



SUMMARY REPORT

Agenda Date: 8/13/2024

To: County of Sonoma Board of Supervisors

Department or Agency Name(s): County Administrator - Climate Action & Resiliency

Staff Name and Phone Number: Barbara Lee (707) 565-2510, Jaida Nabayan (707) 565-6455, Simone Albuquerque (707) 565-2132, Rhianna Frank (707) 565-6483

Vote Requirement: Majority

Supervisorial District(s): Countywide

Title:

Climate Resilience Comprehensive Action Plan

Recommended Action:

- A) Consider the drafts for the Climate Resilience Comprehensive Action Plan and associated Funding Strategy; and
- B) Provide input to staff.

Executive Summary:

The County's 5-year Strategic Plan, adopted in 2021, has a Climate Action and Resiliency Pillar with an overarching goal to "Make Sonoma County carbon neutral by 2030." The pillar has five specific goals, including Goal 3 to "Make County facilities carbon free, zero waste, and resilient." Staff developed a Climate Resilience Comprehensive Action Plan (Climate Plan) to provide a road map to reach carbon neutrality and to make County facilities carbon free, zero waste, and resilient.

The Climate Plan provides a roadmap to reduce greenhouse gas emissions from the County's internal municipal operations and make those operations more resilient to climate hazards that increasingly threaten Sonoma County. The Climate Plan also presents a strategy to engage with Sonoma County communities more fully to better understand their climate resilience priorities and how the County can most effectively support community climate resilience progress.

The Climate Plan includes 54 measures and actions to reduce carbon emissions from County operations and to increase carbon storage on County-owned lands. The measures and actions were informed by climate-related studies, strategies, and plans developed by the County and its partners, and align with their recommendations. Measures are identified for implementation in the "Near Term" (2024-2026), "Mid-Term" (2026-2030), or Longer Term (2030+). Near Term measures can be implemented directly upon approval of the plan and recommended funding. Mid-Term and Longer Term measures require further action by your Board before implementation can begin.

There are 25 Near Term measures and actions with a total estimated cost of approximately \$38 million, of which about \$30.7 million in funding has already been identified (including an upcoming non-competitive

grant). Additional measures are eligible for upcoming competitive funding which requires a local match. Staff recommends your Board consider, at a future date in 2024, \$2.27 million in funding from the Climate Resilience Fund and Tribal Mitigation Funds for 14 Near Term measures and actions (including local match for upcoming grants) and costs for planned community engagement (see Attachments 7A and 7B for a list of Near Term measures and recommended funding).

Costs and benefits of the County Operations measures were analyzed three different ways and provide different relative rankings of their value. Value is considered in terms of direct cost per metric ton of emissions reduced (MT CO₂e), an overall Multi-Criteria Analysis score, and the social value based on the social cost of carbon (the cost of harm to society from emitting one additional ton of CO₂e). In general, policy measures are the least costly to implement but also have a low Multi-Criteria Analysis score; nature-based solutions rank higher overall than built-environment measures. Decarbonizing the County's diesel engines has a high net social cost but is required by state regulations.

If all Near Term and Mid-Term Energy, Transportation, and Waste measures are implemented by 2030, the County will reduce its operational greenhouse gas emissions by 46%, or 14,720 MT CO₂e per year, at an approximate cost of \$162 million. However, the County does not have to fully implement every measure to achieve carbon neutrality by 2030. These measures chart a path to achieve Strategic Plan goals to "Make County facilities carbon free, zero waste, and resilient" to "Maximize sustainability and emissions reductions in all County fleet vehicles." Implementing these measures, in combination with the nature-based solutions in the Water, Wildfire, and Natural and Working Lands sectors, will result in the County's operations going beyond carbon neutral to a net carbon reduction.

