

Business Plan for the

# Center for Climate Action + Innovation

At The Sonoma Developmental Center

January 5, 2024



# Acknowledgments

## Sonoma County Board of Supervisors

Susan Gorin, District 1

David Rabbitt, District 2

Chris Coursey, District 3

James Gore, District 4

Lynda Hopkins, District 5

## Permit Sonoma

Tennis Wick, Permit Sonoma Director

Scott Orr, Assistant Director

Ross Markey, Comprehensive Planning Manager

Wil Lyons, Planner II

## California State Coastal Conservancy

Mark Kalnins, Project Manager

### Prepared For

The County of Sonoma

Permit Sonoma

### Funding Provided By

California State Coastal Conservancy

### Prepared By

#### Enki Development Group

*Prime & Co-Lead (Institutional Framework)*

*Project Manager*

Meea Kang, Founder & President

Stephen Engblom, Principal

#### DAHLIN

*Architecture & Planning*

John M. Thatch, Senior Vice President,

Design Innovation

Justin Doull, Principal/Senior Planner

Eric Muzzy, Senior Planner

#### SWA

*Prime & Co-Lead (Site Framework)*

*Master Planning & Landscape Design*

Joe Runco, Principal

Alison Ecker, Associate Principal

Alejandra Hinojosa, Climate &

Sustainability Specialist

#### Sherwood Design Engineers

*Civil Engineering*

Drew Norton, Principal in Charge

S. Bry Sarte, Chief Executive Officer

Sebastian Bertsch, Project Strategist

#### Farmer D

*Agricultural Consulting*

Daron Joffe, Founder & CEO

Lindsay Gucker, Landscape Designer

#### Economic & Planning Systems (EPS)

*Urban Economics*

David Zehnder, Managing Principal

Tom Martens, Vice President

# Acknowledgments

## Stakeholder Interview Participants

The following list of individuals generously volunteered their time to be interviewed as part of this Business Plan process.

- Angela Lotte – Statewide and Coastal Programs Manager, California State Parks
- Barry Vesser – Statewide Policy Director, The Climate Center, Santa Rosa
- Bert Whitaker – Director, Sonoma County Regional Parks
- Caitlin Cornwall – Senior Project Manager Planning and Grants, Sonoma Ecology Center
- Caitlin Maclean – Senior Director of Financial Innovations Labs, Milken Institute
- Charlie Toledo – Intertribal Advocate, Suscol Intertribal
- Chris Eldemir – Managing Director, Investments, San Francisco, Divco West
- Cindy X Chen, Ph.D. – Woody Biomass and Wood Products Advisor, UC Ag and Natural Resources
- Cyndy Shafer – Natural Resource Program Manager, California State Parks Bay Area District
- Dale Robert – Resilience Engineer, Sonoma Water
- Dan Berkovits – NYC Director of Strategy, Via
- Darren L. Haver, Ph.D. – Associate Director for REC System/ Director South Coast REC
- David Lieberman – Capital Projects, Santa Rosa Junior College
- David Royall – Maintenance Manager, OM and Coordinator, Sonoma Water
- Don Seymoure – Principal Engineer, Sonoma Water
- Egon Terplan – Robert S. Cornish Endowed Chair of Regional Planning and Lecturer in City & Regional Planning at Berkeley College of Environmental Design (former Senior Advisor for Economic Development and Transportation at the Governor’s Office of Planning and Research and California Governor’s Strategic Growth Council)
- Erika Pham – Mote Hydrogen
- Erin Axelrod – Partner, LIFT Economy
- Ethan Brown – Executive Director, Sonoma County Economic Development Board
- Evan Wiig – CAFF Director of Communications and Membership
- Feliz Ventura – Program and Resilience Manager, East Bay Community Energy
- Garrett Brinker – Bay Area Strategic Partnership Director, Via
- Genevieve Taylor – Executive Director, Ag Innovations
- Glenda Humiston – Vice President, University of California Agriculture and Natural Resources
- Gregory C. Ira – UC Environmental Stewarts Program Director
- Haris Gilani, Ph.D. – Biomass & Bioenergy Advisor UC Agriculture and Natural Resources
- Janelle Kellman, Esq. – Founder of Center for Sea Rise Solutions and Former Mayor of Sausalito
- Jay Jasperse – Retired Chief Engineer Ground Water, Sonoma Water
- Jean Fraser – CEO, Presidio Trust

- Jessica Martini-Lamb – Environmental Resources Manager, Sonoma Water
- John McCaull – Land Acquisition Director, Sonoma Land Trust
- Johnny Campbell – Manager, Shone Farm Program Santa Rosa Junior College
- Kanika Singh – Director of Innovative Finance, Milken Institute
- Karen Eggerman – Partner at Tensleep Advisory
- Ken Alex – Director, Climate Project at UC Berkeley (Former Director of the Governor’s Office of Planning and Research)
- Laura Tam – Program Manager, Resource Legacy Foundation
- Lauren Cartwright – Director of Business Services and Economic Research, Sonoma County Economic Development Board
- Louise W. Bedsworth – Executive Director, Center for Law, Energy & the Environment (Former Director or the Strategic Growth Council)
- Lucas Patzek, Ph.D – Executive Director, Napa Resource Conservation District
- Matt Fullner – CEO, Valley of the Moon Water District
- Michael Gillogly – Preserve Manager, Pepperwood Preserve
- Nathan Bengtsson – PG&E’s Interim Director Climate Resiliency and Adaptation
- Norman Gilroy – Sonoma Valley, member CAFF Policy Committee
- Paul Angelone – Special Advisor for Implementation, US Environmental Protection Agency
- Paul Jaamgart – Planning & Urban Solutions Head of Infrastructure, Glydways
- Richard Dale – Executive Director, Sonoma Ecology Center

- Rick Rusnack – Chief Business Officer, Presidio Trust
- Rodger Savory – Savory Holistics
- Rue Furch – Member CAFF Policy Committee, former Sonoma County Planning Commissioner
- Sarah Mae Nelson – UC Climate Stewards Initiative Academic Coordinator
- Sasha Berleman – Prescribed Fire Burn Boss, Director, Fire Forward and Good Fire Alliance
- Simone Albuquerque– Sonoma County Climate and Sustainability Department
- Sims Witherspoon – Climate Leader at the AI research lab Google DeepMind
- Steve Morton – Master Planning and Strategic Planning Director, Jacobs Engineering, Lanterman Campus Cal Poly Redevelopment
- Tanya Narath – Director of Climate Programs, The Regional Climate Protection Agency
- Tom Gardali – CEO, Audubon Ranch
- Virginia Calkins – Director of Environmental, Social, and Governance, Divco West
- Wendy Krupnick – Acting President, CAFF Sonoma County Chapter
- Woody Hastings – The Climate Center, Santa Rosa

# Table of Contents

---

<b>Executive Summary</b>	<b>09</b>	<b>Next Steps</b>	<b>129</b>
		Key Next Steps	131
<b>Introduction &amp; Approach</b>	<b>13</b>	Potential Timeline	132
Specific Plan & Site History	16	Potential Collaboration Frameworks	134
Team	18		
Objectives	22	<b>Case Studies</b>	<b>141</b>
Methodology	22	Asilomar Conference & Grounds	142
Institutional Framework	24	Buck Institute for Research on Aging	144
Site Framework	24	New York Climate Exchange	146
		Pepperwood Preserve	148
<b>Institutional Framework</b>	<b>27</b>	Presidio Trust	150
What We Heard & Learned	28	UC ANR South Coast Research and Extension Center (REC)	152
Potential Program & Partner Alignment	38	UCSC MBEST Center	154
Implementation & Funding	50		
		<b>References &amp; Resources</b>	<b>156</b>
<b>Site Framework</b>	<b>77</b>		
Site Context	78	<b>Appendices</b>	<b>159</b>
Landscape Opportunities	80	A: Stakeholder Survey Summary Report	160
Building Opportunities	82	B: Stakeholder Interviews Summary Report	170
Potential CCAI Themes	90	C: Public Open House Summary Report	222
CCAI Theme: Biodiversity	92		
CCAI Theme: Wildfire	98		
CCAI Theme: Agriculture	104		
CCAI Theme: Water	110		
CCAI Theme: Mobility	116		
CCAI Theme: Energy	122		



## Executive Summary

As climate change increasingly disrupts the well-being of Californians and local communities, Sonoma County is taking action towards a more sustainable and resilient future. Their vision involves the creation of the Center for Climate Action and Innovation (CCAI) at the Sonoma Developmental Center (SDC). The CCAI is anticipated to serve as a central hub for vital climate research, innovation, and demonstration offering a combination of conference facilities, state-of-the-art laboratories, job training, and open spaces in Sonoma Valley. Its primary objective is to strengthen Sonoma County's climate resilience through opportunities addressing biodiversity, wildfire, agriculture, water, mobility, and energy.

On December 16, 2022, Sonoma County (County) adopted a forward-thinking Specific Plan for the SDC site that charts a course for new land uses, zoning regulations, and policies. It was designed to foster a development that could catalyze climate resilience, sustainability, and community well-being. Based on that success, the County was awarded a \$250,000 grant from the California State Coastal Conservancy to explore the feasibility of creating the CCAI at the SDC.

The CCAI is envisioned to be a central occupant of the site, serving as a hub for collaboration and innovation, where key stakeholders, leaders, institutions, and private enterprises can work

together to develop new responses to the ongoing climate crisis. This dynamic institution could not only function to conserve open space resources for future generations but also act as a dedicated laboratory for climate research. It is expected to make valuable economic contributions to Sonoma County through research and development activities, job creation, and economic diversification.

This report, the CCAI Business Plan (Business Plan), will serve as a roadmap for this initiative and draws from a collective wealth of knowledge. The Business Plan is structured with two interconnected frameworks: the Institutional Framework and the Site Framework. The frameworks form the basis upon which more specific site governance options, funding opportunities, and key partnerships can be explored and mobilized. It provides a foundation to develop the CCAI hub with an integrated, equitable, and ecologically mindful site approach to buildings, infrastructure, and open spaces. Business Plan insights were informed by over 50 interviews with County, State, national, and private climate stakeholders. The team, in collaboration with Permit Sonoma, also conducted a thorough analysis of previous studies, including the 2015 SDC Transformation study, the 2021 Eldridge Economic Enterprise study (commissioned by Sonoma Water), and the 2022 SDC Specific Plan by Permit Sonoma. Public engagement included an informative online meeting aimed at highlighting community-integrated climate opportunities at the SDC site.

The success in implementing the CCAI will be critically dependent on the degree of alignment achieved among key stakeholder priorities and processes. Given this central challenge, the Business Plan specifically identifies pathways to project realization through collaborations between climate leadership communities, the County, California State Parks, and the state-appointed developer. The timing for these stakeholders to synchronize their planning efforts and climate ambitions is highly favorable. The state-appointed developer is developing a detailed master plan for County approval, coinciding with the State Parks team's launch of their internally required masterplan and site categorization process. Ensuring integration of the CCAI across both the neighborhood development and open space framework will be key, as a climate district where innovative climate proposals can be demonstrated, tested, and deployed at scale will amplify positive economic, environmental, and equity benefits.

Beyond these key stakeholders, this Business Plan highlights many potential avenues for specific types of collaborations. This includes ideas for developing a climate research center—with biodiversity, wildfire, or agriculture focus—that could host classrooms, labs, offices, and auditoriums and connect to a series of land-based demonstrations and testing grounds throughout the site. Or, the CCAI could be positioned to be a general institutional home for climate technology and data research efforts, making it an attractive partner for technology partners, public institutions, and private funding interested in accelerating climate innovation. To support any vision, the CCAI could also

advance upgraded on-site water and energy systems, including both new and tested technologies, that could be supported by innovative companies, agencies, and financing mechanisms aiming to achieve a sustainable, long-term infrastructural foundation.

The present challenge is to determine a practical and achievable path to realizing any of these CCAI ambitions. To that end, the Business Plan identifies key insights and lessons learned from stakeholders, potential programmatic and partnership alignments, funding sources and mechanisms, and implementation strategies. Critically, public financial support of the CCAI vision and process is necessary in the short-term to maintain momentum; in the long-term, it can help to secure strategic partnerships with a variety of public and private climate stakeholders who are already actively engaged in the community, region, state, and beyond. With potential federal, state, and institutional grant funding and partnership interest for climate efforts at unprecedented levels, it is a highly favorable time to act upon synchronizing interests between these stakeholders.

Taken together, the CCAI vision and this Business Plan aim to create a more resilient and sustainable future for Sonoma County's people, ecology, and economy that could benefit not only the local community, but the surrounding region, State of California, and beyond.



## Introduction & Approach

This CCAI Business Plan was a collaborative effort that harnessed a wealth of knowledge from diverse sources. This plan is dedicated to crafting an integrated and ecologically mindful approach to attract partners, stakeholders, and investors to realize the buildings, infrastructure, and open spaces envisioned for the CCAI in the SDC Specific Plan. It highlights the critical climate change challenges that the CCAI is uniquely poised to tackle, including habitat restoration, food and agriculture, wildfire resilience, water resilience, renewable energy, and low-carbon mobility.

What sets this Business Plan apart is the extensive outreach and engagement process with the climate leadership community. Over 50 climate stakeholders

and leaders were interviewed, and an online public information center was established to gather input and insights from the community. This collaborative approach has resulted in two interconnected frameworks designed to advance both the institutional and site aspects of the CCAI.

Additionally, the purpose of the CCAI Business Plan is to highlight funding options for climate adaptation and resilience in a fiscally responsible and socially equitable manner at the CCAI. The Plan prioritizes current adaptation needs with practical solutions that are feasible within the near-term context of current trends. Alongside these pathways, the Plan includes an equity analysis and an implementation strategy to guide our collective

efforts towards a more climate-resilient future.

The project holds great potential for success if a robust collaboration can be established between the state-appointed developer and the public agencies overseeing the CCAI, including Sonoma County, State Parks, and other vested state agencies and organizations with climate-forward mandates. It is essential that the CCAI and the residential neighborhood aspect of the project be integrated to help create a comprehensive climate community as envisioned in the adopted Specific Plan. In this “complete ecosystem,” novel and proven climate technologies can be researched, piloted, and prototypically developed at a district scale as a platform for testing and prototyping existing and emerging technologies and practices. This collaborative effort can further enhance the project’s effectiveness and its ability to address climate challenges through uses that contribute to demonstration of best practices in sustainable development techniques, progress in understanding climate change through on-site research initiatives, and understanding the site as part of a broader regional ecosystem affected by climate change. The capacity to deliver such comprehensive climate solutions at scale could attract public funding and private investment. Alternatively, the project’s greatest vulnerability would arise if the CCAI is separated from the site’s residential and commercial development and executed as a conventional project relying on outdated technologies, thereby undermining the project’s overall capabilities.

The vision expressed in this Business Plan presents a compelling complement to other development planned on the site, such as commercial and residential uses, in that it helps to diversify the general economy in Sonoma County. The CCAI is positioned to deliver diverse new employment to Sonoma County, that will bring net new economic activity to the County economy, while cementing the County’s leadership role in climate action in local, regional, and larger contexts.

The Plan is intentionally presented as a “high level” strategy. It identifies potential partners, governance models, management options, public and private funding opportunities, and financing pathways. Additionally, it suggests how to align buildings and open spaces with key priorities, as informed by climate stakeholders participating in the interviews. This Plan serves as a strategy to guide the County, State, the state’s appointed developer, and other climate stakeholders in prioritizing and making near-term decisions within the framework of a complex, long-term vision. Subsequent and more detailed discussion of development concepts with the ultimate developer of the site will be central to the next steps around the implementation of the Plan.

The Center for Climate Action and Innovation Business Plan represents an important step towards actualizing the opportunities it presents by outlining what can be achieved when government, developers, climate leaders, and the public come together to address the challenges posed by a changing climate while meeting the needs of the community it serves.





## Specific Plan & Site History

The Sonoma Developmental Center (SDC), founded in 1891, holds a rich history as the oldest facility in California specifically dedicated to serving individuals with developmental disabilities. Over its 120-year tenure, it stood as a cornerstone of the County as the county's largest employer and a hub for Sonoma Valley. In 2018, the State of California made the decision to close the facility and relocate clients to more intimate, community-based care facilities.

This sprawling 945-acre property comprises a 180-acre historic campus surrounded by approximately 800-acres of expansive, agricultural lands, verdant forests, recreational zones, and ecologically valuable natural expanses adjacent to the Sonoma Valley Regional Park and the Jack London State Historic Park. Woven within these natural areas lies an intricate network of preexisting trails and access roads complemented by a robust water system inclusive of two reservoirs, aqueducts, springs, storage tanks, a treatment plant, pipelines, and a water intake located in Sonoma Creek.

The Specific Plan envisions a vibrant mixed-use community in the core characterized by pedestrian-friendly streets and a diverse range of housing, commercial, and institutional opportunities. The adjacent open spaces were identified in the Specific Plan as thriving natural habitats and active agricultural and recreational lands seamlessly integrated with regional parks and open space systems. The introduction of agri-hoods and agricultural

initiatives presents an opportunity to promote self-sufficiency, encourage diverse cultivation, and to honor the area's rich agricultural heritage.

All planned development at SDC is intrinsically tied to its storied past yet attuned to contemporary needs with an emphasis resilience and sustainable building practices. Civic amenities, community gathering spaces, and events will draw visitors from Glen Ellen, Eldridge, and the broader Sonoma region, positioning the center as the vibrant heart of community life in the Sonoma Valley. Crucially, the Specific Plan is focused on addressing pressing issues such as affordable housing and pioneering climate-forward development. It addresses a region that has often received the impact of climate change-related challenges, including devastating wildfires, prolonged droughts, flooding, and sea level rise. Central to this vision is the adaptive reuse of historically significant structures to preserve the legacy of SDC while forging a sustainable future. The CCAI has the opportunity to function in this vision as a nucleus for innovation, research, and education to enhance the resilience and opportunities promoted in the Specific Plan.

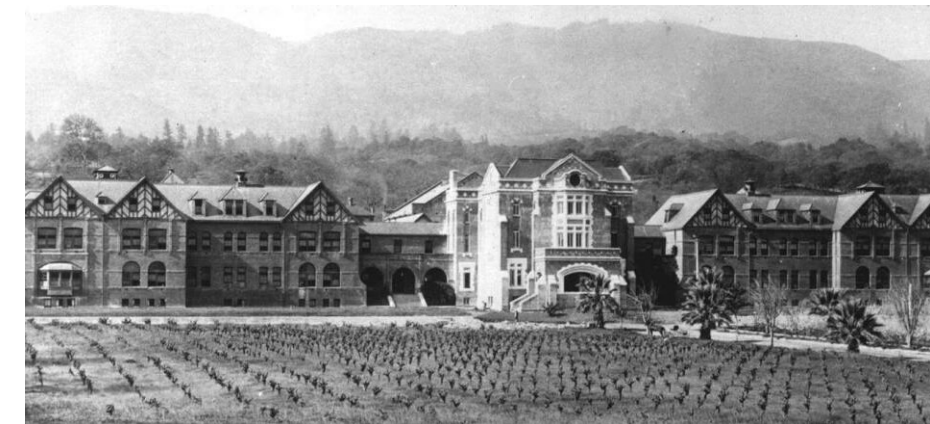


Photo Sources: The Sonoma Index-Tribune  
SDC Specific Plan Cover Page: Permit Sonoma

## Team

The Business Plan Team (Team) consists of best-in-class experts with a deep understanding of SDC’s existing conditions, challenges, and opportunities. The team brings extensive experience in development, land use planning, placemaking, architecture, engineering, and real estate feasibility and finance. They also possess local connections required to successfully realize the Center’s plan in a manner consistent with the County’s adopted Specific Plan. This experience uniquely qualifies this team to develop the CCAI Business Plan for the Sonoma County and create the frameworks for a world-class climate research center in the heart of Sonoma Valley.

### **Enki Development Group** **Prime & Co-Lead (Institutional Framework) / Project Manager**

Enki Development Group, LLC (ENKI) is a California-based real estate company that integrates sustainability and resiliency into all aspects of its work, focusing on equitable infill development, water conservation, energy efficiency, and climate change solutions.

Meea Kang, the President and Founder of Enki Development Group, has a strong background in sustainable development and affordable housing. With over 27 years of experience in the real estate industry, she has successfully financed and developed more than 2,500 units of affordable housing in California. Meea’s projects have received recognition for their social responsibility

and sustainable design. She leads her teams in revitalizing underutilized properties, engaging communities in the planning process, establishing public-private partnerships, and securing complex financing arrangements to create transformative and sustainable developments.

Stephen Engblom, a Principal at ENKI, is an architect with experience spanning both the building scale and the ecological scale. His extensive network has proven invaluable in attracting a diverse array of participants to the business plan process, while his commitment to community-based resilience, integrated infrastructure, master planning, design excellence, and collaboration shines through in his track record of leading resilience plans for cities and communities across the San Francisco Bay region, throughout the United States, and around the world.

ENKI had independently studied the site previously and in that process explored sustainable strategies including water conservation, clean energy, and regenerative agriculture, which were thoughtfully conceived to improve natural resources, ecological assets, and enhance regional community benefits. As a result, ENKI has an unparalleled understanding of the existing conditions, infrastructure challenges, and development opportunities, providing a significant advantage to build upon.

### **SWA** **Prime & Co-Lead (Site Framework) /** **Master Planning & Landscape Design**

SWA is a leading landscape architecture, planning, and urban design firm practicing at various scales of complexity across the U.S. and abroad. Their mission is to enhance the quality of life in the public realm by creating multi-benefit places for people and nature through the power of design. They believe landscape is the essential infrastructure to achieve this mission, defining the future of equitable and resilient cities. SWA is passionate about how ecological restoration and social engagement reimagine placemaking and connect people with the environment in new and surprising ways. They seek opportunities to innovate and work across disciplines with public, private, institutional, and non-profit organizations, collaborating with clients as active partners toward a shared vision.

Joe Runco, Principal of SWA, has been a landscape architect and community planner since 1978, with diverse project experience of all types and scales. Joe directs large-scale community planning and design efforts that balance development desires with existing natural systems. He also designs for campus, residential, hospitality, commercial, and recreation projects with an emphasis on creating livable, sustainable places. Recent projects—including Davis West Village, Davis Cannery, and Ban’an UNESCO Integrated Rural Urbanization Project—have focused on the interface between urban development and open land as well as the integration and protection of agricultural and natural systems, a key factor in long-term sustainability. Joe has been with SWA for

41 years.

Alison Ecker, Associate Principal at SWA, has led various large-scale master planning and entitlement projects, primarily in northern California. Her experience navigating these challenging projects, particularly in relation to wildfire, has influenced a series of wildfire-focused research efforts, including a summer 2022 student research studio focused on the SDC.

### **Economic & Planning Systems** **Urban Economics**

EPS is a land economics consulting firm experienced in a full spectrum of services related to real estate development, financing of public infrastructure and government services, land use, conservation planning, and government organizations. EPS was founded on the principle that real estate development and land use-related public policy should be built on a realistic assessment of market forces and economic trends, feasible implementation measures, and recognition of public policy objectives, including provisions for required public facilities and services. Since 1983, EPS has provided consulting services to hundreds of public- and private-sector clients in California and throughout the United States. Clients include cities, counties, special districts, multi-jurisdictional authorities, property owners, developers, financial institutions, and land use attorneys. The professional staff includes specialists in public finance, real estate development, land use and transportation planning, government organization, and computer applications. The firm excels in preparing concise analyses that disclose risks and

impacts, support decision making, and provide solutions to real estate development and land use-related problems.

EPS assisted ENKI in their site analysis and was also part of a consultant team hired by DGS in 2018 to prepare the chapter “Case Studies: Comparable Places in Transition” for the former SDC. The case studies analyzed financing and governance approaches and recommendations to consider for the future SDC redevelopment.

Managing Principal David Zehnder is a thought leader in the development of innovation economies, having worked extensively with major tech interests to evaluate the fit of 26 major US metro economies with the evolving needs of knowledge-intensive industry. David has analyzed the role that universities play in innovation districts in the Bay Area, Los Angeles, Texas (TMC3), and locally in the Sacramento region. He has worked extensively with Vice President Tom Martens, a leader in the development of innovation economy impact analysis, on many of these projects.

## **DAHLIN**

### **Architecture & Planning**

DAHLIN is a diverse architecture and planning firm working with developers, municipalities, and private clients across a diversified portfolio of residential, commercial, institutional, and civic work. DAHLIN is deeply rooted in both new development and the redevelopment of existing urban areas in the San Francisco Bay Area and throughout the West Coast. The firm is led by a passion for, and expertise in, translating civic sustainability

and development goals into practical, cost-effective plans and standards that promote rich, varied, and identifiable districts, communities and neighborhoods.

## **Sherwood Design Engineers**

### **Civil Engineering**

Sherwood Design Engineers is a civil engineering practice committed to the optimal integration of ecology, infrastructure, and design. The practice specializes in sustainable infrastructure design, innovation, and sound engineering to make big ideas possible at a building, neighborhood, and district scale. Sherwood has a proven track record of delivering projects from idea to implementation around the world and works collaboratively with project teams to find ways to maximize efficiencies through an integrated and ecological approach that results in high-performance projects that are resilient, economical, and get approved and built.

Sherwood led the infrastructure evaluation of the former SDC Existing Conditions phase of the DGS investigation project with the WRT team in 2018. This included a thorough evaluation of the existing utilities, resources, water supply and energy system. The work performed during this phase was summarized in the report issued but also included a significant data summation making up the near entirety of the infrastructure on this campus. This process involved working with the team in evaluation of the buildings, site elements, and related conditions. As a result, Sherwood has first-hand knowledge of existing infrastructure and

significant experience advancing future scenarios.

Bry Sarte, founder of Sherwood Design Engineers, was born and raised in Glen Ellen. His family connections within the community have been directly tied to the SDC campus dating back to its time in full operation.

## **Farmer D**

### **Agricultural Consulting**

Farmer D engages with and works on projects nationwide. The principals are passionate farm advocates and experts when it comes to the integration of conservation, agriculture, and community and have created unique solutions to showcase a climate resiliency model that addresses local challenges.

# Objectives

The Center for Climate Action and Innovation (CCAI) represents a visionary initiative positioned to tackle climate adaptation and mitigation challenges while fostering collaboration among various stakeholders and the public. This Plan outlines the findings and recommendations derived from various stakeholder surveys, site research, and topical explorations. The primary objectives are to identify institutional framework strategies for attracting partners and investments, while also highlighting the physical attributes of the site that align well with institutional, philanthropic, and private sector climate change interests.

# Methodology

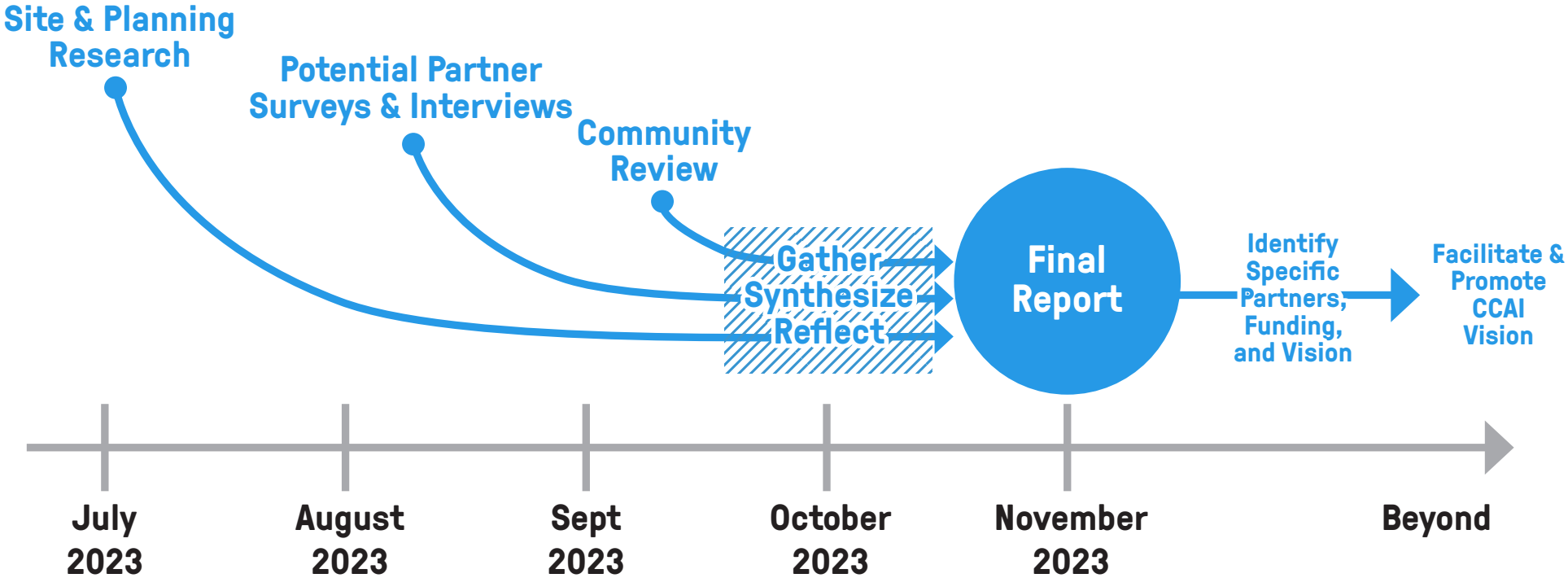
The team initially conducted an in-depth review of the site, examined previous studies and plans, and researched and analyzed best practices and successful case study models from similar projects around the world.

Following this effort, climate stakeholders and potential partners were identified who could contribute to the success of the CCAI. Then, the team conducted two surveys to gather insights and recommendations from this group. These surveys helped identify key priorities and concerns as well as opportunities for collaboration and potential partnerships (see Appendices A and B for summary reports).

The survey feedback was instrumental in shaping the Plan’s strategies and embedding stakeholder knowledge. Additional feedback and community discussion were facilitated through a virtual public workshop, which provided a real time forum to further introduce and discuss key business plan recommendations and priorities (see Appendix C for summary report).

The information gained through this research resulted in two related approaches to the CCAI that consists of an Institutional Framework and a Site Framework. The Institutional Framework explores partnership, governance, and finance options while the Site Framework explores unique opportunities the SDC site presents that could help contribute to the overall success of the CCAI.

## CCAI Business Plan Process



## Institutional Framework

The Institutional Framework section is dedicated to delineating the strategies and crucial steps necessary for the County and site developers to actualize the CCAI through potential partnerships with public and private entities.

The Institutional Framework begins with a review of summary of key insights received through the stakeholder interview process, general research, and case study reviews. This is followed by a review of how the County and site developers can foster both programmatic alignment and collaborative partnerships; this includes climate and resilience leaders, such as universities, research groups, private sector innovators, investors, developers, and advocacy organizations.

The section concludes with a review of funding opportunities and implementation approaches; this encompasses various facets from governance and management structures to ownership and tenancy considerations. It outlines the formation of boards, committees, and executive leadership; the establishment of policies and procedures; the critical navigation of legal and compliance issues; and the importance of long-term strategic planning to guide the CCAI towards a sustainable and impactful future.

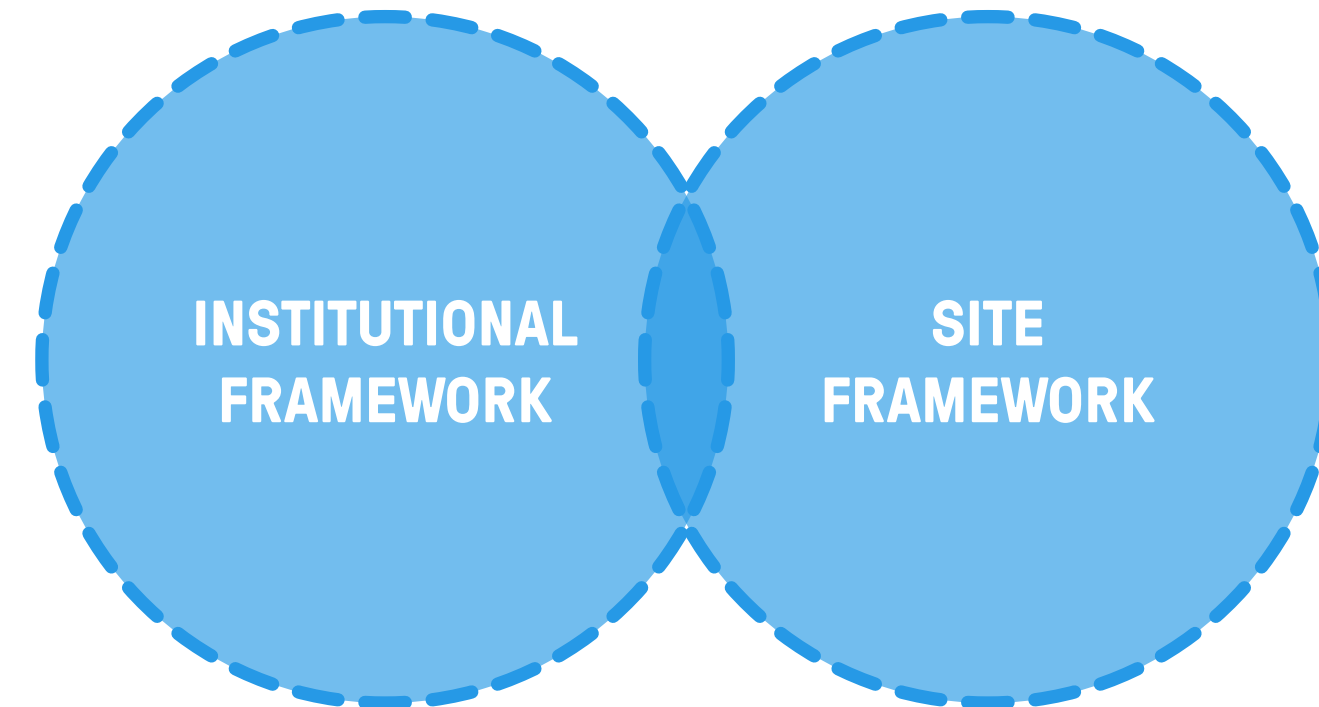
## Site Framework

The Site Framework complements the Institutional Framework and highlights built and natural environment opportunities for implementing the CCAI across six climate categories: biodiversity, agriculture, wildfire, water, mobility, and energy.

This framework begins with a generalized introduction to the site, including how its landscapes, building resources, and infrastructural systems can be thoughtfully designed and arranged to cater to the diverse needs of the CCAI. This site—with its vast, diverse ecosystems and range of buildings and facilities—has the potential to emerge as a premier hub for climate research, rehabilitation, investment, and leadership.

The framework then identifies a range of key building, site, and infrastructural opportunities across the six climate categories with connections to the Specific Plan highlighted. These opportunities are intended to be read as a series of insights and inspirations into how the CCAI might be developed, with either a primary focus on a single theme (i.e., water), a multi-faceted focus across all the themes, or something in between. Each opportunity identified is intended to simply highlight exemplary and innovative proposals and will require further exploration and development based on the eventual CCAI partnerships, specific plan requirements; no opportunity is a commitment to a specific land use at a specific site.

The overall mission of the site planning team was to align climate opportunities with strategically positioned locations across the SDC to ensure they fulfill the CCAI's multifaceted needs and exemplify sustainable, equitable, and economically generative development. Each recommendation is crafted to enhance the operation of the institution and uphold the highest standards of quality of life for the existing and future community. This section demonstrates that the site offers immense potential to serve as a canvas for modeling and showcasing best practices while also facilitating research, experimentation, and innovation.





## Institutional Framework

The Institutional Framework section is dedicated to delineating the strategies and crucial steps necessary for the County and site developers to actualize the CCAI through potential partnerships with public and private entities.

The Institutional Framework begins with a review of summary of key insights received through the stakeholder interview process, general research, and case study reviews. This is followed by a review of how the County and site developers can foster both programmatic alignment and collaborative partnerships; this includes climate and resilience leaders, such as universities, research groups, private sector innovators, investors, developers, and advocacy organizations.

The section concludes with a review of funding opportunities and implementation approaches; this encompasses various facets from governance and management structures to ownership and tenancy considerations. It outlines the formation of boards, committees, and executive leadership; the establishment of policies and procedures; the critical navigation of legal and compliance issues; and the importance of long-term strategic planning to guide the CCAI towards a sustainable and impactful future.

# What We Heard & Learned

The team endeavored to take a wide-ranging approach to understanding the context and opportunities for establishing the CCAI at the SDC. This including conducting an in-depth review of the site, examining previous studies, and researching best practices and successful case study models from similar projects around the world.

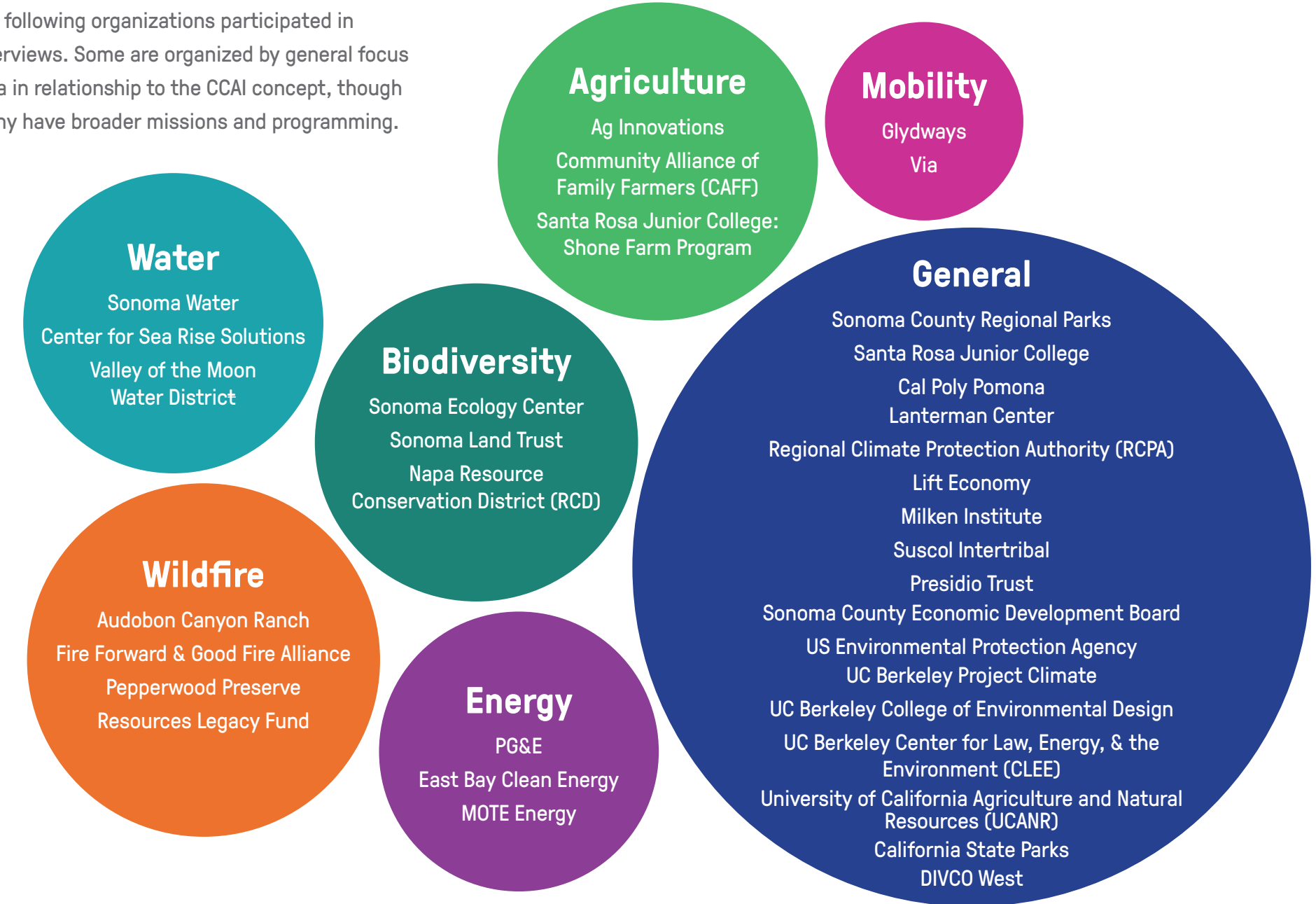
Critically, this effort involved surveying and interviewing over 50 climate stakeholders and potential partners who could contribute to the success of the CCAI; these surveys helped identify key priorities and concerns as well as opportunities for collaboration and potential partnerships (see diagram on the right of participating organizations and Appendices A and B for summary reports). Additional community feedback was facilitated through a virtual public workshop, with over 50 participants, which provided a real time forum to further introduce and discuss key business plan recommendations and priorities (see Appendix C for summary report).

This research approach and stakeholder engagement highlighted how Sonoma Valley is well-positioned at an intersection of urban development and the natural world, in an environmentally forward community, within a globally recognized larger region connected to leading research, availability of capital, and recognition as a premium visitor destination. With these assets Sonoma County has an opportunity to leverage its recognition of climate change leadership to undertake local and global climate change issues.

The following pages highlights key insights from the team’s research and stakeholder engagement process.

## Stakeholder Interviews

The following organizations participated in interviews. Some are organized by general focus area in relationship to the CCAI concept, though many have broader missions and programming.



## Embrace SDC’s unique location and site characteristics to advance climate efforts

The site’s unique location—at the intersection of the urban development and the natural world, within a world-renowned viticulture region, and only an hour’s drive from a major economic and population center in the Bay Area—lends it special qualities for particular types of climate change research and innovation opportunities. These opportunities can be facilitated as the site is essentially a microcosm of the broader region; from a broad range of building opportunities in the Core Area, to a solid infrastructural baseline framework, and a range of landscapes from agricultural lands to native ecosystems, the site can be used to engage across an array of formidable climate change challenges. This encompasses fire management, water resources, energy solutions, biodiversity conservation, agricultural practices, and mobility issues. Considering this context, the climate community stakeholders we engaged with generally expressed enthusiasm for the opportunity to establish a new epicenter for climate resilience work, where proven strategies can be rigorously tested, closely monitored, and scaled, while emerging technologies are primed for exploration and advancement.

Authenticity and realism are essential in realizing the potential of the site to host the CCAI. Acknowledging and embracing the agricultural and semi-rural character of the site is vital and solutions need to be tailored accordingly. Fostering a strong sense of place is essential, with potentially a particular focus

on positioning the CCAI as a leading example of addressing wildfire challenges within the Wildland-Urban Interface (WUI). This approach should solidify the resilience of the community as envisioned in the Specific Plan.

## Fortify the County’s organizational capabilities to guide the SDC and CCAI developments

The County has an opportunity to be a critical entity in providing sustained organizational leadership around the CCAI concept in the early phases of the project as additional partners are identified and ideas are implemented. Prior to the identification of an anchor partner, the County’s ability to assign staff to oversee and sustain progress will be critical to the sustained success of the effort.

## Establish the foundation to secure an anchor partner

Attracting an anchor partner, such as a university, is crucial for advancing CCAI’s mission. Interest from such a partner can materialize at various stages in the development of the CCAI concept. While the ideal scenario is to attract an anchor partner early on, a more practical expectation is to initiate the center’s development incrementally, utilizing topic-based discussions and specific funding opportunities to cultivate potential working

relationships that leads to a substantial commitment.

For example, multiple interviews with the leadership of the University of California Agriculture and Natural Resources (UC ANR) have revealed existing partnerships in the region and interest with positive momentum for further discussions. UC ANR Vice President Glenda Humiston refers to UC ANR as the “10th UC Campus,” signifying its direct reporting relationship to the UC Office of the President. UC ANR has rapidly expanded its programs and initiatives, harnessing over 40 natural reserve systems and research forests to establish an extensive statewide research, innovation, and implementation network.

These Research Extension Centers (RECs) serve as crucial hubs where academia, industry practitioners, and the private sector converge. RECs play a pivotal role as demonstration platforms and workforce training sites for their home counties, broader regions, and the entire state. This mission closely aligns with CCAI’s goals, and Glenda has highlighted a strong analog that has already taken shape in Orange County, focusing on urban wildlife and agricultural systems. She is open to exploring the possibility of establishing a REC at CCAI as a complementary addition to the existing Hopland REC in Sonoma County.

Additionally, UC ANR could explore partnerships with community colleges and national labs, presenting a significant opportunity for collaboration. Potential partners include UCSC (Coastal Science Campus), UC Davis, Sonoma State, SRJC, Lawrence Livermore Labs, and the National Renewable Energy Labs.

## Facilitate collaboration with the State’s appointed developer

This partnership aims to incentivize the creation of climate-forward infrastructure to connect the residential development with the CCAI. The appointed developer has an opportunity to embrace a commercial element of the SDC Specific Plan that goes beyond the retail and commercial opportunities otherwise available to accommodate a cross-section of net new jobs.

## Build the CCAI based on the sum of the site being greater than the individual parts

The collective potential of the CCAI, developed in concert with the new community promoted by the SDC Specific Plan, is greater than the sum of the individual parts. Consistent feedback from stakeholders emphasized that the site’s buildings, infrastructure, and open space opportunities and development—across both and SDC Specific Plan and CCAI framework—should be viewed holistically; taken together, they can provide the unique opportunity to test integrated systems across various land uses and in coordination with the open space.

In isolation, these elements may not garner as much funding and investment or have the same climate impact. Alone, these elements will not generate as much partnership interest in, nor will they enable the state’s appointed developer to attract



climate-related investments and grant funding. The absence of climate-related stakeholder interest and funding would place an outsized emphasis on the housing component of the project; while accessible housing is critically needed to support the Sonoma County workforce, the CCAI brings a more compelling and commercially-compatible anchor with job-force supporting roles for the housing development. This holistic approach creates the ability to demonstrate how a place-based economic development can be delivered more equitably with additional societal benefit.

Every effort should be made during the early communication and marketing phases of the project to convey this integrated, comprehensive idea: that the open space, building, and infrastructure assets of the site represent a rare opportunity to model a climate-forward community featuring a range of the best environmentally-friendly and community-focused practices.

### Emphasize that comprehensive SDC community development is key to the long-term success of the CCAI

Regardless of how the CCAI evolves over time, community-oriented economic development at the SDC, particularly for new attainable housing, is a critical success factor. This factor must be emphasized to attract both public funding and private investment and ensure long-term success. As highlighted in the SDC Specific Plan, the Core Area’s residential development provides an opportunity to address not only the critical shortage

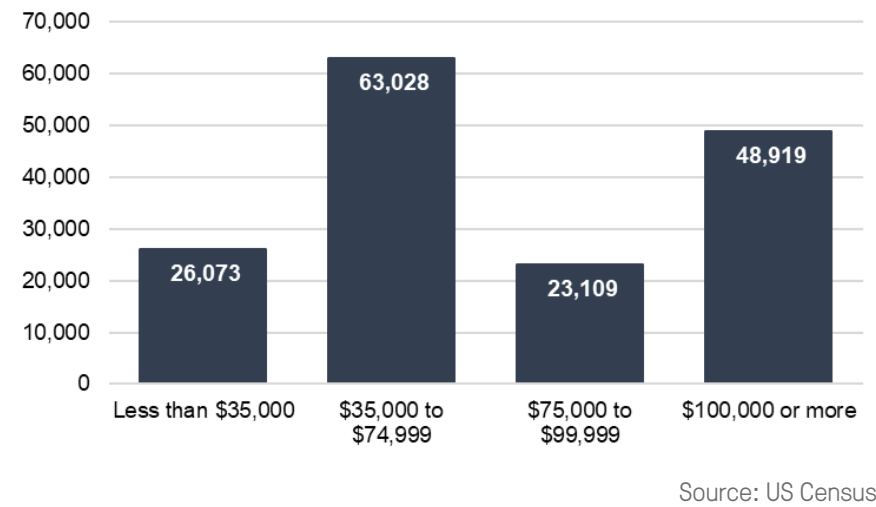
of low-income housing, but also “Missing Middle” housing opportunities; this latter category are households that are above the income requirements for affordable housing but unable to afford most of what the market appears to offer on its own. If developed to achieved this range of housing opportunities, entry-level and mid-level CCAI technical workers could be attracted and supported with a variety of on-site housing opportunities and a high-quality neighborhood environment.

### Create workforce opportunities uniquely suited to addressing local economic challenges

The Sonoma region is characterized by significant socioeconomic disparities, not unlike most agricultural and tourism regions, with acute pressure placed on housing the supporting labor force. The bifurcated workforce/labor market exacerbates the housing challenges already inherent in Sonoma’s location in a region with high land and development costs.

The following chart illustrates the concentration of Sonoma County worker incomes in the lower and higher ranges.

Sonoma County Workers by Income Level



The attraction of a skilled labor force resulting from a strong-place-based economic development concept is a challenge for the County; with many options to choose from, skilled labor force and collaborators will gravitate toward areas integrating high quality of life with compelling research and development opportunities. Given this context, the climate community stakeholders expressed enthusiasm for the prospect of establishing a new economic hub for climate resilience. The CCAI has the potential to provide an avenue for the County to increase entry and mid-level technical jobs, both from local startups and from outside entities locating research teams to the CCAI.

### Expand on current partnerships with State Parks and the Sonoma Valley Wildlands Collaborative (SVWC)

The expansive open space not only offers recreational opportunities but also presents an ideal platform for proactive, coordinated climate-conscious land stewardship and research in the immediate future. Given that State Parks will possess the ultimate authority over the management of open areas surrounding the core of SDC, their involvement and endorsement is pivotal. This cooperative effort can further strengthen the existing alliance that State Parks has with other members of the SVWC: Audubon Canyon Ranch, Sonoma County Regional Parks, Sonoma Land Trust, and Cal Fire.

### Build on existing momentum and urgency around fire management

One of the most urgent resilience challenges facing Sonoma County is the need to advance new methods of living sustainably with fire. The CCAI at SDC is well situated to offer both facilities and land for the much-needed expansion of wildfire training facilities and programs. The Specific Plan calls for a new fire station on the CCAI land and many of our interviews highlighted the need and available funding for fire management. Audubon Canyon Ranch, Fire Forward, Good Fire Alliance, Pepperwood Preserve, Resources Legacy Fund, and Cal-Fire all highlighted that they need expanded facilities and have a clear path to securing public and philanthropic funding for this type of work. Sasha

Bereleman, Director of the Audubon Canyon Ranch Fire Forward and Good Fire Alliance, emphasized key opportunities, including a Fellowship Academy, Community Training, relationships with Indigenous Tribes, experience around environmental permitting, and the need to increase the number of acres planned for controlled burns to meet expanding CalFire requirements. Laura Tam of the Resources Legacy Fund pointed out that there is tremendous philanthropic momentum behind wildfire prevention strategies funding.

## Establish an institutional home for climate research efforts

CCAI has a strategic opportunity to become an institutional home for climate efforts and a central data repository to manage and disseminate valuable climate information. Stakeholders have stated that an unfulfilled but in-demand niche CCAI could fill would be to rigorously test resilient strategies, closely monitor their impact, and scale them up, while also facilitating the exploration and advancement of emerging technologies.

Interviews with industry leaders revealed a surplus of climate data, prompting the idea of positioning CCAI as a data repository for regional climate data and management. Notably Pepperwood Preserve collaborates with organizations like Terrestrial Biodiversity Climate Change Collaborative (TCB3) and UC Berkeley to develop large datasets that provide insights into how climate change affects microclimates, plants, animals, and the local environment. There is a pressing need for a comprehensive data

repository to manage and disseminate this valuable information. Michael Gillogly, Preserve Manager of Pepperwood, emphasized the importance of making ecological data more accessible and understandable to the public; this includes translating complex scientific insights into practical knowledge that can inform climate action and support education programs aimed at training the next generation of scientists to address climate challenges.

Lucas Patzek, Executive Director of the Napa Resource Conservation District (RCD), highlighted the potential for CCAI alignment related to climate monitoring, forest management, and regional climate collaboration efforts. The Napa RCD additionally supports the idea of an institutional home that can serve as a hub for climate efforts in the North Bay region as well as partnering with other regional RCDs, water associations, and agencies. Napa RCD plays a role in County-wide climate action planning by emphasizing real-time emissions tracking in partnership with Lawrence Berkeley National Laboratory and monitoring the impact of environmental projects. There is an opportunity for CCAI to partner with Napa RCD and Lawrence Berkeley National Laboratories to enhance regional greenhouse gas (GHG) monitoring. The multijurisdictional climate planning process involving Pepperwood Preserve and the Multi-Source Integration (Miroflux) project, a national network for GHG monitoring, is a key aspect of Napa RCD's work.

In the September 20, 2023 TED talk titled “Can AI help solve the climate crisis?” Sims Witherspoon, a leader at the AI research lab Google DeepMind shares that the biggest roadblock for

AI optimization in the climate space is access to data sets. According to Sims Witherspoon, there are significant gaps in climate-critical data across all sectors, whether it's electricity, transportation, buildings, or weather. Witherspoon's emphasizes that we need to be able to optimize existing systems and infrastructure, and AI is one of the tools that we can use to do this. AI can help us understand climate change through better models for prediction and monitoring. AI can also help us optimize current systems and existing infrastructure. Witherspoon has invited the Team to share a brief description of the CCAI development opportunity and how Sonoma County could develop value from a Google DeepMind partnership.

## Forge powerful alliances with neighboring Counties and sub-regional efforts

Efficiency gains can be achieved through collaboration with regional partners and neighboring counties. Founder of Sea Level Rise Solutions and Former Mayor of Sausalito Janelle Kellman highlighted that Marin County is actively tracking funding for sea-level rise and recognizing the interconnected challenges faced by Sonoma Valley's flooding ecosystems. Collaborating with Marin County has the potential to expedite funding opportunities and raise awareness that the North Bay is an integral part of an interconnected ecosystem. This interconnected dialogue can also attract interest from venture capital firms focused on coastal flooding and create a bridge to SDC.

Similarly, Napa County and PG&E are involved in the Alliance

for Resilience and Climate Action (ARRCA) Collaboration. PG&E plays an active role in State-Supported Regional Collaboratives, including ARRCA, and Sonoma is a member of the North Coast Regional Collaborative. Nathan Bengtsson Interim Director of Climate Resiliency and Adaptation at PG&E highlighted the company's aspiration to serve as a conduit for federal funding opportunities and described substantial investments in physical infrastructure, including battery storage and non-traditional grid solutions. Their active involvement in advancing decarbonization, micro-grid, and workforce development programs aligns with CCAI's objectives. PG&E is open to collaborating on grid pilot programs, expanding vehicle charging infrastructure, and seeking non-traditional funding sources. These efforts collectively highlight the potential for a fruitful partnership to foster innovation, resilience, and sustainability in the energy landscape of Sonoma County.



## **Position the SDC CCAI at the nexus of state and federal funding opportunities**

The timing of the CCAI corresponds with global recognition of the pressing need to mobilize resources and press forward with climate research and other actions. Funding opportunities are strong at this time, as further discussed in this section.

## **Stay flexible: Remain committed to the overall mission while avoiding excessive prescription**

Stakeholders generally emphasized that while it is important to remain committed to the overarching vision, it is imperative to avoid excessive prescription. Flexibility is key in climate resilience initiatives, allowing them to adapt to emerging technologies, the shifting landscape of market-driven investment priorities, and the unpredicted challenges that may arise.

# Potential Program & Partner Alignment

This section will review potential programmatic and partner alignments for the Center for Climate Action and Innovation (CCAI) at SDC. This segment highlights how various key stakeholders can work together to accelerate the vision of the CCAI, emphasizing the importance of forming strategic alliances with established climate leaders and leveraging funding opportunities to drive the mission forward.

## Mission-Driven Approach: Build upon the SDC Specific Plan, studies, and research

The mission of the Center for Climate Action and Innovation (CCAI) should be intricately aligned with the primary objectives and overarching vision delineated in the Specific Plan and previous studies. By harnessing the distinctive natural and man-made features of the SDC, CCAI's mission can further commitments to propelling environmental, economic, and equity benefits for the County.

Central to this mission-driven and holistic vision are the site's setting and research potential, which underscore the pivotal importance of retaining and effectively managing open spaces. Simultaneously, the historical core of the site presents an exciting opportunity to craft a diverse range of built environments,

fostering connectivity between residential neighborhoods and cutting-edge research laboratories. This synergy enables the testing and monitoring of innovative climate infrastructure while elevating the quality of life for local residents, offering valuable learning experiences for visitors, and providing essential support for local businesses, ultimately contributing to the growth of the regional economy. The CCAI's mission should be intrinsically woven into this transformative vision for the SDC.

## Short-term Collaborations

Engaging a diverse range of well-respected partners on short-term collaborations while seeking a long-term anchor, such as a university, will create momentum, help to attract public funding and financing, and establish a track record of action and innovation. All short-term moves should align with CCAI's mission and contribute to attracting an anchor tenant.

Strategically planning for both short-term successes and long-term sustainability while considering different models for the climate center is key to remain appealing as an attractive site for new tenants and collaborators as development continues. See the "Next Steps" chapter for further information on potential short-term collaborations.



## Anchor Partnership

Identifying and developing a long-term partnership with an anchor institution (or institutions) is key to the lasting success of the CCAI vision. Interest from such a partner can materialize at various stages in the development of the CCAI concept, including during early-stage collaborations. While the ideal scenario is to attract an anchor partner early on, a more practical expectation is to initiate the center’s development incrementally, utilizing topic-based discussions and specific funding opportunities to cultivate potential working relationships that leads to a substantial commitment.

Once an entity with the interest, resources, and capabilities to advance the CCAI to its next phase of development is identified, a more detailed business plan concept should emerge, incorporating specific stipulations for the site’s use as the project takes physical form.

## California State Parks Partnership

Collaboration with California State Parks is of paramount importance in realizing the vision of the CCAI at SDC, especially in managing open spaces. As the appointed land manager for the open space at SDC, California State Parks plays a vital role in this endeavor. Their willingness to collaborate and engage with Sonoma County and the CCAI on open space stewardship efforts is a significant step forward.

The unique attributes of the Wildland Urban Interface (WUI) within the CCAI present novel challenges for wildfire management. Key insights from discussions with California State Parks include their openness to further discussions with the CCAI, their preference for coordinated larger-scale land management, and their dedication to addressing climate change vulnerability through integrated assessments into their land management programs.

California State Parks is planning to embark upon a master planning process and community outreach effort for the SDC open space management plan. Additionally, “Parks California,” a legislative nonprofit organization within State Parks, focuses on fundraising for various initiatives if aligned priorities can be established; this fund could further enhance State Parks capacity to support CCAI’s goals.

California State Parks is deeply committed to ecological processes, including wildfire management, watershed restoration, and ecosystem maintenance. State Parks maintains Memorandums of Understanding (MOUs) with local Tribes to consult and foster cultural rituals and access roles while ensuring the well-being of the natural environment.

Clear authority and mandates within California State Parks are essential drivers for decisions and resource allocation related to land management and open space stewardship. Collaborating with their leadership and the Bay Area team presents a significant opportunity for the CCAI to advance its mission in the realm of open space management and resilience.

## County Partnerships

The County has an opportunity to be a critical entity in providing sustained organizational leadership around the CCAI concept in the early phases of the project as the concept is solidified and partners are identified as well as in the long-term as ideas are implemented. Prior to the identification of an anchor partner, the County’s ability to assign staff to oversee and sustain progress will be critical to the sustained success of the effort.

Further coordination and collaboration will be critical on the permitting front. Permit Sonoma and Infrastructure Agencies (Sonoma Clean Power, PG&E, Valley of the Moon, and Sonoma Water) would ideally be committed to streamlining permitting and zoning procedures, thereby expediting CCAI’s development.

In addition to its significant role as a potential sponsoring stakeholder in the project’s early stages, the County’s capacity to initiate discussions for collaborative efforts with neighboring North Bay counties, as well as Mendocino County, emerges as a strategic approach that surfaced consistently during interviews. This collaborative endeavor holds the promise of shared resources and enhancing CCAI’s competitive advantage when pursuing award funding opportunities. The SDC site, with its distinctive attributes, is exceptionally well-suited to attract organizations that maintain field offices but lack a centralized operational hub. Notably, the Napa Resource Conservation District and the Sausalito-based Center for Sea Rise Solutions both exhibit strong potential for strategic partnerships. These organizations have

extensive connections with national research labs and possess numerous links to various sources of public and private funding. The County’s role as a facilitator in these discussions will remain of paramount importance throughout the development of not only the CCAI but also the SDC as a whole. It is particularly advisable that the County stands ready to assume a crucial role in sustaining the early stages of the Business Plan, including funding staff to pursue agreements with interim- or long-term host agencies/anchors.

## State and Federal Partnerships

Forming strategic alliances with established climate State and Federal leaders to include the CCAI in their existing funding applications is a crucial initial step. This approach not only secures crucial investment and generates interest in the ongoing federal climate investments but also positions the CCAI to independently pursue grants in the future. Collaborating with seasoned entities and regional organizations to seek state-level funding is essential to ensure effective access to available resources and align with climate pollution reduction strategies.

The CCAI aligns with numerous funding opportunities that correspond to federal and state programs, which could drive its mission and objectives forward. These opportunities include programs and grants to reduce greenhouse gas emissions, finance innovative energy systems, and address pressing climate challenges. Sources of potential funding include the California



Economic Recovery Fund (CERF), the California Environmental Protection Agency (CalEPA), the California Governor's Office of Business and Economic Development (Cal Go-Biz), as well as federal funding sources like the Environmental Protection Agency (EPA), the Economic Development Administration (EDA), the Department of Transportation (DOT), the Infrastructure Investment and Jobs Act (IRA), and additional DOT funds.

Sonoma County could establish that the CCAI at SDC is a priority for CERF funding, presenting a significant opportunity. CERF Funding, a program developed by OPR, GO-Biz, and LWDA to bolster resilient, equitable, and sustainable regional economies, is integral to the Bay Area CERF Region. The program distributed \$600 Million in California Governor Gavin Newsom's 2021-22 Budget amongst the 13 CERF regions. This allocation aims to ensure that California's economic recovery not only creates high-quality, accessible jobs but also enhances resilience to the impacts of climate change and other global disruptions affecting the state's diverse regional economies. CCAI could be strategically positioned as part of the Bay Area CERF region's planning and deployment.

### Academic Partnerships

As discussed throughout this Plan, educational institutions, research labs, and non-profit organizations all have potential roles to play in the CCAI initiative. Ongoing and sustained discussions regarding collaborations with institutions like Santa

Rosa Junior College, CSU Sonoma State, University of California, and research labs like Scripps and Lawrence Livermore National Laboratory, operated by the Department of Energy, are crucial to substantial progress on the CCAI concept. In addition, it is beneficial to consider not only academic research but also practical involvement of education at CCAI, such as agriculture-related farm-to-school programs, local food banks, and education and training for fire-forward professionals. Three entities having particular relevance to this discussion are profiled below:

**Santa Rosa Junior College (SRJC)** could view the Center for Climate Action and Innovation (CCAI) as an extension opportunity to establish a SRJC presence in Eastern Sonoma County, offering specialized climate action programs with a particular focus on training/certifications programs for electricians specializing in solar microgrid systems and prescribed-fire professionals. This approach could create affordable educational pathways for individuals interested in this work. It could also facilitate the growth of community college partnerships with universities and create the potential for on-site small-scale agriculture training programs.

Additionally, consideration could be given to the establishment of incubator spaces to encourage student enterprises in agriculture majors and related programs. This potential expansion aligns with SRJC's mission to create climate-oriented job training programs and educational opportunities for the people of Sonoma County, which would further the institution's commitment to advancing equity goals in education and environmental sustainability.

Furthermore, SRJC's Shone Farm Program in West County is well-established and stakeholders indicated that the CCAI could be an opportunity to diversify SRJC's educational offerings by developing a campus in the core of Sonoma Valley, expanding the institution's reach, and providing diverse agricultural opportunities that complement existing programs. This opportunity could support the SRJC's dedication to providing a well-rounded educational experience for students in Sonoma County.

**The University of California Natural and Agricultural Resources (UC ANR)** envisions a collaborative effort involving the County, the state-appointed developer, and State Parks to explore the Center for Climate Action and Innovation's inclusion in their statewide network of Research and Extension Centers (RECs). The site's strategic location in Sonoma Valley, within the wildland-urban interface, seamlessly aligns with UC ANR's research focus in this vital area. Realizing this synergy will require a cooperative agreement with the state-appointed developer to establish an equitable business arrangement that recognizes the value of UC ANR's brand and its impact in exchange for land and facilities. Additionally, collaboration with State Parks will be essential to facilitate curated research in both open spaces and core areas. The inclusion of UC ANR could not only strengthen local relationships but also holds the potential to attract private sector partnerships and drive investments in research across their other RECs.

Drawing a parallel, UC ANR is currently in the process of

establishing a REC in Orange County, CA dedicated to urban agriculture and natural resource research. The CCAI holds significant and similar promise, particularly in areas such as biomass/biochar, bio-hydrogen, and Blue Forest insurance research. Notably, California has recently secured a substantial \$1.2 billion grant for bio-hydrogen research, and industry models foresee this emerging technology as a pivotal player in the future of sustainability.

Furthermore, UC ANR's Environmental Stewards program, initiated in 2012, collaborates closely with local Sonoma Valley stakeholders like the Sonoma Ecology Center and Pepperwood. Delivered through community-based partners, who independently determine course fees while contributing to program support, the program has awarded over 1,000 certificates in just three years in response to the increasing demand for comprehensive climate change education. This program, rooted in a blend of physical and social sciences, places a strong emphasis on community engagement and communication skills. To capitalize on its success, expansion and refinement of the program should remain a priority.

**Berkeley Law's Center for Law, Energy & the Environment (CLEE)**, a leading policy and legal think tank based at UC Berkeley, could be important toward defining key initiatives and a larger programmatic mission of the CCAI; this could lead to development concepts and better definition of the required capital stack and phasing over time. This collaboration could also help to ensure that innovative CCAI infrastructure and development does not

become stymied by antiquated policy and regulatory hurdles.

## Infrastructural Agency Partnerships

Collaboration with infrastructure stakeholders—such as Sonoma Water, Valley of the Moon Water District, Sonoma Clean Power, PG&E, Sonoma County Fire District, and Sonoma County Regional Parks—is vital for planning and implementing resilient infrastructure. Involving these agencies, with appropriate incentives and regulations, can motivate the state-appointed developer and attract other national players.

Working with these stakeholders, the CCAI has the potential to become a hub for carbon markets, a center for climate-smart agriculture, and a central gathering point for Community-Based Energy Providers. Key opportunities discussed with these stakeholders include testing and commodifying carbon, understanding energy demand dynamics, job creation, and economic growth.

A potential water partnership between Sonoma Water, Valley of the Moon Water District, and the state-appointed developer could be explored for the Core Area development. A joint strategy could emphasize watershed recharge aspects, water rights, and the complex dynamics of water supply in the context of emergency agreements and on-site resources. Additionally, as discussed in the interview with Sonoma Water, the CCAI could support Sonoma Water's desire for "above and beyond" water and wastewater systems that focus on climate resilience, water infrastructure,

and innovative technologies for water management. This interview illuminated the intersection of water management, climate adaptation, and innovative solutions that could shape the future of the CCAI and the SDC site.

## Private Sector Partnerships

By strategically emphasizing market incentives and the market demand for climate-driven innovation, the CCAI can attract private sector partners eager to participate in pioneering solutions for climate and environmental challenges. Such collaborations promise not only provide financial returns but could also establish opportunities to be at the forefront of groundbreaking innovations that contribute to a more sustainable and resilient future. This alignment of private sector interests with the CCAI's mission creates a mutually beneficial ecosystem where innovation thrives and the pressing needs of the environment are addressed with the vigor and resources they deserve.

Private sector tenants in the CCAI are valuable for a number of reasons, beyond the primary objective of funding and implementing on-site innovations. These include the ability to generate property, sales, and other tax revenues for the benefit of the site and the County General Fund. To the extent the project becomes a point of business or retail sales, revenue generation to the County can be very substantial and assist in both capital and operating goals. Moreover, private sector jobs in knowledge-

intensive industries typically command higher than average wages and could therefore increase local spending levels in the region. Additionally, as a point-of-sale business, private sector entities can attract the public to the site and thereby increase CCAI awareness and education opportunities and the general role of CCAI's as a leader and educator in climate resiliency and action.

## Philanthropic Partnerships

By identifying philanthropic partners whose missions align well with CCAI's objectives, the Center can establish a powerful alliance that transcends mere financial support and fosters long-term sustainability.

One effective approach is to seek support from prominent philanthropic organizations such as the Resources Legacy Fund, Hewlett Packard, and the Sonoma Land Trust. These entities are renowned for their strong commitments to environmental conservation, climate action, and equity-driven initiatives, making them invaluable partners in the early stages of CCAI development. Through strategic collaboration, CCAI can tap into their expertise and financial resources and secure the seed funding necessary to bring its vision to fruition in the near term. Additionally, these partnerships may lead to other collaborations with partners who have demonstrated experience in the climate innovation and stewardship sector.

Philanthropic investors, driven by their missions to invest in climate initiatives and promote equity, often work through

aggregators like the Resources Legacy Fund (RLF). These aggregators serve as catalysts for efficiently channeling resources into projects that align with their core objectives. By positioning CCAI as a prime candidate for such investments, it can tap into a well-established network of funders with shared values and priorities.

Furthermore, CCAI leadership can actively participate in think tanks and forums dedicated to addressing key climate issues. Engaging in these discussions not only raises awareness about the Center but also underscores its commitment to being at the forefront of climate discussions. It positions CCAI as an essential hub for thought leadership and real-world solutions, attracting both financial support and intellectual collaboration from like-minded organizations and individuals.

By weaving a tapestry of partnerships with philanthropic entities, aggregators, and thought leaders, CCAI can secure not only the necessary financial backing but also a network of supporters who share its profound commitment to climate action, innovation, and equity. This approach could support an invaluable framework to support the long-term objectives of the CCAI.

## Community-Based Organizations Partnerships

The potential vision for CCAI could extend beyond being a single-faceted approach; it could be designed to be a hub for non-

profits and a catalyst for cross-sector innovation. This inclusive approach promotes community engagement and collaboration, addressing not only climate challenges but also enhancing habitats and tackling critical infrastructure issues. During our outreach, numerous community-based organizations emerged as potential candidates to establish momentum, attract further investment, and nurture goodwill within the community as discussed below.

The CCAI should consider the opportunity to collaborate with established community non-profit organizations, such as the Sonoma Ecology Center, Community Alliance of Family Farmers (CAFF), Sonoma Land Trust, Pepperwood Preserve, the Audubon Canyon Ranch, and the Bouverie Preserve. These organizations are well-poised to contribute significantly to the success of the CCAI and bring their expertise and community engagement prowess to the table. These and other community-supporting entities are briefly profiled below:

- **Sonoma Ecology Center:** The partnership potential between the Sonoma Ecology Center and CCAI is of significant value. Their shared commitment to creating a sustainable and adaptable campus that benefits regional resilience the supports a diverse ecosystem aligns with CCAI's mission. The Sonoma Ecology Center's presence as one of the last remaining tenants of SDC and their involvement in Economic Impact Analysis of Eldridge Enterprise Redevelopment of the Sonoma Developmental Center (SDC) positions them as strategic partners in advancing a shared vision.

- **Sonoma Land Trust:** With its focus on ecological restoration and improved water systems, the Sonoma Land Trust is a natural partner for CCAI. Their shared objectives create an ideal foundation for working together.
- **Pepperwood Reserve:** Another promising collaboration is with Pepperwood Preserve, which specializes in stewardship, climate data analysis, and ecological education. These areas of expertise complement CCAI's objectives, making Pepperwood Preserve a strong potential partner.

- **State Parks:** As previously discussed, State Parks has great potential for collaboration, with the above organizations and others, particularly with their expertise in managing open spaces to address climate and ecological challenges.
- **Non-Profit Foundations:** Moreover, the opportunity to attract foundation support, particularly from organizations like the Hewlett Foundation's Climate Program, holds great promise.





- **LIFT Economy:** This consulting firm’s economic leadership—with an emphasis on regenerative practices, carbon sequestration, and cooperative ownership models—presents a unique opportunity for SDC to address climate and environmental challenges while simultaneously tackling social issues. Their approach aligns with climate mitigation and job training and offers a holistic solution.
- **Other community non-profits:** Additionally, the concept of place-based resilience hubs and collaborative efforts with under-resourced groups and organizations, like the California Straw Bale Association and Occidental Arts and Ecology Center, demonstrates how SDC can contribute to socioeconomic growth and environmental sustainability concurrently.

By engaging these and other organizations, the center can serve as a demonstration site for collaboration, sustainability, and environmental resilience throughout the region.

## Tribal Partnerships

Exploring collaboration opportunities with local Native American tribes offers a unique and powerful avenue to enrich the mission and success of the Center for Climate Action and Innovation (CCAI). In Sonoma County, seven land-based tribes including the Wappo, Miwok, and Pomo tribes, continue to thrive. By leveraging existing state memoranda and fostering meaningful relationships with indigenous communities, CCAI can offer a platform for these

tribes to celebrate their rich cultural heritage as well as embrace their extensive history in the area.

The CCAI at SDC has the opportunity to support tribal partners in numerous ways. The integration of indigenous ceremony and land management practices as a core principle of CCAI could not only pay homage to the region’s deep-rooted indigenous history but reflects a profound commitment to sustainability and holistic well-being.

Recognizing the importance of tribal access to open spaces and water resources, such as rivers and creeks, is a critical step. This access facilitates the gathering of essential materials, such as willows for basket weaving, acorns for traditional foods, and medicinal plants; according to the Suscol Intertribal Council, many regional tribes have worked to restore access to ancestral lands and resources, including natural material gathering for traditional ceremonies. By granting tribal access to these resources, CCAI could contribute to the preservation of cultural practices and the promotion of indigenous well-being. This collaborative approach aligns with state land management policies and fosters a sense of unity between the center and the local tribes. Further collaboration—with potential partners such as the California Indian Environmental Alliance, an organization deeply committed to environmental stewardship and cultural preservation—will be required to understand the specific needs of tribal partners.

Furthermore, recent tribal action in California has demonstrated the need for the State to take responsibility for land and resource

clean-up. Utilizing unused federal land for forest management and cultural practices promotes healing and mental health within these communities. Collaborative models focused on mental health and wellness form an integral part of the mission of landless tribes. These activities contribute to overall well-being and resonate deeply with the principles of CCAI. Memorandums of consultation could hold great importance, as they grant tribal access and influence while acknowledging their intrinsic rights and heritage and should be considered as the CCAI moves forward.

By embracing the unique cultural perspectives and environmental stewardship of Native American tribes, CCAI can work to strengthen Sonoma County’s commitment to climate action and social equity and its tribal partners. This collaborative approach not only enriches the Center’s mission but also underscores its dedication to fostering a harmonious relationship with indigenous communities.

# Implementation & Funding

## Signal Government Prioritization, Build Trust, and Partner Well

It's crucial to communicate government commitment to the CCAI to attract partners and investors. Our outreach efforts to stakeholders have underscored the significance of forging strategic alliances between public entities and institutional or private stakeholders. These synergistic partnerships are poised to enhance competitiveness when pursuing grant funding opportunities. Public sector support at both the county and state levels will send a clear and powerful signal to potential funders and collaborators and work to mitigate market uncertainty. One of the greatest issues our Team discovered in our outreach is “siloing,” where public agencies, research teams, and the private sector operate in isolation to tackle climate change. To best position of the CCAI is as an effective institution bringing these entities out of their silos, as siloing hampers effective climate action and innovation. Fostering cross sector collaboration is imperative within the CCAI. Initially, the Team recommends that the County consider providing interim leadership through dedicated staff to continue the development and implementation of this Business Plan.

Trust and regional collaboration with local entities will be instrumental in building a foundation for attracting statewide

and federal support. Demonstrating a strong commitment to regional climate action and cultivating trust among stakeholders both helps to gain public support while alleviating fears from potential partners about entering a new market and geographic area. Establishing near-term momentum and cultivating local partnerships will not only lead to mutually beneficial solutions but also help secure an institutional anchor.

Overall, the response among stakeholders familiar with Sonoma and past efforts around the Bay Area's innovation space has been positive. For example, Egon Terplan, Chair of Regional Planning at UC Berkeley's College of Environmental Design, has recognized and supported the notion that the CCAI's locational attributes are strong for a climate adaptation demonstration site. The site's unique blend of proximity to the Bay Area's capital and its rural setting for ecological research presents both a compelling opportunity and a challenge for securing state funding. By seeking private investment and forming strategic partnerships—with entities like the California Food and Drug Administration, academic institutions like local junior colleges and the University of California, and national laboratories such as Lawrence Livermore—new pathways and partnerships can be established and inspired by past successes, such as the Buck Center and other projects noted in supporting case studies (See Case Studies).



Photo Sources: The Sonoma Index-Tribune ((Robbi Pengelly/Index-Tribune)  
<https://www.sonomanews.com/article/news/sonoma-city-council-to-demand-more-options-on-sdc/?artslide=0>

## Real Estate Demand

The Center for Climate Action and Innovation (CCAI) can assume a pivotal role in advancing the priorities outlined in the SDC Specific Plan by becoming a leading employer and a compelling tenant, especially in a subdued commercial real estate market. It holds the potential to serve as a stable employment anchor within the envisioned community at the site, which can be invaluable as the community takes shape. While a comprehensive economic driver demand analysis is essential for the CCAI's viability at SDC, current indications suggest that, in the short term, attracting Owner-User driven real estate activity is more likely. Later, as demand is demonstrated, a demand-driven speculative market may follow.

The SDC site's unique location off the 101 Corridor, nestled in the heart of wine country, positions it favorably for hosting retreats and conferences in a setting globally renowned for its beauty and accessibility to major metropolitan areas. These attributes, coupled with the site's prime assets for climate innovation and the demonstrated commitment from the County and anchor tenants, create an enticing environment that may attract major public and private sector entities that wouldn't typically consider the County as their primary location.

Historically, the 101 Corridor has supported the County's population and business community but experienced a slowdown in tech expansion after an initial surge in the 1980s, exemplified by HP's optical labs and other facilities. Tech investment in

campus facilities eventually declined due to globalization incentives, with several regions outside the traditional tech hubs in the Bay Area, such as Santa Rosa (HP), Sacramento, Roseville, Elk Grove (Apple), and Folsom (Intel), benefiting from this trend. Santa Rosa's commercial growth primarily caters to the metropolitan population, with relatively modest office rents and a relatively small R&D market segment. However, external investor attraction to the CCAI holds the potential to generate economic activity surpassing typical scenarios in the region.

Insights from climate-focused interviews, including organizations like The Resources Legacy Fund, the Napa Resource Conservation District (NRCD), Pepperwood Preserve, Audubon Canyon Ranch, and the Good Fire Alliance, emphasize the need for specialized training and facilities to support wildfire prevention efforts and having access to facilities capable of efficiently managing, processing, and disseminating climate data, including Air Quality and Fire Management Data. Proper positioning and funding support from entities like the federal and state Environmental Protection Agencies (EPA and Cal EPA) and the Department of Energy (DOE), and their key laboratory partners like National Renewable Energy Lab (NREL) and Lawrence Berkeley Labs (LBL), could position Sonoma County as a hub for climate data and information. This could contribute to increased prosperity, economic development, and resilience, aligning with the Sonoma Economic Development Board's objectives of diversifying the economy beyond tourism.

This strategy aligns with the Economic Development Board's

efforts to enhance economic resilience and diversity in Sonoma County, particularly in response to potential industry downturns, by exploring opportunities in manufacturing and technology. However, the provision of workforce housing stands out as a critical component for the success of the CCAI Program. Sonoma County faces a pressing housing shortage and an affordability crisis, particularly affecting its essential agricultural workforce. Moreover, with the goals of bolstering economic resilience and diversifying economic sectors amid ongoing challenges, there's an increasingly urgent need for housing to support the workforce driving the climate-related economies highlighted in this study. Integrating the CCAI at SDC into the Bay Area's California Economic Recovery Fund (CERF) region emerges as a pivotal solution to address these housing challenges. This strategic approach not only aligns with regional grant funding plans but also plays a crucial role in attracting and training the skilled workforce essential for the sustained growth and success of the program. Santa Rosa Community College and Sonoma State University are poised to play significant roles in providing the necessary skills training, particularly for specific sub-industries.

In the early years, a traditional demand analysis is unlikely to demonstrate significant demand. However, non-traditional demand from existing climate players could yield opportunities that attract nontraditional real estate investment, especially if attractive ground lease terms are offered.

There is also the potential for workforce training demand, with climate-related job training centers driving the need for facilities

and land. This demand for job training and a skilled labor force, including expertise in good fire management and microgrid training, was mentioned by key interviewees such as Santa Rosa Community College, Sonoma State University, and Audubon. Workforce training could be a crucial component of the CCAI's success.

## CCAI Development Models

As the CCAI continues to develop over time, its evolution will be influenced by various factors, including pressing scientific climate issues, the composition and interests of both public and private stakeholders, the availability of funding, and more. Some elements of the Center are more likely to be profitable than others, emphasizing the need for a strong anchor institution or tenant with substantial underwriting capabilities, often referred to as “patient money.”

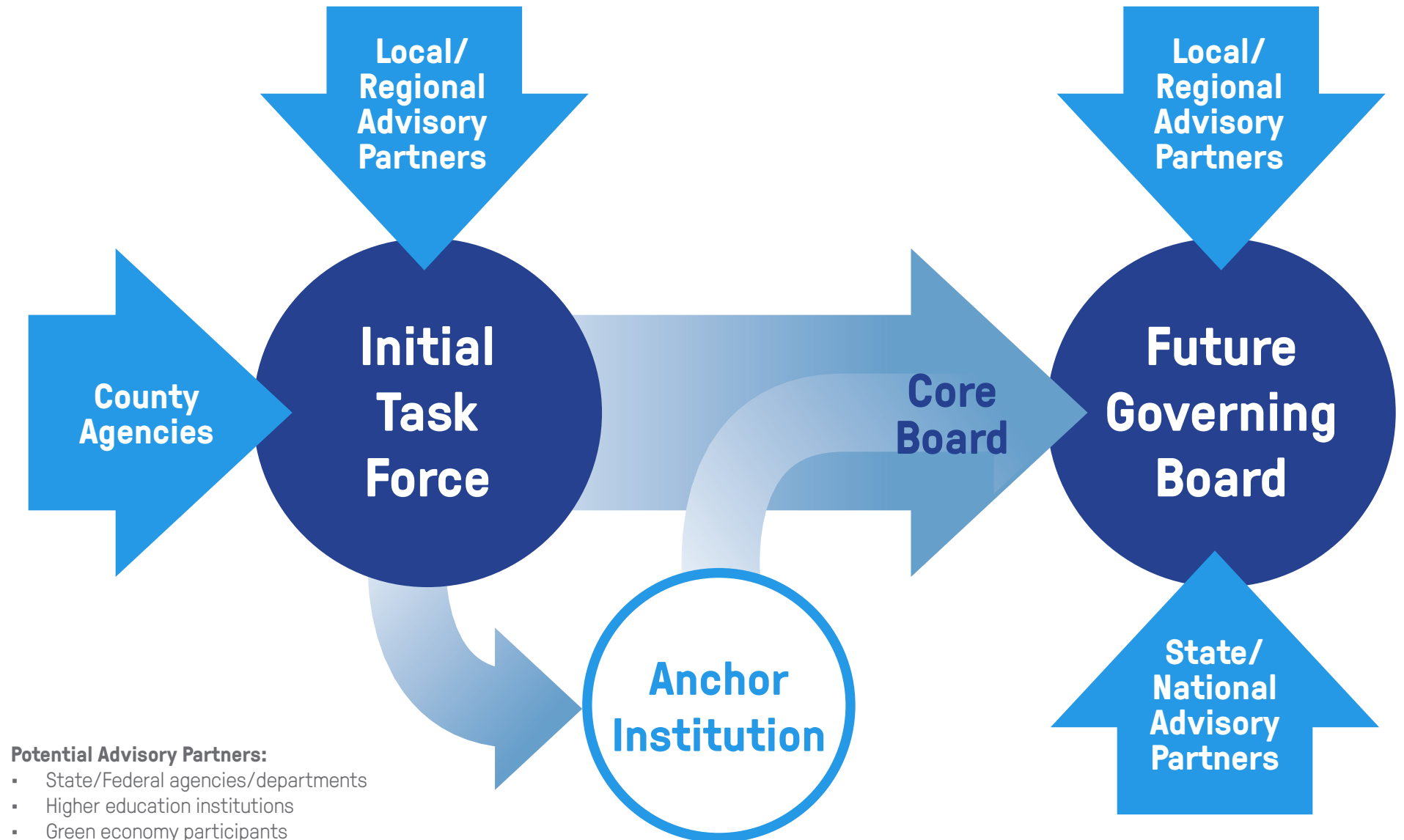
The primary objective of the anchor institution will revolve around the development of the Center’s programmatic elements. This includes identifying priority areas of focus, potential collaborators, and understanding the funding profiles of various ventures. Clarity in these programmatic elements will drive the physical development of the CCAI and define the level of usage intensity, ultimately determining the annual operating and maintenance costs of the center. As these operational and capital elements are refined over time, it’s essential to emphasize that the whole is greater than the sum of its parts. Long-term partnerships between county and state agencies will likely be necessary to provide the private sector with the opportunity to conduct applied research and invest in cutting-edge climate solutions, contributing to the Center’s cash flow over time.

The growth trajectory of the CCAI remains uncertain, primarily due to the early planning stage relative to larger site development discussions and the absence of a clear definition of prospective

anchor tenant(s). One possible growth model envisions the early days of the Center as a smaller “seed” operation, aiming to both attract an anchor tenant and refine and implement its business plan, while securing near-term capital from various sources and encouraging occupancy among a diverse set of private, non-profit, and government tenants. This incremental or staggered development model carries the risk that a prolonged period of gradual growth could consume primary development areas of the SDC, potentially hindering the landing of a “game changer” – a major, large-scale institution or entity dedicated to advancing cutting-edge climate technologies. The fact that the project already has a specific plan designation is advantageous in this regard. This designation can facilitate attracting an anchor tenant to the site, which may necessitate financial and regulatory levers, such as providing free land.

In addition, if a University of California campus or state-run institution were to become a serious partner, there is an opportunity to collaboratively work with the state and the state-appointed developer to devise a more unique and innovative land stewardship, management, or ownership arrangement specifically tailored to the needs of a core tenant. In the near term, it is crucial for the County to collaborate with the state and infrastructure agencies to clarify which regulatory and financial tools are available to bridge the gap between what the state-appointed developer can afford for baseline infrastructure and what is required to lay the groundwork for a forward-looking climate center, capable of attracting the type of interest described in this Business Plan. This commitment in the form

## Potential Organizational Structure Evolution



### Potential Advisory Partners:

- State/Federal agencies/departments
- Higher education institutions
- Green economy participants
- Agricultural participants
- Policy organizations

of government incentives and removal of regulatory barriers could prove to be the critical measure in closing the gap for project development. In the long-term university or institutional partnership would play a crucial role in the project's sustained success and ability to establish a unique land stewardship/management/ownership model to attract a long-term tenant.

## CCAI Initial Task Force

A CCAI Task Force could be formed to serve as the lead entity overseeing the initial development of the CCAI, potentially in partnership with the state-appointed developer, State Parks, and one or more State agencies, such as the California State Coastal Conservancy and UC ANR, or another foundation. The founding group could include a variety of advisory members from interested local and regional entities, such as Sonoma State University, Santa Rosa Junior College, Pepperwood Preserve, and other aligned organizations.

The initial task will be to focus on securing an initial source of ongoing operating funds. Key elements to be funded include:

- **Anchor tenant recruitment:** This will require a dedicated staff person with sufficient budget to fund aggressive marketing strategies.
- **Interim development of the CCAI:** This could include a combination of meeting facilities and incubator spaces to begin to generate organic growth of affiliated sectors within

the CCAI.

Once an anchor tenant has been identified and committed to CCAI, the constitution of the Task Force will likely be reorganized with primary control shared between the new anchor tenant and the controlling entities from the original organization. Along with the reconstitution of the controlling members of the Lead Agency, the list of advisory members will likely expand geographically to represent the potential larger national/global prominence of the CCAI and specific areas of expertise.

## CCAI Anchor Institution

An identified anchor institution typically has established revenue sources aligning with its mission and internal business plan. Depending on the specific objectives of the anchor and its partners, the anchor could seek to attract a range of core tenants capable of contributing to net positive operating revenue. Additionally, based on specific objectives, space for start-up incubation and/or acceleration could then be provided, with shared facilities, technical advisory, and other services offered by the CCAI and its consortium of core tenants. As tenants progress through these supporting programs, there's an opportunity to retain them as future market-based tenants leasing space at the CCAI.