Implementing nature-based solutions on County-owned lands consistent with recently approved statewide targets would increase carbon storage by up to 159,000 MT CO₂e each year the target is achieved. Implementing only statewide targets for beneficial fire and non-fire fuels treatment on 1,245 acres of County-owned land would store an additional 43,838 MT CO₂e per year achieved, which more than offsets the County's operational emissions. The very rough cost of that treatment would be \$10 million per year (costs vary widely by treatment and location, exclude permitting, oversight, and outreach, and are inflation-sensitive; treatments must be reapplied roughly every five years). A similar outcome results from creating urban forested greenspace on 10 acres of County land and lasts for 50 years with maintenance. In short, by combining emissions reductions and nature-based solutions, the County can meet its goal of carbon neutrality by 2030. Staff recommends prioritizing emission reduction measures that will save operational costs over time and nature-based solutions that also achieve key land management objectives, as well as measures that build resilience to increasing climate hazards.

Your Board has made significant investments in climate resilience through the Climate Resilience Fund (almost \$9 million in funding leveraging additional grants and incentives), the Vegetation Management Fund (\$13.5 million in community grants as well as roughly \$6 million of investments in technical support, infrastructure and tools), matching funds and staff support for the Wildfire Resilient Sonoma County programs (leveraging roughly \$60 million in FEMA grants), and for the \$10 million USDA Climate Smart Agriculture grant project, as

well as other planning and programmatic efforts by County departments and agencies. Looking ahead, the Climate Plan includes a Funding and Financing Strategy with 30 specific funding opportunities over the next three years, and novel financing programs that could be developed over a longer period.

Discussion:

The County's 5-year Strategic Plan, adopted in 2021, has a Climate Action and Resiliency Pillar with an overarching goal to "Make Sonoma County carbon neutral by 2030." The pillar has five specific goals, including Goal 3 to "Make County facilities carbon free, zero waste, and resilient." Other goals promote wildfire resilience, community carbon neutrality, decarbonizing County fleets, and incorporating climate resilience into County plans and policies, especially related to natural and working lands. Important progress towards these goals is already underway with over \$100 million of County investments and grants received. Staff developed a Climate Plan to provide a road map to reach carbon neutrality and to make County facilities carbon free, zero waste, and resilient.

Overview of the Climate Plan

The Climate Plan summarizes how the climate is changing, climate impacts in Sonoma County, and what the best science projects for the future. It also identifies key climate hazards the Plan considered and responds to. Care was taken to align the Climate Plan with ongoing climate resilience work at the County, and to incorporate and build on key aspects of other local, regional, and state climate plans and programs.

Three carbon inventories form the basis for the Climate Plan: the Regional Climate Protection Authority (RCPA) Countywide Greenhouse Gas (GHG) Inventory and Unincorporated County area inventory; the County's GHG Inventory for County Operations; and the Carbon Inventory and Potential Sequestration Study for Sonoma County natural and working lands and County-owned lands (see links in Attachment 4-B). There is an overview of the Statewide Targets for Nature-Based Solutions, which set goals for implementing nature-based practices on different land types across California. Staff analyzed what the targets could mean for Sonoma County, which helped frame and evaluate some of the measures in the Climate Plan. This analysis demonstrates that carbon neutrality can be achieved by 2030.

The Climate Plan lays out two tracks of action:

- The Plan includes 54 County Operations measures to reduce carbon emissions from County facilities and operations, increase their resilience to climate impacts and hazards, and increase the health of County-owned lands and the carbon they store. Measures are organized by sector, including Energy, Transportation, Waste, Water, Wildfire, and Natural and Working Lands. Each sector describes Early Actions already underway and provides a table summarizing the recommended County Operations measures with a one-page overview of each measure.
- The Climate Plan outlines a Community Engagement Strategy to better understand climate resilience concerns and priorities of diverse communities across Sonoma County, with an emphasis on reaching unincorporated, underserved, under-resourced communities whose voices are not always heard in climate policy discussions. The engagement is expected to refine and prioritize actions the County could

take to support community progress towards climate resilience, and Candidate Community Progress measures are included in the Strategy as a starting point for conversation. If, at a future date in 2024, the Climate Plan is approved, staff will engage communities and present prioritized measures for Community Progress to your Board in 2026.