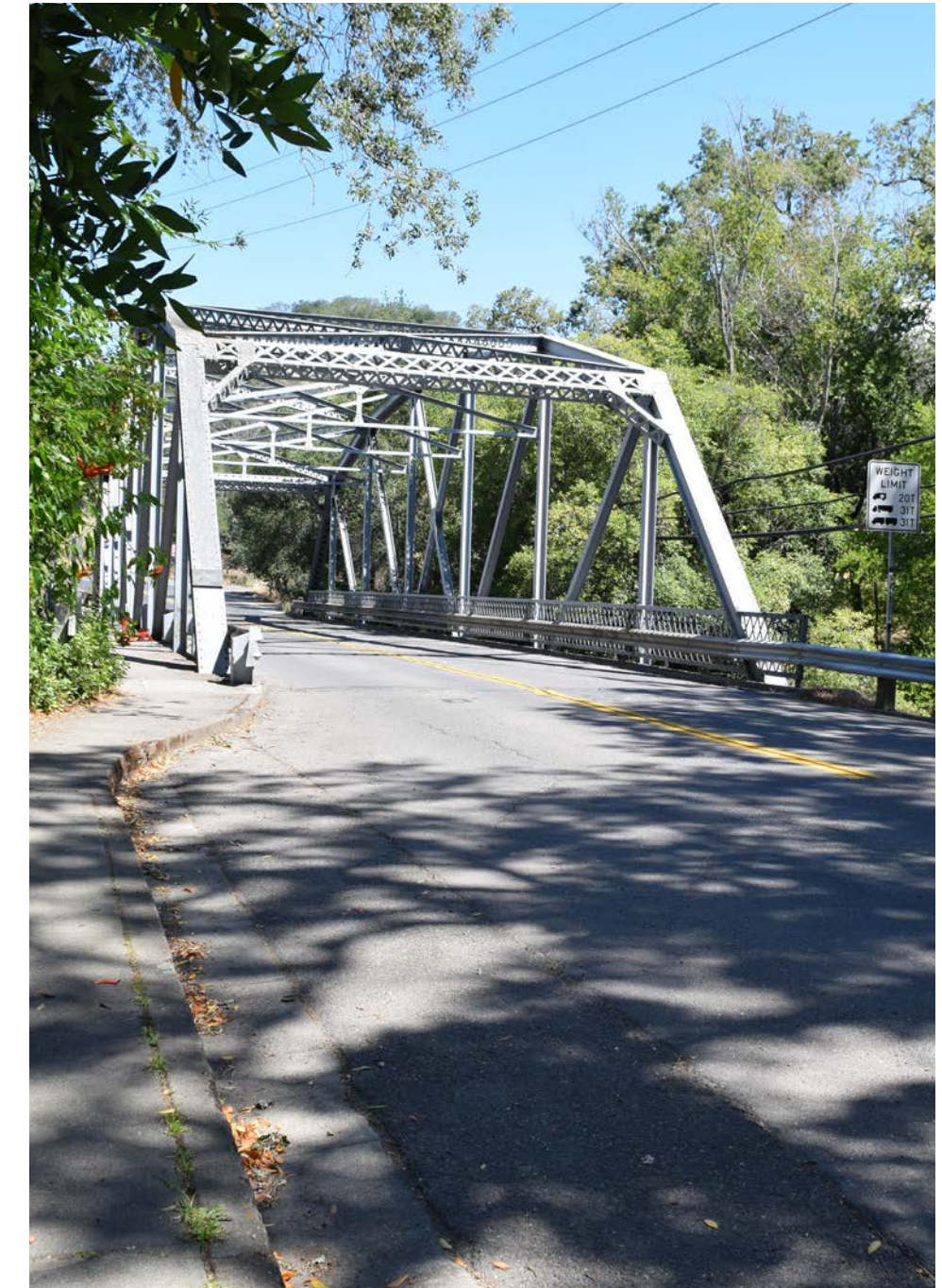
This overall model relies on a broad and diverse range of funding sources, including exploring local philanthropic funding opportunities. Ideally, traditional funding models should be

leveraged to offset costs for emerging climate entrepreneurs and innovators, providing benefits to larger, more mature entities, and vice versa which ensures equitable access to the CCAI and ensures contributions from a more diverse range of stakeholders. Additionally, traditional funding models can be harnessed to offset costs for emerging climate entrepreneurs and innovators, granting them access to this collaborative space and its leadership and funding potential. This inclusive approach involves a delicate balance of private sector investments alongside funding for community meeting rooms, conference facilities for climate-related non-profits, and educational programs, both within the open spaces and the buildings.

## CCAI Governing Board

Effective governance is intrinsically linked to achieving the overarching mission and attracting funding prospects, with the nature of the anchor institution playing a pivotal role. The most favorable institutional outcomes often arise from a synergistic blend of viewpoints, ideas, and funding sources encompassing a mix of public and private entities. These include both established and emerging organizations, involving industry, academia, and the public.

Establishing an interagency governing board for the Center for Climate Action and Innovation (CCAI) is an essential recommended next step in facilitating transparent decision-making, policy formulation, and effective oversight. The board members should



bring not only local insights and expertise but also have extensive connections to various fields of climate work. These relationships can position the CCAI as a high-profile initiative that attracts a wide range of public, philanthropic, and private investments. The Board should have a coordinated relationship with the County in the nascent phase(s) of the project for purposes of identifying and pursuing grants and key partnerships as well as completing other initial actions to establish the CCAI.

One exemplary model that demonstrates the value of such a board is the Presidio's Trust Board, appointed by the federal government. This board plays a crucial role in attracting philanthropic and pro-bono resources, showcasing the tremendous influence a board can have on funding and support for a project.

Based on insights from University of California Agriculture and Natural Resources (UC ANR) and Napa Resource Conservation District, who are actively involved in programs with key entities such as Lawrence Berkeley Labs and the National Renewable Energy Labs, a strategic early-stage step will be the appointment of a board of local climate leaders, political figures, philanthropic leaders, as well as other prominent individuals will help harness their collective expertise and network connections to elevate the CCAI's profile and align it with available federal and state funding opportunities. This board would serve as a vital conduit for resources and support to advance the CCAI mission.

The New York Climate Exchange on Governor's Island could serve as a model for CCAI in terms of governance and organizational

structure (see Case Studies). The Trust for Governors Island (Trust) is a 501(c)(3) non-profit organization, created by the City of New York in 2010 and is responsible for the planning, operations, and ongoing development of Governors Island. The Trust has worked with the National Park Service and Friends of Governors Island for the past two decades to develop park space, rehabilitate historic buildings in partnership with educational and cultural tenants, and invest in infrastructure.

In 2021, the City of New York and the Trust for Governors Island launched a global competition to identify a climate-focused vision and institution to be hosted on the island. The selected cross-sector consortium for the New York Climate Exchange (Exchange) will be led and anchored by New York Stony Brook University (SBU). The Exchange's Core partners and voting members of the board of directors, who have committed financial and/or programmatic support, include Boston Consulting Group, IBM, Georgia Tech, the University of Washington, Pace University, the Pratt Institute, and Good Old Lower East Side. In addition, the Exchange is collaborating with the following non-voting Affiliate Partners as members of their board of directors: Duke University, NYU, the University of Oxford, Rochester Institute of Technology, Maritime College, CUNY, and Moody's Corporation.

Advisory Partners include Brookhaven National Laboratory and urbs |Urban Systems. Nonprofit and Community Partners include the American Geophysical Union, the American Museum of Natural History, the Association for a Better New York, the Aspen Global Change Institute, the Beam Center, the Billion Oyster Project, New

York State Building and Construction Trades Council, The Climate Museum, Earth Matter NY, the Educational Alliance, Green City Force, Grow NYC, Harvest-works, the Lower Manhattan Cultural Council, the Museum of the City of New York, the NYC Employment and Training Coalition, NEW (Nontraditional Employment for Women), Solar One, The Point Resort, The Urban Assembly, New York Harbor School, the Waterfront Alliance, and We ACT for Environmental Justice.

Coalition Partners include the Bronx Chamber of Commerce, the Brooklyn Chamber of Commerce, Climate Jobs NY, the Laborer's International Union Local 79, the Manhattan Chamber of Commerce, the New York Building Congress, the Queens Chamber of Commerce, the Service Employees International Union Local 32BJ, the Staten Island Chamber of Commerce, and the Variety Boys and Girls Club of Queens.

Funding for the Exchange will come in part from previously allocated City capital (\$150 million) and gifts from the Simons Foundation (\$100 million) and Bloomberg Philanthropies (\$50 million). The remaining costs are to be covered by the consortium of Core Partners.

Facility development will be funded through The Exchange. The Trust for Governors Island through the City of New York has committed \$100 million to the project. The remaining funds for construction and operations will come from partners, grants, and philanthropic donations. SBU already has secured an initial commitment from a private foundation to match up to \$100

million in other donor support.

The Exchange is set to offer a Climate Solutions Fellows program for graduate students, a Climate Solutions Semester as well as a Climate Solutions Internship for undergraduates, Climate Solutions Workforce Training, K-12 programming for field trips and camps, and a Climate Solutions Culture Assembly to drive artistic expression and community engagement.

As part of the project, ferry service will be offered every 15 minutes, with a new, hybrid ferry set to begin transporting passengers in the summer of 2024.

## CCAI at SDC Development Agreement

Given the unique nature of the Land Agreement between the State and their appointed Developer, County oversight plays a crucial role in ensuring its adherence. Continued collaboration between the County, the state-appointed Developer, and potential third-party stakeholders involved in realizing the CCAI is highly advantageous. This ongoing liaison remains pivotal as the site's buyer progresses through entitlements, including a Development Agreement.

The County may consider entering into a Development Agreement for the CCAI at SDC with the state-appointed Developer or another development entity. A Development Agreement would formalize an arrangement delineating the terms, responsibilities, and

commitments among the CCAI and its partnering stakeholders. This Agreement could serve as the foundation for collaboration and coordination among the key entities engaged in the development, funding, and operation of the CCAI. A Development Agreement is envisioned to encompass the following key aspects:

- 1. Mission Alignment:** The agreement should clearly articulate how each partner aligns with the mission and objectives of the CCAI, emphasizing their dedication to advancing climate action and innovation.
- 2. Roles and Responsibilities:** It defines the specific roles, responsibilities, and contributions of each partner, encompassing financial commitments, resource contributions, and any in-kind support.
- 3. Funding Mechanisms:** The agreement outlines the financial arrangements, including funding sources, disbursement schedules, and any revenue-sharing models, ensuring the secure and effective utilization of funds.
- 4. Governance Structure:** It establishes the governance structure of the CCAI, specifying decision-making processes, leadership roles, and mechanisms for resolving disputes or conflicts.
- 5. Timeline and Milestones:** The agreement sets forth a timeline for the development and implementation of the CCAI, along with key milestones and performance metrics to track progress.

- 6. Reporting and Accountability:** It includes provisions for regular reporting and accountability mechanisms to ensure transparency and the achievement of agreed-upon goals.
- 7. Intellectual Property:** If applicable, the agreement addresses ownership and use of intellectual property, data sharing, and the protection of proprietary information.
- 8. Termination and Exit Strategy:** Contingency plans are established in case the partnership needs to be terminated or modified, outlining the process for winding down activities and addressing any remaining obligations.
- 9. Compliance with Regulations:** The agreement ensures compliance with all relevant federal, state, and local regulations, permitting requirements, and environmental standards.
- 10. Amendment Process:** Procedures for amending the agreement, should circumstances change, are included to allow for flexibility and adaptation.

A well-structured Development Agreement for the CCAI at SDC would be designed to foster collaboration, mitigate risks, and provide a clear framework for achieving the shared vision of advancing climate action and innovation within the community. It serves as a foundational document to guide the successful establishment and operation of the Center for Climate Action and Innovation.



# Essential Funding Roadmap

- ### FEDERAL
- Army Corps of Engineers
  - Department of Energy (DOE)
  - Department of Transportation Build America (DOT Build America)
  - Economic Development Administration (EDA)
  - EDA Infrastructure Grant (Case Study: UC MBEST)
  - Environmental Protection Agency (EPA)
  - National Oceanic and Atmospheric Administration (NOAA)
  - Federal Grant Funding Program: Outdoor Legacy Recreation Partnership Program
  - Ongoing Federal Appropriations (Case Study: Presidio)

- ### PRIVATE
- Corporate fund/investor allocation
  - Impact investor funds
  - Venture capital
  - Development equity, construction, and take-out debt
  - Conference Fees/Hotel Accommodations
  - Asset leasing (Case Studies: Presidio, Asilomar)
  - Service district charge (Case Study: Presidio)

- ### STATE
- California State Coastal Conservancy
  - California Department of Water agency
  - Governor's Office of Business and Economic Development (Go Biz).
  - Museum/scientific/educational institution (Case Study: Pepperwood)
  - Office of Planning and Research/Strategic Growth Council.
  - Community Economic Resilience Fund (CERF)
  - Infrastructure and Revitalization Financing Districts (IRFDs)
  - Statewide Community Infrastructure Program (SCIP)
  - Cap-and-Trade Program
  - State Grant Funding Program: Infill Infrastructure Grant Program
  - State Grant Funding Program: Land and Water Conservation Fund
  - State Grant Funding Program: Active Transportation Program
  - Integrated Climate Adaptation & Resiliency Program (ICARP) Grant Programs

- ### LOCAL
- City or County General Fund Allocation (Case Study: Governor's Island)
  - Enhanced Infrastructure Financing Districts (EIFDs/Climate Resilience District)
  - Mello-Roos Community Facilities District (Infrastructure and/or services)
  - Infrastructure and Revitalization Financing Districts (IRFDs)
  - Community Revitalization and Investment Authorities (CRIA)
  - Benefit Assessment District
  - Disposition of Public Land/Assets
  - General Fund Contributions/Dedications
  - Voter Approved Tax Measures
  - Development Impact Fees
  - Other Fees & Exactions (including "in-lieu" fees)
  - Revenue Bond
  - Municipal Lease Financing

- ### PHILANTHROPIC
- Museum/scientific/educational institution (Case Study: Pepperwood)
  - University Endowment/Other Funds (Case Study: Governor's Island)
  - Dedicated Foundation(s) (e.g., Bloomberg)

## Funding: The Bigger Picture

Exploring a diverse range of financial and funding tools is paramount to ensure the sustained growth of the CCAI. During the initial stages, collaboration with established climate leaders will play a pivotal role in maximizing immediate funding opportunities, while simultaneously prioritizing mid- and long-term funding prospects through the development of a comprehensive strategy that encompasses multiple sources of support. This strategic approach should seamlessly extend from the Business Plan, delving into funding channels at both the federal and state levels, ready to secure the necessary resources when the state appointed developer and potential tenants are prepared to advance.

Given the expansive nature of the SDC redevelopment endeavor, precise details such as the nature, dimensions, scheduling, and expenses associated with the facilities remain undetermined at this juncture. These particulars will become clear as the programmatic elements of the CCAI continue to evolve. As dialogues advance with crucial collaborators, the blueprint for facilities and associated infrastructure will necessitate alignment with the primary research focus areas. Valuable insights garnered from our collaborative engagements with both public and private partners will facilitate more granular analyses of funding feasibility and strategies for securing grants and alternative revenue streams.

The following sections therefore provides a high-level overview

of a spectrum of funding sources, encompassing federal, state/ local, and private entities. It is essential to harmonize major federal resources, such as EDA, DOE, and others, with strategic state and local sources, employing innovative techniques and approaches. In some instances, like the Presidio Trust, the leverage of land and building assets can generate income as part of a specific funding strategy intricately woven into the overall mission and governance structure. Jean Fraser, CEO of the Presidio Trust, pointed out that the Presidio's mission is to keep the National Parks of the Presidio open for public enjoyment, this mission is enabled by and dependent on the business tenants at the Presidio being cash flow positive. These sources can be complemented by a range of private, mission-driven philanthropic resources. Permanent, dedicated revenue streams, such as federal or state appropriations, are generally preferred over one-time grants and should be a major priority.

## Federal & State Funding Opportunities

At present, there exists an extraordinary global, federal, and state commitment to understanding and addressing the challenges posed by climate change. At the highest levels of government, numerous federal agencies are deeply engaged in providing financial support for a wide spectrum of climate change research initiatives. These agencies include the Environmental Protection Agency (EPA), the Economic Development Administration (EDA), the National Oceanic and Atmospheric Administration (NOAA), the Department of Energy (DOE), and the Department of



Transportation (DOT).

The recently enacted Federal Inflation Reduction Act has allocated substantial funding for endeavors related to climate, offering promising opportunities for the CCAI. These allocations encompass critical areas such as forestry ecosystems, land management, clean energy, and transportation/mobility. Various funding mechanisms are available, including grants, partnerships, tax incentives, and interest incentives, among others. By forging collaborations with established stakeholders, the CCAI at SDC can position itself competitively to access immediate funding opportunities.

State programs like CAL Go-Biz prioritize investments that nurture California’s entrepreneurial ecosystem, particularly when they create economic prospects for underprivileged socio-economic groups. Interviews conducted during this process have assigned critical importance to the economic development and job training components of the SDC and CCAI vision. Additionally, the state emphasizes collaboration with Native American communities, aligning with the strategic position of CCAI at SDC and Sonoma County goals. We heard from many of the stakeholders, including the Suscol Intertribal Council, that the Native American communities in Sonoma and surrounding counties have a strong interest in realizing spiritual and commercial aspirations in the area and a CCAI at SDC is uniquely positioned to aid that effort.

The Community Economic Resilience Fund (CERF) was developed by the Governor’s Office of Planning & Research (OPR), GO-Biz,

and California Labor & Workforce Development Agency (LWDA) to promote a sustainable and equitable recovery from the economic distress of COVID-19 by supporting new plans and strategies to diversify local economies and develop sustainable industries that create high-quality, broadly accessible jobs for all Californians. Phase I for FY 2022-25 awarded each of 13 regions of California with \$5 million grants for development of sustainable industries. Sonoma County is part of the Bay Area CERF Region, and the CCAI could be positioned as a multi-County North Bay Climate resiliency center.

As various funds are allocated and integrated into state and local projects, states are crafting their climate programs to complement and extend federal funding sources. California, for instance, has established a \$3.7 billion climate resilience package comprising five major grant programs administered through its Office of Planning and Research (OPR) and the Strategic Growth Council (SGC). The mission of the CCAI is well-aligned with these programmatic objectives. With a strategic, collaborative approach, the CCAI should be well-positioned to secure funding from this initiative, emphasizing the urgency of identifying partners and developing a mission.

Notably, the California Strategic Growth Council (SGC) oversees more than \$2 billion in California Climate Investments (CCI) funds. The CCI program channels proceeds from California’s greenhouse gas (GHG) emissions cap and trade program into efforts aimed at reducing GHG emissions and delivering economic, environmental, or health benefits. Approximately two-thirds of CCI’s funds are

allocated to GHG reduction measures, with the remainder directed towards activities such as sustainable housing and communities, transformative communities, water efficiency and drinking water, agriculture, sustainable forests, wildfire prevention and response, and coastal resilience.

Collaborating with established organizations and regional partners to seek state-level funding is pivotal for effectively accessing available resources and aligning with climate pollution reduction plans. CCAI offers multiple opportunities for funding alignment with federal, state, and private programs to advance its mission and objectives, spanning areas such as greenhouse gas reduction, energy system financing, climate challenge solutions, and grants to further its initiatives.

In the near term, a valuable opportunity lies in convening a roundtable of financial and policy experts, serving to raise awareness about the CCAI among climate investors and policymakers at both the statewide and national levels. The interview with the Milken Institute underscores the potential for organizing a financial innovation lab, as detailed in The Milken Institute interview in Appendix B. Additionally, it will be important to maintain alignment with the priorities and timing of institutions like the Resources Legacy Fund, which acts as a significant aggregator overseeing philanthropic funding for climate programs. The recognition by Resources Legacy Fund of the CCAI’s value at SDC as a viable location for critical investment in fire-forward communities underscores its potential significance to attract grant funding.

## Local Government Funding Mechanisms

The CCAI could consider utilizing funding mechanisms, such as EIFDs and Mello-Roos CFDs tax financing, to bridge the funding gap between conventional infrastructure and innovative climate-focused infrastructure. These tools can not only facilitate cooperation with the state-appointed developer but also serve as an incentive to attract key tenants to the CCAI. Importantly, these tools must be combined with traditional developer debt and equity sources. Other resources may include various tax credits related to historical structures and affordable housing.

Traditional tools, such as community facility districts utilizing special taxes, can be seamlessly integrated with emerging public finance instruments, most notably the Enhanced Infrastructure Financing District (EIFD). The EIFD serves as a specialized funding mechanism, empowering local governments to generate funds for infrastructure projects through a variety of revenue streams, including tax increment and public-private partnerships. These EIFD resources can assist the state-appointed developer in bridging the gap between conventional residential infrastructure and a forward-looking, climate-centric approach, fostering a connected infrastructure network between the community and the CCAI.

Climate-specific legislation provide opportunities to bolster and strengthen funding options beyond traditional and emerging techniques such as the EIFD. For example, in 2022, CA State Senator Dodd authored and successfully passed SB 852 that was

signed into law by Governor Newsom. This bill empowers cities, counties, or special districts to establish climate resilience financing districts. Under SB 852, Climate Resilient Districts gain the authority to embark on a wide range of projects and programs aimed at addressing the multifaceted challenges posed by climate change. These projects encompass critical areas such as wildfire mitigation, sea-level rise adaptation, management of extreme heat and cold events, drought resilience, flood mitigation, and other related climate resilience measures. The legislation specifically designates Sonoma Regional Climate Protection Authority (Sonoma RCPA) as a climate-resilient district upon board approval.

The financing mechanisms available to these districts under SB 852 are diverse, allowing jurisdictions to raise essential revenue for their climate resilience initiatives. These mechanisms include tax increment (TIF) funding, voter-approved supplemental property taxes, sales tax, property benefit assessments, and fees. Using TIF funding to advance sustainable and resilient projects align the goals of the CCAI.

The alignment between CCAI goals and SB 852 not only underscores the legislative support for climate resilience efforts but also serves as a pivotal driver for the realization of the CCAI's vision. It signifies a significant opportunity for leveraging these financing tools to create a comprehensive climate community and advance the objectives set forth in the Business Plan.

Layered and partnered financing structures are common in

public-private partnerships (P3). The Aggie Square project at the UC Davis Medical Center in Sacramento provides a useful example; in this case, UC Davis, the anchor institution, has attracted a major developer (Wexford), which is developing space for university ownership and occupancy as well as space for private sector collaborators. An Enhanced Infrastructure Financing District (EIFD) will generate tax increment to be used to fund facilities and infrastructure. The City of Sacramento will use a Mello-Roos Community Facilities District (CFD) bonds as a form of tax-exempt, land-secured debt, with the tax increment serving as the source of debt service. A similar approach could be used in the context of CCAI, in conjunction or in addition to SB 852 as discussed above. Depending on fiscal results of using the County's property tax increment as debt service, it may be necessary to also create a CFD to supplement.

In most cases, the special taxes generated by a Mello-Roos Community Facilities District (CFD) serve as the preferred means to fund essential backbone infrastructure supporting site development, in addition to grants and traditional private sector debt and equity sources. CFDs offer flexibility in allocating costs to specific uses, ensuring that special taxes, combined with ad valorem 1% property taxes and any additional bond overrides, remain reasonable relative to the overall asset's value, whether it be a home or commercial building. Additionally, a CFD can be structured on a pay-as-you-go basis to fund annual services, alongside or in lieu of infrastructure debt service, a useful approach for publicly owned or tax-exempt structures.

Strategic considerations for space allocation between the public and private sectors are pivotal for generating assessed value and enabling tax-exempt bonds to finance backbone infrastructure. If there are insufficient capital resources to underwrite necessary infrastructure, the County retains the option to establish an Enhanced Infrastructure Financing District (EIFD) on the site. This allows it to dedicate a portion of property tax increments (and/or other revenues) to underwrite debt service related to the construction of backbone infrastructure and other facilities. If the EIFD should cause an annual fiscal deficit due to sequestering property taxes, for example, the above-referenced CFD could supplement funds available for County services.

Because these mechanisms and approaches could impact the overall economics of site development, it is imperative that the residential and CCAI components of the project be fully integrated through an Infrastructure Finance Plan with a related fiscal analysis to ensure feasible approaches to building and maintaining site infrastructure over time.

## Key Local Funding Mechanisms: EIFDs & CFDs

### Enhanced Infrastructure Financing District (EIFD):

This is as a way to generate extra money for building things like facilities and infrastructure. It sets aside a portion of the County's taxes generated from the project's growth to pay for improvements.

### Mello-Roos Community Facilities District (CFD) Special Taxes:

Having a CFD in place does three things: 1) it can be used to supplement County taxes used to provide services to the project; 2) it can be used to support larger bonds for infrastructure than an EIFD alone; and 3) it provides an easy way to issue debt within an EIFD, even if Special Taxes are not collected.

The key thing is that these mechanisms allow for money generated by the project (the County's tax increment and additional Special Taxes) to pay back loans funding project infrastructure. So, it's like using the project's success to cover the costs of these bonds.

## Key Federal, State, and Local Project Financing Options

Financing Mechanism or Program	Description
Enhanced Infrastructure Financing District (EIFD)	An EIFD captures incremental increases in property tax revenue from future development otherwise accruing to the county's General Fund that can be used for to finance public capital facilities or other specified projects of communitywide significance.
Mello-Roos Community Facilities District (CFD)	Allows local agencies to create assessment districts and raise funds through special property taxes. Provides financing for public capital investment and operating improvements within the district through tax-exempt bonds sponsored by a public agency.
Community Economic Resilience Fund (CERF)	The CERF was developed by the Governor's Office of Planning & Research (OPR), GO-Biz, and LWDA to promote a sustainable and equitable economic development. Grants of \$5 million each were distributed to each of 13 defined regions of California in FY 2022-23.
Infrastructure and Revitalization Financing Districts	Established for a given project area, IRFDs may fund the purchase, construction, improvement, seismic retrofit, or rehabilitation of any real or other tangible property with an established useful life of 15 years. A district may be formed by a city, county, or joint powers authority on former military base. Participating agencies may be any agency that collects property tax. Debt of the agency may be issued under the authorization of the IRFD, or through Mello-Roos CFDs or the Improvement Bond Act of 1915.
Community Revitalization and Investment Authorities (CRIA)	Allows a city, county, or a special district to establish a CRIA to revitalize disadvantaged communities through planning and financing infrastructure improvements and upgrades; economic development activities; and affordable housing via tax increment financing based, in part, on the former community redevelopment law. The entities forming a CRIA must produce and adopt a CRIA Plan (Plan) that guides its revitalization programs and authorizes receipt and expenditure property tax increment revenues.
Statewide Community Infrastructure Program (SCIP)	Provides a pooled tax-exempt bond-financing program for development-impact fees and costs of public infrastructure such as roads, water, sewer, storm drainage, and parks for commercial, industrial, retail, and multi- and single-family residential developments. SCIP is administered by the California Statewide Communities Development Authority (CSCDA) - a joint powers authority sponsored by the League of California Cities and the California State Association of Counties. Under the SCIP, CSCDA issues bonds secured by property assessments.
Benefit Assessment District	Benefit Assessment Districts allow cities, counties, or special districts to finance the costs of needed services by assessing area property owners, based on benefit received by funded improvements or facilities. Most common types of benefit assessments include: Fire suppression assessments; Flood control assessments; Storm drain assessments; Water assessments; Sewer assessments; Sanitation assessments.
Disposition of Public Land/Assets	Local jurisdiction may dispose of its property assets (through sale or ground lease).

Financing Mechanism or Program	Description
General Fund Contributions/ Dedications	A dedication of General Fund property or sales tax revenue, low interest loans, one-time contributions, and other discretionary financial contributions.
Voter Approved Tax Measures	Voters can approve parcel or sales tax increases for a specific purpose or general revenue purposes. Annual revenue stream may be used as repayment source for issuance of municipal bonds (Special Tax or Tax Allocation Bonds).
Cap-and-Trade Program	Cap-and-Trade permits are both allocated and sold at an annual auction, the proceeds of which go to specific programs according to the State budget. In order to access these funds, a developer/jurisdiction's project must be eligible through an existing program. Cap-and-Trade auction proceeds have funded high-speed rail projects, affordable housing and sustainable communities program(s), transit and intercity rail projects, and low carbon transit operations.
Development Impact Fees	One-time fees charged to new development to cover "fair share" infrastructure cost needed to accommodate growth. Often a source of local "matching" funds.
Other Fees & Exactions (including "in-lieu" fees)	There are a number of other mechanisms such as project-specific fees and exactions that could be used as funding mechanisms.
Private Capital/Developer Equity	Developers may fund portion of infrastructure and facilities with private capital and/or commercial lending. A portion of such investment may be subject to reimbursement.
Revenue Bond	Allows local agencies to issue bonds supported by enterprise revenues (rates charged to customers for enterprise utilities or services). Generally limited to enterprise infrastructure (e.g. water, sewer, parking); could be a source of area-specific financing using a local rate surcharge.
Municipal Lease Financing	An agreement to lease a public facility, with shares in the flow of lease revenue sold as a means of generating upfront revenue for the facility.
State Grant Funding Program: Infill Infrastructure Grant Program	Assists in the new construction and rehabilitation of infrastructure that supports higher-density affordable and mixed-income housing in locations designated as infill. For Qualifying Infill Projects and large multi-phased Qualifying Infill Projects, eligible applicants include nonprofit and for-profit developers and as a joint applicant with the developer, a locality or public housing authority.
State Grant Funding Program: Land and Water Conservation Fund	Grants to assist in planning, acquisition and development of recreation lands. Examples of projects include: development of a new park, expand existing parks, renovate existing or create new outdoor facilities, provide community space for healthy lifestyles, engage community residents during the project concept and design process, and increase the inventory of California Wetlands under federal protection that also meet public outdoor recreation needs.

## Key Federal, State, and Local Project Financing Options, Continued

Financing Mechanism or Program	Description
State Grant Funding Program: Active Transportation Program	The ATP consolidates various transportation programs, including the federal Transportation Alternatives Program, state Bicycle Transportation Account, and federal and state Safe Routes to School programs into a single program to: enhance biking and walking safety and mobility; greenhouse gas reduction; enhance public health; Inclusion of disadvantaged communities; and others.
Federal Grant Funding Program: Economic Development Administration	EDA will make construction, non-construction, and revolving loan fund investments under the Public Works and Economic Adjustment Assistance (EAA) Programs. Grants made under these programs will leverage regional assets to support the implementation of regional economic development strategies designed to create jobs, leverage private capital, encourage economic development, and strengthen America's ability to compete in the global marketplace.
Federal Grant Funding Program: Outdoor Legacy Recreation Partnership Program	Grant program through the Land and Water Conservation Fund to assist with acquisition and development of land for public parks and other outdoor recreation spaces in disadvantaged neighborhoods. The first and last round was funded in 2014, however this program could be funded in the future.
Integrated Climate Adaptation & Resiliency Program (ICARP) Grant Programs	ICARP is a statewide collaboration advancing equitable, integrated climate adaptation and resilience solutions across local, regional, and state efforts. Grant programs support local, regional, and tribal climate adaptation and resilience.

## Philanthropic Funding Opportunities

To attract philanthropic funding for the Center for Climate Action and Innovation (CCAI), it's crucial to explore local philanthropic opportunities, especially considering the growing interest in climate-focused initiatives within Sonoma County. By strategically collaborating with philanthropic organizations that share mission-driven goals and are actively engaged in California, particularly in Sonoma, CCAI can accelerate its support and funding efforts.

In Sonoma County, philanthropic money has already been flowing into the region through local groups like the Audubon Canyon Ranch, Sonoma Land Trust, and Pepperwood Preserve. These organizations have a proven commitment and experience with environmental and climate-related causes, making them potential allies in advancing CCAI's objectives. Additionally, powerful statewide players like the Resources Legacy Fund have been aggregating climate-related philanthropy, further highlighting the potential for collaborative partnerships. Given this philanthropic momentum in Sonoma County and the state at large, securing their support for CCAI is highly feasible.

Through strategic collaboration with these philanthropic entities, CCAI can tap into their expertise and financial resources, securing the seed funding necessary to bring its vision to fruition in the near term. These organizations often possess a deep understanding of the local landscape and can provide valuable insights and connections. Moreover, such partnerships may open

doors to additional partners with demonstrated experience in the climate innovation and stewardship sector, further strengthening CCAI's position as a leader in the field.

## Private Sector Funding Opportunities

To justify capital investment, the private sector will be looking for alignment with the CCAI's overall mission (as it evolves). Initial private sector entities would ideally be comprised of both large, well-capitalized secondary anchor institutions with knowledge of and relationships with any primary public anchors attracted to the site. Such entities will often look to construct specific owner-user (build-to-suit) facilities unique to their specialized operations. Over time, these users can attract additional smaller private sector operations, which may be candidates for multi-tenant space developed on a speculative basis. Attracting these groups of private sector tenants will require the recognition of market opportunities leading to certainty around revenue forecasts, cost control, and risk quantification. In the case of CCAI, primarily an innovation center, the presence of a major research institution can offer added certainty regarding long-term research commitments that support partnerships and attract private investment. Innovation centers thrive when they involve a diverse range of entities, both large and small as well as public and private, leading to a variety of private sector firms seeking partnerships with such anchor institutions.

Generating income from core tenants with substantial financial

resources can provide financial flexibility for the site's owner. This, in turn, allows small businesses, emerging entrepreneurs, and researchers to actively participate, following a model akin to the one employed at the SF Presidio Trust. Among these stakeholders, start-ups often require venture capital (VC) and flexible lease terms. While start-ups are integral to the innovation ecosystem, they may not independently contribute enough project value to cover operational and capital expenses. In this context, well-established private sector firms can collaborate with start-ups, offering valuable networks that include educational institutions and financiers while the CCAI plays an important role as facilitator.

Ensuring the success of the CCAI involves establishing communal meeting spaces, hosting events, and providing programming. These aspects should be outlined in a well-structured operational business plan once core tenants are onboarded. Additionally, expanding local housing options to accommodate a diverse workforce while mitigating any adverse impacts on nearby residents is of equal importance. It is essential for the County and housing advocates to remain engaged in facilitating sustainable solutions for labor and goods delivery.

Attracting private sector investment to the CCAI requires a strong demonstration of demand and a promising return on investment. To achieve this, the CCAI should actively engage with the private sector and form partnerships that drive innovation across critical domains like carbon sequestration, wildfire prevention, habitat conservation, water management, mobility solutions, and clean energy technologies.

Actions that can entice private sector investment in the CCAI include providing creative approaches to land disposition to reduce upfront costs. This may involve offering land at a discount in exchange for availability payments or structuring ground leases to support start-ups. In some cases, land can be sold or leased to end users on a phased basis, ensuring that facilities and capital costs are scaled appropriately and providing for shared resources. Additionally, under specific circumstances, land costs may be written down if justified by the generation of other economic benefits.

These innovative approaches not only reduce the upfront financial burden on private investors but also align their interests with the long-term success and sustainability of the Center. Offering manageable packages in line with realistic timeframes is another key incentive, allowing private sector investors to participate at a pace that matches their business strategies, fostering financial stability and predictability.

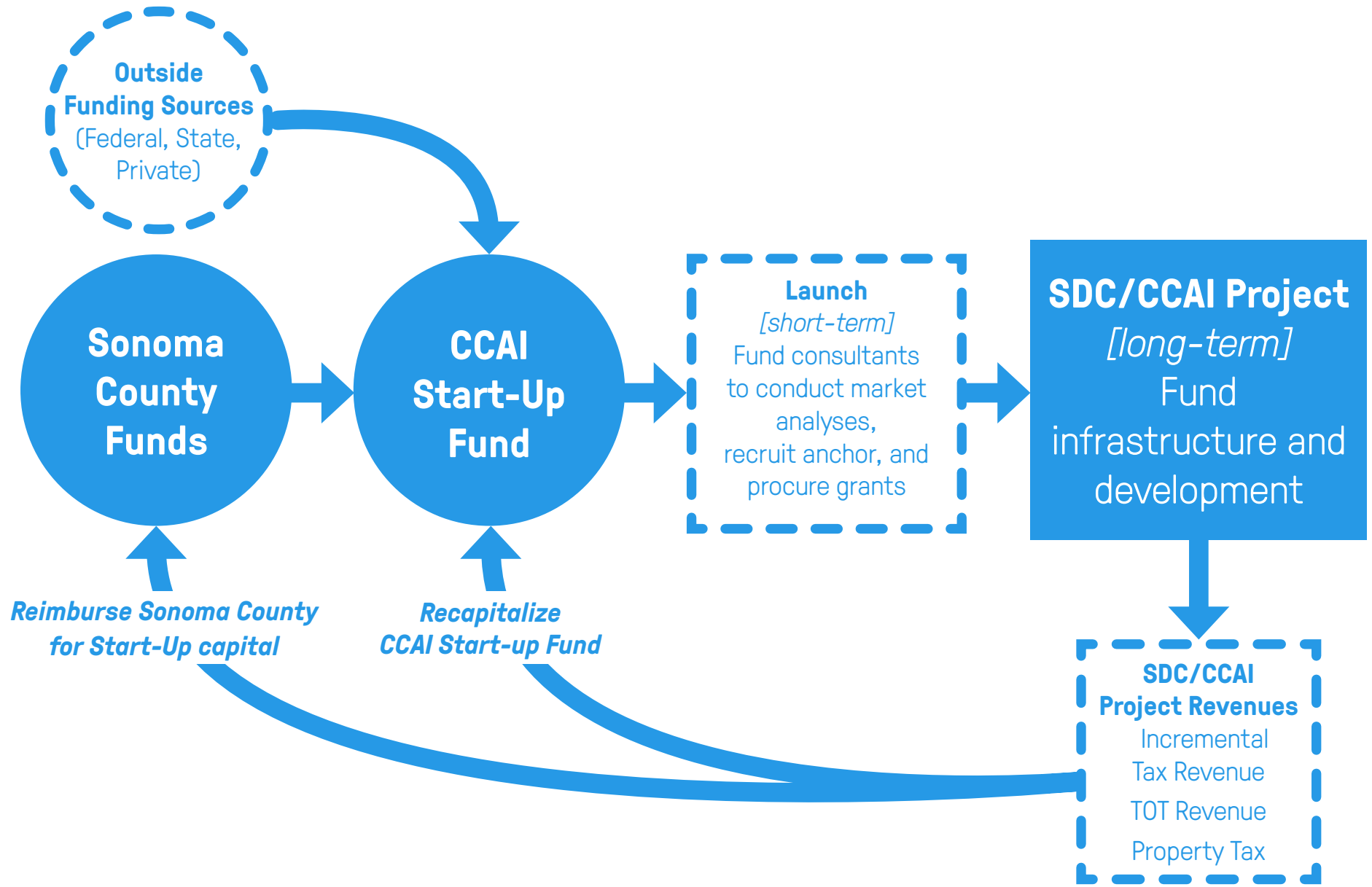


### Launching & Sustaining the CCAI: Revolving Loan Fund Model

Although it is recommended that Sonoma County continues to collaborate and sustain the project concept in the early years, there will be an increasingly pressing need to find an anchor institution, be it public or private, and a further pressing need to define an operational funding concept for the CCAI. While there is much work to be done prior to designating a preferred approach, the concept of a revolving loan fund structure could be a candidate for consideration at CCAI.

The diagram on the right provides a simplified example of a revolving loan fund model (or a tax increment financing structure, such as an EIFD), can provide initial budget allocation and supplemental seed funds from a variety of sources can combine to create one or more project funding opportunities. With a variety of potential players involved, including government, private sector (including impact investors), and non-profits, funds could be organized and awarded to candidate applicants based on mission alignment factors and other criteria. To the extent that certain grants and loans to the fund may be forgivable based on specific conditions, there is an ability for the fund to grow over time as the CCAI develops and expands. There are many variations of this model as the governance structure and specific, interested entities begin to emerge.

### Revolving Loan Fund Model





## Site Framework

The Sonoma Developmental Center site includes diverse and valuable assets to develop the Center for Climate Action and Innovation. The setting is perhaps one of the most beautiful locations in Sonoma Valley and was initially selected as the site of the SDC for its therapeutic benefits resulting from its connections to nature. Through thoughtful design and strategic planning, the site's vast landscapes, building resources, and infrastructural systems can support a variety of goals and programs for the CCAI, SDC Specific Plan, and Sonoma County.

This section highlights these site conditions and explores a range of opportunities for the CCAI. The section begins with an overview of the site's context, landscape opportunities, and building opportunities. Following this background is an introduction to a range of key building, site, and infrastructural opportunities across the six climate categories: biodiversity, agriculture, wildfire, water, mobility, and energy. Connections to the Specific

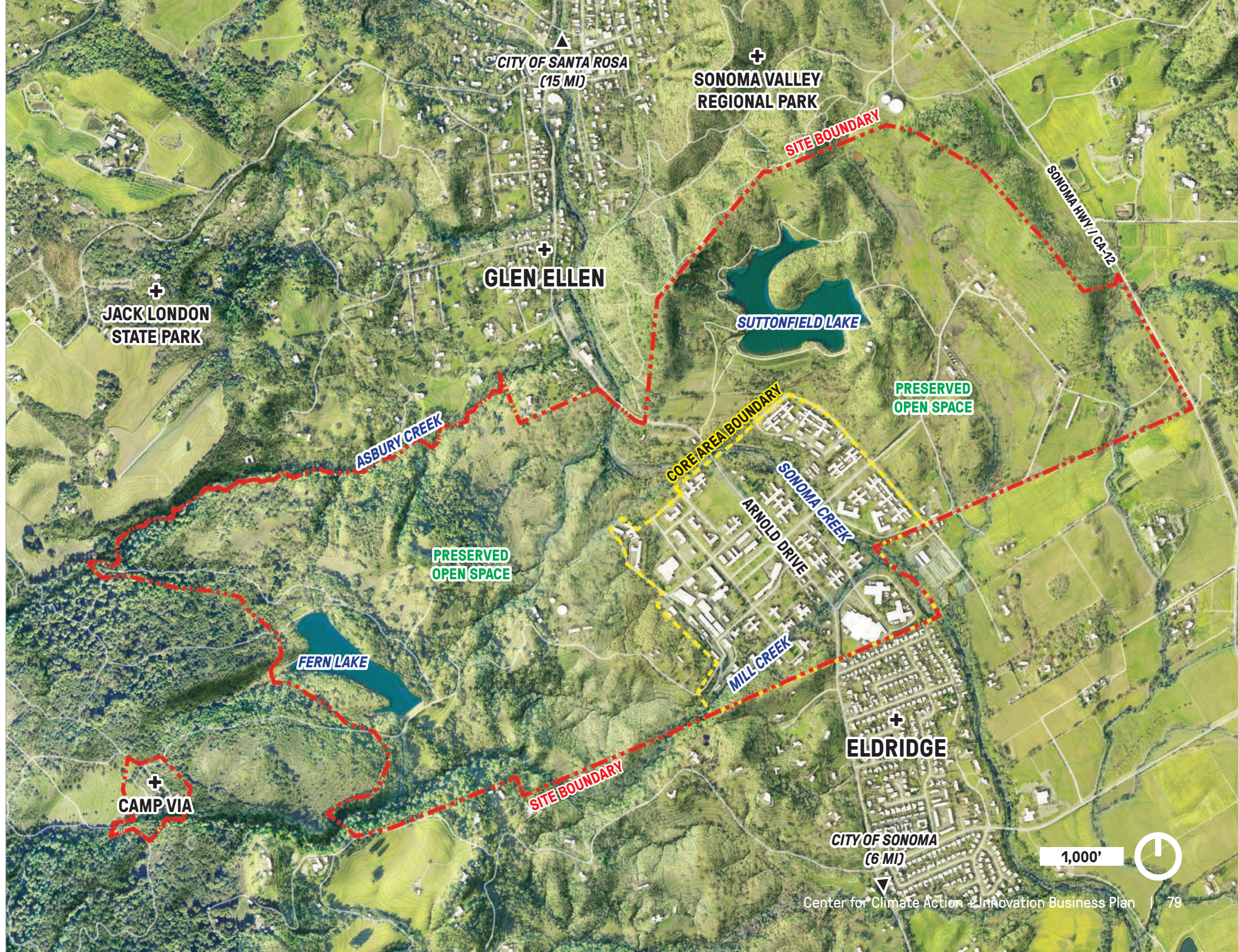
Plan are highlighted.

These opportunities are intended to be read as a series of insights and inspirations into how the CCAI might be developed, with potentially a primary focus on a single theme (i.e., water), a multi-faceted focus across all the themes, or something in between. Each opportunity is intended to demonstrate exemplary and innovative proposals but will also require further exploration and development based on eventual CCAI partnerships, objectives, and funding. These opportunities key options based on site assets but are not a commitment to any specific land use at any specific location. Any opportunities that are pursued by the state-appointed developer and any partners must be consistent with the SDC Specific Plan and any state obligations for the site; it will further require coordination with public entities that hold and manage the Preserved Open Space, such as California State Parks.

# Site Context

The Sonoma Developmental Center (SDC) is situated at the heart of Sonoma Valley, approximately six miles north of the City of Sonoma and about 15 miles south of Santa Rosa. This expansive site spans nearly 1,000 acres and is located in unincorporated Sonoma County, along both Arnold Drive and Sonoma Highway. SDC is situated between the unincorporated communities of Glen Ellen and Eldridge and adjacent to the ecologically and culturally significant Sonoma Valley Regional Park and Jack London State Historic Park. The site is surrounded by vineyards, agricultural lands, and land preserves and framed by the picturesque backdrop of Sonoma Mountain.

The SDC site is divided into two main areas. The Core Area encompasses approximately 180 acres and includes nearly 300 buildings, most of which are currently vacant. The Sonoma Ecology Center remains in operation within the Core Area. The Preserved Open Space covers approximately 765 acres and provides a diverse range of agricultural, recreational, and ecologically valuable natural areas. This section explores landscape, building, and infrastructural opportunities for the CCAI across both the Core Area and the Preserved Open Space.





## Landscape Opportunities

The landscapes throughout the site showcase Sonoma County's rich biological diversity, ranging from former agricultural lands to forests, oak woodlands, native grasslands, wetlands, and riparian corridors, including Sonoma Creek.

Various landscape amenities and conditions could contribute to a wide variety of opportunities supporting a CCAI mission. Trails, beaches, overlooks, and connections to nearby parks create a substantial foundational open space framework to build expanded opportunities. The range of existing and proposed landscapes—from more formally-designed landscapes within the Core Area to more natural areas within the Preserved Open Space—could support a wide variety of CCAI demonstrations, designs, research, and stewardship opportunities.



## Building Opportunities

The Specific Plan includes a Land Use Diagram and Designations outlining objectives for each classification and designating appropriate land uses for various locations on the site. The following summary includes Land Use Designations that may be appropriate for CCAI development and building opportunities:

- **Employment Center** areas provide opportunities for a mix of office, research and development, creative services, micro-manufacturing, institutional, and other supportive uses.
- **Flex Zone** areas provide opportunities for a broad mix of commercial, residential, office, hospitality, and entertainment uses.
- **Institutional** opportunities for a retreat/conference center could include event spaces, workspace/office, museums, conference areas, and supportive uses such as food preparation, retail spaces, and short-term housing.
- The **Hospitality Overlay Zone** provide opportunities for a “boutique” hotel of up to 120 keys with mix of lobby space and publicly accessible retail, food, and other support uses.

Stakeholder survey responses and interviews demonstrated support for innovative CCAI building spaces which may not be currently be provided by the real estate market. This includes industrial spaces including fabrication and machine shops

(potentially with prototyping equipment), clean manufacturing facilities, research/development labs and facilities, educational classrooms, offices, demonstration areas, exhibit spaces, auditoriums, conference facilities, co-working spaces, meeting rooms, restaurants, and markets. The CCAI has the opportunity to provide these types of space and—through housing development in the SDC Core Area—accommodate short- or long-term housing needs for CCAI employees, researchers, scholars, students, or visitors.

The CCAI buildings could be designed and constructed with innovative materials and techniques that promote climate resiliency and align with County goals for the site. This approach could not only reduce the carbon footprint of the buildings but could also be used to test new ideas and demonstrate sustainable architecture to the building users and the public.

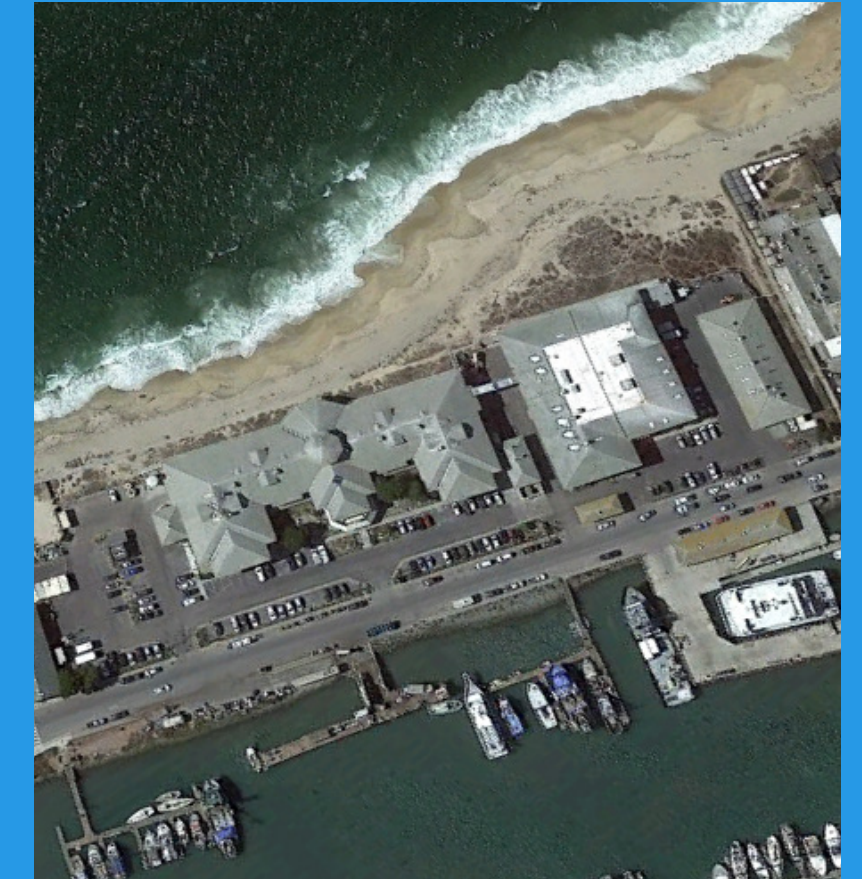
The following section begins with brief case studies highlighting adaptive reuse and new construction approaches, similar to what might be pursued with CCAI buildings. This is followed by a review of specific buildings within the SDC Core Area that may be adaptive reuse opportunities to host CCAI functions; this is then complemented by a section highlighted parcels within the Core Area that could host new construction for CCAI buildings.



### Humanities & Social Studies Center, Grinnell College *Adaptive Reuse Brief Case Study*

This Center combines 15 humanities departments into one location. The project includes 52,000 GSF of adaptive reuse and 125,000 GSF of new construction and boasts 77% Energy Use Intensity Savings. The project features a 3-Story Atrium, 4 Pavilions, 40 Classrooms, and 145 Faculty Offices.

Photo Source:  
Page Southerland Page, <https://www.pagethink.com/client/grinnell-college/humanities-and-social-studies-center>



### Monterey Bay Aquarium Research Institute *New Construction Brief Case Study*

MBARI is a nonprofit oceanographic research center dedicated to advancing marine science and engineering to understand our changing ocean. The facilities employ a workforce of approximately 220 scientists, engineers, and operations and administrative staff.

Photo Source:  
Google Earth

## Building Opportunities Adaptive Reuse

The following adaptive reuse opportunities highlight contributing and historical existing buildings on the SDC Campus. The buildings are listed by name and assigned numbers 1 - 16. Building locations are indicated by numbers on the site map. Additional information (including photo, approximate building area, and Specific Plan Land Use designation) is listed for each building in the following pages.

Considerations such as accessibility, condition of facilities, Specific Plan compatibility, and suitability for envisioned uses should be considered as adaptive reuse opportunities are evaluated.

- 1** Wagner Building
- 2** Dunbar
- 3** Activity Center (Blue Rose Cafe)
- 4** Main Building P.E.C.
- 5** Main Store Room
- 6** Maintenance Shop
- 7** Chamberlain
- 8** Palm Court
- 9** Pines
- 10** McDougall
- 11** Fire House
- 12** Boiler/Chiller Plant/Power House
- 13** Acacia Court 1
- 14** Acacia Court 2
- 15** Hatch
- 16** Walnut



# Building Opportunities Adaptive Reuse



**1**  
**Wagner Building**  
 11,054 SF  
*Specific Plan*  
 Land Use: Employment Center



**2**  
**Dunbar**  
 10,271 SF  
*Specific Plan*  
 Land Use: Employment Center



**3**  
**Activity Center (Blue Rose Cafe)**  
 7,074 SF  
*Specific Plan*  
 Land Use: Employment Center w/ Hotel Overlay



**4**  
**Main Building P.E.C.**  
 +/- 20,000 SF  
*Specific Plan*  
 Land Use: Employment Center w/ Hotel Overlay



**5**  
**Main Store Room**  
 20,645 SF  
*Specific Plan*  
 Land Use: Employment Center



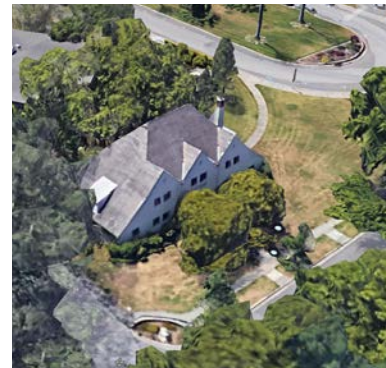
**6**  
**Maintenance Shop**  
 11,294 SF  
*Specific Plan*  
 Land Use: Employment Center



**7**  
**Chamberlain**  
 37,373 SF  
*Specific Plan*  
 Land Use: Flex Zone



**8**  
**Palm Court**  
 6,157 SF  
*Specific Plan*  
 Land Use: Flex Zone



**9**  
**Pines**  
 5,718 SF  
*Specific Plan*  
 Land Use: Flex Zone



**10**  
**McDougall**  
 15,000 SF  
*Specific Plan*  
 Land Use: Employment Center w/ Hotel Overlay



**11**  
**Fire House**  
 4,447 SF  
*Specific Plan*  
 Land Use: Flex Zone



**12**  
**Boiler/Chiller Plant/Power House**  
 7,515 SF  
*Specific Plan*  
 Land Use: Flex Zone



**13**  
**Acacia Court 1**  
 5,272 SF  
*Specific Plan*  
 Land Use: Flex Zone



**14**  
**Acacia Court 2**  
 4,587 SF  
*Specific Plan*  
 Land Use: Flex Zone



**15**  
**Hatch**  
 8,525 SF  
*Specific Plan*  
 Land Use: Flex Zone



**16**  
**Walnut**  
 10,061 SF  
*Specific Plan*  
 Land Use: Flex Zone

# Building Opportunities New Construction

New construction opportunities include development sites where SDC Specific Plan Land Use Classifications support land uses as envisioned for the Center for Climate Action and Innovation.

Construction opportunity sites are listed and assigned numbers 1 - 11. Approximate site area and Specific Plan Land Use are listed and site locations are indicated by number on the site map.

These opportunities do not identify a specific land use project.

- 1 Opportunity Site #1**  
+/- 1.6 Acres  
*Specific Plan Land Use:*  
Employment Center
- 2 Opportunity Site #2**  
+/- 2.4 Acres  
*Specific Plan Land Use:*  
Employment Center
- 3 Opportunity Site #3**  
+/- 3.0 Acres  
*Specific Plan Land Use:*  
Employment Center
- 4 Opportunity Site #4**  
Site 4a: +/- 2.5 Acres  
Site 4b: +/- 1.0 Acre  
*Specific Plan Land Use:*  
Employment Center /  
Hospitality Overlay
- 5 Opportunity Site #5**  
+/- 1.7 Acres  
*Specific Plan Land Use:*  
Employment Center
- 6 Opportunity Site #6**  
+/- 0.7 Acres  
*Specific Plan Land Use:*  
Flex Zone / Hospitality  
Overlay
- 7 Opportunity Site #7**  
+/- 2.1 Acres  
*Specific Plan Land Use:*  
Flex Zone
- 8 Opportunity Site #8**  
+/- 1.9 Acres  
*Specific Plan Land Use:*  
Flex Zone
- 9 Opportunity Site #9**  
+/- 1.0 Acres  
*Specific Plan Land Use:*  
Employment Center /  
Hospitality Overlay
- 10 Opportunity Site #10**  
+/- 3.0 Acres  
*Specific Plan Land Use:*  
Flex Zone
- 11 Opportunity Site #11**  
+/- 3.0 Acres  
*Specific Plan Land Use:*  
Flex Zone

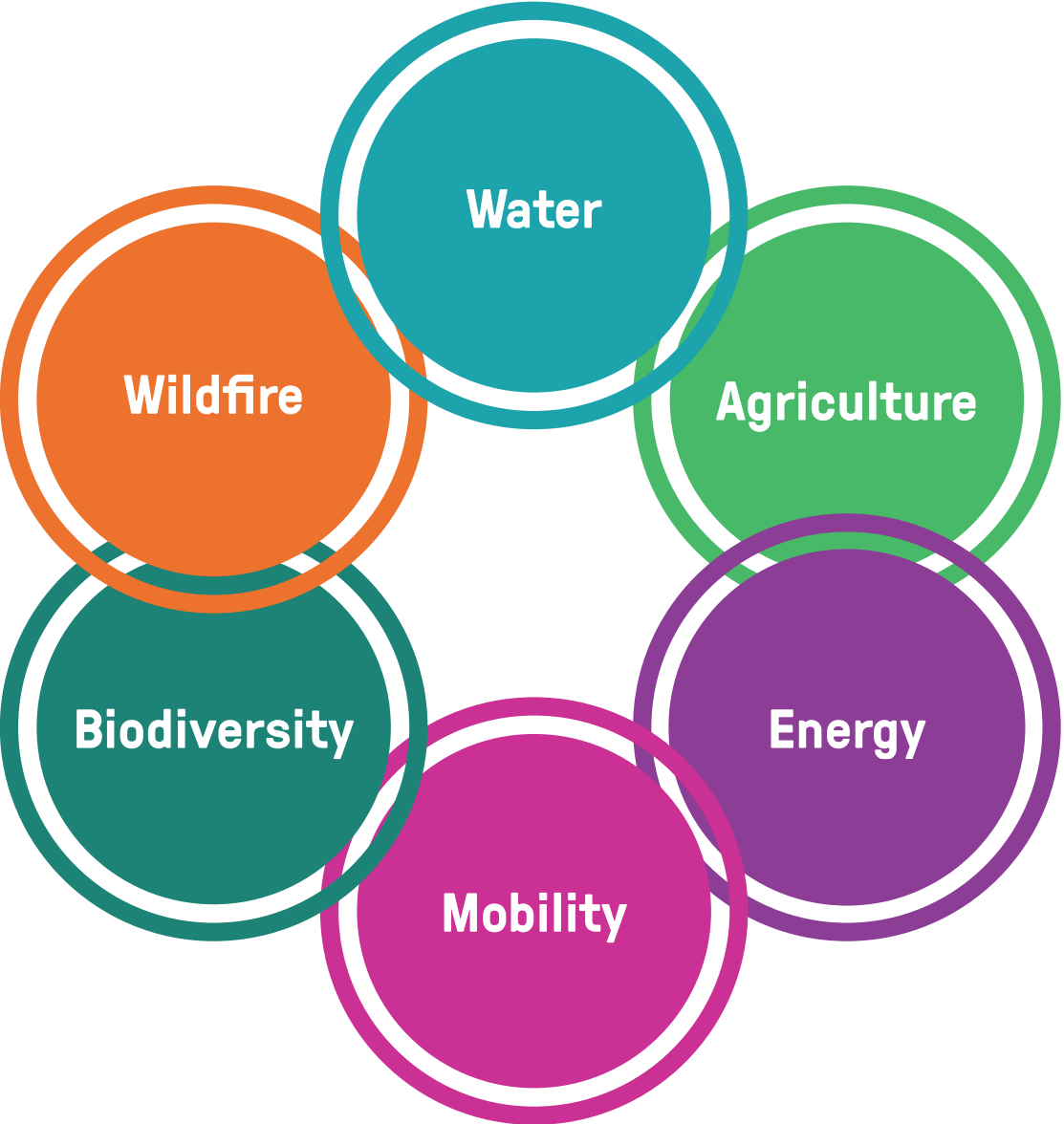


# Potential CCAI Themes

With a vast range of assets and conditions, the SDC site presents a significant opportunity to develop the Center for Climate Action and Innovation with a wide or specific range of climate focus areas. The following pages introduce a variety of landscape, building, and infrastructural opportunities across the six key climate categories: biodiversity, agriculture, wildfire, water, mobility, and energy.

Each of these opportunities are intended to demonstrate ways the site could be used to showcase best practices or research new innovations for climate adaptation or mitigation. These opportunities are intended to be read as a series of insights and inspirations into how the CCAI might be developed with potentially a primary focus on a single theme (i.e., water), a multi-faceted focus across all the themes, or something in between.

This is not an exhaustive list of CCAI opportunities, or even the only climate categories that might be explored, but rather an introduction to the creative ways the site could be developed or stewarded to support the mission of the CCAI. Each opportunity will require further exploration and development based on eventual CCAI partnerships, objectives, and funding.



# Biodiversity

The majority of California is within a biodiversity hotspot—the California Floristic Province, considered a critical region due to its distinctive range of animal species and plant life—with Sonoma County and the SDC site within the core of this rich ecosystem. The SDC site showcases a wide range of significant regional landscapes, including dense evergreen and redwood forests, oak woodland to native grassland mixes, and wetlands and riparian corridors, such as Sonoma Creek. The Sonoma Valley Wildfire Corridor traverses the site, providing a significant east-west wildlife connection across Sonoma Valley for species such as mountain lions, deer, coyotes, and foxes.

The SDC Specific Plan identifies a framework to support these critical ecosystems. Building upon this foundation, the CCAI could implement a range of educational programs and research innovations to advance a series of biodiversity goals. The proposals include technical and educational research centers within the core area, civic science programs involving the community, and landscape monitor programs to analyze climate change’s impact to biodiversity in real time. These ideas highlight how the site could become a living laboratory for studying and tackling climate change’s impacts to biodiversity for Sonoma Valley and beyond.

# Biodiversity Opportunities

*Example Locations*

- 1 Biodiversity Research & Education Center
- 2 Biodiversity-focused Biotechnology Research Center
- 3 Sonoma Valley Wildlife Corridor Protection
- 4 Biodiverse Public Realm
- 5 Open Space Habitat Restoration & Preservation
- 6 Land-Based Carbon Sequestration Management & Monitoring
- 7 Assisted Species Migration Study Areas
- 8 Citizen Science Initiatives



# Biodiversity Opportunities



## 1 Biodiversity Research & Education Center

A Biodiversity Research and Education Center could support advanced biodiversity studies and collaborations, potentially focusing on climate-impacted Northern California habitats. The Center could connect to the site’s “Living Laboratory” with a series of key habitat restorations, research fields, and stewardship demonstrations. The Center could not only host research opportunities, but also be designed in a way to demonstrate how buildings can be integrated with key biodiversity-supporting features, such as green roofs, green facades, and natural areas.

Photo Source: Fletco Carpets, © Werner Huthmacher



## 2 Biodiversity-focused Biotechnology Research Center

A Research Center—with laboratories, offices, classrooms, and exhibit space—could also be established with a focus on biodiversity-focused biotechnology research areas, such as phytoremediation, genomic conservation/preservation, and microbiome engineering. Demonstrations or research areas around the site could connect to research efforts within the Research Center.

Photo Source: acrogame - stock.adobe.com



## 3 Sonoma Valley Wildlife Corridor Protection Specific Plan Connection

Maintaining and enhancing the permeability of the Sonoma Valley Wildlife Corridor, with its connections to the broader Sonoma Valley region, is a critical biodiversity priority and opportunity at the site. The corridor’s pinch point—between Suttonfield Lake and the Core Area—is particularly important to protect. Protecting the Corridor could be accomplished through educational signage and design guidelines to limit fencing, lighting, recreational uses, mowing, and domestic animal grazing within the Corridor. Additional protection could also be achieved by protecting the Corridor as it traverses Arnold Drive and Highway 12.

Photo Source: © SWA photography: Bill Tatham



## 4 Biodiverse Public Realm Specific Plan Connection

The core area landscapes can be designed as a biodiverse public realm to encourage biodiversity learning and values among residents, employees, and visitors. Strategies could include planting native species; maintaining and improving habitats for pollinators, birds, and other animals; limiting fencing and lighting; and developing signage to teach about certain plants and open space design decisions.

Photo Source: © SWA photography: David Lloyd



# Biodiversity Opportunities



## 5 Open Space Habitat Conservation & Preservation Specific Plan Connection

The site's range of natural areas are highly representative of Sonoma County landscapes, from wetlands and riparian corridors such as Sonoma Creek, to native grasslands, oak woodlands, and forests. Efforts to restore and conserve these landscapes could demonstrate how impactful these strategies could be to the larger Sonoma community and the State. These restored/conserved areas could act to naturally remove carbon dioxide from the atmosphere and perform other vital ecosystem functions, such as reducing runoff, retaining soil, and improving air and water quality. Research into the effectiveness of on-site approaches to restore and conserve these habitats could benefit other habitat projects regionally and beyond.

Photo Source: © SWA photography



## Land-Based Carbon Sequestration Management & Monitoring

This site presents an ideal opportunity for testing and implementing land-based carbon sequestration management and monitoring. Various landscape types can effectively serve this purpose, including agricultural lands, wetlands, grasslands, woodlands, and forests. A range of techniques, tailored to specific landscape types, can be employed to enhance carbon storage. These methods include promoting plant diversity within each landscape type, implementing soil management practices to mitigate erosion and compaction while augmenting soil with organic matter, and minimizing disturbances such as pests and diseases. The progress of carbon sequestration can be systematically tracked and assessed through periodic soil and vegetation evaluations, utilizing advanced tools like remote sensing technology. Furthermore, the potential for monetization exists through participation in carbon offset programs.

Photo Source: © SWA photography



## 7 Assisted Species Migration Study Areas

Assisted species migration aims to support the migration of plant species to habitats more suitable for long-term survival under climate change. These efforts have an overall goal of maintaining ecosystems and biodiversity to the extent possible. The site could support this type of research by designating areas where certain seeds and plants would be strategically sourced from geographically related areas to research their long-term viability in the Sonoma Valley area.

Photo Source: Oregon Encyclopedia, <https://www.oregonencyclopedia.org/articles/assisted-migration/>



## 8 Citizen Science Initiatives

Citizen science initiatives could be actively integrated into the management and improvement of the site, including bird watching and reporting, insect monitoring, wildlife tracking, water quality monitoring, and air quality monitoring. By encouraging residents, students, and enthusiasts to actively participate, the CCAI could collect valuable data on local ecosystems, wildlife, climate, and more. This collaborative effort could not only foster a stronger sense of environmental stewardship and community involvement but also generates a wealth of data to support ongoing research and conservation efforts, ultimately benefiting both the site and the broader scientific community.

Photo Source: wendyhayesrise - stock.adobe.com

# Wildfire

The risk and history of wildfire throughout Sonoma County is significant and is similarly one of the most challenging issues for the SDC site. With climate change, wildfire will likely become an even more critical issue for the region. Fully addressing it will require considerable wildfire management, prevention, and evacuation innovation and planning.

The SDC site and Sonoma Valley is directly within the Wildland-Urban Interface (WUI), or areas where the built environment is in close proximity or within lands prone to wildfire. According to CAL FIRE's fire hazard severity rating system, the site is within Moderate to Very High Fire Hazard Severity Zones. In 2017, the Nuns Fire severely impacted the site, burning the landscape on a large portion of the eastern side of the site and threatening, damaging, or destroying numerous buildings within this area. The 2020 Glass Fire greatly threatened the general area of SDC, but did not burn the site.

The SDC Specific Plan identifies a broad range of strategies to mitigate wildfire risk. Building upon these policies and tactics, a holistic and integrated approach to wildfire management can both greatly reduce risk while also demonstrating innovative strategies that bring additional benefits, including recreational features, agricultural amenities, job training, and biodiversity enhancement. The strategies showcased on the following pages

illustrate how the CCAI could be structured to support a critical mission of wildfire resilience for the site, Sonoma County, and beyond. Local and State institutions like the Audubon Canyon Ranch, Fire Forward, the Good Fire Alliance, and CAL FIRE are all working in Sonoma County and are interested to work in partnership with the CCAI at SDC on this critical issue.

- 1 Wildfire Education & Research Center
- 2 Good Fire: Controlled & Cultural Burning Areas
- 3 Wildfire Buffer Park
- 4 Wildfire Detection & Warning Technology
- 5 Fire Break Trail System
- 6 Community Wildfire Resilience Network
- 7 Fire Ecology Research Areas
- 8 Vegetation Management Research Areas

## Wildfire Opportunities Example Locations



# Wildfire Opportunities



## 1 Wildfire Education & Research Center

A Wildfire Education and Research Center could support researchers engaged in this critical issue, particularly within the Wildland-Urban Interface (WUI). The Center could not only host offices and gathering rooms, but also function as a repository to collect critical data about wildfire on the site and throughout the region, a critical hub for disseminating vital wildfire prevention and awareness information to the public, and a controlled burn workforce training center. The building could be designed in a way to showcase the best practices as well as innovations in fire-resistant materials and building techniques. The center could also be the nexus for a series of land-based designs, demonstrations, and research across the entire site.

Photo Source: North Bay Business Journal, Gary Quackenbush  
<https://www.northbaybusinessjournal.com/article/industry-news/pepperwood-at-10-seeks-next-phase/?artslide=3>



## 2 Good Fire: Controlled & Cultural Burning Areas

Fields within the site could be designated for controlled and indigenous cultural burning practices. This practice—where fire is used to fight fire—could reduce long-term wildfire risk to the development core and surrounding area. The burns could be staged to demonstrate a key fire prevention technique to the broader public, structured to train burn crews and support a locally growing industry, or designated to provide space for our local tribal communities to engage in an important tradition. On-site dormitories to host fire training crews could further bolster this effort.

Photo Source: New York Times, <https://www.nytimes.com/2020/10/07/us/native-american-burning-practices-california.html>



## 3 Wildfire Buffer Park Specific Plan Connection

The Specific Plan designates the western and eastern edges surrounding the Core Area as a “Managed Landscape/Fire Buffer” to aid wildfire defense. The CCAI could elevate this approach by designing these buffers as public parks—with significant recreational, aesthetic, and biodiversity benefits—that also work to buffer the primary development from wildfire risk.

Photo Source: Landezine  
<https://landezine-award.com/forest-park-in-bad-lippspringe/>

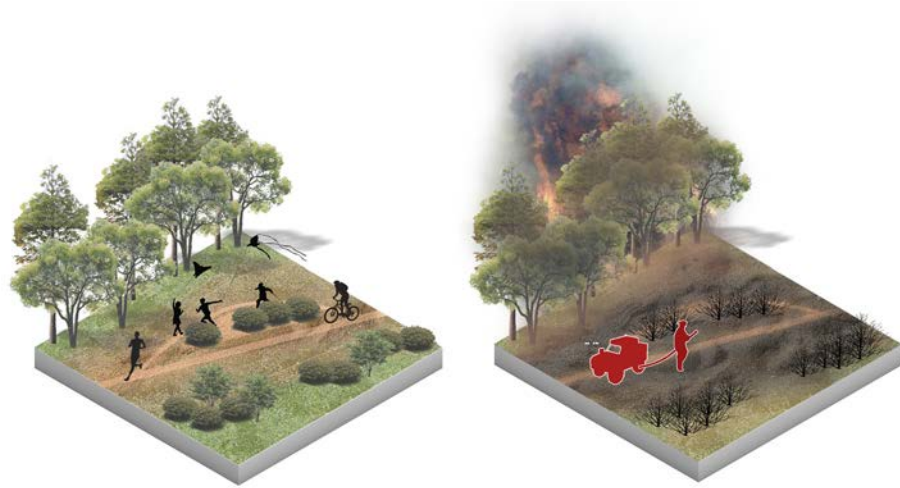


## 4 Wildfire Detection & Warning Technology

Wildfire technology continues to advance as the intensity and scale of this critical climate issue expands. Early detection fire and warning technologies—such as cameras, drones, sensors, sirens, and phone alerts—can be demonstrated and tested on site to ensure advanced response and improve large-scale warning to the core area and surrounding communities.

Photo Source: Department of Homeland Security  
<https://www.dhs.gov/science-and-technology/news/2021/09/14/feature-article-st-wildfire-sensor-initiative-heats-up>

# Wildfire Opportunities



## 5 Fire Break Trail System

This is a fairly simple but potentially highly impactful concept that would involve improving, expanding, and connecting the existing trail system so that it could dually function as both an enhanced trail system as well as a protective fire break system. The trails would work to slow fires and provide routes for fire firefighters to access the entire site in a wildfire emergency. The system could be designed to include key access points to surrounding areas such as Eldridge, Glen Ellen, Jack London State Park, and Sonoma Valley Regional Park.

Photo Source: SWA



## 6 Community Wildfire Resilience Network

Building upon key planning efforts—such as the Sonoma County Community Wildfire Protection Plan and the Sonoma Valley Wildlands Collaborative—the CCAI could designate the site as the base location for a cooperative network of property owners collectively developing a large-scale irrigated, managed, or controlled burn buffers between high risk fire areas and developed areas.

Photo Source: © SWA photography: Bill Tatham



## 7 Fire Ecology Research Areas

Fire ecology is an interdisciplinary research field that delves into the complex relationship between fire and ecosystems. Researchers in fire ecology investigate the impacts of wildfires on plant and animal species, ecosystem regeneration, and the long-term dynamics of fire-adapted landscapes. Areas within the site could be designated for the study of fire ecology, which could ultimately lead to more effective wildfire prevention and conservation efforts, both at the site and beyond. In order to educate the public on these efforts, educational walking trails, signage, overlooks, and programming could accompany these research areas.

Photo Source: U.S. Forest Service  
<https://www.fs.usda.gov/detailfull/riogrande/home/?cid=stelprdb5425999&width=full>



## 8 Vegetation Management Research Areas

A wide variety of vegetation management techniques could be deployed across the site to manage and reduce wildfire risk. Techniques such as grazing; mechanical thinning, chipping, and masticating; and the planting of native fire-resistant plant species and removal of invasive species could be deployed in a range of designated areas. Over the long-term, these areas could be monitored and assessed for risk reduction effectiveness.

# Agriculture

The site offers the possibility of creating a dynamic setting where agriculture is deeply woven into the tapestry of a sustainable community concept. If planned right, the CCAI could create a site where edible and ecological landscapes equally flourish, offering not only visual beauty but also nourishment and environmental protection.

The campus historically supported productive agriculture for the SDC's food systems. Now, as the site develops into a climate-resilient community, regenerative farming could be reintroduced with an emphasis on innovation, education, farm and food-based entrepreneurship, and agro-tourism. The Specific Plan designates an Agrihood on the eastern side of the Core Area, which represents a conservation community model that will seamlessly integrate agriculture and open space into everyday life. Homegrown local businesses could use CCAI agricultural programs to access income opportunities, obtain ongoing education, and contribute to improving overall local food security. CCAI farming practices and partnerships could be structured to create multiple benefits beyond agricultural goals, such as enhancing soil quality and bolstering efforts toward fire resilience, water resilience, and increased biodiversity.

Together, the following agricultural elements could form a harmonious ecosystem of community integrated agriculture

that not only embraces climate resilience but also thrives as an embodiment of shared community values. At the CCAI, agriculture could nurture both the land and residents as well as attract agritourism that promotes education, appreciation of local food production, and support for rural economies.

- 1 Farm Incubator Education & Events Center
- 2 Local Food Hub & Farmers Market
- 3 Regenerative Grazing & Agroforestry
- 4 Food Crop Production
- 5 Compost Program
- 6 Agriculture Resiliency Research Center
- 7 Edible Landscapes
- 8 Farm-to-Table Restaurant

## Agriculture Opportunities Example Locations



# Agriculture Opportunities



## 1 Farm Incubator Education & Events Center Specific Plan Connection

This CCAI could act as a vibrant hub bridging agriculture, education, and hospitality. Farmer training and entrepreneurship education could be supported by short and long-term workforce housing where farmers can live, learn, and incubate an enterprise on site. Farm-to-School programs could provide education and quality food to students. The CCAI could provide an anchor for agriculture and community culture that highlights Sonoma's Farm-to-Table ethos. Interconnected fields, orchards, and gardens could showcase the principles of regenerative farming in a living classroom. Passionate educators could be invited to lead workshops, seminars, and hands-on activities, sharing their expertise and empowering individuals to become stewards of the land.

Image Source: Caroline Vander Ark Jun 12, 2017 Avoid Summer Brain Drain with Place-Based Learning, <https://www.gettingsmart.com/wp-content/uploads/2016/10/Place-based-education-field-trip-feature-image.jpg>



## 2 Local Food Hub & Farmers Market Specific Plan Connection

Showcasing and aggregating local produce and products, a bustling marketplace could bring together artisans, entrepreneurs, and community members to celebrate the abundance of local culinary and farming traditions. A collective processing space and incubator for food and agricultural entrepreneurs could create a new nexus for the local food economy. Additional offerings—such as cooking classes, value-added products, and community food events—could attract residents and agritourism alike.

Image Source: Istock Photos - <https://www.istockphoto.com/photo/fresh-vegetables-at-the-farmers-market-gm946308766-258432548>



## 3 Regenerative Grazing & Agroforestry Specific Plan Connection

Regenerative grazing patterns enhance soil health by capturing water and preventing erosion. It's a sustainable cycle that strengthens ecosystems, bolsters watershed resilience, and contributes to wildfire prevention all while producing food. Agroforestry is an integrated approach that not only yields food but also strategically combats fires and conserves water. By designated areas of the site for these practices, such a system offers a sustainable, multi-benefit solution that fortifies against climate challenges while providing nourishing produce.

Image Source: Seven Fifty Daily - <https://daily.sevenfifty.com/why-so-many-winemakers-are-embracing-agroforestry/>



## 4 Food Crop Production Specific Plan Connection

A thriving diversified produce farm, tightly integrated with the community, could provide fresh, local sustenance and affordable produce to address local food security. By cultivating a diverse array of crops and embracing sustainable practices, these fields could nourish both soil and people. By fostering direct connections between farmers and residents, such a system could create a resilient food supply that reflects the CCAI's needs and values.

Image Source: NC State Extension <https://growingsmallfarms.ces.ncsu.edu/2018/02/2018-southeastern-vegetable-crop-handbook-is-now-on-line/>

# Agriculture Opportunities



## Compost Program Specific Plan Connection

Zero waste compost programs can create rich soil and a viable business. Local organic waste is processed on site into quality compost that reduces landfill use and synthetic fertilizer reliance. The compost's sale to farmers and gardeners could generate revenue and foster a circular economy that benefits the environment and community finances. Additionally, University of California ANR is interested in researching agricultural waste products which can be reused to support hydrogen research, and how the byproducts from that research used to amend and replenish depleted soils.

Image Source: University of Vermont College of Agriculture and Life Sciences Banning Food Waste: Lessons for Rural America - <https://www.uvm.edu/news/cals/banning-food-waste-lessons-rural-america>



## 6 Agriculture Resiliency Research Center Specific Plan Connection

A CCAI agricultural resilience research center or field station could be developed for researchers to collaborate with local farmers to develop and refine regenerative practices tailored to the Sonoma County ecosystem. This fusion of local wisdom and innovation could establish a unique model for sustainable food production, setting the stage for a more resilient agricultural future. The center could include controlled environments and greenhouses for various types of research, demonstration, and training. In addition, the center could host testing and development of emergent smart agriculture technologies, such as smart irrigation and plant monitoring systems.

Image Source: University of Nebraska Department of Agronomy and Horticulture - <https://agronomy.unl.edu/>



## 7 Edible Landscapes Specific Plan Connection

The Core Area could be designed as a harmonious tapestry of integrated agriculture and edible landscapes, inviting residents to participate in flourishing community gardens and build hands-on connection to the earth, nurturing a sense of ownership and camaraderie. In particular, the Agrihood on the eastern side of the site could be designed to closely weave edible and ecological landscapes, creating a living mosaic of beauty and sustenance.

Image Source: The Pine House Edible Gardens - <https://pinehouseediblegardens.com/lumen>



## 8 Farm-to-Table Restaurant Specific Plan Connection

The CCAI could launch an exquisite culinary experience intimately linked to the land. With a direct connection to the adjacent farmland, the menu at a farm-to-table restaurant could include the freshest and most sustainable produce. This restaurant could potentially serve as a key revenue stream for the Center. Diners could be treated to a symphony of flavors that bridges the gap between farm and plate. Every dish could be a testament to the commitment to sustainability and local community, inviting guests to savor the essence of Sonoma's bountiful agricultural environment in every bite.

Image Source: Wine Country Table - <https://winecountrytable.com/travel/travel-tips/sonoma-winery-events-vineyard-dinner>

# Water

Water is critical to the success of the Center for Climate Action and Innovation. Due to regional water supply constraints, it is unlikely that off-site water sources will be sufficient to serve the facility. Legacy on-site infrastructure historically provided sufficient surface water supply to meet SDC needs, with surplus that could be used locally. While existing infrastructure is antiquated and largely in need of replacement, significant assets include reservoirs and associated water rights. The local aquifer and streams are vulnerable to groundwater pumping and should be protected. Preserving and enhancing riparian and flood plain ecology can provide multi-benefit solutions for habitat, groundwater, and stream flow management while providing high quality open space. Water supply and vegetation management must all be considered relative to fire risk. Storage and irrigation, as well as robust infrastructure can help to ensure public safety. Properly conceived and managed, SDC is well positioned to model and advance regionally important strategies for integrated water management. As the water rights around the site and its resources are complex, this will require a thoughtful solution to site water infrastructure, including ownership, financing, operations, and maintenance in collaboration with the State, the state-appointed developer, and local water agencies. The following is an exploration of innovative strategies that could support regional water resilience in the face of Climate Change.

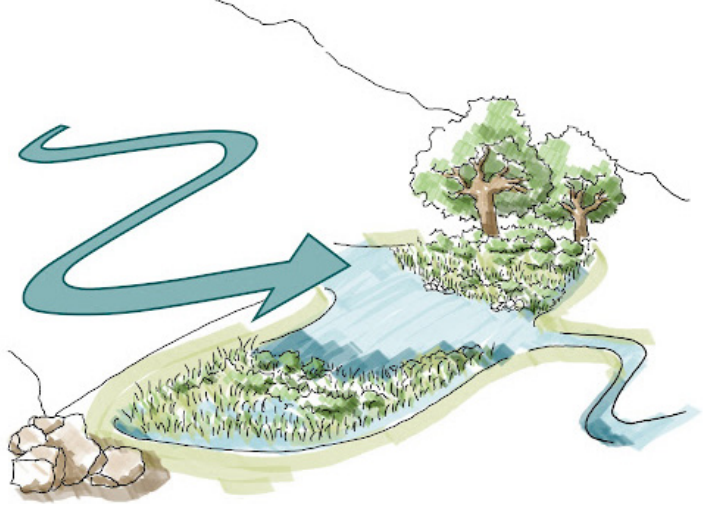
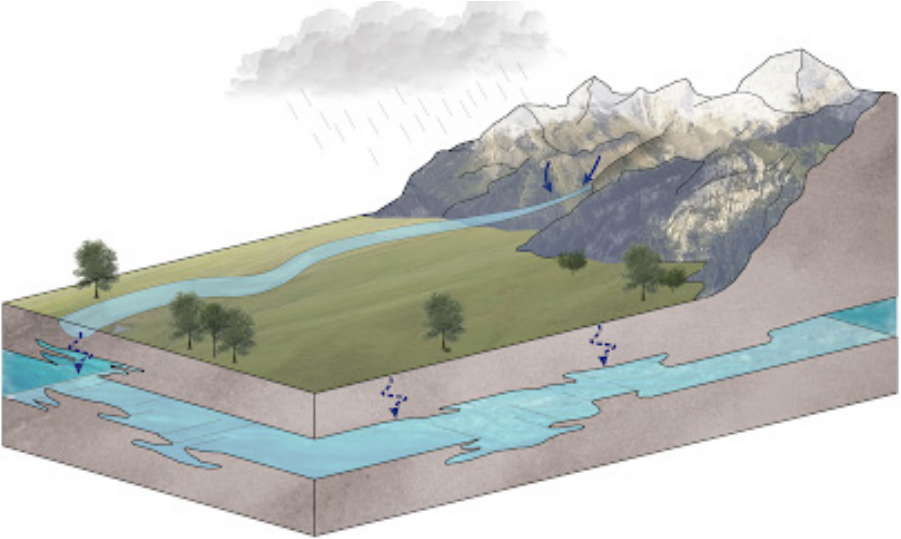
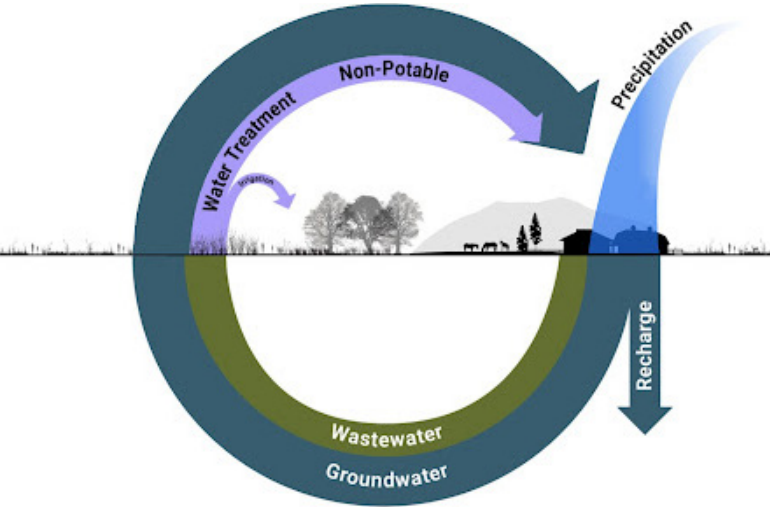
## Water Opportunities Example Locations

- 1 Net-Positive Water
- 2 Groundwater Recharge
- 3 Restoration / Flood Control
- 4 Resilient Water Supply
- 5 Water Recycling Systems
- 6 Seasonal Stream Flow Enhancement
- 7 Dual Plumbing / Non-Potable Water
- 8 Pilot Resource Recovery





# Water Opportunities



## 1 Net-Positive Water

The CCAI could produce more water than it uses, providing a net-positive impact on groundwater, the watershed and nearby communities. Surface water rights and two functioning reservoirs provide a stable water system core. Efficient demand management, treatment of wastewater for reuse, and an adaptive approach to balancing supply and demand can help to establish long term water resilience on site and beyond.

Image Source: Sherwood

## 2 Groundwater Recharge Specific Plan Connection

There is significant opportunity at the CCAI site to recharge water into the groundwater aquifer. This can help to stabilize local wells, reduce downstream flood risk, and augment the amount of water available for the stream. Holding water below ground can also provide water for native plants, reducing fire risk. Site appropriate techniques include using flood waters for Managed Aquifer Recharge (MAR) and using potable or recycled water for Aquifer Storage and Recovery (ASR).

Image Source: Sherwood

## 3 Restoration / Flood Control Specific Plan Connection

Sonoma Creek is an important stream that provides habitat, flood conveyance, open space, and many other benefits to the community. To maximize these benefits, the riparian stream corridor should be enhanced, expanding the riparian corridor and restoring historical connections to floodplains/wetland. This will provide for climate adaptation while minimizing WUI/wildlife conflicts and restoring hydrologic function.

Image Source: Sherwood

## 4 Resilient Water Supply Specific Plan Connection

Recent drought cycles exposed significant regional vulnerabilities in the water supply. Additional risks include fire, flood, seismic and an unpredictable climate. The SDC used to have water supply connections to share water with nearby water providers. Restoring and improving these connections will improve resilience not only at the SDC/CAI but also for the residents of the region.

Photo Source: © SWA photography: Bill Tatham

# Water Opportunities



Sidwell Friends School  
Washington, DC

## 5 Water Recycling Systems Specific Plan Connection

It is increasingly common for wastewater to be safely reused for non-potable uses, saving potable water for people and habitats. Rather than using unsightly traditional wastewater treatment facilities, multi-benefit green resource recovery technology provides habitat and site amenities. Beyond just the sewer flows from the site, harvesting additional wastewater from the regional sewer main can provide additional recycled water to the site and neighboring communities and farm.