Costs and benefits of measures were evaluated in three different ways. Staff estimated direct implementation costs and expected GHG reductions for each County Operations measure that is sufficiently bounded to support the analysis (29 measures). Staff also performed a Multi-Criteria Analysis for every County Operations measure. A consultant performed a Cost Benefit Analysis of 17 measures based on the social cost of carbon. The results of these analyses are presented in the Climate Plan, and details about how the analyses were performed are provided in the appendices. The Climate Plan also includes a summary of grant funds secured that support climate resilience, and a funding and financing strategy to secure additional funds. A more detailed summary of the Climate Plan, including tables of County Operations measures, can be found in Attachment 1; it is provided in Spanish in Attachment 2. The Climate Resilience Comprehensive Action Plan is found in Attachment 3. Appendices to the Plan are provided in Attachments 4-A through 4-I.

Recommended Near Term Measures (2024 to 2026)

The Climate Plan includes 25 Near Term measures, which staff is recommending your Board approve at a future date in 2024 so work on them can begin. These measures were identified for implementation between 2024 and 2026 because they have a relatively low threshold to initiate and complete the activities described. For example, they do not require significant logistical or procedural steps and they have a modest cost, except E-CO-1 (Near Term energy upgrades) and T-CO-1.1 (decarbonizing 30% of the light-duty fleet as described in the Strategic Plan) which both have a high cost and yield cost savings over time. Financing is being considered for the energy upgrades, and grant funding will be pursued for the vehicle fleet. Many of these Near Term measures and actions are the first step that enables significant progress in the Mid-Term. A list of Near Term measures is provided in Attachment 7-A.

Recommended Future Funding for Near Term Measures

The item before your Board is informational only, however staff recommends your Board consider (at a future date in 2024) funding for the Near Term measures that do not have secured or anticipated grant funding, excluding some measures that are strictly compliance with existing regulatory requirements. Nine of the measures have secured funding, alternative funding is being pursued, or there are no costs attributed to them because the costs are addressed elsewhere. Two of the Near Term measures are strictly regulatory compliance, so no funding is recommended. In the case of measure W-CO-8, which plans for sea level and bay level rise and river flooding, action 1 leverages a separate study already underway to develop a detailed stream and riparian corridor map that will support a needed vulnerability assessment, while action 2 will rely on non-competitive grant funding to complete the vulnerability assessment and begin preparation of an adaptation plan. In total, funding is recommended for 14 Near Term measures at a cost of \$1.8 million. Staff is also recommending \$460,000 in funding for the Community Engagement Strategy, bringing the total recommended funding for Near Term Climate Plan implementation to \$2.27 million. The recommended

funding sources are: 1) the Climate Resilience Fund, which has \$1,297,256 available to allocate, and 2) the Tribal Mitigation Fund, of which your Board identified \$5.6 million for implementation of the Climate Plan. See Attachment 7-B for more details.

Engaging Communities

In developing the Climate Plan, staff engaged communities through surveys, tabling community events, focus group conversations, and interviews of community organizations and members, as well as a virtual Climate Town Hall and two workshops with the Board of Supervisors. Engagement activities were designed to support interaction by people with different communication needs and preferences - with community input accepted verbally, written on notes, by dropping tokens in jars, anonymously through surveys, via polling at meetings, and through email. More than 700 people engaged with County staff during 13 tabled community events. Forty-seven one-on-one interviews were conducted with staff in County departments, agencies, and external partners, as well as 42 one-on-one interviews with community members and community-based organizations, including people from climate justice communities. Sixty people participated in the virtual Town Hall, and staff met with focus groups about the developing plan and the measures in it. In addition, over 200 people responded to surveys that informed the Climate Plan. Materials, interviews, focus groups, surveys, and meetings were offered in English and Spanish. Staff also reviewed input from engagement activities for different climate-related strategies and plans (such as the Multi-Jurisdictional Hazard Mitigation Plan, the Climate Resilient Lands Strategy, the Community Wildfire Protection Plan, and the Safety and Environmental Justice elements of the General Plan), as well as comments made during the 2021 Climate Action and Resiliency Town Hall.