Image Source: ArchDaily  
[https://www.archdaily.com/32490/ad-interviews-kieran-timberlake?ad\\_medium=gallery](https://www.archdaily.com/32490/ad-interviews-kieran-timberlake?ad_medium=gallery)



## 6 Seasonal Streamflow Enhancement

Streamflow in Sonoma Creek is frequently reduced in the summer, threatening sensitive species. CCAI reservoirs and other water sources, such as stormwater runoff, can be used to restore critical stream flows that support salmon and other species. Low Impact Design (LID), soil improvement, and creek restoration can benefit stream flow; regenerative agriculture and restoration practices can enhance the watersheds' ability to retain water. This can be augmented by site water resource management.

Image Source: treesfoundation.org



## 7 Dual Plumbing / Non-Potable Water Specific Plan Connection

The SDC site used to have two water pipes servicing each structure. As part of the site redevelopment, the Core Area development and CCAI should revitalize this approach, with potable water only used with needed for safety (such as providing high-quality drinking water) and non-potable water used for all other needs, including irrigation, toilet flushing, and mechanical uses. Since a majority of the site water infrastructure needs to be rebuilt, this method, though more costly upfront, makes the site resilient to future water scarcity by significantly reducing the volume of potable water demand. As the site and CCAI experiments with different non-potable water systems, the existing buildings are already equipped to adopt this system. This dual-plumbing approach has been proven in many projects to provide long term cash savings. It is also a critical component of many third-party certifications, such as the Living Building Challenge.

Image Source: Santa Clara Valley Water News  
<https://valleywaternews.org/2019/07/25/recycled-water-runs-through-it-the-purple-pipe-system/>



## 8 Resource Recovery Systems

The Core Area development and CCAI could consider a platform for resource recovery from wastewater. Biosolids from wastewater can be used to generate biogas and biohydrogen, which are renewable fuel sources for generating electricity, heat, or powering vehicles. Other valuable products include fertilizers, bioplastics and biochar, which can sequester the carbon in wastewater that would otherwise contribute to climate change. While there currently are cost-effective technologies that can be utilized at the CCAI to improve its resilience and demonstrate sustainability, the Center could also provide a flexible laboratory to incubate and accelerate new technologies.

Image Source: totalenergies.com

# Mobility

The SDC site is fortunate to have an existing network of streets, sidewalks, and trails—traversed and connected to the major roadway corridors of Arnold Drive and Highway 12—which provides an interconnected foundation for upgraded transportation design. The Specific Plan builds upon this foundation by establishing a robust multimodal transportation system for pedestrian, bicycling, transit, and vehicular travel.

The ideas presented here could create an expanded and experimental low-carbon mobility campus with a focus on pedestrian, bicycle, transit, and electric-powered transportation. These proposals build upon the Specific Plan while also identifying new opportunities for advancing transportation with ideas such as electric and autonomous vehicle fleets.

Given the unique setting and vision for the SDC site, the CCAI could demonstrate, test, and advance key low-carbon mobility approaches that are particularly well-suited to a campus community in a semi-rural region. A comprehensive implementation of this framework could serve well both the residential community and CCAI employees, while also progressing key ideas to reduce emissions that result in climate change.

# Mobility Opportunities

## Example Locations

- 1 Pedestrian Friendly Design**
- 2 Bicycle Friendly Design**
- 3 Transit Connections**
- 4 Car & Ride-Sharing Programs**
- 5 Mixed Used Neighborhood**
- 6 Bicycle & Micro-Mobility Sharing Program**
- 7 Electric Bike & Vehicle Charging**
- 8 Electric & Autonomous Shuttle/Taxi Program**



# Mobility Opportunities



## 1 Pedestrian Friendly Design Specific Plan Connection

As aligned with the Specific Plan, the Core and Preserved Open Space areas should be designed as a pedestrian friendly area, with features such as wide, protected, and shaded sidewalks as well as a robust network of nature trails. These sidewalks and trails could be navigated via a fine-grained network of connections, including key access points to surrounding areas such as Eldridge, Glen Ellen, Jack London State Park, and Sonoma Valley Regional Park. For the CCAI to achieve key climate change mitigation goals, simply walking or biking creates the lowest carbon footprint.

Image Source: © SWA photography: David Lloyd



## 2 Bicycle Friendly Design Specific Plan Connection

A comprehensively-designed bicycle network is key to achieving low-carbon mobility and Specific Plan goals. A bicycle-friendly campus—with features such as raised and protected bike lanes, bike parking, and directional/safety signage—can encourage a broad range of users, from avid cyclists to casual riders, to enjoy bicycling throughout the campus and beyond. Connections to regional bike paths connecting from Sonoma to Santa Rosa can further support the bicycling community. A bicycle-friendly community can well-serve both residents and CCAI employees and visitors.

Image Source: © SWA photography: Jonnu Singleton



## 3 Transit Connections Specific Plan Connection

Transit makes avoiding personal vehicular travel easier to achieve if designed to provide an easy, efficient, and obvious alternative for traveling short and long distances. Building upon the Specific Plan, transit connections between SDC and the surrounding community could be supported by creating partnerships with transit agencies to help fund initial development, benefits, and options. Transit strategies such as pass subsidies, additional and well-designed bus stops, and real-time arrival/departure information systems could contribute to an enhanced system. Potential collaborations with area job centers and winery destinations could help to offset initial funding costs to create new transit around the CCAI/SDC and add connections to the regional systems. Such arrangements could ensure equitable transportation access to employment centers, residential areas, and tourist attractions while also reducing the need for private vehicle transportation.

Image Source: © SWA photography: Tom Fox



## 4 Car & Ride-Sharing Programs Specific Plan Connection

Aligned with Specific Plan objectives, programs and incentives to encourage CCAI employees, visitors, and local residents to get to and from the Center with ride-sharing programs and to utilize car-sharing programs for local trips can contribute to reducing larger carbon footprint from everyone driving alone or owning their own vehicle.

# Mobility Opportunities



## 5 Mixed Used Neighborhood Specific Plan Connection

The basis of a low-carbon mobility community is developing a comprehensive neighborhood that can serve a variety of everyday needs. A broad mix of uses within the Flex Zone—including retail, hospitality, and entertainment—can encourage employees and residents to live, work, and play on site and decrease the need for vehicular travel outside off site. In order to be overall successful as an institution, the CCAI low-carbon mobility goals will need to be seamlessly integrated into the design framework for the core area’s residential communities.

Image Source: © SWA photography: Tom Fox



## 6 Bicycle & Micro-Mobility Sharing Program Specific Plan Connection

A bicycle and/or micro-mobility (e.g. scooter) sharing program can encourage non-vehicular transportation for short trips within and beyond the core area. Such a program can reduce carbon footprint by providing a convenient, eco-friendly alternative to cars, allowing people to easily switch to zero-emission transportation option for short trips and thereby decreasing emissions.



## 7 Electric Bike & Vehicle Charging Specific Plan Connection

Expanding upon the Specific Plan’s CalGreen Standards for electric vehicle charging, the CCAI could create a system of conveniently-located charging stations for electric bikes and vehicles—potentially with renewable energy integration such as solar panels—that could be used by residents, Climate Center employees, and the public to encourage the increased adoption of electric vehicles and bicycling. Enhanced by microgrid policies, this infrastructure can continue to function as a key facility in emergency events and ensure equitable access to charging for the surrounding area.



## 8 Electric & Autonomous Shuttle / Taxi Program Specific Plan Connection

The CCAI could develop an electric and autonomous vehicle or shuttle program for employees and local residents to quickly traverse the campus and access buildings, open space areas, and public transportation connection points. This program could rely on widely-used vehicular technologies, or the program and site could serve as host to companies testing and advancing new technologies that may be particularly well-suited to the site’s campus and rural character. Connections to transit and expansions to a broader regional corridor or network could further bolster the system.

Image Source: Glydways, <https://www.glydways.com/>

# Energy

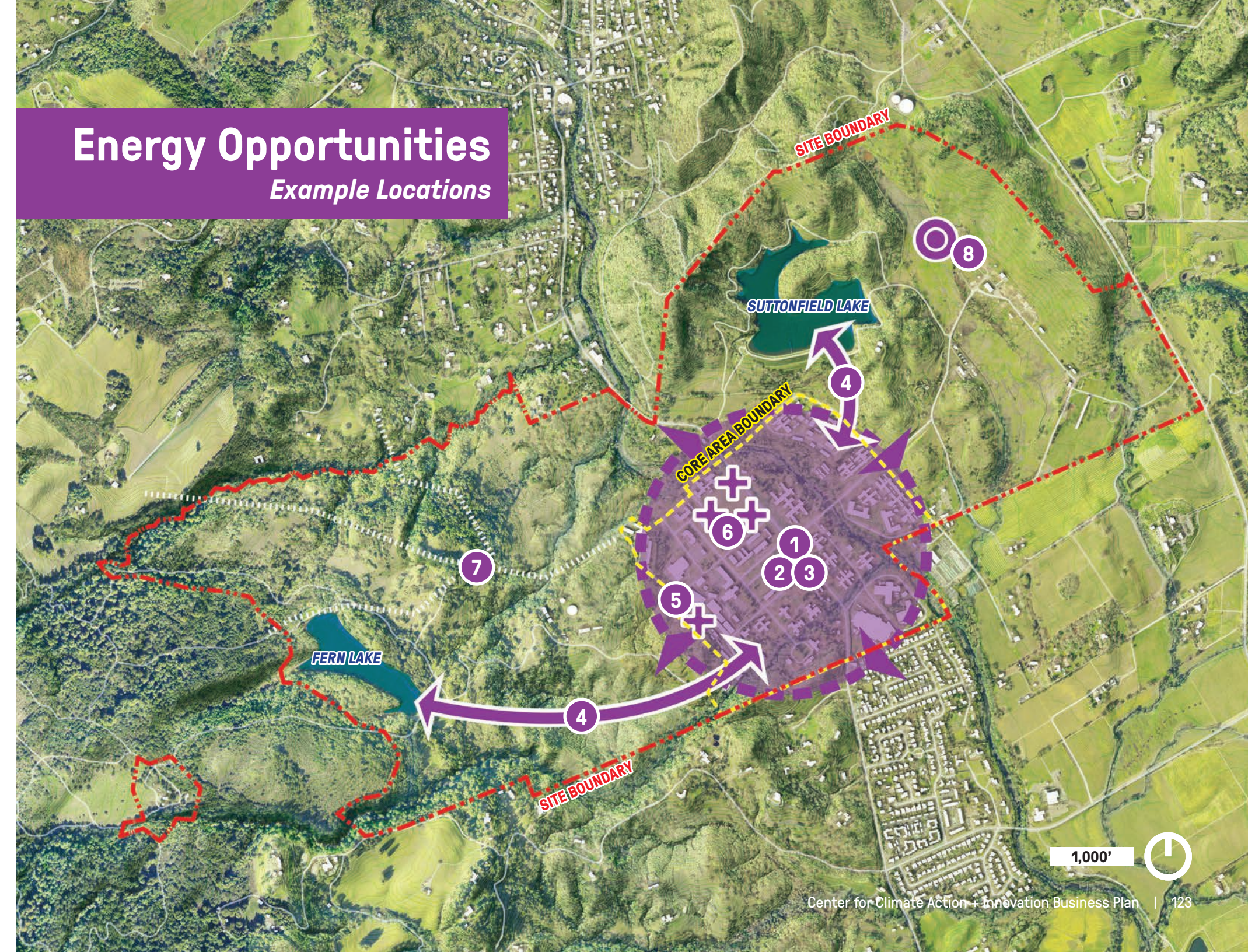
CCAI energy goals could focus on renewable energy, carbon-free on-site energy generation, on-site energy storage, and operational stability and safety in a fire-prone region. Collectively the constraints and opportunities present at CCAI present an exciting opportunity to demonstrate, test, and explore solutions for reliable, resilient, and renewable energy. Some innovative energy technology is already readily available, other relevant strategies are quickly emerging in the marketplace, and new ideas are being advanced at major institutions.

As a platform for resilient infrastructure, strategies for optimizing energy demand and generation are envisioned; this includes opportunities for storage and generation of renewable energy in unique ways. A platform that can accommodate emerging technology and innovation will provide an attractive and valuable asset to test solutions.

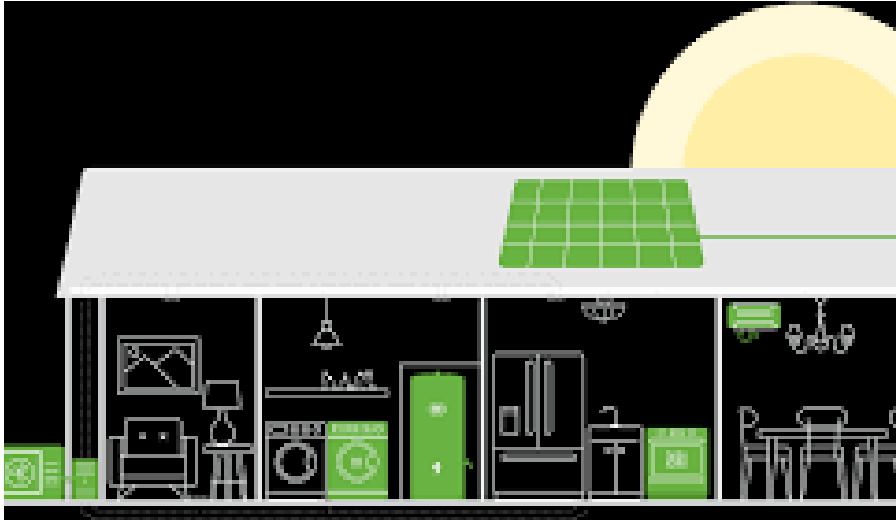
To contribute to community resilience in the Wildland-Urban Interface (WUI), and in fire-prone areas in general, the opportunities presented here have the potential to demonstrate and reduce fire risk during high fire danger periods (through opportunities such as a low-voltage operating mode) and maintain critical services during blackouts (through opportunities such as an island microgrid approach).

## Energy Opportunities Example Locations

- 1 All Electric Development
- 2 All Renewable Energy
- 3 Island Microgrid Community
- 4 Reservoir Hydro Battery Back-up
- 5 Central Thermal Heat
- 6 Geothermal Heat
- 7 Fire Safe Low Voltage Rural Grid
- 8 Innovative Energy Production



# Energy Opportunities



## 1 All Electric Development Specific Plan Connection

Development is trending away from the use of propane and natural gas toward all electric energy, as now required by many cities (Santa Rosa, Petaluma are among 60+ cities and counties in CA alone). New and remodeled buildings can be built for all electric appliances, utilizing available incentives. This also saves development costs by eliminating the need to redevelop gas infrastructure.

Image Source: Peninsula Clean Energy



## 2 All Renewable Energy Specific Plan Connection

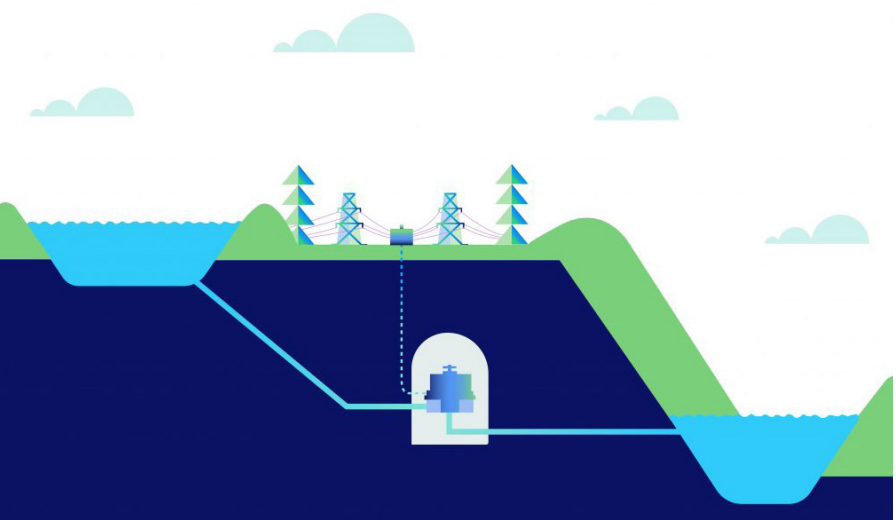
Once electricity provides all power for the site, the project can model a stable renewable energy platform with zero carbon emission. This will be heavily reliant on traditional sources like photovoltaics and wind, but could also utilize solar, thermal, or emergent innovative strategies discussed herein. Diverse ownership structures can support the development and operation of these sources, including building scale systems, collaboration with a Community Choice Aggregator, and private energy production projects.



## 3 Island Microgrid Community Specific Plan Connection

CCAI presents a unique opportunity to work with power providers, wildfire stakeholders, and private partners to model an island microgrid system capable of operating when the grid is down due to Public Safety Shutoffs or blackouts. Using onsite renewable energy and electrical storage, the site could maintain some or all functions by being an island where the power is still on. This could support critical services during an emergency such as food storage, communications, and medical services. There are increasingly more examples of this at the estate and campus scale.

Image Source: Wired, <https://www.wired.com/story/casino-microgrid-future-of-energy/>



## 4 Reservoir Hydro Battery Back-up

Typically a major energy demand, water infrastructure can instead assist the site energy goals. Reservoir hydro battery back-ups are a proven technology that are often prohibitively expensive due to the capital associated with creating reservoirs; however, at the SDC, the site is fortunate to already be equipped with this critical component. The two existing reservoirs are positioned such that they may provide a “water battery.” Energy is stored in the reservoirs perched at higher elevations and returns energy on demand as that water flows downhill through turbines to buildings at lower elevations; energy can also be generated when water moves between the two reservoirs at different elevations. This provides a significant backup energy supply to an island microgrid while also harvesting unused energy from a water system that will continue to flow every day.

Image Source: Drax

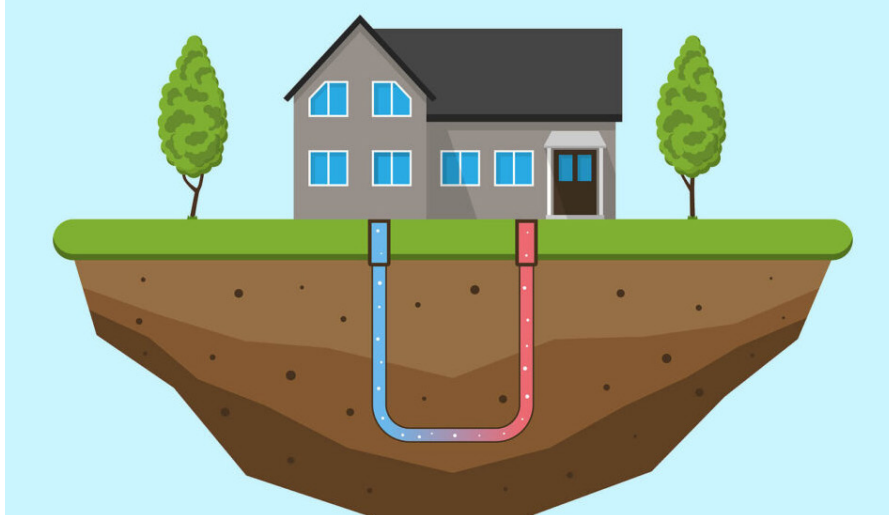
# Energy Opportunities



## 5 Central Thermal Facility

Heating and Cooling can be optimized in a central facility to reduce the amount of energy necessary to maintain thermal comfort in buildings. This approach is efficient and adaptable to climate change. Sources of Heating and Cooling can include air or water heat exchange and other renewable sources, such as solar thermal or biosolids/biomass. This is common on institutional campuses and could be the revenue source for the site or an Enhanced Infrastructure Financing District (EIFD).

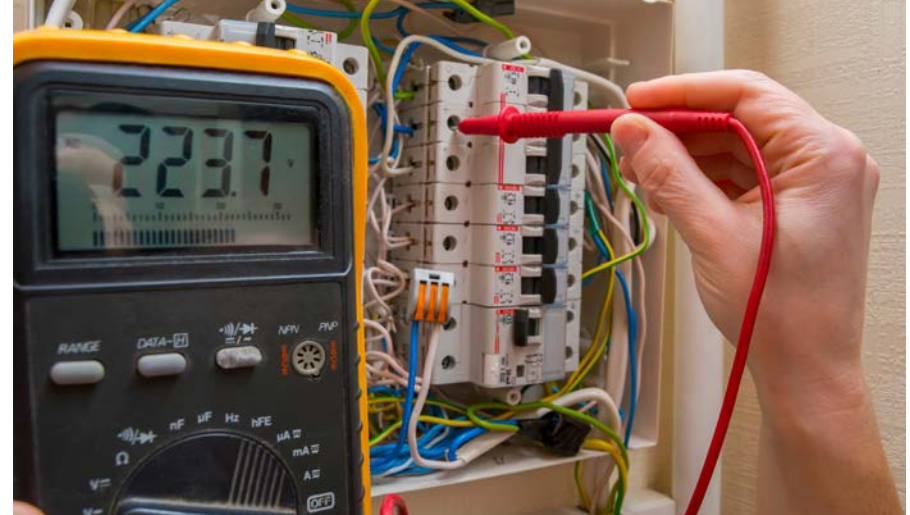
Image Source: US Department of Energy



## 6 Geothermal Heat Specific Plan Connection

Past explorations of the site have demonstrated that it may be possible to leverage high ambient temperatures within the earth under the site to provide zero carbon heating. Heat is pulled directly from deep wells and used on the site. This approach can be decentralized at building scale or built into a Central Thermal Facility strategy.

Image Source: Design Flow HVAC



## 7 Fire Safe Low Voltage Rural Grid

Above ground high voltage power lines create a risk of starting fires. While undergrounding lines is becoming more common, it is very costly. Low Voltage technologies allow for localized energy storage and transmission without the risk of starting a fire. Many end use electronics currently exist for 24vac and lower voltage applications, including refrigerators, lighting, televisions and most personal electronics. As new appliances, lighting, communications and other equipment come available, SDC can be a testing location for fire safety, efficiency, reliability and other measures.



## 8 Innovative Energy Production Specific Plan Connection

From biogas and biochar to hydrogen, geothermal and micro-hydro, CCAI could present a real time laboratory for developing and testing fire and climate safe renewable energy opportunities. These should be focused on carbon free solutions and enabled by an adaptable infrastructure platform that provides unique opportunities for startup technologies. As a test bed, or “sandbox” for innovation, CCAI can attract partners seeking pilot scale proof of concept.





## Next Steps

The success of the CCAI's Business Plan is contingent upon the alignment of State and County priorities with climate change strategies and the use of the CCAI as a catalyst to encourage and demonstrate a holistic redevelopment rather than fragmented components.

It is essential to maintain the integration of the CCAI and the residential neighborhood aspect of the project to create a comprehensive climate community. In this complete ecosystem, novel and proven climate resilience ideas can be implemented at a district scale, closely monitored, measured for efficiency, and serve as a demonstration for the broader Sonoma region and beyond. The capacity to deliver such comprehensive climate

solutions at scale is a unique and valuable asset, making it an appealing prospect for both public funding and private investment. The project's greatest vulnerability would arise if the residential development were executed as a conventional project relying on outdated development technologies and frameworks, potentially undermining the project's overall objectives.

This Business Plan demonstrates what is possible when local government agencies, developers, climate leaders, and the public work together to build something that addresses the challenges presented by our changing climate while meeting the needs of the people it supports. The success of the CCAI hinges on robust collaboration across

public, private, and philanthropic sectors, coupled with effective governance, innovative infrastructure, and community engagement. By implementing the recommendations outlined here, the CCAI can become a beacon of climate resilience and sustainability, driving positive change in Sonoma County and beyond.

This project positions Sonoma County to emerge as a global leader in the climate realm, securing a more resilient and sustainable future for all its residents. The project will not only rejuvenate and preserve the SDC but also propel it into the next century, supporting the robust, new community that aligns with the goals in the Specific Plan. The CCAI's role in this ambitious endeavor is pivotal, offering a unique opportunity to showcase the collaborative and innovative spirit of Sonoma County while staying true to its heritage. The following represents recommended next steps the County, developer, and stakeholders should consider to make the CCAI a success.

## Key Next Steps

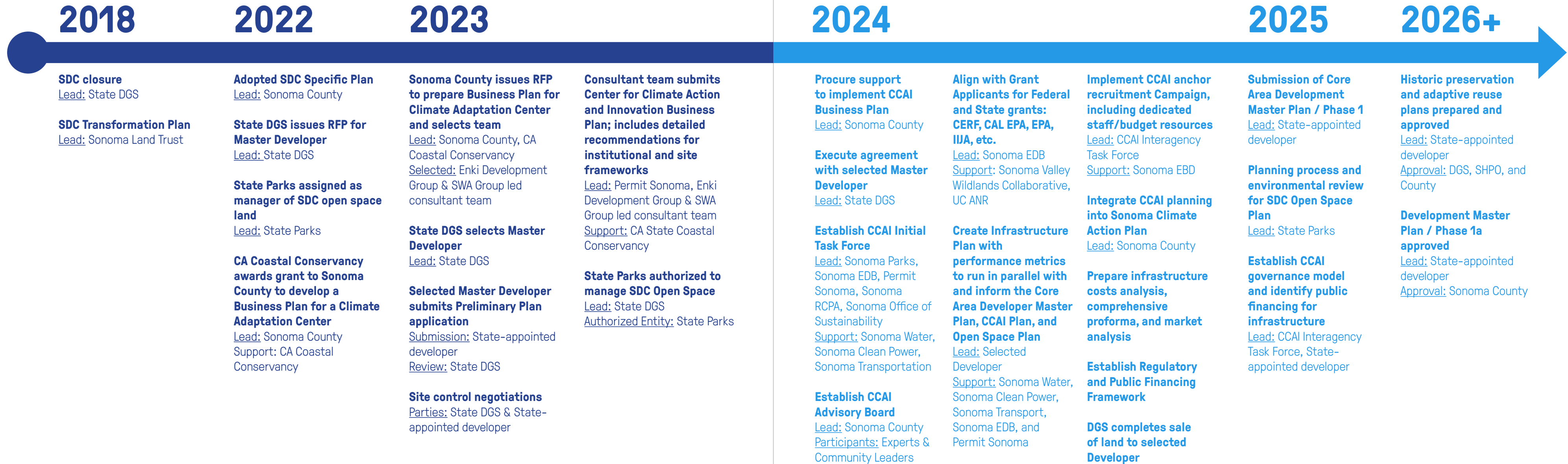
- 1. Make the Business Plan available to the public, the State, and the site's ultimate developer** to help realize the goals of the Center for Climate Action and Innovation (CCAI) and bring it to the Sonoma Developmental Center campus.
- 2. Appoint leadership and allocate appropriate resources to the CCAI.** Identify a champion for the project with measurable goals and accountability. Consider seeking additional funding sources to support the recommended next steps.
- 3. Establish a CCAI task force** designed to bolster the organizational capabilities of the County team for the successful execution of this project. This is especially crucial in the initial stages before securing a key institutional partner. The task force's objective is to ensure the project's progress and readiness for collaboration and to signal government support for the vision as a key priority.
- 4. Appoint an advisory board** comprising recognized resilience experts, pertinent political authorities, and community advocates. This advisory board will provide invaluable insights, guidance, and endorsement as the project evolves, elevating its credibility and fostering community engagement.
- 5. Conduct comprehensive economic due diligence**, including market studies and demand analyses, to ascertain the economic viability and market potential of the CCAI. This data will inform strategic decisions on financing models, whether market-driven or grant-supported, ensuring the project's

sustainability.

- 6. Explore innovative funding and financing models**, combining market-driven and grant-supported approaches to leverage resources effectively. By tapping into these diverse funding mechanisms, the project can partner with existing climate stakeholders who are already in line for public climate funding, diversify its financial base, and enhance its long-term viability.
- 7. Leverage tax increment tools** such as Enhanced Infrastructure Financing Districts (EIFD) Climate Resilient District Financing and Community Facilities Districts (CFDs) to optimize the project's financing structure and gain access to essential resources.
- 8. Launch a campaign aimed at recruiting short-term partners and securing an anchor tenant**, thereby establishing the groundwork for productive collaborations that will propel the project forward. This campaign entails the implementation of a comprehensive recruitment strategy, the advancement of vision planning, the organization of conferences to engage potential partners, and the introduction of recruitment initiatives that resonate with key stakeholders. Diligently follow up on invitations for subsequent meetings with the key interviewees referenced throughout this document.

By implementing these strategic steps, the project can enhance its operational and financial foundations, foster a culture of collaboration, and position itself for success in the climate action and innovation landscape.

# Potential Timeline



## Potential Collaboration Frameworks

As the Sonoma County Center for Climate Action and Innovation (CCAI) project unfolds, it is crucial to recognize the pivotal role of collaboration, strategic partnerships and programs, and specific funding sources in achieving the vision for this project. Through these collaborative efforts and innovative pathways to funding, the CCAI is poised to become a thriving, climate-resilient hub that will benefit the community and the environment for generations to come.

The Institutional and Site Framework sections provide in-depth review of CCAI opportunities across a variety of topics and climate themes. The following table is intended to summarize and merge strategies from across these sections and is organized by the six key climate themes: biodiversity, agriculture, wildfire, water, mobility, and energy. The table includes a summary of key partners, near- and long-term collaborations, and funding and implementation tools. Note that many of these themes, partnerships, collaborations, and funding/implementation tools will likely overlap in their actual implementation; moreover, various additional and general funding sources and mechanisms (as described in the “Funding & Implementation” section) could support any of the strategies described below.



Category	Key Partners	Near-Term Collaborations	Long-Term Collaborations	Implementation & Funding Tools
Overall	<ul style="list-style-type: none"> <li>UC ANR</li> <li>Research Labs (LBNL and NREL)</li> <li>Private Sector Tech/VC</li> </ul>	<ul style="list-style-type: none"> <li>Partner with existing climate groups in Sonoma Valley</li> <li>Environmental Certificate Program</li> </ul>	<ul style="list-style-type: none"> <li>Establish a Research Extension Center (REC) and foster a relationship with the UC office of the President to explore research opportunities in a uniquely positioned setting</li> <li>Develop an institutional home for regional climate efforts and a central data repository to manage and disseminate valuable climate information.</li> </ul>	
Biodiversity	<ul style="list-style-type: none"> <li>CA State Parks</li> <li>Audubon Canyon Ranch</li> <li>Pepperwood Preserve</li> <li>Santa Rosa Junior College (SRJC)</li> <li>Sonoma Ecology Center</li> <li>Sonoma Land Trust</li> <li>CA Biodiversity Network</li> </ul>	<ul style="list-style-type: none"> <li>Collaborate with Cal State Parks on Planning and Land Classification</li> <li>Develop wildlife education and citizen science initiatives</li> <li>Create collaborative and demonstration spaces for public engagement</li> </ul>	<ul style="list-style-type: none"> <li>Develop of a Biodiversity Research &amp; Education Center led by UC ANR and with collaboration from Audubon Ranch, Pepperwood Preserve, and SRJC; develop a central research building complex with connections to land-based demonstrations and research across the SDC site</li> </ul>	<ul style="list-style-type: none"> <li>SDC Specific Plan biodiversity frameworks, with a specific focus on the on-site wildlife corridor</li> <li>CA Fish &amp; Wildlife regulations</li> </ul>

Category	Key Partners	Near-Term Collaborations	Long-Term Collaborations	Implementation & Funding Tools
Wildfire	<ul style="list-style-type: none"> <li>UC-ANR</li> <li>Audubon Canyon Ranch/Fire Forward</li> <li>Good Fire Alliance</li> <li>Indigenous Tribes</li> <li>Pepperwood Preserve</li> <li>CAL FIRE</li> <li>Sonoma Valley Fire District</li> <li>CA State Parks</li> <li>Sonoma Valley Wildlands Collaborative</li> </ul>	<ul style="list-style-type: none"> <li>Negotiate land and space for wildfire training teams and equipment centers in collaboration with Audubon Preserve/Fire Forward, Pepperwood</li> <li>Expand partnerships with CAL FIRE, Sonoma Valley Fire District, and indigenous tribes</li> <li>Explore Good Fire programs in conjunction with CA State Parks</li> </ul>	<ul style="list-style-type: none"> <li>Establish a wildfire education &amp; research center with a focus on Wildland-Urban Interface (WUI) conditions; center could include a centralized research building complex supported by land-based research and demonstrations, such as controlled/cultural burning areas, wildfire buffer parks, wildfire technology demonstration and testing, fire ecology research areas, and vegetation management research areas</li> <li>Align center objectives and gain support from key entities, including the Sonoma Valley Wildlands Collaborative and the UC-ANR REC program</li> </ul>	<ul style="list-style-type: none"> <li>SDC Specific Plan wildfire frameworks</li> <li>Sonoma County Community Wildfire Protection Plan objectives</li> <li>State mandates for fire- forward management</li> </ul>
Agriculture	<ul style="list-style-type: none"> <li>CA State Parks</li> <li>UC ANR</li> <li>Santa Rosa Junior College (SRJC)</li> <li>Sonoma State University</li> <li>Ag Innovations</li> <li>Community Alliance with Family Farmers (CAFF)</li> <li>Sonoma County Food Recovery Coalition</li> </ul>	<ul style="list-style-type: none"> <li>Launch ag waste product recycling initiatives</li> <li>Collaborate with educational institutions (e.g., SRJC) to support Sonoma County agricultural goals</li> <li>Coordinate agricultural research and objectives with CA State Parks</li> <li>Expand partnerships with non-profit agricultural organizations</li> </ul>	<ul style="list-style-type: none"> <li>Develop a state-of-the-art agricultural resilience center incorporating building and landscape space for key uses, including a farm incubator, educational areas, agricultural technology testing and demonstration, food hub &amp; farmer's market, food crop fields, compost program, greenhouses, labs, edible landscapes, farm-to-table restaurants, etc.</li> </ul>	<ul style="list-style-type: none"> <li>SDC Specific Plan agricultural frameworks</li> <li>Environmental Quality Incentives Program (USDA)</li> <li>Agricultural Conservation Easement Program (USDA)</li> <li>Conservation Stewardship Program (USDA)</li> <li>CDFA State Grant Programs</li> </ul>

Category	Key Partners	Near-Term Collaborations	Long-Term Collaborations	Implementation & Funding Tools
Water	<ul style="list-style-type: none"> <li>▪ Sonoma Water</li> <li>▪ Valley of the Moon Water District</li> </ul>	<ul style="list-style-type: none"> <li>▪ Expand collaborations with Sonoma Water and Valley of the Moon Water District</li> <li>▪ Consider bond initiatives to improve and upgrade water infrastructure</li> <li>▪ Coordinate with the state-appointed developer to analyze a holistic water approach between residential and non-residential area</li> </ul>	<ul style="list-style-type: none"> <li>▪ Develop a model water conservation community in partnership with the SDC Core Area development and the CCAI; through a net-positive water framework, implement site-wide sustainable water measures, such as groundwater recharge, restoration/flood control, water recycling systems, season streamflow enhancements, dual plumbing/non-potable water systems, and resource recovery systems</li> </ul>	<ul style="list-style-type: none"> <li>▪ SDC Specific Plan water frameworks</li> <li>▪ Enhanced Increment Financing Districts (EIFDs)—with input from water agencies to determine rate-based funding and capital improvements—may be key to supporting advanced and integrated water frameworks for both the SDC Core Area and the CCAI objectives</li> </ul>
Mobility	<ul style="list-style-type: none"> <li>▪ Sonoma County Transit</li> <li>▪ Sonoma Marin Area Rail Transit (SMART)</li> <li>▪ Glydways</li> <li>▪ Via</li> </ul>	<ul style="list-style-type: none"> <li>▪ Enhance the site’s public transition connections and launch on-demand subscription transportation services (e.g. Via) with a particular focus on tourists, local farm workers, and site construction workers</li> <li>▪ Explore the viability of an electric and autonomous shuttle program</li> </ul>	<ul style="list-style-type: none"> <li>▪ Support implementation of the SDC Specific Plan mobility objectives with key enhancements, including a mixed-use neighborhood with pedestrian and bicycle-friendly design, expanded transit connections, car- and ride-sharing programs, bicycle- and micro-mobility sharing programs, and electric bike- and vehicle-charging stations</li> <li>▪ If viable, launch an electric and autonomous shuttle program with connections potential to regional population areas</li> </ul>	<ul style="list-style-type: none"> <li>▪ SDC Specific Plan mobility frameworks</li> <li>▪ US EPA Greenhouse Gas Reduction Fund (GGRF)</li> <li>▪ Private-sector funding for transportation start-ups</li> </ul>

Category	Key Partners	Near-Term Collaborations	Long-Term Collaborations	Implementation & Funding Tools
Energy	<ul style="list-style-type: none"> <li>▪ Sonoma Clean Power</li> <li>▪ Santa Rosa Junior College (SRJC)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Develop a collaboration with Sonoma Clean Power and educational institutes (e.g. SRJC) for green energy workforce training as the site is being developed</li> <li>▪ Research and analyze a wide range of potential resilient energy systems and innovations</li> </ul>	<ul style="list-style-type: none"> <li>▪ Develop a model energy community in partnership with the SDC Core Area development and the CCAI; incorporate established energy best practices and advance new energy technologies, such as electric/renewable energy systems, island microgrid systems, reservoir hydro battery back-up sources, central thermal heat systems, geothermal heat systems, fire-safe low-voltage grids, and innovative energy production sources, such as bio-char</li> </ul>	<ul style="list-style-type: none"> <li>▪ SDC Specific Plan energy frameworks</li> <li>▪ Enhanced Increment Financing Districts (EIFDs)—with input from energy agencies to determine rate-based funding and capital improvements—may be key to supporting advanced and integrated energy frameworks for both the SDC Core Area and the CCAI objectives</li> </ul>



## Case Studies

The following case studies encompass a diverse range of similar centers as the ideas being pursued for the Center for Climate Action and Innovation (CCAI). Each case study includes brief information on the center's history, strategic purpose, site features, funding mechanisms, and impact. They are intended to provide insight into how the CCAI might identify opportunities, navigate challenges, and structure the institution for long-term success.

The case studies span various focus areas, including climate, ecology, scientific research, tourism, economic development, and public open space, providing parallels to the CCAI ambitions. Similar to the context and eventual structure of the CCAI, the majority are within California and feature a range of

buildings and infrastructure within the site's more expansive open space.

Taken together, they illuminate how the CCAI may borrow important lessons learned as it charts its own path into the future.

# Asilomar Conference & Grounds

## Location

Pacific Grove, California

## Size

107 acres (originally 91 acres), 33 employees

## Focus

Preserving historic buildings and facilitating coastal access and gatherings of various kinds in an idyllic, environmentally sensitive location

## Site Features

Asilomar Conference & Grounds has 60 buildings and 30 event spaces on its property, including within historic Julia Morgan-designed structures. The park includes a one-mile stretch of sandy beach, a 25-acre restored sand dune preserve, and a native Monterey pine forest. The coastline is part of the Monterey Bay National Marine Sanctuary and a State Marine Reserve, which protects the rich marine life and habitats.

## Development Timeline

Originally constructed in 1913 as the Northern California YWCA retreat and training facility. Acquired by the State of California in 1952, at the behest of local citizens seeking preservation. Operated by the City of Pacific Grove, then transferred to California State Parks in 1969.

## Institutional Partners

The site is owned by California State Parks, which oversees access, improvement and educational programs for the Asilomar State Beach, Asilomar Coast Trail, and the Asilomar Dunes Natural Preserve. The lodging, dining, and conference meeting room facilities were originally operated by the City of Pacific Grove; over time, operations were transferred to the current concessionaire, Aramark.

## Funding Sources

**Initial:** Phoebe Apperson Hearst, Grace Hoadley Dodge, Ellen Browning Scripps, and Mary Scroufe Merrill

**Ongoing:** Conference and lodging revenues

## Impacts

Asilomar has an annual visitation of more than 400,000 people, including conference attendees, vacationers, visitors to the beach and visitors to the dunes, boardwalk, and coastal trail.

## Learn More

[www.visitasilomar.com](http://www.visitasilomar.com)



Photo Sources:  
Top Left: See Monterey, <https://www.seemonterey.com/listings/asilomar-conference-grounds/1065/>  
Top Right: See Monterey, <https://www.seemonterey.com/listings/asilomar-conference-grounds/1065/>  
Bottom Left: Booking.com, <https://www.booking.com/hotel/us/asilomar-conference-grounds.html>  
Bottom Right: California State Parks, <https://castateparksweek.org/event/asilomar-ramble/>

Historic buildings and iconic coastal environmental for the Asilomar Conference & Grounds



# Buck Institute for Research on Aging

## Location

Novato, California

## Size

488 acres, 300 employees

## Focus

The Buck Institute for Research on Aging is an independent biomedical research institute that focuses on understanding aging and age-related diseases.

## Site Features

The Buck Institute for Research on Aging is located on a 488-acre site, with 238 acres dedicated to permanent agricultural use and 70 acres preserved as open space. The primary building complex integrates five interconnected components, including a curved main building (housing reception, administrative offices, conference rooms, dining, and support) and four elongated laboratory wings. All of these are organized around a landscaped 1-acre hexagonal courtyard.

## Development Timeline

**1953:** The Buck Foundation Trust was created by Beryl Hamilton Buck after the death of her husband, pathologist Leonard W. Buck.

**1975:** Mrs. Buck left most of her estate to the San Francisco Foundation with instruction to spend the money for charitable purpose, including “to extend help towards the problems of the aged”.

**1989:** I.M. Pei was assigned as the architect to design the facilities.

**1999:** The Buck Institute began its research program, making it the world’s first institute founded primarily to study intervention into the aging process.

## Institutional Partners

PBLWorks, CIRM, Glenn Foundation for Medical Research, UC Merced, USC Leonard Davis School of Gerontology

## Development Cost

\$80,000,000

## Funding Sources

**Initial:** Buck Trust, Glenn Foundation for Medical Research, California Institute for Regenerative Medicine (CIRM)

**Ongoing:** Sources such as the Buck Trust, Federal Grants, Foundations and Private Donors, and CIRM (CA stem cell agency). The institute also receives funding from leasing 27,000 square feet of its 245,000 square foot campus

## Impacts

Buck Institute plays a vital role in advancing scientific research, improving education, boosting the local economy, and engaging with the community.

## Learn More

[www.buckinstitute.org](http://www.buckinstitute.org)

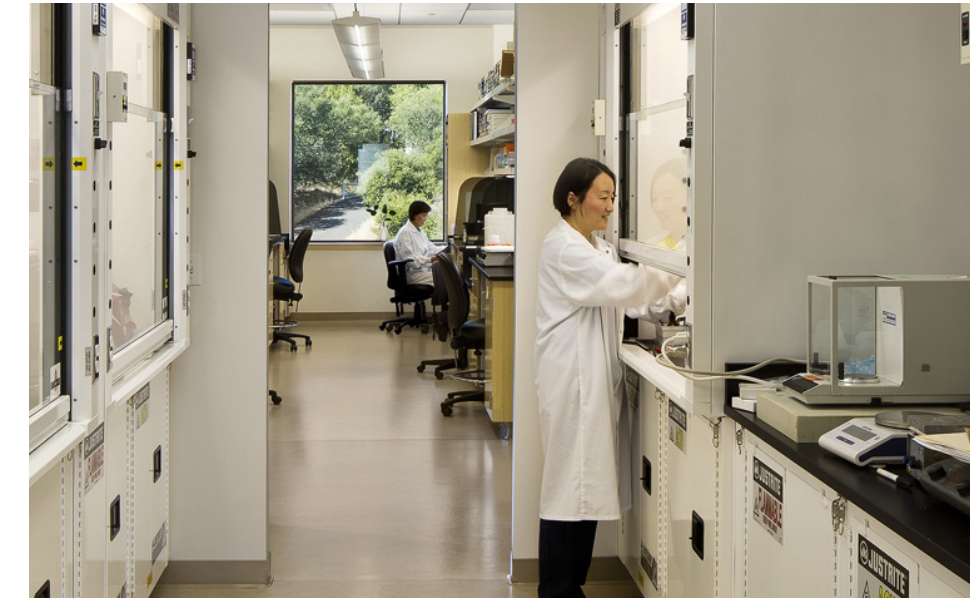


Photo Sources:  
Top Left: Buck Institute, <https://www.buckinstitute.org/>  
Top Right: Marin Living, <https://marinlivingmagazine.com/a-look-at-the-life-changing-science-happening-at-marins-buck-institute/>  
Bottom Left: Buck Institute, <https://www.buckinstitute.org/>  
Bottom Right: Alfa Tech, <https://www.atce.com/project/buck-institute-for-research-on-aging/>

Campus for the Buck Institute located on the foothills of Mount Burdell in Marin County, California; the primary building was designed by I.M. Pei and houses various research laboratories and facilities

# New York Climate Exchange

## Location

Governor's Island, New York

## Size

The 174-acre island (accessible by ferry only) includes 1 million square feet of historic buildings ready for adaptive reuse and 33 acres to accommodate new academic, commercial, convening, and cultural facilities. A new 400,000 square foot facility is currently planned to house Climate Exchange activities. A 43-acre park is designed to address projected sea level rise.

## Focus

Climate change resilience strategies such as green infrastructure for coastline resilience, electric vehicle-to-grid integration, circular organic waste management, climate-resilient hydroponics, data visualization of extreme event impacts, and policy strategies for solution implementation of solutions

## Site Features

Introduction of a public design lab, new mass timber academic and research buildings, open labs, research spaces, and a renovated Yankee Pier and new public plaza

## Development Timeline

New York City has been seeking uses for the island for many years. Stony Brook University has taken the lead in developing the Climate Exchange in conjunction with the Trust for Governors Island. Construction is set to begin in 2025, with Phase 1 finishing in 2028.

## Institutional Partners

Key partners include Stony Brook University, Brookhaven National Laboratory & Urban Systems, American Geophysical Union, and the American Museum of Natural History.

## Development Cost

Estimated \$700,000,000

## Funding Sources

**Initial:** Major sources include \$150 million in previously allocated NYC capital; Simons Foundation gift of \$100 million; Bloomberg Philanthropies gift of \$50 million; \$100 million from the Trust for Governors Island, through NYC. Stony Brook has also secured a commitment from a private foundation to match up to \$100 million in donor support.

**Ongoing:** Grants & philanthropic support

## Impacts

The Exchange is expected to produce 7,000+ permanent jobs and \$1 billion in economic impact for NYC.

## Learn More

[www.stonybrook.edu/commcms/the-exchange/](http://www.stonybrook.edu/commcms/the-exchange/)

[www.govisland.com/about/the-new-york-climate-exchange](http://www.govisland.com/about/the-new-york-climate-exchange)



Photo Sources: SOM, <https://www.som.com/projects/the-new-york-climate-exchange/>

Conceptual renderings of the New York Climate Exchange

# Pepperwood Preserve

## Location

Mayacamas Mountains, Santa Rosa, California

## Size

3,200 Acre Site

## Focus

Ecosystem-climate research on the ecological preserve and environmental education in the North Bay

## Site Features

The facilities include a state-of-the-art \$9 million, 9,400-square-foot, solar-powered center for environmental research and education, called the Dwight Center for Conservation Science. The Bechtel House offers overnight accommodations. A variety of reserve landscapes—ranging from Douglas-fir forests and oak woodlands to wetlands and ponds—serve as a living laboratory for a variety of educational and research purposes.

## Development Timeline

**1978:** The Kenneth Bechtel family bequeaths 3,200 acres to the California Academy of Sciences

**2005:** Herb and Jane Dwight establish the non-profit Pepperwood Foundation to steward the property in partnership with California Academy of Sciences

**2016:** Pepperwood becomes an independent 501(c)3 nonprofit organization

## Institutional Partners

California Academy of Science, Santa Rosa Junior College, Sonoma State University, and Native Advisory Council

## Funding Sources

**Initial:** Kenneth Bechtel

**Ongoing:** Individual gifts/donations, Herb & Jane Dwight, education endeavors, California Academy of Sciences

## Impacts

**Science-Based Solutions:** Develop science-based solutions for reducing wildfire hazards, managing floods and droughts, advancing regenerative agriculture, and preventing wildlife extinction.

**Inform Policy:** Engage researchers and decision-makers in measuring and mapping the processes driving ecosystem change in order to develop adaptive policies that make our community more resilient as a whole.

## Learn More

[www.pepperwoodpreserve.org](http://www.pepperwoodpreserve.org)



Photo Sources:  
Top Left: North Bay Business Journal, <https://www.northbaybusinessjournal.com/article/industry-news/pepperwood-at-10-seeks-next-phase/>  
Top Right: Pepperwood Preserve, <https://www.pepperwoodpreserve.org/>  
Bottom Left: Napa Valley Register, [https://napavalleyregister.com/news/community/calistogan/lifestyles/pepperwood-a-local-nature-preserve/article\\_128aeb04-adf5-52dd-9e0a-cd7c6285f65f.html](https://napavalleyregister.com/news/community/calistogan/lifestyles/pepperwood-a-local-nature-preserve/article_128aeb04-adf5-52dd-9e0a-cd7c6285f65f.html)  
Bottom Right: Pepperwood Preserve, <https://www.pepperwoodpreserve.org/2021/10/11/wfm-wildfire-prep-that-works/>

Pepperwood Preserve's hub—the Dwight Center for Conservation Science—is set within 3,200 acres of managed landscapes with designated learning and research programs

# Presidio Trust

## Location

San Francisco, California

## Size

Real estate portfolio consists of 5.6 million square feet of space with 220 commercial tenants and over 2,900 residents on 1,491 acres.

## Focus

The Presidio Trust leverages its real estate assets to fulfill its mission of preserving the Presidio's natural beauty, history, and future. Real estate driven model with rents from key commercial and residential tenants funding infrastructural, building, and open space improvements along with the ongoing park operations.

## Site Features

Panoramic vistas, trails, lawns, and natural areas; the Presidio Visitor Center; the Battery Chamberlin, an artillery display and museum at Baker Beach; Fort Point; Field Station curiosity lab; etc.

## Development Timeline

**1996:** Created by Congress to manage the Presidio with the National Park Service and with support from the Golden Gate National Parks Conservancy

**2001:** Restored sections of Crissy Field opened to the public

**2004-2013:** Organizational partnerships create new opportunities to the Main Post, the Letterman District, Crissy Field, and the Public Health District

**2013:** As agreed upon, the Presidio Trust begins to cover annual operating expenses with funds primarily earned through leasing homes and workplaces

**2022:** Presidio Tunnel Tops Park opened to the public

## Institutional Partners

Presidio Trust, the National Park, and the non-profit Golden Gate National Parks Conservancy

## Development Cost

Key development costs include the Doyle Drive Replacement Project (approximately \$1 billion), the Tunnel Tops project (approximately \$100 million budget), and the construction of the Letterman Digital Arts Center/ Lucasfilm headquarters (approximately \$350 million).

## Funding Sources

**Initial:** Leveraging existing real estate assets in a highly desirable location.

**Ongoing:** Funding comes from operating park businesses, leasing homes and workplaces, and offering visitor amenities; Loans; Investment; as of 2022, the Presidio Trust held \$469.2 million in net assets concentrated mostly in investments and general property, plant and equipment.

## Impacts

**Revenue generation:** The Presidio Trust generates more than \$200 million in annual revenue from leasing, hospitality, and park operations. This revenue covers the park's operating costs and funds its preservation and improvement.

**Visitor spending:** The Presidio Trust attracts more than 7.5 million visitors each year, who spend more than \$400 million in the local economy. This spending supports more than 5,000 jobs and generates more than \$40 million in tax revenue.

## Learn More

[www.presidio.gov/](http://www.presidio.gov/)



Photo Sources:  
Top Left: San Francisco Business Times, <https://www.bizjournals.com/sanfrancisco/news/2020/10/19/presidio-and-the-pandemic.html>  
Top Right: Presidio Trust, <https://presidio.gov/>  
Bottom Left: Presidio Trust, <https://presidio.gov/>  
Bottom Right: Presidio Trust, <https://presidio.gov/>

The Presidio of San Francisco encompasses iconic open spaces with historic, restored buildings servicing residential and commercial needs.

# University of California Agriculture & Natural Resources (UC ANR) South Coast Research and Extension Center (REC) / Hub for Urban Living

### Location

10 minutes outside of Irvine (other locations throughout California and its various ecological environments)

### Size

200 Acres with 200 academic advisors and 700 community education specialists

### Focus

The mission of UC ANR's RECs are to be the world's go-to source for practical solutions to meet the agricultural and natural resource needs of rural and urban communities worldwide. The RECs aim to leverage California's unique climates and ecosystems, its diverse crops, and the strength of the UC system to advance science-based solutions and engage communities in hands-on learning. The RECs also seek to create novel partnerships, invest in facilities and technology, and enhance their sustainability.

The South Coast Research and Extension Center (SCREC) is a regional living laboratory for UC scientists to conduct agricultural and natural resources management research and extend research-based information to a wide spectrum of audiences. Within the SCREC is the Hub for Urban Living (the Hub). The Hub concept was launched in May, 2021 with the help of over 100 stakeholders from across California and the U.S., including private industry, non-profit organizations, government agencies, and researchers and extension professionals from many different educational institutions. Collectively, this group defined possible areas of focus and activity for the hub.

### Site Features

The center has six on-site greenhouses, a lathhouse, three demonstration landscapes, and a California Irrigation Management Information System (CIMIS) station. It also maintains germplasms for subtropical plants. Researchers can request land, labor, and facilities through an online form. The Center has a conference room with audio-visual and high-speed internet access for extension events and activities. There are also two outdoor demonstration landscape classrooms with seating for up to 40 people each, and a covered demonstration area for 20 people. For larger events there is a barn space available that can accommodate up to 200 people.

### Development Timeline

The South Coast Research and Extension Center (REC) was initially established by the University of California in 1956. In 2020, the University of California's Research and Extension Center System identified the potential for a multi-disciplinary center of excellence that would facilitate discovery and the application of solutions to complex problems impacting sustainable urban living.

### Institutional Partners

UC ANR and the California Stewardship Network are partnering to enhance community and economic development across California.

### Funding Sources

Supported by an UCOP capital request (\$7.4 million initial request for a conference center). UC ANR support employee salaries. The South Coast REC receives additional funds by charging researchers that use the facility.

### Impacts

SCREC collaborated with the GROW program to engage and introduce agriculture careers to over 1,000 students from different schools.

### Learn More

[www.screc.ucanr.edu](http://www.screc.ucanr.edu)



Photo Sources: UCANR South Coast Research and Extension Center (REC)



The South Coast REC features a range of facilities, including greenhouses, demonstration landscapes, outdoor classrooms, and a conference center.

# UCSC MBEST Center

## Location

Marina, California

## Size

1,100 acres

## Focus

The MBEST Center serves as a collaborative research and development park that collaborates with public agencies, private firms, educational and research institutions, and policymakers to tackle emerging challenges in both the economy and the environment. The MBEST Center has faced market-related challenges and has undergone several revisions; its current master plan emphasizes integration with Marina Airport and commercial development.

## Site Features

Situated on 1,100 acres of former Fort Ord land, the UCSC MBEST Center includes 500 acres designated for planned development and 600 acres dedicated to a habitat reserve. The Central North Campus occupies 70 acres and includes the 20,000 square foot MBEST headquarters complex, a multi-tenant commercial office, and essential infrastructure. Considerations for the undeveloped planned development land include potential residential use on lands east of Blanco Road. Adjacent to the MBEST Center are the Marina Airport and the Naval Postgraduate School for Meteorology. The 600 acres designated for a habitat reserve will be managed by the UC Natural Reserve System, a network of protected natural areas throughout California that provide undisturbed environments for research, education, and public outreach programs.

## Development Timeline

The site was transferred from Fort Ord to UC Santa Cruz in 1994, and development progressed slowly for several years. Ground leases have presented challenges due to historical market conditions. In a 2011 re-envisioning process, plans were crafted to adjust the campus's scale, seek anchor tenants, complete MBEST land entitlements, explore transactional alternatives, and enhance the appeal of peripheral lands for short-term development. These efforts aimed to significantly expedite economic activity at the Center.

## Institutional Partners

Marina airport and local economic development agencies

## Funding Sources

**Initial:** University of California Santa Cruz, Federal Government Grants (Economic Development Administration)

**Ongoing:** Tenant rental revenue.

## Impacts

UC Santa Cruz, which operates the UCSC MBEST Center, added \$1.35 billion in value to the region's economy and helped create more than \$2 billion in economic activity.

## Learn More

[financial.ucsc.edu/Pages/MBEST\\_Process.aspx](https://financial.ucsc.edu/Pages/MBEST_Process.aspx)



Photo Sources:  
Top Left: Mahoney & Associates, <https://mahoneycommercial.com/uc-mbest-4/>  
Bottom Left: Mahoney & Associates, <https://mahoneycommercial.com/uc-mbest-8/>  
Right: Google Earth

XXXX

# References & Resources

## Source References

### Asilomar Conference & Grounds Case Study

- [https://en.wikipedia.org/wiki/Asilomar\\_Conference\\_Grounds#References](https://en.wikipedia.org/wiki/Asilomar_Conference_Grounds#References)
- <https://www.visitasilomar.com/plan/park-history/>
- <https://web.archive.org/web/20081015184124/http://visitasilomar.com/asilomartoday.aspx>
- <https://www.visitasilomar.com/plan/asilomar-architecture/>
- <https://www.zoominfo.com/pic/asilomar-conference-grounds/17060494>

### Buck Institute Case Study

- <https://www.buckinstitute.org/news/buck-institute-receives-20-5-million-for-new-stem-cell-building/>
- <https://www.pblworks.org/bie-is-now-pblworks>
- <https://gero.usc.edu/about/the-school/partnerships/>

### New York Climate Exchange Case Study

- <https://www.stonybrook.edu/commcms/the-exchange/>
- <https://www.stonybrook.edu/commcms/the-exchange/about/the-partners>
- <https://www.stonybrook.edu/commcms/the-exchange/about/the-team#CoreBoardMembers>
- <https://www.stonybrook.edu/commcms/the-exchange/>

[about/faqs](#)

### Pepperwood Preserve Case Study

- <http://www.pressdemocrat.com/article/20110206/ARTICLES/110209624>
- <https://www.pepperwoodpreserve.org/donors/>
- <https://www.pepperwoodpreserve.org/>

### Presidio Trust Case Study

- <https://www.presidio.gov/presidio-trust/about/partners>
- <https://www.presidio.gov/presidio-trust/about/mission-and-history>

### UC ANR South Coast REC Case Study

- <https://recs.ucanr.edu/>
- <https://ucanr.edu/sites/recs-for-academics/files/384126.pdf>
- <https://storymaps.arcgis.com/>

## Key Resources

The SDC site has been extensively studied and conceptualized through various reports and plans. The team referenced many of these resources in developing this Business Plan. The following were considered key resources by the team:

### Sonoma Developmental Center Site Transformation Report

*Prepared by Potrero Group for Transform SDC, 2015*

A Site Management Study conducted by Potrero Group explores the transformation possibilities for the Sonoma Developmental Center (SDC). The study examines successful site transformations, emphasizing community engagement, leadership involvement, financial sustainability, and a compelling vision. It suggests three scenarios for SDC's future: university acquisition, a trust or government corporation, or private redevelopment with multiple uses. The study recommends pursuing a public-private partnership model with a trust to govern the transformation, preserving open space, maintaining healthcare services, and promoting economic diversification. It also outlines immediate next steps, highlighting the importance of protecting the land while serving the community's needs. The core pillars of the transformation include preserving open space, maintaining healthcare services, and promoting economic diversification, with a focus on environmental conservation and climate resilience.

### Adopted Sonoma Developmental Center Specific Plan

*Prepared by Dyett & Bhatia for the County of Sonoma, 2022*

The Sonoma Developmental Center (SDC) was established in 1891 in the Sonoma Valley. It covers approximately 180 acres of developed campus and around 765 acres of agriculture, recreation, and natural areas. The site is adjacent to the Sonoma Valley Regional Park and the Jack London State Historic Park and includes an extensive trail system, water infrastructure, and a water intake in Sonoma Creek. SDC was initially created to serve individuals with developmental disabilities and was known for its therapeutic and picturesque setting. In 2018, the facility closed, and the State of California authorized Sonoma County to lead the planning process for the SDC site.

After its closure in 2018, Sonoma County took the lead in planning its future. The plan emphasizes affordable housing, open space preservation, and economic feasibility. It envisions a vibrant, sustainable community with a mix of uses, including housing, research, education, and retail, surrounded by protected open space and natural habitats. The plan aims to integrate development with conservation, maintain historic resources, promote multi-modal mobility, and ensure fiscal sustainability. Community engagement and environmental review are essential components of the planning process, aligning with state goals and objectives.

## **Key Resources, Continued**

**[Economic Impact Analysis of Eldridge Enterprise](#)**

**[Redevelopment of the Sonoma Developmental Center \(SDC\)](#)**

**[Sonoma County California](#)**

**Prepared by Economic Forensics and Analytics, Inc., 2021**

This report explores the potential economic impacts of the Eldridge Enterprise, a concept aimed at redeveloping the Sonoma Developmental Center (SDC) site in Sonoma County. Economic Forensics & Analytics (EFA) conducted the study, estimating the economic benefits based on specific assumptions for the site's commercial idea. The Eldridge Enterprise envisions an RD&D center focused on climate change mitigation and adaptation solutions through scientific research, product design, and development. The report highlights the enterprise's potential to attract financial investments from Silicon Valley, government funds, and support climate change initiatives. It emphasizes a public-private partnership framework and outlines key characteristics of the envisioned partnership.

# Appendices

---

**Appendix A: Stakeholder Survey Summary Report**

**Appendix B: Stakeholder Interviews Summary Report**

**Appendix C: Public Open House Summary Report**



# Appendix A: Stakeholder Survey Summary Report

During this first survey round, the team developed survey questions and an engagement strategy to approach key targets. In August 2023 the team coordinated with the County and prepared a contact list of recommended stakeholders who might have strong alignment with the realization of the Center for Climate Action and Innovation (CCAI).

On August 21, 2023, Permit Sonoma emailed Survey 1 to a hundred (100) key contacts, with the subject line “Help to Find a Niche for the SDC Climate Adaptation Center” (See “Survey Question Form” at the end of this Appendix Report). The County received eighteen (18) completed survey responses as of August 25, 2023.

Participants from various organizations responded to the survey. See below for the list of companies represented in Survey 1.

### List of Respondents:

- Milken Institute
- Community Alliance of Family Farmers (CAFF)
- Valley of the Moon Water District
- East Bay Community Energy
- Jacobs
- UC Davis, Department of Environmental Science and Policy, National Center for Sustainable Transportation
- LIFT Economy
- Audubon Canyon Ranch
- Sonoma Water

- Glydways
- Resources Legacy Fund
- City of Sausalito / Center for Sea Rise Solutions
- Pepperwood Foundation
- Divco West
- Sandborn Tree Service
- Suscol Intertribal Council
- Savory Holistic LLC
- Sonoma County Regional Parks

### Survey Response Highlights

#### Most Relevant Areas of Interest:

- Biodiversity
- Wildfire Resilience
- Water Resilience
- Renewable Energy

#### Most Valuable Resources?

1. Land for building
2. Cross-Sector Collaboration Space and Access to other collaborators across sectors (i.e. Public/Private/Non-Profit/Community)

#### Most important characteristic of an innovation space?

1. Cross-Sector Collaboration Space - Access to other collaborators across sectors i.e., Public/Private/Non-Profit/

- Community
2. Investment/Incubation - Access to Investors and/or opportunity to develop/prototype
3. Access to human resources – skilled labor or ability to train future workforce i.e., Education Opportunities/Skills Development

#### Willing to be interviewed and meet for 30 minutes?

- 100% of participants were willing to participate in Survey 2.

### Summary of Survey Responses

Please check the areas of climate adaptation that is most relevant to your work.

Category	Percent of Vote
Biodiversity	22%
Wildfire Resilience	22%
Water Resilience	22%
Renewable Energy	17%
Low-Carbon Mobility	11%
Food & Agriculture	6%

### Land and Natural Resources: In your part of the climate adaptation space, what type of resources would be valuable?

Category	Number of Votes
Cross-Sector Collaboration Space - Access to other collaborators across sectors i.e., Public/Private/Non-Profit/Community	7
Land for Building	7
Investment/Incubation - Access to Investors and/or opportunity to develop/prototype	6
Other	6
Access to human resources – skilled labor or ability to train future workforce i.e., Education Opportunities/Skills Development	3
Reservoirs	2
Ag Land	1
Forested Land	1
Flexible Space - Ability to grow or shrink on short notice	1

## Appendix A, Continued

**Please rank by priority the most important characteristic of an innovation space:**

Category	Number of Votes
Cross-Sector Collaboration Space - Access to other collaborators across sectors i.e., Public/Private/Non-Profit/Community	7
Investment/Incubation - Access to Investors and/or opportunity to develop/prototype	6
Access to human resources – skilled labor or ability to train future workforce i.e., Education Opportunities/Skills Development	3
Flexible Space - Ability to grow or shrink on short notice”	1

**Are there other important characteristics that would make an innovation space useful for your organization?**

- “A tie or close second is the cross-sector collaboration.”
- “My biggest hope is that whatever takes place here prioritizes appropriate technology and innovations that are accessible to enterprises of smaller and more grassroots scales. There’s a lot of investment into larger-scale innovations, big technologies and programs that require either very large government or corporate investments. What excites me

is the possibility of an incubation space that encourages innovations that can be accessed by smaller-scale farms, businesses and communities, climate change solutions in which the benefactors—and just not the consumers, but the entrepreneurial benefactors are many, diverse and spread out through our community. Unlike Silicon Valley and other places of innovation, Sonoma County has always been more down-to-earth in our approach and focused on local people and ecosystems; wouldn’t it be cool if our very own Climate Adaptation Center reflected those values?”

- “Water education center”
- “Fabrication space & equipment for prototype development.”
- “I understand that there are groups that need space for prescribed fire training in Sonoma County”
- “Machine shops and other industrial facilities”
- “Co-working options: daily, weekly, monthly”
- “Teaching outdoor courses in prescribed fire - including places to burn as demonstrations”
- “Innovation is great but the reality is that we know what is needed to address climate change. There are not going to be technological solutions to meet the challenge. We need an educated workforce to steward landscapes and make homes resilient to floods and fire. We need to protect land

and promote biodiversity. A strong and healthy natural world is the most important thing we can do to respond to climate change short of reducing CO2 emissions. We know what we need to do we just need the resources and commitment to get the job done. So an innovation space should provide a training space for an army of forest stewards and home hardening practitioners.”

- “I have looked at opening a biomass utilization campus. Appropriately zoned land with paved areas, good access for trucks and access to 3 phase power is very hard to come by in Sonoma county.”
- “For tribes especially landless tribes to have unrestricted access to open space and water resources in rivers, and creeks for gathering willow and other basket materials, acorns and medicine.”
- “We work with the community based on their desired Quality of Life and then create the economy to let people live that desired life which includes a future landscape description which describes the biodiversity, clean air and water and the agricultural/fisheries and forestry management needed to achieve regenerative abundance well into the future.”

**Buildings / Facilities: What type of Buildings / Facilities does your organization use?**

Category	Number of Votes
Meeting Rooms/Conference Facilities	5
Other	5
Adaptive Re-use	3
Office	2
Labs	1
R+D/Clean Manufacturing	1
New Build	0

**What types of spaces does the Climate Adaptation industry need that aren’t currently provided by the market?**

Category	Number of Votes
Other	5
R+D/Clean Manufacturing	3
Adaptive Re-use	3
Meeting Rooms/Conference Facilities	2
Office	1
Labs	1
New Build	0

# Appendix A, Continued

## Are there other important characteristics that would make a physical building space useful for your organization?

- “A place to test and view climate interventions and a place to bring investors or partners to see those in action and then brainstorm next steps”
- “We are always looking for venues that include both indoor spaces for conventional conference-type activities as well as outdoor farm space, as we host events that showcase sustainable agriculture which require both meetings, power points and such as well demos in the field. Having a space where we could find both in a single venue would be pretty cool.”
- “Water education, operator training, additional laboratory space/personnel”
- “I personally don’t know but some of our partners are working on the concept of community resilience centers that would be refuges of clean, cool air and access to electricity/internet during extreme heat or fire events, as well as providing culturally appropriate services, youth engagement,etc.”
- “Proximity to water for prototype testing”
- “Following the Well Building certification: <https://www.wellcertified.com/ratings/>”
- “Flexible meeting space”

- “We need space and a program to teach forest stewardship practitioners and home hardening skills. We need funders to support this work. Again, survey takers can’t make more than one response.”
- “Open neutral space with a kitchen, running water space for classes and workforce training. Traditional Indigenous Water Management, Forest management, harvest, and cultural burns. Support basket weaving which is part of forest and riparian corridors management.”

## Infrastructure: What kind of infrastructure is necessary for a Climate Center? Please rank by priority

Category	Number of Votes
Energy/Power	7
Other	5
Water/Wastewater	2
Mobility	1
Technology	1

## Are there any available, unique or emerging funding sources, that you can think of that might be helpful to efforts to establish and or operate a Climate Adaptation Center at SDC?

- “Apart from federal and state funding for climate, I think looking at green banks, and at green financing tools like green bonds, environmental impact bonds, or impact investing funds that have a climate focus.”
- “When it comes to climate adaptation in agriculture, both CDFA and USDA have many funding sources. Can’t say sure which a space like this would be eligible for, but there is increasing investments by the state and federal government to promote regenerative ag and I’d imagine spaces like this could fit the bill.”
- “DWR: <https://water.ca.gov/Work-With-Us/Grants-And-Loans/GRanTS>”
- “Check out the SGC’s Community Resilience Centers solicitation, \$100M”
- “NOAA resilience challenge grants”
- “Support the transition away from oil, wood-based products to HEMP. Support the Hemp transition away from oil, plastics, and trees to Hemp!”
- “Tomkat Ranch Foundation”

## Would you be willing to participate in 15-30-minute interview with us?

- 100% responded Yes

## Do you have any recommendations for other individuals or organizations that we should connect with for this survey?

- “The California Climate and Agriculture Network (CalCAN)”
- “Sonoma Fire/Cal Fire”
- “Jeral Poesky, Swyft Cities”
- “Sonoma County Firesafe council, Sonoma Land Trust, North Bay Jobs with Justice, Latino Community Foundation”
- “I’m happy to help as I can but I don’t think I’m your target audience for this. I could see using the center for special meetings and retreats, but I don’t see other needs for space at the center, so I’m not sure how to answer the questions. Connecting UC Davis - and Sonoma State - to the work going on at the center does seem like a good idea.”
- “North Bay Jobs with Justice”
- “Sonoma Valley Groundwater Sustainability Agency; Sonoma Land Trust”
- “Sarah Kaiser. She works to develop neighborhood grazing cooperatives. If the site could be a home base for several Grazing contractors”

# Appendix A, Continued

- “Pepperwood Foundation Tribal advisors. CIMCC. California Indian Museum and Cultural Center, Santa Rosa, Ya-Ka-Ama, Native American land-based North of Santa Rosa. SRJC Indian Museum, and Student Native American Club both on campus.”

## Survey Question Form

The online survey questions were developed to encourage the participants to share insights/ideas/recommendations that could help us shape the plan.



### SDC Climate Adaptation Center Business Plan

With a grant from the California Coastal Conservancy, Sonoma County is developing a business plan to strategically align the vision for a Climate Adaptation Center at the Sonoma Developmental Center (SDC) site with needs in the climate adaptation space and potential funding opportunities. SDC offers an unrivaled site with 1000 acres of breathtaking Sonoma countryside with a wide range of natural features, including open space, agricultural lands, forested hillsides, picturesque creek corridors, reservoirs, and recreational trails, as well as a 180-acre core with a portfolio of historical buildings slated to be redeveloped with adaptive reuse potential, and serviced land parcels suitable for build to suit facilities.

The county's vision for the Center revolves around cultivating a dynamic climate adaptation ecosystem fostering innovation, exploration, research, demonstration, and economic development.

We invite you to complete this survey and help shape the future of Sonoma County's Climate Adaptation Center.

1. Name

2. Email

3. Organization

4. Phone number

5. Please check the areas of climate adaptation that is most relevant to your work.

- Biodiversity
- Wildfire Resilience
- Water Resilience
- Food & Agriculture
- Low-Carbon Mobility
- Renewable Energy

The following questions help us better understand what types of Land, Facilities, Interaction, and Infrastructure organizations in the climate adaptation space need to help achieve their mission. And what type of funding might be available.

6. Land and Natural Resources: In your part of the climate adaptation space, what type of resources would be valuable?

- Agricultural Land
- Forested Land
- Land for Building Development
- Reservoirs
- Other

7. Innovation: Please rank by priority the most important characteristic of an innovation space:

Investment/Incubation - Access to Investors and/or opportunity to develop/prototype	^	v
Cross-Sector Collaboration Space - Access to other collaborators across sectors i.e., Public/Private/Non-Profit/Community	^	v
Flexible Space - Ability to grow or shrink on short notice	^	v
Access to human resources - skilled labor or ability to train future workforce i.e., Education Opportunities/Skills Development -	^	v

8. Are there other important characteristics that would make an innovation space useful for your organization?

9. **Buildings / Facilities:** What type of Buildings / Facilities does your organization use?

- Meeting Rooms/Conference Facilities
- Office
- Laboratories
- R+D/Clean Manufacturing
- Adaptive Re-use
- New Build
- Other

10. What types of spaces does the Climate Adaptation industry need that aren't currently provided by the market?

- Meeting Rooms/Conference Facilities
- Office
- Laboratories
- R+D/Clean Manufacturing
- Adaptive Re-use
- New Build
- Other

11. Are there other important characteristics that would make a physical building space useful for your organization?

# Appendix A, Continued

## Survey Question Form, Continued

12. Infrastructure: What kind of infrastructure is necessary for a Climate Center? Please rank by priority

☰ Energy/Power	▲ ▼
☰ Water/Wastewater	▲ ▼
☰ Mobility	▲ ▼
☰ Technology	▲ ▼
☰ Other	▲ ▼

13. Are there any available, unique or emerging funding sources, that you can think of that might be helpful to efforts to establish and or operate a Climate Adaptation Center at SDC?

14. Would you be willing to participate in 15-30-minute interview with us?

- Yes
- No

15. Please let us know the best way to contact you and we will reach out to schedule a virtual meeting

- Phone
- Email

16. Do you have any recommendations for other individuals or organizations that we should connect with for this survey?

17. Are you interested in learning more about Sonoma County's vision for the SDC Climate Center and discussing this opportunity further?

- Yes
- No

Done

# Appendix B: Stakeholder Interviews Summary Report

## Introduction

During the months of August through October 2023, our team conducted round two of the surveys, which comprised of more in-depth conversations with industry leaders.

Survey 2 interviews targeted stakeholders across various categories in agriculture, education, climate, and resilience fields.

## Methodology

In-depth interviews are a qualitative research method used for uncovering the range of views, beliefs, attitudes, opinions, and experiences. The interviewers used a discussion guide to conduct a semi-structured conversation with participants.

## Interviewers

The interviews were conducted by Meea Kang and Stephen Engblom, Enki Development Group, Alison Ecker, SWA and Wil Lyons, Ross Markley, Claudette Diaz, Permit Sonoma

## Interview Participants

The first twenty (20) interviews were participants from Survey 1. The remaining thirty (30+) participants were individuals and groups identified based on their known interest,

affiliations, experiences and/or their ability to represent a range of perspectives. The final list of interviewees included representation from such interests as:

- Academia
- State Parks
- Agriculture
- County Regional Parks
- Business
- Land Trusts
- Non-Profit Organizations
- Nature Preserves
- Energy Providers Finance
- Environmental Community
- Federal Agencies
- Local Government
- Local Protection Agencies
- Tribal Interests
- Water Providers

Over fifty (50) people were interviewed representing over thirty (30) companies (see below for a list of those interviewed). On behalf of Sonoma County, Enki Development Group. contacted each potential interviewee, provided a consistent explanation of the request to potential interviewees. Potential participants were told the interviews would take approximately thirty minutes and

were asked to meet interviewers on Zoom.

## Structured Interview Guide

A list of questions were prepared as a discussion guide for all interviews (See Appendix B for the structured interview discussion guide). The guide included unprompted questions, meaning the questions were open-ended, and the interviewer did not suggest possible answers. In other questions, the interviewer asked about a specific issue or topic. As appropriate, interviewers asked follow up questions not on the guide to fully explore a topic.

## Interview Length

Interviews ranged in length from 30 minutes to one hour, with the majority of interviews lasting approximately 30 minutes. Interviewers encouraged using as much time as each participant could provide to allow for the maximum opportunity for discussion.

## Method Limitations

Like other qualitative methods, in-depth interviews allow for detailed exploration of topics, but do not provide data that is statistically representative of a larger population. This report makes note of trends among interview participants when applicable, but those trends cannot be generalized. Instead, the information obtained is descriptive and should be considered as representing a range of opinions that may exist among stakeholder segments.

## Report Format

This report summarizes responses from interview participants. The first section summarizes responses from all participants. Occasionally a response will be in quotes to indicate a specific comment, although the interviews were not recorded, and remarks are not verbatim. These remarks are included to give the reader a flavor for the language interview participants used.

## Key Interview Highlights

In general, there is a highly engaged stakeholder base in the climate-leader space evidenced by the high percentage of people agreeing to participate in interviews. Within this community base there were widely ranging opinions on all topics discussed. “A range of perceptions and opinions were expressed.”

Following are the key highlights:

“**The whole is greater than the sum of the parts**” and enabling climate forward Infrastructure through public private partnerships is key:

- Respondents stressed the most alluring attribute of the Sonoma Development Center Site is the opportunity to create a complete climate community, including residential, nonresidential, and open space. Researching, monitoring and implementing climate innovation requires this combination of developed and non-developed areas in a living laboratory.

## Appendix B, Continued

- Realizing this complete community will require quick action by county and state officials to bring together key stakeholders in overcoming the realities of realizing climate forward infrastructure.
- The county and key stakeholders should collaborate to leverage regulatory and financial incentives, encouraging the developer to adopt a Longterm perspective.
- Leveraging tools such as Enhanced Infrastructure Districts (EIFD), Community Facility Districts (CDF), and innovative tax districts can help finance the infrastructure to create a comprehensive climate community at SDC.
- Plan the infrastructure for the Center for Climate Action and Innovation, the new residential community at SDC, and the open space resources as a seamless whole. While this may seem daunting, SDC presents as amazing opportunity to do so.

**Water** – Water infrastructure plays a pivotal role at the Center for Climate Action and Innovation at SDC.

- It will require close coordination between the county, the appointed developer, to deliver innovative solutions for water management, drought related climate adaptation, and resilient technologies.
- Conversations with Sonoma Water and Valley of the Moon

Water Management District underscore the importance of water infrastructure that goes above and beyond, aiming to create a blueprint for sustainable water management in Sonoma County.

- The interplay of water rights, ground water supply, emergency response agreements, and the collaboration between stakeholders exemplify a comprehensive approach towards reimagining the potential of the SDC site in the context of climate action and innovation.

**Energy** – Sonoma Clean Power, EBCE Center for Climate Action and Innovation (CCAI), has the potential to become a hub for carbon markets, foster climate smart agriculture, and enhance resilience in the face of extreme climate conditions. Key points discussed included the prospect of developing a microgrid that leverages a new community and research centers and explores the potential to transfer power to neighboring communities as well. We also heard about the need statewide for a center for testing and commodifying carbon, as well as understanding demand dynamics. Job creation, economic growth, and environmental stewardship are among the many opportunities presented at CCAI underscoring its significance in the pursuit of a sustainable and climate resilient future. Positioning CCAI as a hub / meeting center for all Community Based Energy Providers.

**Mobility** – Innovative new mobility solutions (eg. Via) offer ready for market mobility options, such as on demand transit services for the Sonoma Development Center (SDC) in its early stages, reducing car dependency and enhancing existing public transit

efficiency. Simultaneously, long-term prospects could mature opportunities to integrate a low-density cutting-edge AI solution bundled with a new cross-valley bike path network, presenting a holistic approach to transportation in the region.

**Open Spaces** – Unleashing the open spaces’ complete potential revolves around striking a delicate equilibrium encompassing recreation, habitat corridors, ecological restoration, and climate research. Particular focal points involve researching aspects of fire management, promoting sustainable fire practices, and pioneering novel strategies for agricultural diversification. Collaborative prospects exist for Cal State Parks, Sonoma Land Trust, and Sonoma Regional Parks to engage in innovative land management and recreational endeavors, forging solutions that generate mutual benefits within the biodiversity and fire management research communities.

**Agriculture** – Diversifying and restoring the agricultural portfolio in the county is a key opportunity at SDC CCAI that will not only help to address climate issues but also address food equity and create job training opportunities

**Biodiversity** – SDC is one of the most important biodiversity linkages in Sonoma Valley, this key link is well known to the biodiversity experts who participated in the process, and one that demands a close collaboration with recreational and development opportunities. Restoring biodiversity at CCAI is a magnetic topic to the climate experts we spoke with.

**Fire** – The Center for Climate Action and Innovation (CCAI) at SDC could attract funding from statewide Resources Legacy Funding (RLF) by forming strategic partnerships with established entities like Audubon Ranch and Pepperwood Preserve, positioning itself as an exemplar of a fire-forward community. With a focus on prescribed fire, ecosystem health, and sustainable fire management, CCAI aligns with RLF’s climate, wildfire, and community resilience funding, fostering collaboration with organizations like Audubon Canyon Ranch and Fire-Forward and Good Fire Alliance, while drawing on RLF’s extensive experience and connections to advance climate resilience, wildfire mitigation, and sustainable land conservation initiatives.

**Strategic Partnerships** – Climate research is a multifaceted field, and the successful integration of a Center for Climate Action and Innovation into this ecosystem necessitates strategic partnerships. This involves authentically aligning the attributes of SDC with current climate topics and streams of investment. Access to federal, state, and local funding will be accelerated by collaborating with established and trusted partners, many of whom were part of the interview process.

**Key Institutional Anchors** - have played a pivotal role in analogous studies for the case studies section of this report. Valuable lessons learned from the creation of the Lanterman Campus at Cal Poly Pomona, the Presidio Trust’s successful history and its approach to addressing current growth issues, and the Santa Rosa Junior College’s growth in response to climate challenges provide insights into how Sonoma County should

## Appendix B, Continued

explore collaboration with institutional partners and attract a key institutional anchor.

Local Players, such as the Sonoma County Economic Development Board coordinating with statewide and international entities, are essential in raising awareness for the CCAI at SDC. Collaborating with players like the Milken Institute can raise the profile of the CCAI to expedite financial and political commitments to the program.

Building momentum in the near term, SLR Solutions based in Sausalito has successfully positioned itself for NOAA funding and sees an opportunity to collaborate on North Bay water / ecology related issues. Intercounty collaboration with Napa Resource Conservation District to attract involvement from Lawrence Livermore National Laboratories and North Bay counties clusters is a promising strategy for securing federal and state funding.

The University of California Division of Agriculture and Natural Resources (UCANR) is interested in exploring the potential partnership with Sonoma County to establish a Research and Extension Center (REC) at the Center for Climate Action and Innovation (CCAI) at SDC. This partnership aligns with UCANR's research focus on the Wildland Urban Interface (WUI) and encompasses opportunities in the well-funded research areas of biomass, biochar, biohydrogen, and Blue Forest insurance research. A crucial next step is the formation of a task force to

collaborate with UCANR in developing a proposal for CCAI as a Wildland Urban REC. Such a partnership could serve as a strong foundation for broader UC System involvement and facilitate the participation of National Labs like LLNL and NREL.

The insights from Survey 2 reflect a robust commitment to realizing the full potential of the SDC project, with a focus on sustainable infrastructure, open space, and strategic partnerships to drive innovation and progress. These recommendations emphasize the importance of creating a forward thinking, resilient, and research-oriented community.



# Appendix B, Continued

## Individuals Interviewed

The following list of individuals interviewed may include an organization or interest group with which they are associated; however, interview participants did not express or officially represent an opinion of that group or organization.

- Angela Lotte - Statewide and Coastal Programs Manager, California State Parks
- Barry Vesser - Statewide Policy Director, The Climate Center, Santa Rosa
- Bert Whitaker - Director, Sonoma County Regional Parks
- Caitlin Cornwall - Senior Project Manager Planning and Grants, Sonoma Ecology Center
- Caitlin Maclean - Senior Director of Financial Innovations Labs, Milken Institute
- Charlie Toledo - Intertribal Advocate, Suscol Intertribal
- Chris Eldemir - Managing Director, Investments, San Francisco, Divco West
- Cindy X Chen, Ph.D. - Woody Biomass and Wood Products Advisor, UC Ag and Natural Resources
- Cyndy Shafer - Natural Resource Program Manager, California State Parks Bay Area District
- Dale Robert - Resilience Engineer, Sonoma Water
- Dan Berkovits - NYC Director of Strategy, Via

- Darren L. Haver, Ph.D. - Associate Director for REC System/ Director South Coast REC
- David Lieberman - Capital Projects, Santa Rosa Junior College
- David Royall - Maintenance Manager, OM and Coordinator, Sonoma Water
- Don Seymoure - Principal Engineer, Sonoma Water
- Egon Terplan - Robert S. Cornish Endowed Chair of Regional Planning and Lecturer in City & Regional Planning at Berkeley College of Environmental Design (former Senior Advisor for Economic Development and Transportation at the Governor's Office of Planning and Research and California Governor's Strategic Growth Council)
- Erika Pham - Mote Hydrogen
- Erin Axelro - Partner, LIFT Economy
- Ethan Brown - Executive Director, Sonoma County Economic Development Board
- Evan Wiig - CAFF Director of Communications and Membership
- Feliz Ventura - Program and Resilience Manager, East Bay Community Energy
- Garrett Brinker - Bay Area Strategic Partnership Director, Via
- Genevieve Taylor - Executive Director, Ag Innovations
- Glenda Humiston - Vice President, University of California Agriculture and Natural Resources
- Gregory C. Ira - UC Environmental Stewards Program Director
- Haris Gilani, Ph.D. - Biomass & Bioenergy Advisor UC Agriculture and Natural Resources
- Janelle Kellman, Esq. - Founder of Center for Sea Rise Solutions and Former Mayor of Sausalito

- Jay Jasperse - Retired Chief Engineer Ground Water, Sonoma Water
- Jean Fraser - CEO, Presidio Trust
- Jessica Martini-Lamb - Environmental Resources Manager, Sonoma Water
- John McCaull - Land Acquisition Director, Sonoma Land Trust
- Johnny Campbell - Manager, Shone Farm Program Santa Rosa Junior College
- Kanika Singh - Director of Innovative Finance, Milken Institute
- Karen Eggerman - Partner at Tensleep Advisory
- Ken Alex - Director, Climate Project at UC Berkeley (Former Director of the Governor's Office of Planning and Research)
- Laura Tam - Program Manager, Resource Legacy Foundation
- Lauren Cartwright - Director of Business Services and Economic Research, Sonoma County Economic Development Board
- Louise W. Bedsworth - Executive Director, Center for Law, Energy & the Environment (Former Director of the Strategic Growth Council)
- Lucas Patzek, Ph.D - Executive Director, Napa Resource Conservation District
- Matt Fullner - CEO, Valley of the Moon Water District
- Michael Gillogly - Preserve Manager, Pepperwood Preserve
- Nathan Bengtsson - PG&E's Interim Director Climate Resiliency and Adaptation
- Norman Gilroy - Sonoma Valley, member CAFF Policy Committee
- Paul Angelone - Special Advisor for Implementation, US Environmental Protection Agency

- Paul Jaamgart - Planning & Urban Solutions Head of Infrastructure, Glydways
- Richard Dale - Executive Director, Sonoma Ecology Center
- Rick Rusnack - Chief Business Officer, Presidio Trust
- Rodger Savory - Savory Holistics
- Rue Furch - Member CAFF Policy Committee, former Sonoma County Planning Commissioner
- Sarah Mae Nelson - UC Climate Stewards Initiative Academic Coordinator
- Sasha Berleman - Prescribed Fire Burn Boss, Director, Fire Forward and Good Fire Alliance
- Simone Albuquerque- Sonoma County Climate and Sustainability Department
- Sims Witherspoon - Climate Leader at the AI research lab Google DeepMind
- Steve Morton - Master Planning and Strategic Planning Director, Jacobs Engineering, Lanterman Campus Cal Poly Redevelopment
- Tanya Narath - Director of Climate Programs, The Regional Climate Protection Agency
- Tom Gardali - CEO, Audubon Ranch
- Virginia Calkins - Director of Environmental, Social, and Governance, Divco West
- Wendy Krupnick - Acting President, CAFF Sonoma County Chapter
- Woody Hastings - The Climate Center, Santa Rosa

# Appendix B, Continued

## Summary of Interviews

**University of California  
Agriculture and Natural Resources (UC ANR)**  
[www.ucanr.edu](http://www.ucanr.edu)

### Interviewees:

- Glenda Humiston: Vice President Agriculture and Natural Resources
- Harris Gilani, Ph.D.: Biomass and Bioenergy Advisor
- Cindy X. Chen, Ph.D.: Woody Biomass and Wood Products Advisor, Central Sierra; Alpine and Mariposa
- Darren L. Haver, Ph.D.: Associate Director for REC System/ Director South Coast REC
- Gregory Ira: UC Environmental Stewards Program Director
- Sarah-Mae Nelson: UC Climate Stewards Initiative Academic Coordinator

The University of California Agriculture and Natural Resources (UC ANR) has great potential to act as the key anchor institution for the CCAI as a location for their Research and Extension Centers (RECs) and Environmental Stewards Program. They are keen to have a next conversation about the CCAI.