The input received underscored the need to engage more deeply with diverse communities across Sonoma County before proposing measures the County should take to support community climate resilience progress. Deeper engagement with a wider range of communities will help staff better understand communities' different priorities and needs, and the barriers they face in becoming more climate resilient. To accomplish this, the Climate Plan includes a Community Engagement Strategy (Strategy) designed to meet diverse communities where they are. It incorporates trusted community voices as members of an advisory committee that will operationalize the Strategy and design and participate in engagement activities. The Strategy continues engagement through community events (including fairs, festivals, cultural events, and culturally relevant celebrations like Dia De Los Muertos and Juneteenth celebrations). As a starting point for conversation, the Strategy includes Candidate Community Progress measures that staff expect will evolve based on the engagement. If approved, engagement will occur in 2025 and 2026, after which the advisory committee will help staff review input received and prepare recommendations for prioritized actions the County can take to support climate resilience progress in diverse communities across Sonoma County (see Attachment 4-D for the Community Engagement Strategy, and Attachment 6 for estimated costs for implementation).

Pathways to Carbon Neutrality

Carbon neutrality occurs when the amount of carbon taken out of the atmosphere is equal to the amount of carbon released into the atmosphere. The Strategic Plan sets a goal to make Sonoma County carbon neutral by 2030. Each of the nine jurisdictions in Sonoma County share this goal and are working to achieve it under the leadership of the RCPA. Each jurisdiction is responsible for achieving carbon neutrality in its own operations, and for supporting community carbon neutrality within its jurisdiction. This Climate Plan identifies measures to reduce County operational carbon emissions and to increase the amount of carbon stored in County-owned lands; together they can achieve carbon neutrality by 2030. The Climate Plan also evaluated opportunities to achieve carbon neutrality for unincorporated communities in Sonoma County and countywide, demonstrating that this can also be achieved.

Carbon neutrality for County Operations: County Operations are responsible for about 32,000 MT CO₂e per year, which will grow by 3% in 2030 with no reduction measures. Federal and state climate programs are projected to reduce the County's 2030 emissions by about 20%. The County can further reduce emissions by 46% by implementing the Near and Mid-Term measures in the Climate Plan. If the County achieves these reductions, County Operations will still release about 8,300 MT CO₂e per year in 2030, but some reductions may not be feasible from a cost perspective. To achieve carbon neutrality, the County needs to increase carbon storage on its lands by at least 8,300 MT CO₂e per year; more if the County does not achieve all Near and Mid-Term operational reductions (see Attachment 4-B).

Natural and working lands in Sonoma County currently store over 105 million MT CO₂e, and County-owned lands store about 1.8 million MT CO₂e. The Climate Plan includes County Operations measures with nature-based solutions that improve resilience and increase carbon storage. To evaluate pathways to carbon neutrality, staff prepared an analysis of the Statewide Targets for Nature-Based Solutions (April 2024, see Attachment 4-B). The Statewide Targets identify the number of acres to be treated in different land types to improve climate resilience and sequestration. Using the County's Carbon Inventory and Potential Sequestration Study, staff determined the County's percentage of acres in each land type compared to the total statewide acres for that type - then scaled each treatment target and determined the carbon sequestration that would occur from achieving them in Sonoma County. The County owns 2% of the natural and working lands in Sonoma County (mostly in Regional Parks), and staff further scaled the acreage targets and carbon storage benefits for treatments on County-owned lands. The analysis demonstrates that if the County achieves the proportional target of 1,245 acres of beneficial fire and non-fire vegetation fuel treatments on County-owned lands, those lands will store an additional 43,800 MT CO₂e per year (every year the County meets the target; treatments must be reapplied roughly every five years). This would more than offset all County operational emissions. Completing 20 acres of urban greening and forestry on developed County-owned lands would store an additional 71,600 MT CO₂e per year achieved, more than twice the current operational emissions. The state has committed to make funding available to support achieving the Statewide Targets; with this analysis, the County is well-positioned to compete for those funds.

Carbon Neutrality Countywide: According to the RCPA Countywide GHG Inventory, total emissions for Sonoma County are about 3.1 million MT CO₂e per year. Sonoma County can achieve countywide carbon neutrality in 2030 by increasing carbon storage by 3.1 million MT CO₂e per year with wildfire fuels reduction on 60,000

acres each year, and 277 acres each year of urban greening, countywide. Completing wildfire treatments on 15,950 acres per year and urban greening on 74 acres per year would store 827,000 MT CO₂e/year in 2030 and would make the unincorporated communities carbon neutral. The actual cost and sequestration benefit of a nature-based solution will depend on the specific location and treatments used for a project. If Sonoma County continues its current trajectory of reducing GHG emissions, while collaboratively and thoughtfully increasing sequestration through nature-based solutions (leveraging state funding), carbon neutrality is achievable countywide by 2030.