### Research and Extension Centers (RECs) Network Overview

The UC ANR RECs Network represents a dynamic initiative harnessing over 40 natural reserve systems and Research Forests to establish an extensive statewide research, innovation, and implementation network. RECs serve as vital hubs where academia, industry practitioners, and the private sector converge. These centers play a pivotal role as demonstration platforms and workforce training sites for the entire state and neighboring counties. Furthermore, the proximity of the Sonoma Developmental Center (SDC) campus to urban and suburban expansion positions it as a compelling candidate for potential incorporation into the University of California Division of Agriculture and Natural Resources (UC ANR) Research and Extension Campus, thereby further enriching the network's capabilities and reach.

As an Analog, UC ANR has recently established an urban center in Orange County, CA, dedicated to urban agriculture and natural resource research. The Center for Climate Action and Innovation (CCAI) holds considerable promise, particularly in the domains of biomass/biochar, biohydrogen, and Blue Forest insurance research. The Irvine/Orange County REC achieved operational status within a two-year timeframe, thanks to a grant from the UC System, with ongoing funding support sourced through matching grants involving researchers, academic institutions, and private sector collaborators.

### Environmental Stewards Program Overview

The program, which started in 2012, is delivered through local community-based partners who are trained to deliver their courses locally. The partners charge their own fees for their courses and remit a portion to the program for the provision of a volunteer management system, course materials, updates, and events.

The course, designed to address the demand for more detailed information on climate change, has grown significantly since its inception, with almost a thousand people having completed the course in three years. It has also been piloted in other states and is being integrated into community colleges.

The course combines physical and social sciences, focuses on community engagement and communication, and has shown statistically significant gains in efficacy, agency, and communication skills around climate. The course also includes a stewardship project requirement, which encourages students to apply their learning in practical ways, leading to community level collective action and engagement.

UC ANR Climate Stewards recommends the Bay Area Climate Action Network as an organization to connect with and mentions other climate action networks around the state, such as the Sonoma Regional Climate Action Network (RCPA) and the Napa Resource Conservation District. They also mention the University of Santa Cruz Led Center for California Coastal Science Campus network, which has been working on sea level rise issues and saltwater intrusion. The team emphasizes the importance of not

reinventing the wheel and the need for collaboration with local groups to address climate change. This thinking aligns with what we heard from Sausalito Based Sea-level Rise Institute.

A crucial next step is to convene a task force to collaborate closely with UC ANR in crafting a comprehensive proposal for the designation of CCAI as a Wildland Urban REC.

- CA Statewide Research Network: Utilizing 40+ natural reserve systems and Research Forests to create a statewide research / innovation and implementation network.
  - RECs are a place where academics, practitioners, and private sector come together, demonstration, and workforce training sites for the whole state and nearby counties.
  - Irvine/Orange County REC up and running in 2 Years – Grant from UC System, operating funding through matching grants with researchers, academic and private sector interaction//
  - Potential for CCAI as a UC ANR Research and Extension Campus: Key reason SDC campus's proximity to urban and suburban growth.
  - Existing Tech Incubator relationships: Focusing on tech incubators, agrifood, and Agri-Tech.
- Environmental Stewards Program:
  - Program launched in 2012, delivered through local partners who charge fees and contribute to program

## Appendix B, Continued

support. Over 1,000 certificates in 3 years.

- The course on climate change demand has grown significantly, expanded to other states and community colleges.
- Blends physical and social sciences, focuses on community engagement and communication, showing skill improvements.
- Engenders community stewardship projects and positive engagement.
- UC Collaborations: UC ANR would attract exploring partnerships with community colleges and national labs. Good opportunity to work with UCSC (Coastal Science Campus), UC Davis, Sonoma State and SRJC, as well as with Lawrence Livermore Labs, and National Renewable Energy Labs.
- Established regional and local partnership with Pepperwood, Sonoma Ecology Center, Audubon Canyon Ranch, Bay Area Climate Action Network, RCPA, and Napa RCD.
- Potential Next interviews:
  - Gabe Youtsey: Chief Innovation Officer: Leading innovation efforts.
  - County Director: Stephanie Larsen is the County Director for UC ANR in Sonoma County.
- Potential Specific Initiatives well suited to CCAI:

- Biomass: Focusing on biomass in Riverside, Siskiyou, and central Sierra Nevada.
- Biochar Benefits: Utilizing biochar to improve soil quality and water filtration.
- Bioenergy Collaboration: Working on a Cal Fire grant for workforce development and innovative wood products.
- El Dorado County: Efforts to create Crescent Mill, a wood products campus, are in the initial stages.
- Bio Bricks: Collaborating with UC Merced and UC Davis on biomass bricks and construction materials.
- Mass Timber: Exploring mass timber products, especially cross laminated timber (CLT).
- Biochar: A byproduct of hydrogen and bioenergy production, usable as a soil amendment and water filter.
- High Biomass Potential: Access to 54 million bone-dry tons of biomass, capable of meeting a significant portion of California's hydrogen needs
- Timber Industry: Focusing on wood product industry processing, value-added products, and improving timber yield – Sonoma counties position as a high resource county at the intersection of urban and wildland suggest it would be a good location for this research.
- Startups in Hydrogen: Opportunities for hydrogen

startups and facilities in Sonoma and nearby areas

- Crescent Mills: Developing a wood products campus, potentially involving manufacturing and mass timber.
- Eg. El Dorado County: Efforts to create Crescent Mill, a wood products campus, are in the initial stages.
- Biohydrogen Center: Establishing a center for biohydrogen through collaboration.
- Hot Funding topics:
  - Hydrogen Startups: A thriving hydrogen startup ecosystem in Sonoma and the North Bay. It's worth noting that California recently secured a substantial \$1.2 billion grant for biohydrogen research.
  - UC Office of the President, Go Biz, and Organized Labor: Key stakeholders in biohydrogen development.
  - BBB Grant: Secured the largest BBB grant for Agri-food and Agri-Tech.
  - Hub Approach: Establishing hydrogen hubs with a broader focus on clean energy and as an incubator for startup.
  - Alliance for Renewable Clean Hydrogen Energy Systems (ARCHES) P3: A statewide effort to scale up the hydrogen market, with an application for an \$8 billion DOE grant.
  - Cal Fire Grant: Working on a workforce development

grant for bioenergy and wood products.

- Collaborations: Emphasis on partnerships and collaboration among various stakeholders
  - CA State Parks – UC Environmental Stewards is both a professional development opportunity for park staff as well as an opportunity to build the volunteer capacity of local state park associations.
- CERF program promotes a sustainable and equitable recovery from the economic distress of COVID19 by supporting new plans and strategies to diversify local economies and develop sustainable industries that create high-quality, broadly accessible jobs for all Californians
- Regulatory Considerations: Addressing regulations for protection and permitting carbon capture and storage.

# Appendix B, Continued

## UC Berkeley / Center for Law, Energy, & Environment (CLEE) Project Climate

[www.law.berkeley.edu/research/clee/](http://www.law.berkeley.edu/research/clee/)

[www.law.berkeley.edu/research/clee/research/climate/  
projectclimate/](http://www.law.berkeley.edu/research/clee/research/climate/projectclimate/)

### Interviewees:

- Louise Bedsworth, Executive Director, Center for Law, Energy & the Environment, former Executive Director of the Strategic Growth Council
- Ken Alex, Director, Project Climate at UC Berkeley, Former Director of the Governor's Office of Planning and Research

During the conversation with Ken Alex, Director of Project Climate, and Louise Bedsworth, Executive Director of the Center for Law, Energy & the Environment (CLEE) at the University of California, the focus was on how their work could align with state laws and priorities to support the realization of the Center for Climate Action and Innovation at SDC. They discussed various facets, such as regional resilience initiatives, collaboration with state parks, research, and public-private partnerships. Moreover, topics ranged from energy and wastewater management to regenerative agriculture and climate risk initiatives in the insurance industry. These discussions underscored the importance of bringing together diverse stakeholders and approaches to address the multifaceted challenges associated with climate action and

innovation at SDC.

- Suggested participation in the Alliance Regional Resilience Collaborative (AARCA) and its nine-county scale approach.
- CLE has been a key player in Initiatives like cooling centers and the Eco Block Program in Oakland, which could be a good urban analog to what is possible at CCAI in the WUI world.
- Existing Collaboration with Jeff Siefers from Sonoma Clean Power.
- Efforts to secure EPA funding for enhanced aquifer recharge, such as in Pajaro Valley.
- Focus on energy and wastewater, including holding tanks and legal/technical aspects.
- PG&E Rule 18, which disallows transfer of power between ownership would be a good example of legislation CLE and CCAI at SDC could work on together to allow micro-grid to become a reality.
- Exploring regenerative agriculture, community scale food production, and composting.
- Considering regional aspects like wildlife corridors and a balanced approach to building resilience.
- Addressing challenges in the wine industry due to global warming.
- Participation in Bay CAN Regional Resilience and the importance of regional outreach.

- Insights from the Oakland Eco-Block Program, focusing on residents, costs, utility companies, and infrastructure.
- Involvement in Transformative Climate Communities (TCC) projects like Ontario and Fresno.
- Collaboration with the insurance industry to engage in climate risk initiatives, including Dave Jones' efforts in this regard.

### Ag Innovations

[www.aginnovations.org](http://www.aginnovations.org)

**Interviewee:** Genevieve Taylor, Executive Director

Ag Innovations has a 25 year history of facilitating and connecting networks focused on agriculture, water, and fire resilience. Their work spans across systems view with a firm foothold in Sonoma County. Notably, Ag Innovations is bridging the generational gap in agriculture and aiding young and disenfranchised farmers to access land. The organization delves into the realm of farm to school initiatives, addressing food hub challenges and advocating for equity in education. Here are some key points from the interview:

- **Facilitation, Not Ownership:** Ag Innovations is celebrated for its facilitation role, creating connections among people and networks to address challenges related to agriculture, water stewardship, and fire resilience.
- **A Comprehensive Systems View:** The organization takes a systems level approach to tackle issues that span across local

and regional landscapes.

- **Pulsing Local Developments:** Genevieve Taylor has her finger on the pulse of local activities, having grown up in Sonoma, and she is attentive to the changing needs of the community.
- **Addressing Land Challenges:** Ag Innovations is exploring innovative solutions to challenges like the transition of older farmlands and assets, often desired by younger farmers who lack access to land.
- **Farm to School Initiatives:** The organization is dedicated to realizing the vision of farm to school programs, striving to bridge the gap between vision and implementation in schools. They work on food hubs and address kitchen infrastructural issues that hinder farm fresh meals in schools.
- **Equity in Education:** With a focus on Title 1 districts and a predominantly Hispanic student population, Ag Innovations is addressing challenges in education while fostering a sense of belonging for Latino communities.
- **Strategic Growth Planning:** They are exploring opportunities for Sustainable Agricultural Land Planning Grants and Sustainable Agricultural Land Conservation, offering technical assistance for ag planning.
- **Climate Resilience:** Ag Innovations is engaged in climate resilience efforts, including applications for Climate Resilience Community Grants and Transformative Climate Communities.
- **Water Management:** The organization is orienting efforts toward water recharge and stormwater management in the

## Appendix B, Continued

context of sustainable groundwater practices.

- **Fire and Forest Resilience:** Addressing the challenge of biomass storage, Ag Innovations is actively involved in innovation around biomass. They collaborate with local agencies and industries within the North Coast Resource Partnership.
- **Innovation in Agriculture:** Ag Innovations promotes practices such as biochar, mulching, and weed suppression that enhance agriculture’s sustainability.
- **Bio Hydrogen:** The organization is involved in ventures related to biohydrogen, and they collaborate with the Sonoma Ecology Center in this regard.
- **Collaboration with CA Water Action:** Ag Innovations engages with the California Water Action Alliance in water related initiatives.
- **UCANR Hopland Involvement:** Ag Innovations collaborates with UC Agriculture and Natural Resources (UCANR) in Hopland, offering facilities like indoor conference spaces and an ag tech workshop patio. They provide support for irrigation companies and include spaces for researchers.
- **Space Needs:** Ag Innovations highlights the need for various spaces, such as dormitories, low-cost researcher spaces, and commercial kitchens, for effective functioning.

### Audubon Canyon Ranch

[www.egret.org](http://www.egret.org)

**Interviewee:** Tom Gardali, CEO

Audubon Canyon Ranch manages the Bouverie Preserve in Glen Ellen, over 500 acres of diverse native ecosystems. The Preserve is within the ancestral territories of the Coast Miwok, Southern Pomo, and Wappo.

In 2017 the Nuns Fire swept through the Sonoma Valley, burning approximately 75% of the wildlands of the Preserve and destroying 7 of 9 buildings, including all the program infrastructure on the Preserve. Although many areas of the Preserve were struck by high-severity fire, strong evidence of ecological resilience and fire adaptation abounds.

Tom Gardali, CEO highlights the importance of prescribed fire for two main reasons: Audubon would be a strong and immediate strategic partner for the Center for Climate Action and Innovation (CCAI). Audubon CEO Tom Gardali’s emphasis on prescribed fire, its role in ecosystem health, and its ability to prevent catastrophic wildfires aligns with CCAI’s mission, offering opportunities for collaboration in education, workforce development, and environmental conservation initiatives.

- **Ecosystem Health:** Prescribed fire is vital for ecosystems that have adapted to or depend on fire for their wellbeing.
- **Mega Fire Prevention:** Prescribed fire plays a pivotal role in reducing the risk of catastrophic “megafires,” with the Sonoma Developmental Center (SDC) as a model for

responsible fire management and education.

- **Education on Healthy Smoke:** Emphasis on the need for educating about healthy wildfire smoke and the 30x30 initiative, which aims to protect 30% of California by 2030, promoting coexistence with wildlife.
- **Holistic Climate Action:** Advocacy for a holistic view of climate action that addresses both challenges and benefits.
- **Workforce Development:** The need for more workforce development opportunities, such as the California Biodiversity Network, along with training, job creation, and financial support.
- **Innovative Tools:** Mention of innovative tools like “Burn Bots” for containment lines and highlights the Good Fire Alliance and the Fire Forward Program, particularly in Sonoma County.
- **Professionalizing Prescribed Burns:** The Fire Forward Program seeks to make prescribed burns a fulltime profession and is actively seeking expansion space, including warehouses, offices, and land for community training.
- **Funding Opportunities:** Emphasis on the significant funding opportunities in wildfire and prescribed burning, including partnerships with tribes and philanthropic donors.
- **Responsible Land Development:** Highlighting the importance of responsible land development and stewardship to ensure the safety of new residential areas, inviting participation and learning during prescribed burns.

- Encouragement for a multidisciplinary approach at the intersection of environmental conservation and justice, recognizing the potential for diverse perspectives to converge and create substantial opportunities.
- Audubon Canyon Ranch would be a compelling near-term strategic partner for the CCAI for a multitude of reasons.
- The critical role of prescribed fire in maintaining ecosystem health, making a strong case for its necessity due to ecosystems’ adaptation to fire. This aligns seamlessly with SCAI’s mission to promote ecological wellbeing.
- The pivotal function of prescribed fire in preventing catastrophic “megafires,” making SDC, based in Sonoma County, a potential exemplary site for showcasing and educating the public about the merits of responsible fire management.

### Fire Forward and Good Fire Alliance

[www.egret.org/fire-forward](http://www.egret.org/fire-forward)

**Interviewee:** Sasha Berleman, Director

Sasha was the first person to become certified as a California Prescribed Fire Burn Boss (CARX) and now a federally qualified Prescribed Fire Burn Boss (RXB2). Sasha is the Director of Fire Forward and Good Fire Alliance and works with the Audubon Canyon Ranch.

Sasha provided insights during the interview, highlighting the significant progress made by Fire Forward and the importance

## Appendix B, Continued

of engaging communities and partners to promote the practice of prescribed burning. Key Opportunities include a fellowship Academy, Community Training, relationships with Indigenous Tribes, and experience around environmental permitting. their initiatives and objectives:

- **Prescribed Fire Development:** Established in 2017, Fire Forward focused on growing prescribed fire development and building capacity.
- **Leadership and Mentoring:** They trained approximately 500 people and encouraged mentors to become leaders in prescribed fire programs.
- **Leadership Skills:** Recognizing the time, it takes to develop leadership skills in fire burns, they launched the 2.0 Fellowship Academy.
- **Career Opportunities in Prescribed Fire:** In response to the need for a volunteer workforce, Fire Forward is expanding its efforts to offer careers in prescribed fire. This includes providing training for entry-level positions.
- **Controlled Fire Near Homes:** Fire Forward seeks to conduct controlled burns near homes, emphasizing defensible space preparation. The reaction from communities varies from excitement to nervousness, requiring outreach and education.
- **Prescribed Burn Frequency:** The organization clarified that they do not burn every year. Grasses tend to burn more

frequently, with the first burn being the most challenging.

- **Environmental Regulations:** While CEQA/NEPA is not necessary on private land for burning, public lands require these approvals. They mentioned a 10year authority for Programmatic EIR (Environmental Impact Report) through Cal V2P PEIR.
- **Collaborations with Indigenous Tribes:** Fire Forward has partnered with Federated Graton since 2015 to learn about tribal practices, conducting joint ventures on tribal lands like Toms Point. These burns serve cultural and ceremonial purposes and acknowledge land history.
- **Stewardship and Good Fire Alliance:** Stewardship practices are essential. The Good Fire Alliance, in collaboration with UC Cooperative Extension, serves as an informal partnership for cooperative burns, with a network of around 750 people on their list-serve.

### California State Parks

[www.parks.ca.gov](http://www.parks.ca.gov)

**Interviewee:** Angie Lottes – State Parks Statewide and Coastal Programs Manager

California State Parks has expressed interest in collaborating with the Center for Climate Action and Innovation (CCAI) and its vision for open space stewardship – including resilience and ecosystems management.

The Wildland Urban Interface (WUI) attributes of CCAI will present

a new scale challenge in their fire management approaches as usually they test these types of programs on larger-land areas in less urbanized areas. Key points from the interview with California State Parks include:

- State Parks is open to collaboration with CCAI and is willing to participate in efforts related to open space stewardship.
- CA State Parks prefer larger-scale land management, including 300acre burns and whole ecosystem level approaches.
- Although State Parks do not have a formal climate change program, they focus on climate change vulnerability assessments and aim to integrate this knowledge into their management programs.
- The Sonoma Mendocino District of State Parks is well-staffed and willing to engage in collaborative efforts with a clear mandate to drive resources and decision making.
- State Parks has a legislative nonprofit organization called “Parks California” that handles fundraising and works on various initiatives.
- They have a wildlife team dedicated to ensuring that ecosystems support the Well-being of all flora and fauna.
- California State Parks is invested in ecological processes, including wildfire, watershed restoration, and ecosystem maintenance.
- Many State Parks districts have Memorandums of Understanding (MOUs) with local Tribes and well-staffed

cultural resources divisions for cultural burning and access roles.

- Clear authority and mandates is critical to drive CA State Parks decisions and resources for land management and open space stewardship.

### California State Parks / Bay Area District

[www.parks.ca.gov/?page\\_id=682](http://www.parks.ca.gov/?page_id=682)

**Interviewee:** Cyndy Shaffer – Natural Resource Program Manager for the Bay Area District

The Bay Area District division of State Parks will be the land manager for the open space land the Sonoma Developmental Center (SDC). In this role, they will continue to collaborate closely with the Sonoma Valley Wildlands Collaborative and other interested parties in a public process that adheres to specific planning and classification processes. Key points from the discussion include:

- **State Parks’ Vast Management:** State Parks, managed by Cyndy’s team, oversees approximately 30,000 acres of state parks across Sonoma, Napa, Lake, and Mendocino counties. Their responsibilities encompass invasive species control, forest health projects, fish passage restoration, and habitat restoration, often involving collaborations with partners and stakeholders.
- **Natural Resource Management Policies:** Cyndy elaborated on State Parks’ policies regarding natural resource management,

## Appendix B, Continued

emphasizing the use of natural processes and fire. She also highlighted the local prescribed fire program and the collaboration with the Sonoma Valley Wildlands Collaborative, which includes joint applications for Cal Fire grants to expand vegetation treatments and beneficial fires in Snow Valley.

- **Public Engagement in Planning:** While discussing vegetation management and resource management policies, Cyndy stressed that any land coming under State Parks' management would undergo a planning process involving public engagement. Specific details about this process for the newly acquired land at SDC are yet to be determined.
- **Exploring Educational Hub Potential:** The potential for the Lyons property, of interest to Native American tribes, was explored as a potential educational center for park ranger training, climate programs, and firefighter training. This idea could serve as a hub for various organizations, although no final decisions were made.
- **California State Parks is a member of the Sonoma Valley Wildlands Collaborative** <https://www.svwildlandscollaborative.com/> . This Collaboration strengthen efforts and bring more opportunities and funding to the table. Bay Area district of State Parks discussed the need to engage with different programs within State Parks for a comprehensive view. State Parks engages in collaboration the Sonoma Valley Wildlands Collaborative.

- **Water System and Reservoir Considerations:** Discussions also touched upon the water system and the potential role of reservoirs in future development. Specifics about reservoir management were pending determination, aligning with the State Parks' planning process and considering various uses, including research, community engagement and tribal relations.

### PG&E

[www.pge.com/en/about/corporate-responsibility-and-sustainability.html](http://www.pge.com/en/about/corporate-responsibility-and-sustainability.html)

**Interviewee:** Nathan Bengtsson, PG&E's Interim Director Climate Resiliency and Adaptation

Nathan Bengtsson from PG&E's Climate Resiliency and Adaptation Team described that PG&E is deeply committed to collaborating with power customers to ensure resilient power infrastructure. This commitment extends to the potential partnership with Sonoma County and Sonoma Clean Power in realizing the Center for Climate Action and Innovation at the Sonoma Development Center. PG&E's engagement in initiatives such as the State Supported Regional Collaboratives, including the North Coast Regional Collaborative, underscores their role as a community convener. They aspire to serve as a conduit for federal funding opportunities and have made substantial investments in physical infrastructure, including battery storage and non-traditional grid solutions. Their active involvement in building decarbonization, micro-grid development, and workforce development programs

aligns with the center's objectives, as does their forthcoming Climate Resilience Report, which assesses risks and equity considerations. PG&E is open to collaborating on grid pilot programs, expanding vehicle charging infrastructure, and seeking non-traditional funding sources. These efforts collectively highlight the potential for a fruitful partnership, fostering innovation, resilience, and sustainability in the energy landscape of Sonoma County.

- **ARRCA Collaboration:** PG&E is actively involved in the State Supported Regional Collaboratives, such as ARRCA (Alliance for Resilience and Climate Action). Sonoma is part of the North Coast Regional Collaborative, demonstrating PG&E's commitment to community engagement and resilience building.
- **Community Power Provider:** PG&E is working to serve as a conduit for federal funding opportunities, showcasing their dedication to supporting local communities in enhancing their power infrastructure and resilience.
- **Infrastructure Investments:** PG&E is making significant investments in physical infrastructure, including battery storage and nontraditional grid solutions. These technologies can play a crucial role in bolstering power resilience.
- **Building Decarbonization:** PG&E is actively involved in initiatives related to building decarbonization and microgrid development, aligning with the goals of reducing carbon emissions and enhancing energy efficiency.

- **Climate Resilience Report:** PG&E is in the process of developing a Climate Resilience Report, which will assess risks and equity considerations. This report can be valuable for Sonoma County's efforts to enhance climate resilience.
- **Grid Pilot Program:** PG&E is open to collaborating on grid pilot programs, which can serve as a testing ground for innovative technologies and approaches to power resilience.
- **Vehicle Charging:** PG&E is also invested in expanding vehicle charging infrastructure, contributing to the adoption of electric vehicles and reducing greenhouse gas emissions.
- **Workforce Development:** PG&E has a strong interest in workforce development programs, which can provide training and employment opportunities in the energy sector.
- **Collaborative Leadership:** PG&E has funded conveners to facilitate discussions among leaders, creating spaces for collaboration and idea exchange.
- **Funding Opportunities:** PG&E acknowledges the importance of seeking nontraditional funding sources, such as DOE GRID grants, to support projects aimed at enhancing power infrastructure and resilience.

## Appendix B, Continued

### East Bay Clean Energy

[www.avaenergy.org](http://www.avaenergy.org)

**Interviewee:** Feliz Ventura, Program and Resilience Manager

Center for Climate Action and Innovation (CCAI), has the potential to become a hub for carbon markets, foster climate-smart agriculture, and enhance resilience in the face of extreme climate conditions. Key points discussed include the prospect of testing and commodifying carbon, as well as understanding demand dynamics. Job creation, economic growth, and environmental stewardship are among the many opportunities presented at CCAI, underscoring its significance in the pursuit of a sustainable and climate-resilient future. Positioning CCAI as a hub / meeting center for all Community Based Energy Providers.

- CCAI serves as an excellent testing ground due to the expansive land area and the proposed building portfolio's scope. What qualities define an effective testing ground?
- Exploring Carbon Market Economics holds significant potential, especially in relation to Carbon Markets and Soil Carbon. This exploration could result in substantial financial gains. Furthermore, the site's value lies in its capacity to serve as a testing ground for carbon and soil markets.
- Maintaining a unified campus setting creates opportunities for a robust microgrid energy program. This microgrid initiative could encompass the development of distributed energy

resources.

- Transitioning to one hundred percent renewable energy poses challenges. Implementing solar systems is a key aspect of this transition.
- Given its comprehensive management approach, SCAC can contribute to enhancing emergency preparedness.
- Lawrence Berkeley Lab is keen on expanding its test bed programs. It could find SCAC attractive as a space where failure can lead to successful learning.
- There are not many large energy one owner parcels like this, for instance, East Bay Collective Power lacks a particular element.
- Explore collaborating with the California Public Utilities Commission (CPUC) who have a relationship with all Community Choice Aggregators (CCAs) could collaborate effectively.
- Position CCAI as a model test bed with technology providers, including software companies who could be funders in exchange for the ability to test their products in the SCAI: Distributed Energy Management Systems (DERMS) which encompass EV, thermostat, and hot water heater integration. Home Energy Management Systems also contribute to the ecosystem.
- An innovative microgrid could be developed at SCAC since the land is all one ownership – This idea would need to be explored before breaking up the land and having infrastructure

agreements. Could be part of the developer agreements.

- By refining these points, the CCAI can effectively harness its potential as a climate adaptation center clean energy technology testing center.

### MOTE Energy (Bio-Hydrogen)

[www.motehydrogen.com](http://www.motehydrogen.com)

**Interviewee:** Erika Pham, VP Strategy

MOTE Energy, a pioneering producer of Bio Hydrogen Energy, is actively engaged in cutting-edge initiatives that align with the goals of the Sonoma County Climate Adaptation Center. While Bio-Hydrogen production may not be an appropriate fit for the SDC site, MOTE is looking for a HQ location and imagines a strategic HUB for Alternative Energies including Bio-Hydrogen in fostering innovation and collaboration in conjunction with other climate leaders and stakeholders who may become tenants at the Center for Climate Action and Innovation on the SDC site. MOTE Energy plays a pivotal role in the emerging field of Bio Hydrogen Energy production, offering expertise, scalability, and a collaborative spirit. Below are key points highlighting MOTE Energy's role and potential collaboration opportunities within this context:

- **Bio-Hydrogen Expertise:** MOTE Energy specializes in producing Bio Hydrogen Energy, a sustainable energy source derived from biomass. This innovative approach involves converting various biomass sources, such as wood products, agricultural waste, and forest waste, into hydrogen while sequestering

carbon dioxide (CO<sub>2</sub>) in saline aquifers. This expertise can contribute significantly to the research and development efforts at the Climate Adaptation Center.

- **Scalable Solutions:** MOTE Energy's capability to establish a sizable facility, occupying up to 80 acres, demonstrates scalability. By utilizing resources like downed trees, grapevines, and agricultural waste, they efficiently extract carbon and convert it into valuable hydrogen, reducing carbon emissions in the process. This scalability aligns with the ambitions of the Climate Adaptation Center.
- **Collaborative Potential:** MOTE Energy expresses a strong interest in establishing a Research and Development department and welcomes collaboration opportunities. Their willingness to collaborate with renowned entities like NREL, LLNL, and universities, as well as local farms for ag waste utilization, makes them a valuable prospective partner for the Climate Adaptation Center.
- **Environmental Responsibility:** The company's commitment to environmental responsibility is evident in their plans to sequester CO<sub>2</sub> and efficiently manage biomass resources. Their Kern County facility, set to go online by mid2026, demonstrates their intention to operate safely and responsibly while contributing to environmental sustainability.
- **Strategic Locational attributes:** While MOTE Energy's initial facility is situated in Kern County, they are open to exploring opportunities in the Bay Area, emphasizing the importance of proximity to potential collaborators and job opportunities. This



## Appendix B, Continued

flexibility could align well with the Climate Adaptation Center’s goals, especially if other climate leaders become tenants at the SDC site.

### DIVCO West

[www.divcowest.com](http://www.divcowest.com)

#### Interviewees:

- Virginia Calkins, Director of Environmental, Social, and Governance
- Chris Eldemir, Managing Director, Investments, SF

In the interview with DIVCO West, a private sector developer, we gained valuable insights into their experience and perspective regarding the availability of land and the importance of identifying demand dynamics for development. We also delved into their potential participation in the CCAI.

One particular point of interest was the potential scenario where, during the realization of the CCAI, the stewards of the site may consider inviting the private sector development community to share in the risk and reward of delivering facilities such as labs and offices in the envisioned CCAI Core Area. In such cases, a Market Driver Demand study is deemed critical. DIVCO West recommended several inducers to consider, including offering free land to attract an anchor tenant and development partner, strategically dividing the core program into manageable packages

with realistic timelines to create scarcity, and emphasizing the importance of Food and Beverage offerings in alignment with Ag-Tourism, Education, and Job Training initiatives.

DIVCO West also acknowledges the state’s interest in divestment. While they hadn’t actively explored opportunities within CCAI/SDC, it’s worth noting their impressive track record in developing innovation districts and mixed-use environments across the Bay Area and nationally.

- Potential strategies to attract developers, such as offering free land with back ended compensation and providing incentives to capture more of the upside of projects. Key Bay Rea example was Mission Bay.
- Clear demand dynamics, particularly for-profit fiduciaries, are considered crucial for attracting developers.
- Key is understanding where the demand is coming from, including primary tenants and users like UCANR, Scripps, SRJC, and philanthropic organizations.
- The importance of packaging nonresidential elements, such as a housing package and a hotel parcel, with office spaces was highlighted.
- Attracting an anchor tenant was mentioned as a recruitment strategy, and they discussed the need for funding for master plan visioning to sell the overall vision of the SCAI.
- Consideration of potential users, such as food and beverage companies, and economic drivers for the region were key factors in their assessment.

- DIVCO West suggested breaking projects into smaller, more digestible pieces and pairing different elements together to attract interest and investment.
- DIVCO’s initial thought was that finding aligned food and beverage anchors presented an opportunity for collaboration and partnership in the region.

### Google DeepMind AI Laboratory

[www.deepmind.google](http://www.deepmind.google)

- Sims Witherspoon, Climate Action Lead, Google DeepMind AI Lab

“Can AI help solve the climate crisis?” (Sims Witherspoon | TED)  
<https://go.ted.com/CC4nt>

In the September 20, 2023 TED talk titled “Can AI help solve the climate crisis?” Sims Witherspoon, a Climate leader at the AI research lab Google DeepMind shares that the biggest roadblock for AI optimization in the climate space is access to data sets. According to Sims Witherspoon, there are significant gaps in climate-critical data across all sectors, whether it’s electricity or transportation or buildings and weather. We need to be able to optimize existing systems and infrastructure, and AI is one of the tools that we can use to do this. AI can help us understand climate change and the problems that we face related to climate change through better models for prediction and monitoring. AI can also help us optimize current systems and existing infrastructure. Sims Witherspoon has invited the Team to share

a one pager description of the CCAI development opportunity, the Machine Learning (ML) application and describe how Sonoma and the CCAI could value from a Google DeepMind partnership. There is an opportunity for strategic partnership to be formed.

### Sonoma County Economic Development Board

[www.sonomaedb.org](http://www.sonomaedb.org)

#### Interviewees:

- Ethan Brown, Executive Director
- Lauren Cartwright, Director of Business Services and Economic Research

The Sonoma County Economic Development Board, represented by Executive Director Ethan Brown and Lauren Cartwright, the Director of Business Services and Economic Research, highlights the significance of the Climate and Innovation Center at SDC as a top priority for the county. This endeavor serves as an institutional anchor for commercializing technology and bolstering manufacturing and technology industries in Sonoma County and the wider region. The EDB is keen on diversifying the local economy, shifting focus away from tourism-dependent revenue streams. By fostering manufacturing and technology, sectors proven to be relatively recession-resistant, they are positioning the county for long-term economic resilience. Moreover, their involvement in the California Economic Recovery Funds (CERF) region, encompassing Sonoma and Mendocino, allows them to participate in a regional planning process aimed at securing grant funding. The EDB sees this innovation center

## Appendix B, Continued

as a means to attract and train a workforce, especially in fields like good fire training, and to demonstrate best practices for tackling the climate crisis. They emphasize collaboration with organizations like UC ANR, Livermore Labs, and potential federal funding sources like American Rescue Plan Act (ARPA) to localize businesses and tap into economic opportunities. In addition, they seek alignment with local institutions, such as Sonoma State University, in addressing climate action and innovation, job training, and equity and access concerns. Through this multifaceted approach, they aim to leverage existing resources, foster ecofriendly endeavors, and create a sustainable future for Sonoma County.

- Priority of the Climate and Innovation Center for Sonoma County
- Anchor for commercializing technology and advancing manufacturing
- Focus on diversifying the economy beyond tourism
- Resilience against economic downturns through manufacturing and tech
- Engagement in CERF region and regional planning for grant funding
- Commitment to attracting and training a skilled workforce
- Emphasis on good fire training, innovation, and climate crisis

solutions

- Collaboration with UC ANR, Livermore Labs, and federal funding entities
- Pursuing niche opportunities, such as the Hydrogen Highway and WUI funding
- Alignment with regional groups and institutions
- A focus on climate action, innovation, and community collaboration for a sustainable future.

### UC Berkeley College of Environmental Design

[www.ced.berkeley.edu](http://www.ced.berkeley.edu)

**Interviewee:** Egon Terplan, Robert S. Cornish Endowed Chair of Regional Planning and Lecturer in City & Regional Planning at Berkeley College of Environmental Design

Egon is a specialist in regional economic development, land use, transportation, government reform and regional policy. From 2019 to 2022 he served as the Senior Advisor for Economic Development and Transportation at the Governor’s Office of Planning and Research and California Governor’s Strategic Growth Council. His work crossed regional economic development, transportation policy, and regional planning (land use and transportation). He helped lead the Regions Rise Together initiative for the Governor’s Office of Planning and Research (OPR) and the Governor’s Office of Business and Economic Development (GO-Biz). He also led the California Transportation Assessment for the Strategic Growth Council working with a research team from

UC ITS.

Egon envisions CCAI as a strong location for a demonstration site in climate adaptation. The site’s unique blend of proximity to Bay Area capital and a rural location for ecological research centers is both a compelling proposition and a challenge for state funding, strategic partnerships with CDFA and Academic Institutions, Lawrence Livermore Labs, as well as private investment. Key points from the interview include:

- Closed Loop Demonstration: CCAI could serve as a powerful demonstration site for self-sustaining, fully closed-loop systems in a remote setting.
- Regeneration and Challenges: Challenges arise due to SCAI’s remoteness. Effective planning is crucial, considering proximity to urban areas. It’s vital to examine business plans, development possibilities, and the idea of recreating a self-sustaining system.
- Key Components: Land, buildings, and infrastructure. The integration of these components plays a pivotal role, even in a remote setting.
- Intersection of Climate, Water, and Research: The site’s value lies in its ability to intersect climate, water, and research, contributing to innovative solutions.
- Bio Hydrogen and Waste Stream: The potential for biohydrogen generation and waste stream management is discussed, particularly in the context of wildfire prevention and the involvement of the Department of Energy (DOE).

- Community Involvement: SCAI’s value extends to serving the needs of disadvantaged communities, including farmworkers and landless tribes interested in utilizing acorns and fire for spiritual purposes.
- Governance and Money-Making Aspects: Joint Powers Authority (JPA), trust, or conservancy, to demonstrate a strong commitment to public-private collaboration, all while chasing a reasonable rate of return.
- Possible Management Entities: The interview highlights the potential for nonprofit management entities such as Fort Mason, which may require substantial upfront investment.
- Academic Collaborations: Collaboration with educational institutions like Cal Poly, Sonoma State, SRJC, UCD, and Lawrence Livermore Labs is discussed, especially in the context of regenerative agriculture and carbon management.
- CDFA and Climate Adaptation Center: Conversations with the California Department of Food and Agriculture (CDFA) explore topics like healthy soils and climate adaptation.
- 30x30 Initiative: The site’s contribution to the California “30 by 30” initiative to protect natural working landscapes is emphasized.
- Stone Edge Farm Winery: to hydrogen production provide a local example of innovative initiatives that could be incorporated at CCAI.

# Appendix B, Continued

## US Environmental Protection Agency

[www.epa.gov](http://www.epa.gov)

[www.epa.gov/grants](http://www.epa.gov/grants)

**Interviewee:** Paul Angelone, Special Advisor for Implementation

Environmental Protection Agency (EPA) represented by Paul Angelone, discussed how federal funding aligns with the mission of the Center Climate Action and Innovation (CCAI). Collaborating with established entities and regional entities to apply for state-level funding is key to effectively access available funding and connect with climate pollution reduction plans. CCAI has various opportunities for funding alignment with federal programs to support its mission and objectives, whether it's in demonstrating GHG reductions, financing energy systems, addressing climate challenges, or securing grants to advance its initiatives

Key points from the conversation include:

- **Federal Funding Programs:** There are various federal funding and financing programs that can align with CCAI's mission.
- **Greenhouse Gas Reduction Funds:** CCAI can work to demonstrate reductions in greenhouse gases and create density while financing energy systems and addressing climate-related challenges such as extreme heat. These include:
  - **Solar for All Program** – Especially for near term Residential program.

- **Clean Investment Fund** with a \$14 billion budget
- **Clean Community Accelerator** program with \$7 billion allocated to third parties for GHG reduction, infill development, clean energy, and more.
- **Broader Tax Credits:** The Inflation Reduction Act (IRA) offers opportunities for government entities to receive funding
- **Brownfields and Hazardous Materials:** Brownfield properties, including those with hazardous materials, may qualify for financing.
- **Energy Projects and Infrastructure:** CCAI could connect various energy projects and infrastructure initiatives. This involves planning, funding, and implementing a variety of projects.
- **Community Change Grants:** These grants have a 2.8billiondollar budget allocated to disadvantaged communities. Funding should demonstrate GHG reduction within a three-year spending window.
- **Transit Stations and Financing:** CCAI can explore financing options, such as Build America, for transportation infrastructure. The Joint Development Agreement is another possibility.
- **GHG Reduction and Climate Mitigation:** CCAI can play a pivotal role in demonstrating reductions in greenhouse gases and mitigating climate-related challenges.

- **Collaborative Opportunities:** Collaboration with multiple entities, including nonprofits, coalitions, and public-private partnerships, is a significant avenue for securing funding.
- **Low Hanging Opportunities:** Special focus on residential programs to increase financing or funding for housing.
- **Open Space and Agriculture Land Funding:** Exploring funding sources for open space and agricultural land, including rural development and forestry programs.
- **Climate Resilience Funding:** Seeking funding opportunities for climate resilience projects, especially those addressing wildfire mitigation.

## Glydways

[www.glydways.com](http://www.glydways.com)

**Interviewee:** Paul Jamtgaard, Planning & Urban Solutions Head of Infrastructure

Glydways is committed to offering innovative, autonomous, and efficient ways to transport people and goods at a mass scale, ultimately transforming the way communities access transportation. Driven by the vision of providing innovative AI solutions for mass transit, Glydways is exploring a unique approach that is an alternative to move people and goods in single occupancy vehicles, and a cost-effective alternative to traditional public transportation. Paul Jamtgaard, the Strategy Director, shared insights during the interview, shedding light on their concept:

- **Dedicated Right of Way:** Glydways envisions employing Level 1 autonomy within dedicated right-of-way corridors, akin to the size of a protected bicycle path, with the goal of mass transit solutions. Could be combined with Bike trail improvements.
- **Site Utilization:** Glydways is actively working on utilizing 1000 acres of land, focusing on both internal and external circulation. This approach aims to connect remote sites effectively, emphasizing connectivity to local population centers.
- **Marginalized Communities:** Their human-centered vehicle concept and tailored infrastructure aim to provide feasible transportation solutions for marginalized communities, potentially transforming their access to transport.
- **Urban Environment:** The viability of Glydways' system varies depending on the density of the environment. While it may be effective in dense urban areas, it could also prove to be financially viable in lower-density settings with decreased ridership, offering a high farebox return.
- **Challenges and Solutions:** Glydways identifies various low-hanging fruit areas for implementation, such as repurposing old circulation roads, parking lots, and creating central hubs.
- **Active Implementation** programs with San Jose Airport, and Contra Costa County.

## Appendix B, Continued

### Via

[www.ridewithvia.com](http://www.ridewithvia.com)

**Interviewee:** Dan Berkovits (NY) Director of Strategy and Garrett Brinker Bay Area Strategic Partnership Director

Via Transportation Solutions brings forth potential mobility solutions that could significantly reduce dependence on private cars, align with existing Sonoma County transport systems, and enhance access to rural attractions like vineyards. Via offers a range of transit solutions for public agencies, including white label contracting, ride hailing/sharing, and transit hybrid, micro-transit, paratransit, and à la carte services, along with consulting and advisory services. They have more than 50 partnerships in California, with a dozen in the Bay Area. Their white label private sector solution could be a near-term solution that brings together Sonoma Transit Authority, the appointed developer, residents in the near-by Eldridge and Glen Ellen communities, and new investors around an innovative mobility solution.

- Connectivity remains a significant challenge, particularly in terms of improving transportation options without increasing car traffic.
- The existing county transit infrastructure offers opportunities for expansion, either by extending traditional dial-a-ride services to the general public as micro-transit or by designing a combination of on-demand micro-transit and fixed-schedule transit services tailored for the development at

Sonoma County.

- The integration of micro-transit could create a seamless connection to fixed-route shuttles, regional transit, and nearby destinations.
- Their revenue model is designed for sustainability rather than profit, with an estimated income of \$2 per fare and an outlay of \$10.
- Via has experience partnering with real estate developers, supporting car-free and car-light trends that reduce the need for extensive parking infrastructure. They have worked with the Stanford Research Park which had different but equally challenging mobility solutions to CCAI at SDC.
- Various flexible financing models are available, from software-only solutions to full turnkey operations. Many projects receive funding through grants in California.
- Via suggests connecting with local wineries to help offset costs, enhancing connectivity for agricultural workers and reducing drunk driving incidents.
- They offer flexible contract terms with no strict minimum.
- While they have deployed 910 autonomous paratransit services, they currently lack a dedicated testbed facility.

Via presents a promising solution to enhance mobility, provide greater access to rural attractions, and support sustainability efforts in Sonoma County, creating an innovative and efficient transportation ecosystem.