Using Analyses of Costs and Benefits

The analyses of costs and benefits rely on estimates and assumptions, except for a few specific measures. In some cases, only the initial activities (such as developing a study or plan that will support future emission reducing or storing activities) could be evaluated because the scope of those future activities is not yet known. Estimates of costs and benefits are most appropriately used to compare the measures on a relative basis. The analysis of direct costs and benefits shows a wide range of cost-effectiveness; some energy measures show a very large net savings per ton of carbon reduced (saving as much as \$200,000 per MT CO₂e reduced for lighting upgrades), and other measures have high net cost (costing over \$13,000 MT CO₂e to decrease the County's use of disposable food ware). The actual cost of a specific project, or the benefits it yields, will vary depending on the actual scope of the project, and potentially on its location or other factors. The methods used to estimate direct costs and benefits are described for each measure in Attachment 4-E. The Multi-Criteria Analysis found that nature-based solutions measures generally have a higher overall community benefit than built-environment measures although there are notable exceptions (analysis described in Attachment 4-F). The Cost Benefit Analysis using the social cost of carbon showed that diesel engine measures have the highest net social cost, however they are also required by state regulations (analysis described in Attachment 4-G).

Funding & Financing Strategy for Mid- and Long-Term Measures:

Over the last two years, staff has secured almost \$17 million in state and federal climate resilience funding, including expected direct pay tax credits and other incentives for solar generation and storage. Full implementation of the Climate Plan will require significant additional funding. To that end, the County tracks federal, State, regional, and local funding opportunities, and had specific funding strategies prepared for 10 County Operations measures and one Candidate Community Progress measure that directly corresponds to an objective in the Strategic Plan. In total, 30 grant opportunities were identified. Two novel financing strategies were also identified: 1) a working lands carbon mitigation bank, which would provide a forum to sell verified carbon reductions from nature-based solutions on ranch and farmlands; and 2) a residential retrofit offset reverse auction, which would collect carbon mitigation fees from project developers and would fund efficiency and decarbonization at low-income residential buildings through an auction where contractors bid how many units the contractor would retrofit for the available funds (see Attachments 4-H and 5 for additional information).

Environmental Review

The approval of the Plan is exempt pursuant to California Environmental Quality Act (CEQA) Guidelines sections 15262 (feasibility or planning studies) and 15061(b)(3). The Near Term implementation measures proposed to be funded and approved are exempt pursuant to CEQA Guidelines sections 15262 (feasibility or planning studies); 15061(b)(3); and 15307.

Climate Action and Resiliency Division Staffing

A brief overview of the Climate Action and Resiliency Division (CARD) programs and staff is included as Attachment 9. The division was established in 2021 with limited term positions to coordinate and oversee the County’s climate resiliency work and to develop this Climate Plan. In 2022, the County’s Energy and Sustainability Division was merged with CARD because of the strong alignment of mission and functions. This group has 11 FTE (2 vacant) that are enterprise and grant funded. A Clean Water Analyst and Ombudsman was also added in 2022. In 2023, a full-time Grants Analyst was added, and CARD secured a \$10 million grant for a collaborative nature-based solutions project, which largely funds a Climate Resilience Project Analyst to coordinate and oversee the 5-year grant. In total, CARD now has 15 filled FTE positions and two vacant FTE positions. Of these, one is a 5-year limited term position overseeing the \$10 million grant, and there are three other 3-year limited term positions from the original CARD staffing, two of which (including the Director) will end in January 2025. In light of these upcoming changes, in September the County Executive will present a revised staffing model for climate resiliency work that recommends where different climate resiliency positions should be housed. See Attachment 8 for a description of Division programs, staff responsibilities, and funding sources.

Next Steps

Following this presentation and discussion of the Climate Plan, staff will return to present the Climate Plan for your Board’s consideration of approval, and to consider approval of funding for Near Term measures. If approved, staff will continue to collaborate with County departments and agencies, the RCPA and other partners to implement the Climate Plan, maximize the value of outreach and engagement, and develop a unified, integrated monitoring and tracking system and dashboard, which will include Results-Based Accountability to measure the County’s equity outcomes. The County Executive will also present recommendations for staffing changes at a later date.

Strategic Plan:

This item directly supports the County’s Five-year Strategic Plan and is aligned with the following pillar, goal, and objective.

Pillar: Climate Action and Resiliency

Goal: All goals

Objective: All objectives

Racial Equity:

Was this item identified as an opportunity to apply the Racial Equity Toolkit?

Yes

The County of Sonoma is committed to promoting and ensuring equitable access to government decisions and services, and to equitable outcomes. Staff began developing this Climate Plan with the questions and promptings of the Racial Equity Toolkit. Staff actively considered racial and social justice in the community engagement for the development of the Climate Plan, and intentionally incorporated climate justice and just transition in specific measures and actions that are part of the Plan. A Racial Equity Toolkit Analysis was completed for the Climate Resilience Comprehensive Climate Plan. Refer to Attachment #4-J for the complete Racial Equity Toolkit Analysis.

Prior Board Actions:

12/11/23 - Climate Resilience Master Action Plan Workshop (2023-1383)

8/29/23 - Climate Resilience Workshop (2023-0094)

11/6/23 - Carbon Inventory and Potential Sequestration Study (2023-2240)

9/17/23 - Zero Waste Audit and Characterization Study (2023-0949)

5/9/23 - Sonoma County Community Wildfire Protection Plan Update (2023-0348)

10/25/22 - Climate Resilience Fund: Round #2 (2022-0802)

9/20/22 - Sonoma County Multi-Jurisdictional Hazard Mitigation Plan (2022-0967)

2/1/22 - Board Update: Legislative Affairs, Strategic Plan and Climate Action & Resiliency (2022-0111)

FISCAL SUMMARY

Narrative Explanation of Fiscal Impacts:

This is an informational item. Funding recommendations are included for future consideration. Staff recommends your Board consider allocating \$2,266,300 to implement Near Term measures in the Climate Plan. Allocating \$1,297,256 from the Climate Resilience Fund will allocate all remaining funds in that account. Allocating \$969,044 from identified Tribal Mitigation funds will leave \$4,630,956 of those funds for future allocation to other measures in the Climate Plan, including future measures to support community climate resilience.

Narrative Explanation of Staffing Impacts (If Required):

Following Board direction related to approval and implementation of this proposed Climate Plan, staff will return to the Board to present a recommended staffing structure and organizational placement of the current CARD positions, on a permanent, ongoing basis.

Attachments:

1. Highlights of the Climate Resilience Comprehensive Action Plan (English)
2. Highlights of the Climate Resilience Comprehensive Action Plan (Spanish)
3. County of Sonoma Climate Resilience Comprehensive Action Plan
4. Appendices to the Climate Resilience Comprehensive Action Plan
 - a. 4-A: Complete Glossary of Terms & Concepts
 - b. 4-B: Key Resources
 - c. 4-C: Complete Measures and Actions Tables
 - d. 4-D: Community Engagement Strategy
 - e. 4-E: Basis of Costs & Benefits Estimations

- f. 4-F: Multi-Criteria Analysis
 - g. 4-G: Cost Benefit Analysis
 - h. 4-H: Funding and Financing Analysis
 - i. 4-I: Racial Equity Toolkit Analysis
- 5. Cost Benefit Analysis and Funding & Financing Strategy Findings Report
 - 6. Community Engagement Strategy Implementation Costs
 - 7. Information about Near Term Measures:
 - a. 7-A: Table of Near Term Measures
 - b. 7-B: Funding Recommendations for Near Term Measures and Community Engagement
 - 8. Overview of the Climate Action and Resiliency Division
 - 9. Board Summary
 - 10. Presentation

Related Items “On File” with the Clerk of the Board:

None.