### Lanterman Center, Cal Poly Pomona

[www.cpp.edu/lanterman/index.shtml](http://www.cpp.edu/lanterman/index.shtml)

**Interviewee:** Steve Morton, Jacobs, Master Planning and Strategic Planning Director

Cal Poly Pomona's Lanterman Center offers valuable insights that can inform the development of the Center for Climate Action and Innovation (CCAI). Emphasizing the importance of realistic development capacity assessments, facilities assessment, land conveyance strategies, campus planning opportunities, market analysis, and the significance of aligning with the county's ecosystem and social equity goals. He underscored the importance of exploring various procurement methods for enabling infrastructure and building programs that account for the true cost implications. Furthermore, Morton highlights the vital assessment of developer partners' financial viability and the potential for collaboration with allied partners such as the UC System or National Renewable Energy Laboratory (NREL) to enhance climate action innovation within a program as ambitious as Lanterman center or a CCAI. Drawing parallels between these lessons and the CCAI project, Morton provides valuable guidance for ensuring CCAI's success and alignment with its community and environmental goals.

- **Realistic Development Capacity:** It's essential to have a realistic assessment of the development capacity at CCAI. Demand analysis is a critical next step.
- **Facilities Assessment:** Consider a thorough assessment of facilities, with particular focus on the state of wet and dry

utilities.

- **Land Conveyance:** Evaluate land conveyance to the state and address predisposition concerns.
- **Cal Poly Lanterman Facility:** Cal Poly's due diligence process for the Lanterman Center involved a 12month right of first refusal and 9 months of technical work.
- **Campus Planning Opportunities:** Explore potential campus planning opportunities, including the development of an innovation village.
- **Market Analysis:** Market analysis plays a vital role in determining the focus of the project, whether in the private or public sector.
- **Manufacturing and Light Industry:** The market assessment may lead to considering manufacturing and light industry.
- **Synergy and Ecosystem:** Examine the total ecosystem of Sonoma County, looking for synergies and opportunities to support growing businesses.
- **Methods of Procurement:** Various methods of procurement, including Public-Private Partnerships (P3), ground leases, and build-to-suit options, should be considered.
- **Infrastructure and Development:** Clarify the county's role in infrastructure development and balance urgency with thorough planning.
- **Sonoma County's Authority:** Recognize Sonoma County's authority in land use and the guidelines and regulations that

## Appendix B, Continued

impact the project.

- **Project Details and Implementation:** Clearly define the development program, ensuring scalability, and consider affordable payments and program hand-back.
- **Developer Partner Assessment:** Assess the financial viability and the availability of long-range capital.
- **Allied Partners:** Consider collaborating with allied partners like the National Renewable Energy Laboratory (NREL) to enhance sustainability and innovation within SCAI.

### Center for Sea Rise Solutions

[www.searisesolutions.org](http://www.searisesolutions.org)

**Interviewee:** Janelle Kellman, Esq., Founder of Center for Sea Rise Solutions and Former Mayor of Sausalito,

Janelle shared valuable insights regarding the Center for Climate Action and Innovation (CCAI). She envisions CCAI embracing diverse land uses, incorporating industrial fabrication and prototyping in vacant office spaces, and fostering collaborations with entities like Sausalito’s working waterfront and the Army Corps. Kellman emphasizes the significance of addressing resilience and decarbonization, making CCAI a major job generator by piloting new technologies. She also highlights innovative financing models, like cooperatives or land trusts, and advocates for regional collaboration to tap into the potential of SCAI,

following the examples of leading institutions such as Ohio State, UC Davis, and the University of Minnesota. Her vision underscores the transformative role CCAI can play in fostering innovation, environmental resilience, and decarbonization in the region.

- **Diverse Land Use:** Kellman suggests incorporating industrial fabrication and prototyping facilities to make the most of vacant office spaces. She underscores the importance of blending history with innovative applications, such as water industry testing and green energy transition.
- **Collaborative Approach:** CCAI could foster collaboration with Sausalito’s working waterfront, including discussions with the Army Corps about repurposing nearby workshops. Inland sister facilities and water conservation mechanisms, coupled with nascent technologies, can be central to this collaborative effort.
- **Resilience and Decarbonization:** Addressing issues related to drought, wildfires, floods, and heat is paramount. Kellman highlights the need to emphasize decarbonization as a central theme. CCAI has the potential to become a major job generator by piloting new technologies and innovations.
- **Innovative Financing Models:** Kellman discusses the potential for cooperative or land trust-based development profiles, ensuring lower rent options for innovators and minimizing the need for significant capital investments. Community-owned spaces can enable smaller players to participate.
- **Regional Collaboration:** Local jurisdictions should work

together rather than operating in isolation. Many ports, universities, and cities are striving to establish innovation centers, and CCAI has the opportunity to join these ranks, drawing inspiration from institutions like Ohio State, UC Davis, and the University of Minnesota.

- **VC in Resilience space suggestions for future discussions:** VSC, Sway Ventures, Propeller (Ocean oriented), Seafutures.org, Marin Development, Braid Theory, Blue Action Labs.

### LIFT Economy

[www.lifteconomy.com](http://www.lifteconomy.com)

**Interviewee:** Erin Axelrod, Partner

LIFT Economy offers valuable lessons for the Center for Climate Action and Innovation (CCAI) at the Sonoma Development Center (SDC) by focusing on a model that intertwines socioeconomic benefits with climate action programs. LIFT Economy’s emphasis on regenerative practices, carbon sequestration in construction, and cooperative ownership models presents an opportunity for SDC to address climate and environmental challenges while also addressing social issues. These approaches, including field building initiatives, cooperative design-build firms, and quantifying carbon sequestration, align with both climate mitigation and job training, offering a holistic solution. Furthermore, the idea of place-based resilience hubs and collaborative efforts with under-resourced groups and organizations like the California Straw Bale Association and Occidental Arts and Ecology Center demonstrate how SDC

can contribute to socioeconomic growth and environmental sustainability simultaneously. By integrating these lessons, SDC has the potential to become a self-reliant economic model that fosters economic upcycling while actively addressing climate change and social issues.

- Focus on regenerative practices such as hydrology, carbon sequestration, and innovative construction typologies.
- Prioritize carbon sequestration in construction, particularly through materials like straw and timber.
- Encourage buildings to become carbon sequestration assets, locking up carbon for long periods.
- Promote field building initiatives to support social entrepreneurs and build networks and movements.
- Emphasize regenerative forest management and leveraging natural materials in construction.
- Explore cooperative ownership models for design-build firms.
- Foster the creation of regenerative farming ownership models.
- Collaborate with organizations like Sonoma RCD to develop a “carbon farm plan” to quantify carbon sequestration in forestry, grazing, compost, and hydro.
- Leverage the potential of remote, bicoastal teams and explore models that do not rely on a physical site.
- Develop place-based resilience hubs to capture economic and innovative potential.

## Appendix B, Continued

- Quantify climate impact and retrofit land and housing stock with regenerative practices.
- Investigate fully remote business models and the creation of retreat centers to build economic resilience.
- Position the CCAI as a place where under-resourced groups like the California Straw Bale Association intersect with Academic Research, grants and private sector funding
- Engage with organizations like Occidental Arts and Ecology Center (OAC) for insights into water conservation, beaver restoration, and sustainable practices.
- Seek to answer how a place-based site can become economically self-reliant while addressing climate change.
- Explore regional resilience hubs and build economic surplus to fund carbon sequestration and green initiatives.
- Consider the economic feasibility and resilience of the CCAI at SDC as a potential model.
- Collaborate with architects like Arkin Tilt to provide reports on climate savings through adaptive reuse for commercial and residential buildings.
- Examine how SDC can become a self-reliant economic model contributing to climate change mitigation.

### Milken Institute

[www.milkeninstitute.org/financial-innovations-labs](http://www.milkeninstitute.org/financial-innovations-labs)

**Interviewee:** Caitlin Maclean, Senior Director of Financial Innovations Labs and Kanika Singh, Director of Innovative Finance

Milken Institute offers insights on how financial innovation could benefit the Center for Climate Action and Innovation (CCAI) at the Sonoma Development Center (SDC). The Milken Institute focuses on helping programs like CCAI attract investment from Innovative Finance Portfolios through Financial Convenings that bring together key players to analyze a project's financial offer and marketability to private and philanthropic investors. They advocate for addressing both environmental and social aspects, particularly with opportunities for corporate partnerships and housing initiatives. Key opportunities include working with Milken on a Financial Innovation Lab (Funded by a grant or county), join the Community Infrastructure Center, helping communities navigate funding resources, and leveraging the available land and facilities at SDC for climate interventions and resilience. Furthermore, they emphasize the importance of moving from proof of concept to commercialization through aggregation and taking advantage of California Green Bonds. Governance models, investment models, and considering specific models for different land opportunities are also essential aspects to explore. In summary, the Milken Institute's insights suggest that financial innovation can help the CCAI navigate complex funding mechanisms and attract investors while addressing environmental and social challenges.

- Partner with Milken Institute
  - Consider a Financial Innovation Lab: Milken Institute's signature process of convening key financiers and stakeholders around a topic could more greatly increase the level of visibility for the CCAI at SDC. By work-shopping and accelerating innovative finance portfolios, financial convening, and financial innovations, emphasizing the connection between finance, health, and philanthropy in the context of financial innovation.
  - Financial Innovation for SDC: SDC offers unique advantages for testing climate interventions with its available land and facilities, particularly in addressing both environmental and social aspects.
  - Community Engagement: Engaging local communities, partnering with investors, and addressing specific infrastructure needs through conferences and research are key steps in building the CCAI.
  - Collaborative Efforts: Collaborations involving academia, investors, researchers, and various stakeholders are essential in creating a climate resiliency center.
  - Learn from similar programs: The Community Infrastructure Center aims to assist 10,000 communities, addressing infrastructure needs with a focus on environmental resilience (<https://www.communityinfrastructurecenter.org/about>).
- Corporate Partnerships: The presence of corporate partners with climate pledges presents opportunities to bring them onsite as anchor tenants.
- Financing Options: Considerations include municipal financing, California Green Bonds, governance models (e.g., Community Land Trust and Community Land Bank), and the importance of maintaining value in various land opportunities.
- Bridging Gaps by partnering with existing players: The need to bridge the gap from proof of concept to commercialization is crucial. Aggregation in order to do this leverage various smaller grants for a larger impact.
- Muni Finance: Leveraging municipal financing and tax-exempt green bonds offers opportunities to raise funds while promoting environmentally and socially friendly initiatives (EIFD or CFD).
- Balance and Focus: It is crucial to maintain a balance between solving multiple problems and developing a model that aligns with the project's goals and fosters investment and sustainability.

## Appendix B, Continued

### Napa Resource Conservation District (RCD)

[www.naparcd.org](http://www.naparcd.org)

**Interviewee:** Lucas Patzek, Executive Director

Summary: Lucas Patzek, Executive Director of the Napa Resource Conservation District (RCD), discusses the potential for aligning the efforts of the Napa RCD in climate action planning with the Sonoma County initiative to establish the Center for Climate Action and Innovation at Sonoma Development Center (SDC). The interview underscores key points related to climate monitoring, forest management, regional collaboration, and the need for an institutional home for climate efforts. These insights highlight the potential for regional collaboration, the need for an institutional home, and the role of climate monitoring and forest management in aligning the Napa RCD's efforts with those of Sonoma County in realizing the CCAI.

- The Napa Resource Conservation District, involved in agriculture and resource management, focusing on policy and planning.
- Napa RCD plays a role in countywide climate action planning, emphasizing real-time emissions tracking in partnership with Lawrence Berkeley National Laboratory and monitoring the impact of environmental projects. This partnership could be a good opportunity to partner with Napa and Lawrence Berkeley National Laboratory.

- The multijurisdictional climate planning process involving Pepperwood Preserve and the Multi-Source Integration (Miroflux) project, a national network for greenhouse gas (GHG) monitoring, is a key aspect of Napa RCD's work.
- The organization provides technical assistance to both public and private landowners, seeking partnerships with institutions such as UC Davis and the UN to expand the network of GHG measurement sites.
- Lucas Patzek highlights the need for more demonstration sites for forest management and urban emissions tracking, while emphasizing the importance of a collaborative approach.
- The Napa RCD supports the idea of an institutional home that can serve as a hub for climate efforts in the North Bay region, partnering with other regional RCDs, water associations, and agencies.
- Collaboration with regional stakeholders is a priority, aiming to create a learning space and forum for water management and climate action.
- The interview also mentions key political figures who have supported climate action planning, such as Senator Dodd and congressional representatives like Mike Thompson and Jared Huffman. Additionally, Aguilar Curry, who is involved in natural resource management, is mentioned as a supporter of climate initiatives.

### Suscol Intertribal

[www.suscolcouncil.org](http://www.suscolcouncil.org)

**Interviewee:** Charlie Toledo (She, Her), Intertribal Advocate

Charlie Toledo, an advocate representing indigenous human rights with a background based in Napa, provides valuable insights into the complex relationship between Native American tribal and nontribal communities and their interest in the SDC site's open spaces and facilities. Her group's mission involves legalizing previously prohibited indigenous ceremonies and rituals, playing a pivotal role in changing laws under the Carter administration. Charlie has been part of the CPUD, which allows her to influence state policies, notably in consultation with federally recognized tribes. In Sonoma County, there are seven land-based tribes, which have not been eradicated. Additionally, five land-based tribal offices are in operation, including landless tribes. The Wappo, Miwok, and Pomo tribes were historically present in the region, with the Graton Rancheria being a Miwok tribe. Despite the absence of land-based tribes in Sonoma County's coastal areas, the tribes aim to restore tribal beneficial uses and promote integrated water management. Their primary objective is to regain access to ancestral lands and resources, such as willow and abalone. Coordination with Sherri Norris, Executive Director California Indian Environmental Alliance it is essential as it aligns with tribal advocacy for environmental stewardship. The tribes are urging the state to take responsibility for land and resource cleanup. By utilizing unused federal land, Indian tribes can contribute to forest management and enact cultural practices for healing and mental health. Memorandums of consultation are

important as they grant tribal access and influence. Landless tribes seek to establish a land base, and collaborative models focusing on mental health and wellness are part of their mission, with activities like drumming and basket weaving contributing to overall wellbeing.

- Native American tribal and nontribal relationships with the SDC site
- Advocacy for legalizing indigenous ceremonies and rituals
- Influence on state policies and tribal consultation
- Federally recognized land-based tribes and their significance
- Coordination with five land-based tribal offices and landless tribes
- Indigenous tribes' efforts to restore tribal beneficial uses and promote water management
- Aiming to regain access to ancestral lands and resources
- The importance of coordination with the California Indian Environmental Alliance and tribal advocacy
- Pushing for state responsibility in land and resource cleanup
- Utilizing unused federal land for forest management and cultural practices
- Memorandums of consultation for tribal access and influence
- Landless tribes working towards establishing a land base

## Appendix B, Continued

### Pepperwood Preserve

[www.pepperwoodpreserve.org](http://www.pepperwoodpreserve.org)

**Interviewee:** Michael Gillogly, Preserve Manager

Michael Gillogly, the Preserve Manager of Pepperwood Preserve, discusses strategic lessons learned and partnership potential between Pepperwood and the Center for Climate Action and Innovation (CCAI) at Sonoma Development Center (SDC). He emphasizes the importance of stewardship, climate data analysis, and ecological education as key areas of collaboration and knowledge sharing. Pepperwood Preserve's expertise in stewardship, climate data analysis, and ecological education align with the goals and are a strong potential partner for the Center for Climate Action and Innovation at SDC.

- Michael Gillogly's background in stewardship, including experience at the California Academy of Sciences, has informed his perspective on the value of a healthy environment's ability to sustain changes, which is particularly relevant in the context of climate action.
- Pepperwood Preserve collaborates with organizations like Terrestrial Biodiversity Climate Change Collaborative (TCB3) and UC Berkeley to develop large datasets that provide insights into how climate change affects microclimates, plants, animals, and the local environment. The need for a data repository to manage and disseminate this valuable information is highlighted.

- Michael emphasizes the importance of making ecological data more accessible and understandable to the public, translating complex scientific insights into practical knowledge that can inform climate action.
- The Executive Director identifies the need for a shift in focus within science academia to prioritize climate issues, supporting education programs aimed at training the next generation of scientists to address climate challenges.
- Pepperwood Preserve actively engages in job fairs, classes for children and adults, and convenings to connect with agencies and organizations working on climate-related research and action.
- The organization collects a wide range of data, including open-sourced weather data, stream flow data, live fuel data, and vegetation monitoring. Collaborations with researchers from UC Berkeley, such as David, focus on understanding how woody vegetation changes in response to climate shifts.
- Michael also mentions the importance of monitoring indicator species like newts to get a baseline understanding of how ecosystems are changing due to climate impacts.
- Pepperwood Preserve has a strategic vision that involves being a Centennial site and encouraging others to adopt a similar approach. Collaboration with UC Davis, TCB3, and Lisa, among others, is a part of this vision.
- Michael emphasizes the need to train individuals in basic ecological principles and land management techniques,

including the safe operation of tools like chainsaws and controlled burns.

- Public interest in land management tools, particularly controlled burns, is growing, reflecting the growing awareness of the importance of healthy fire practices in ecosystems.
- Michael underscores the complexity of ecological issues and the need to raise the public's understanding of the interconnectedness of lives with healthy ecosystems.
- Effective communication about the importance of a healthy environment, as well as legal considerations around fire, are highlighted as critical aspects of climate action.
- The need for training programs to equip individuals with the skills to engage in good land management practices is recognized as a priority.

### The Community Alliance of Family Farmers (CAFF)

[www.caff.org](http://www.caff.org)

**Interviewees:**

- Wendy Krupnick – Acting President, CAFF Sonoma County Chapter
- Norman Gilroy – Sonoma Valley, member CAFF Policy Committee
- Evan Wigg – CAFF Director of Communications and Membership
- Rue Furch – Member CAFF Policy Committee, former Sonoma County Planning Commissioner

While interviewees expressed serious concerns regarding the appropriateness of placing a climate research activity at the center of such a large urban development in what is otherwise a rural setting, the Community Alliance of Family Farmers (CAFF) holds immense potential to play a vital role at the Center for Climate Action and Innovation located at the Sonoma Development Center. CAFF, a well-established organization with a mission centered on building sustainable food and farming systems, could significantly contribute to the center's goals of addressing climate change and fostering innovation in agriculture. Their expertise in policy advocacy, farm-to-market connections, ecological farming, small farm support, and community engagement aligns perfectly with the center's mission. Collaboratively, CAFF and the center can create a vibrant hub for sustainable agriculture, policy innovation, and community engagement, all contributing to a more climate-resilient and environmentally friendly future.

- **Policy Advocacy:** CAFF has a strong track record of advocating for sustainable agriculture policies at both the state and national levels. Their expertise in this area can be leveraged to shape policies and regulations that promote eco-friendly farming practices and reduce the carbon footprint of agriculture.
- **Farm to Market Connections:** CAFF's experience in connecting farms with businesses and coordinating institutional purchasing can be instrumental in promoting a sustainable supply chain within the region. This aligns with the center's mission to reduce the environmental impact of food



## Appendix B, Continued

- distribution.
- Ecological Farming: CAFF's commitment to promoting ecological farming practices aligns perfectly with the center's focus on innovative agricultural techniques that prioritize soil health, natural resource conservation, and resilience against pests. Collaborative efforts in this area can lead to pioneering advancements in sustainable agriculture.
- Small Farm Support: The center can benefit from CAFF's work in supporting small-scale farmers. CAFF's initiatives can help provide a platform for smaller farming operations to access resources, funding, and educational opportunities, ultimately contributing to agricultural diversity and sustainability.
- Community Engagement: CAFF's dedication to building resilient family farms and communities resonates with the center's objectives. Their involvement can help create gathering spaces, educational programs, and community-driven initiatives that enhance the local agricultural ecosystem.
- Climate Resilience: CAFF's role in advocating for policies that enhance climate resilience in agriculture can complement the center's mission to address climate change. Collaborative efforts can result in the development of climate-resilient agricultural practices and technologies.
- Lindsay Gucker of Farmer D – reviewed the 8 points of ag

strategy that are evolving as part of the CCAI Business plan – based in part on CAFF's letter

- CAFF advocated for a larger local involvement in stewardship of the land and expressed concerns about density and amount of allowable development at SDC

### Presidio Trust

[www.presidio.gov/about/presidio-trust](http://www.presidio.gov/about/presidio-trust)

#### Interviewees:

- Jean Fraser, CEO
- Rick Rusnack, Chief Business Officer

Jean Fraser, CEO, and Rick Rusnack, Chief Business Officer at the Presidio Trust, discuss the strategic approach to the site's development and the partnership potential between the Presidio Trust and the Center for Climate Action and Innovation (CCAI) at Sonoma Development Center (SDC). They highlight the importance of balancing commercial and residential tenants while focusing on the financial sustainability that can fuel the site's mission and open spaces. Note the Presidio is one of our case studies, and while there are obvious differences, the mission-driven Presidio offers some key lesson learned.

- The Trust's primary focus is to create a sustainable park powered by businesses, emphasizing the importance of businesses in fulfilling their mission.
- The Trust recognizes the need for public-private partnerships

to achieve their goals effectively.

- The engine that funds the site comes from the market-based commercial tenants. This income is then reinvested to support various opportunities within the site.
- Infrastructure costs are substantial and need upfront capital investment.
- The world is changing, with companies more willing to establish locations in nontraditional areas based on employee preferences.
- The Presidio Trust emphasizes the need for businesses that align with the mission and drive market rate rents.
- Separate development into commercial and housing segments is essential.
- The commercial development plan should be profitable and self-sustaining before allocating resources to climate innovation.
- Considerations are made for the costs of maintaining open spaces.
- The model involves businesses driving market rate rents, and nonprofits must support the mission while paying market rate rents.
- Climate adaptation is a mission-driven priority, focusing on generating revenue.
- Infrastructure funding and risk mitigation are crucial aspects

of the financial model.

- Maintaining open spaces is a significant expense that requires careful planning.
- Collaboration between business and nonprofit sectors is essential to support the mission effectively.

### Regional Climate Protection Agency (RCPA)

[www.rcpa.ca.gov](http://www.rcpa.ca.gov)

**Interviewee:** Tanya Narath, Director of Climate Programs

The Regional Climate Protection Agency (RCPA) highlights the alignment between the Center for Climate Action and Innovation (CCAI) at Sonoma Development Center (SDC) and RCPA's climate action initiatives in Sonoma County. Tanya Narath's insights suggest strong potential for collaboration between RCPA and the CCAI at SDC, with a shared focus on reducing greenhouse gas emissions, promoting sustainability, and achieving carbon neutrality.

- RCPA's overall strategy centers on reducing greenhouse gas emissions (GHG).
- Collaboration has been a key focus since 2009, involving Clean Energy, Parks, open space, and Transportation.
- The 2020 plan and 2021 climate strategy mobilization aim to achieve carbon neutrality by 2030.
- A climate center think tank is considered critical to support these efforts.

## Appendix B, Continued

- Electrifying existing buildings and upgrading appliances and infrastructure are priorities for GHG reduction.
- Bay Area regional programs and CPUC initiatives play a significant role in supporting these efforts.
- Funding challenges, especially for demonstration projects and electric vehicle (EV) access, are recognized.
- RCPA is a small organization and sees the potential of the CCAI as a magnet for funding.
- Whole neighborhood electrification exemplars are essential, with a focus on reducing emissions from buildings (30%) and transportation (60%).
- Innovative solutions like a SMART Train connection and safe, connected bike connectors are considered.
- Sonoma Mountain Village is seen as a groundbreaking, sustainable, and climate-friendly community.
- SB 852 and tax increment financing are explored for financing opportunities.
- Partnerships, equity, and community priorities are central to RCPA's initiatives.
- RCPA is actively working on clean energy building projects and securing funding, such as CEC grants.
- The focus is on creating demonstration sites and leveraging

tax funding to upgrade infrastructure.

- Implementation of electrifying buildings and EV charging in low-income neighborhoods is underway.
- Adaptation and planning grants are crucial for resilience and microgrid strategies.
- Sonoma Transport's smaller-scale on-demand transit options are being considered to serve the community.
- Collaboration with Sonoma Clean Power and other partners has been instrumental in driving climate initiatives.
- The goal is to achieve carbon neutrality by 2030 through a think tank and a set of well-defined objectives.
- Ensuring that building electrification programs have enough funding is a priority.
- On-demand transit solutions aim to address the need for alternative transportation options.
- Sonoma Mountain Village is a remarkable sustainable community that is underway.
- RCPA is actively involved in securing grant funding for climate action initiatives and promoting low carbon action and mobilization.
- Resilience grants, microgrid strategies, and state-level grant programs are part of the plan.

### Resources Legacy Fund (RLF)

[www.resourceslegacyfund.org](http://www.resourceslegacyfund.org)

**Interviewee:** Laura Tam – Program Manager

Laura Tam, representing Resources Legacy Fund (RLF), provides insights into how RLF's statewide efforts can align with the Sonoma County Climate Adaptation Center to attract strategic partners and funding, particularly focusing on opportunities related to fire-forward communities. Laura's insights suggest that RLF has a wealth of experience, connections, and knowledge that could be valuable to the Climate Adaptation Center's initiatives, particularly in the context of climate resilience and wildfire mitigation.

- RLF supports climate, wildfire, and community resilience funding with a strong emphasis on these areas.
- RLF is a 20 year old C3 organization dedicated to land and ocean conservation.
- They successfully supported Bond Measure 8A, a \$500 million campaign.
- RLF has been involved in various restoration projects, indigenous research, and natural resource campaigns over the past ten years.
- Building coalitions, lobbying, and supporting field initiatives are essential aspects of their work.
- The interview identified several organizations and individuals who may have potential connections with the Climate

Adaptation Center, including:

- The Nature Conservancy's work in creating wildfire buffers and lessons learned from their funding efforts.
- Fire Forward, a Sonoma-based organization, and its collaboration with Audubon Canyon Ranch on prescribed burning training.
- North Bay Jobs for Justice's interest in land-based/work-based training programs.
- Equitable Infrastructure for Los Angeles and its potential benefits regarding displacement.
- A state bond for climate that went on hold but might be revived for co-funding.
- Ellie Cohen and the Climate Center, which focuses on climate policy in California.
- The Governor's Office of Wildfire Task Force and its efforts to build capacity for organizations, with a focus on public health, smoke, community resilience, and regional collaboration.
- RLF is working on strategies to scale up these ideas, including mitigation strategies for fire management.
- A new CAL Fire report called "Fire Tech," funded by the Moore Foundation, in March 2022.
- The town of Eldridge as a potential site for socioeconomic aspects of fire resource training.
- The Water Foundation, a spinoff of RLF, has proposed roles in

## Appendix B, Continued

managing reservoirs, dams, and innovative pumped hydro.

- Laura is open to making introductions and connections when the timing is right, offering potential introductions to relevant parties when appropriate.

### Santa Rosa Junior College

[www.santarosa.edu](http://www.santarosa.edu)

**Interviewee:** David Liebman, Capital Projects

David Liebman, new to his full time position, envisions the CCAI as a complementary campus to the Santa Rosa Campus. He sees opportunities for programs aligned with climate action, such as new energy job training and certificate programs, to flourish at this site.

- CCAI could serve as a complementary campus to the Santa Rosa Campus, offering climate action programs.
- Lacks presence in eastern Sonoma County
- Opportunities for new energy job training and certificate programs.
- Partnership possibilities to provide education opportunities for those involved in the site.
- Room for growth in community college partnerships with universities.

- Exploring the feasibility of small-scale agriculture and potential assistance.
- Consideration of incubator spaces for student enterprises.
- High interest in agriculture majors and related programs.

### Santa Rosa Junior College: Shone Farm Program

[www.shonefarm.santarosa.edu](http://www.shonefarm.santarosa.edu)

**Interviewee:** John Campbell, Farm Manager

John Campbell, from the Shone Farm Program, is interested in the Shone Farm site in West County, which adds a Sonoma Valley campus to their existing West Sonoma Campus. The Shone Farm site offers a different ecosystem and agricultural opportunities, which complements their programs. Key points from John's discussion include:

- Shone Farm Program's attraction to the Shone Farm site in West County, adding a Sonoma Valley campus.
- Emphasis on the unique ecosystem and agricultural possibilities this location provides.
- The site's potential to enhance and complement their existing programs.
- Opportunities for educational partnerships between SDC CC and Shone Farm Program.

### Sonoma Ecology Center

[www.sonomaecologycenter.org](http://www.sonomaecologycenter.org)

**Interviewees:**

- Richard Dale, Executive Director
- Caitlin Cornwall, Senior Project Manager Planning and Grants
- Karen Eggerman, Senior Project Management and Partner at Tensleep Advisory

Sonoma Ecology Center (SEC), several key points emerged, emphasizing the potential for collaboration with the Sonoma Development Center (SDC) to create a Center for Climate Action and Innovation (CCAI). This conversation highlighted the Sonoma Ecology Center's interest in creating a sustainable and adaptable campus that could serve the community in numerous ways, making it a valuable partner for the CCAI at SDC. Their focus on economic viability, environmental sustainability, and community engagement aligns well with the goals of the Climate Action Center. Sonoma Ecology Center has been very involved in research and planning efforts around transforming the SDC into a climate center. They would be a strategic partner in efforts at advancing the vision.

- SEC discussed the potential for leveraging grants, including those from the EPA, to support projects related to climate, vegetation management, and more. They aim for the entire SDC site to demonstrate sustainable ways of living and working.
- The interview participants emphasized the importance of economic viability for the region and the planet, considering

diverse aspects such as climate adaptation, wastewater treatment, and microgrids.

- The interview highlighted the focus on sustainability and adaptability. This includes efforts to replace plastic and packaging, collaborate with Los Alamos Labs on research, eg. harness seaweed as a substitute for plastics.
- They also discussed the need for interdisciplinary collaboration, suggesting that big companies have labs where startups can work together. Such collaboration can lead to the development of new solutions, such as those for fire retardants or alternative construction materials (See Eldridge Economic Enterprise report).
- The discussion touched on governance models for projects like this, emphasizing the need for flexibility and continuous adaptation to maximize resources.
- The interview participants expressed their visionary approach to this project, where economic viability and reversing demographic declines play a central role. The potential benefits include job creation and addressing economic challenges that have affected the county.
- Further topics included the availability of funding from sources like FEMA, which brings in substantial money for various projects, and the need for the state to take a more active role in facilitating collaboration between state family departments.
- Governance and land ownership were identified as key

## Appendix B, Continued

considerations, including the role of housing land trusts, shared control, and creating social good.

- The interview underscored the importance of building a flexible and shared approach to governance and the need to focus on reversing the demographic and economic decline affecting the county.
- A few specific plans and initiatives were discussed, such as biodiversity and transportation, as part of the larger vision for the development site.

### Sonoma Land Trust

[www.sonomalandtrust.org](http://www.sonomalandtrust.org)

**Interviewee:** John McCaull, Land Acquisition Director

John McCull, Land Acquisition Director at Sonoma Land Trust (SLT), emphasized the need for a multifaceted approach at the Center for Climate Action and Innovation (CCAI) to address climate, biodiversity, and housing crises. CCAI, in his view, should serve as more than just a climate center. Collaboration and cross-sector innovation are vital components, making it a hub for nonprofits and promoting community engagement. Enhancing the habitat and addressing infrastructure challenges are key priorities for Sonoma Land Trust, focusing on ecological restoration and improved water systems. McCaull also highlighted the importance of involving state parks and utilizing their expertise in managing

open spaces. Additionally, McCull discussed the potential for foundation support, especially from organizations like the Hewlett Foundation's Climate Program, and the need to facilitate the engagement of nonprofits in CCAI. He emphasized that CCAI should serve as a demonstration site for various sustainability practices, including wildlife corridor crossings, and shared equipment. This comprehensive vision for CCAI underscores its role in fostering collaboration, sustainability, and environmental resilience in the region. Suggested a Hub for nonprofits with offices and conference center, Collaboration with SLT, Cal State Parks in order to attract Federal funding including NOAA funding.

- CCAI should not be limited to a climate center but also serve as a hub for nonprofit organizations.
- Promoting cross-sector innovation and collaboration is essential within SCAI.
- A primary focus should be on enhancing habitats and addressing infrastructure challenges, including ecological restoration and improved water systems.
- Involving state parks and leveraging their expertise in managing open spaces can be beneficial.
- Engagement of nonprofits and their contribution to CCAI should be facilitated.
- Ecology center. There is a need for a hub for nonprofits in Sonoma County.
- The site should serve as a demonstration ground for various sustainability practices, such as wildlife corridor crossings.

- Sharing equipment for fire prevention and habitat restoration is a practical approach.
- Foundation support, particularly from organizations like the Hewlett Foundation's Climate Program, is worth exploring
- Explore NOAA Funding
- The vision for CCAI encompasses collaboration, sustainability, and environmental resilience in the region.

### Sonoma County Regional Parks

[www.parks.sonomacounty.ca.gov](http://www.parks.sonomacounty.ca.gov)

**Interviewee:** Bert Whitaker, Director

In the conversation with Bert Whitaker, a strong interest in serving as a land manager in partnership with the State Parks at the Sonoma Development Center (SDC) was evident. This collaboration is driven by the aim of creating a hub where active research, scientific expertise, public outreach, and education converge. In a dynamic conversation with Burt Whitaker of Sonoma Regional Parks, a profound commitment to environmental stewardship and the potential for a transformative partnership with the SDC emerges. The emphasis is on creating a hub where scientific research and education go hand in hand. The visionary approach seeks to establish an innovative facility that combines the insights of scientific expertise with outreach and public engagement. Bert Whitaker underscores the crucial importance of good fire practices within county parks and expresses the desire to explore a sustainable scale and interval for controlled burns.

The conversation also delves into the multifaceted challenges of climate adaptation, resiliency, ecosystem services, and ecology, signaling a readiness to navigate the complexities of the natural world. Moreover, the potential role of this proposed innovation center in the evolution of land management is highlighted, with an aspiration to move beyond bureaucratic limitations. By considering the broader spectrum of environmental and ecological factors, this conversation underscores the holistic approach required to address the pressing challenges of our time.

- The focus on combining active research and public-facing elements highlights a commitment to integrating science and public education effectively.
- The importance of incorporating well-managed fire practices in county parks is stressed. A sustainable scale and interval for controlled burns in the county parks system are being explored.
- Climate adaptation, resiliency, ecosystem services, and ecology are at the center of their interests, with a recognition of the connections between fire, carbon, watersheds, and landscape-level ecology.
- To foster innovation and progress, the need for an entity that can navigate the bureaucracy of land management is expressed. The desire is to move beyond reactive approaches that often focus on specific niche aspects of environmental science.
- The conversation underscores the potential for combining

## Appendix B, Continued

recreation, science, education, adaptation, and mitigation. Collaboration with public and private partners to educate the public and communicate scientific findings and innovations is identified as a key goal.

- Funding opportunities through demonstrations and partnerships between the public, private, and philanthropic sectors are seen as potential avenues to support these efforts.
- The limitations of the California Environmental Quality Act (CEQA) and its focus on the past are highlighted. There is a call for forward-thinking approaches that consider future needs.
- The unique ecological characteristics of the area between Highway 12 and Arnold are recognized, providing opportunities for water and wetland restoration and diversity. Restoration of vernal pools in cooperation with agricultural uses is suggested.
- The need for hands-on learning and the importance of having educational facilities onsite where the work is happening are emphasized.
- The Sonoma Regional Parks expresses interest in serving as the regional land manager, focusing on climate adaptation, carbon, water, and fire. Their interest aligns with the county's goals for environmental management.
- The conversation mentions the challenges of integrating

federal funding compared to state funding, with a stronger emphasis on understanding ecology and soil types.

- The collaborative nature of the project is underlined, with the potential for attracting funding, both public and private, being highlighted.
- The importance of finding innovative approaches to land use planning, particularly in the context of environmental adaptability, is stressed.
- The conversation touches on the alignment of the project with the Climate Action Plan and its potential to contribute to climate management, fire management, and carbon reduction.
- The key role of public education, demonstration, and the potential for climate strategies are outlined, with a focus on creating infrastructure that can facilitate human engagement with the environment.
- The various organizations involved in the initiative, including Sonoma Regional Parks, are seen as catalysts for long-term management, with opportunities for public education and climate strategy demonstration.
- The conversion of woodlands back to grasslands and the development of carbon valuation models are key aspects of the project.
- The idea of creating a region that attracts funding and encourages a shift in land use development perspectives is highlighted.

### Sonoma Water

[www.sonomawater.org](http://www.sonomawater.org)

#### Interviewees:

- Jessica Martini-Lamb, Environmental Resources Manager and wildlife biologist
- Jay Jasperse, Retire Chief Engineer Ground Water,
- David Royall, Maintenance Manager, OM and Coordinator collections
- Don Seymoure, Principal Engineer
- Dale Robert, Engineer Resilience

Sonoma Water Agency underscores the importance of water infrastructure that goes above and beyond the norm. In the conversation, Jessica highlights the integration of key feedback into the specific plan for the Center for Climate Action and Innovation (CCAI) at Sonoma Development Center (SDC). The discussion also delves into the partnership between Sonoma Water and the county appointed developer, Valley of the Moon, regarding water retail for the built development part. Emphasis is placed on watershed recharge aspects, water rights, and the intricate dynamics of water supply in the context of emergency agreements and onsite resources. Additionally, Jessica Martini Lamb discusses how the CCAI can support Sonoma Water's mission and objectives, with a focus on climate resilience, water infrastructure, and innovative technologies for water management. The conversation illuminates the intricate intersection of water management, climate adaptation, and innovative solutions that could shape the future of the SDC site.

- Emphasis on robust water infrastructure
- Incorporating feedback into the specific plan
- Water retail partnership with Valley of the Moon
- Watershed recharge and water rights management
- Water supply in emergency agreements and onsite resources
- Mutual benefits of the CCAI for Sonoma Water
- Focus on climate resilience and innovative water management technologies
- Utilizing gray water treatment and fire suppression
- Strategies for reducing treatment facility costs
- Implementation of forecast informed reservoir management
- Collaboration with NOAA, SCRIPPS, and Colorado State University
- Importance of addressing peak flow and excessive infiltration and inflow in wastewater management
- Capturing water flow for potential use
- Expanding water infrastructure capabilities for the SDC site.

## Appendix B, Continued

### Valley of the Moon Water District

[www.vomwd.org](http://www.vomwd.org)

**Interviewee:** Matt Fullner –CEO

In the conversation with Matt Fullner, CEO of Valley of the Moon Water District, the discussion centered around Valley of the Moon Water District’s involvement with the SDC water supply management and their keen interest in the success of the CCAI at SDC. The main highlights included the direction of the developer toward the Valley of the Moon Board, considerations related to water supply, an ongoing EIR lawsuit, ownership models, water supply assessment, water supply initiatives, including an MOU with the Danish Government, groundwater recharge, and funding opportunities. The conversation emphasized the importance of redeveloping the water treatment plant, infrastructure requirements for fire flow, and the need for a thorough water supply assessment that aligns with the specific plan buildout.

- Valley of the Moon directed the developer to the Valley of the Moon Board for water supply considerations, and they work closely with Gary Bryant, who possesses extensive knowledge of SDC’s water infrastructure.
- A Conditional Will Serve Letter was provided to the developer but wasn’t returned within the specified timeframe.
- The conversation addressed key aspects like water supply assessments, EIR lawsuit, and the importance of addressing

water demand exceeding development needs.

- Ownership models for water management, involving Sonoma County Water Management and Valley of the Moon District, were under discussion.
- The conversation touched upon the necessity of redeveloping the water treatment plant and infrastructure requirements to meet new Fire Flow Requirements.
- The options for rebuilding the water treatment plant were explored, including the Northrim water treatment district plant and retrofitting the existing plant.
- Funding opportunities were considered, with Valley of the Moon looking to the developer to fund various initiatives, and it was emphasized that development costs should not fall on existing ratepayers.
- The importance of ground water recharge, direct inject recharge, and the potential for Aquifer Storage and Recovery (ASR) were discussed.
- Infrastructure requirements, including sewer plants, treatment wells, and ensuring water quality, were considered, along with the role of State Parks in policing lakes and public users.
- The developer’s ongoing due diligence was mentioned, with Gary Bryant’s support, and the need for a comprehensive water supply assessment that aligns with the specific plan buildout was highlighted.

- Collaborative initiatives like the MOU with the Danish Government for innovative water technology were also noted, and having the CCAI active would be a good attraction for partnerships such as this.

# Appendix B, Continued

## Interview Discussion Guide

The interview questions were developed to allow a flow of conversation and encourage the interviewee to share insights/ ideas/critiques that could help us shape the plan.

### Introduction

Sonoma County is developing a business plan for a Climate Change Center at the Sonoma Developmental Center. Funding for this plan is provided by the California State Coastal Conservancy. The Center is envisioned as a commercially viable hub that utilizes the built environment of SDC to bring together environmental leaders, stakeholders, and the public to research, create, and demonstrate innovative climate change adaptation and mitigation solutions:

1. We're interested in your background, how you and your organization work to address climate change. How would you envision your organization fitting into this site, and what innovations do you think it can offer?
2. Can you discuss any specific projects that your organization is working on that affects or could benefit the Sonoma County Climate Adaptation Center?
3. What do you see as the best 2 or 3 things Sonoma Climate Adaptation Center can provide to help achieve your mission, business objectives, etc.? your organization / mission?

### Facilities and Land Resources

Noting your responses on questionnaire, can you describe how you envision using or expanding upon the SDC buildings and land uses to achieve your vision?

4. What are your most pressing facility and land use needs?

### Money – Funding and Financing

Noting the interviewee's response to the questionnaire – engage in a general / higher level about types/sources and uses of funding they have for their program and if they are willing to engage ask the following specific questions.:

#### “Money looking for good ideas”

5. What short term and long-term sources of investment are you considering?
6. Can you confirm your priority investment areas?
7. What ratio of public vs private finance does your organization usually operate in to help implement your climate goals?

#### “Good ideas looking for money”

8. Can you describe the sources and level of funding do you currently have to support your organization/Mission?
9. What sources and level of funding are you looking for to take your mission to the next level?
10. Is it difficult for your organization to find or collaborate with other innovators, both large and small scale, to help grow in the emerging environmental sector? How might SDC fill that gap?

# Appendix C: Public Open House Summary Report

On October 4, 2023, Sonoma County with their team of consultants, hosted a Public Information Workshop to share information about the County’s business plan for a Center for Climate Action and Innovation at the Sonoma Developmental Center (SDC). The meeting was held online from 6:00 PM – 7:30 PM. The meeting was conducted in an open house webinar format including introductory presentations and informational slides for the public to review. A total of 156 people registered for the meeting and the meeting was attended by 86 people.

Wil Lyons from Permit Sonoma introduced the project and the project consultants presented a description of the plan development process, business plan themes and answered questions from the public during two, 15 minute break out sessions.

The meeting presentation provided a summary of the site opportunities, timeline for the Business Plan process to date, draft theme concepts and the next steps in plan process. There were 19 completed survey comments collected during the meeting. The following is a summary of survey questions and responses.

## Online Survey Questions & Answers

### Where do you reside?

- 26% Glen Ellen Resident
- 68% Sonoma County Resident (outside of Glen Ellen/Eldridge)
- 5% Non-Sonoma County Resident (General Project Stakeholder)

### In your opinion, which themes should the Climate Center prioritize?

Top 3 Themes: Water, Biodiversity Wildfire

### Which of the opportunities did you think were the most important, most exciting, or should happen immediately? Are there opportunities we missed?

“Climate solutions above and beyond climate issues above -- innovation in all sectors with spin-offs across the county.”

“Eldridge Marsh, the degraded wetland on the eastern portion of the property, should be restored. The benefits in terms of water, wildlife, and fire protection would be tremendous.”

“Make SDC totally self-sufficient, All solar, graywater self-contained in all buildings, not wasteful centralized tied into valley of the moon water district. Micro grid.”

### Do you have any additional comments you would like to share with the team?

Selected comments:

“Concern about water use agriculture, permeability of wildlife corridor throughout the site, fire resilience, defensible space and minimizing traffic and water impacts on surrounding communities.”

“Trade school training program for this build out”

“Biodiversity focus should also include marine habitats (including carbon sequestration sites).”

“The large size of the climate center is too big for rural size. Traffic is already an issue; workers will make this worse and endanger lives in wildfire.”

“Concept is great, but we should have started this planning process with this discussion. Redevelopment and open space transfers are now on different trajectory. May not catch up to them fast enough.”

“I think that to be credible a well recognized NGO will have to be brought onboard early as an anchor .”



