County of Sonoma

Climate & Resilience Comprehensive Action Plan

Complete List of Measures and Actions

August 2024

Early Actions

Energy Early Actions			Target Timeline	Key Supporting Depts./Agencies	*CRF Award*	*Estimated Cost of Project*
E-EA-1	**Decarbonize Doran Beach infrastructure through Solar generation and backup power.**		**2023-2024**	**Regional Parks**	**$ 378,720**	**$ 378,720**
	1	Select mobile solar chargers' w/battery storage to power restrooms and park buildings.				
	2	Conduct load capacity study.				
	3	Order mobile charging units.				
	4	Deploy mobile solar charging units' w/battery storage.				
E-EA-2	**Pilot energy resilience upgrades within the Santa Rosa Veteran's Building by adding solar and battery storage.**		**2023-2024**	**Climate, Public Infrastructure**	**$ 901,230**	**$ 1,553,540**
	1	Parking Lot Car Canopy Solar PV –110 kW				
	2	Battery Energy Storage –80 kW / 220 kWh				
E-EA-3	**Pilot improved energy efficiency and systems within the Santa Rosa Veteran's Building to make it a more attractive space for community events to increase revenue sources for General Services.**		**2023-2024**	**Climate, Public Infrastructure**	**$ 870,000**	**$ 1,689,750**
	1	Install interior LED lamps & fixtures: replace existing fluorescent lights with T8s, add Title 24 Energy Code compliant controls.				
	2	HVAC upgrades: 80 tons of heat pump cooling & heating for the Auditorium and 3 mini split heat pump systems for front offices.				
	3	Building Management System (BMS) upgrade.				
	4	Replace Existing Natural Gas-Fired Domestic Water Heater with 3 Electric Heat Pump water heaters.				
	5	Update Central Mechanical Plant chiller and thermal storage schedules to avoid peak demand periods.				
Transportation Early Actions			**Target Timeline**	**Key Supporting Depts./Agencies**	***CRF Award***	***Estimated Cost of Project***
T-EA-1	**Accelerate creation of Class 1 Bikeways by funding transaction fees & costs related to right-of-way acquisition, and outreach materials.**			**Regional Parks**	**$ 440,000**	**TBD**
	1	Establish fund for right-of-way fees & costs.	2022			
	2	Develop landowner information and marketing materials.	2023			
	3	Peer review outreach materials with stakeholders.	2024			

	4	Secure rights-of-way for Class 1 Bikeways.	2024+			
T-EA-2	**Expand the County's Electric Vehicle (EV) Charging Infrastructure with Level II and III charging infrastructure and deployable, solar-powered EV chargers.**			**Public Infrastructure**	**$ 1,726,760**	**TBD**
	1	Initiate program to install EV chargers at Sheriff's office.	2024			
	2	Develop a public-private partnership to construct, install, operate, maintain, and secure Level 3 EV chargers at 6 County-maintained Park and Ride lots.	2022-2024			
	3	Design & implement deployable, solar-powered EV charging infrastructure, at Helen Putnam, Taylor Mountain, Spring Lake, Schopflin Fields, Gualala Point and Spud Point Marina.	2024			
T-EA-3	**Implement a Fare-Free service pilot on Sonoma County Transit, Santa Rosa City Bus, and Petaluma Transit, with the goal of rebuilding transit ridership.**		**2023**	**SCTA, City of Santa Rosa, City of Petaluma, Climate, RCPA**	**$ 500,000**	**TBD**
T-EA-4	**Fund the right-of-way portion of the Arnold Drive Bike Lane project to add nearly 2 miles of Class II bike lanes on Arnold Drive in Sonoma Valley.**			**Public Infrastructure**	**$ 500,000**	**$ 4,175,000**
	1	Right-of-way engineering.	2023			
	2	Right-of-way consulting services.	2024			
	3	Right of way acquisition.	2024-2025			
Zero Waste Early Action Measures			**Target Timeline**	**Key Supporting Depts./Agencies**	***CRF Award***	***Estimated Cost of Project***
ZW-EA-1	**Develop a Construction, Demolition & Deconstruction Model Ordinance.**			**Public Infrastructure, Zero Waste Sonoma, Permit Sonoma, RCPA, Cities**	**$ 121,400**	**$ 127,044**
	1	Create model Ordinance for cities and County to adopt to reduce the amount of construction debris sent to landfill.	2023	Zero Waste Sonoma		

	2	Secure license(s) for countywide use of Green Halo, a web-based service for waste diversion and recycling tracking.	2023	Zero Waste Sonoma		
Water Resilience Early Action Measures			**Target Timeline**	**Key Supporting Depts./Agencies**	***CRF Award***	***Estimated Cost of Project***
W-EA-1	**Provide a county-wide pilot rebate & training program to promote household-level water storage through rainwater catchment.**			**Sonoma Water, Gold Ridge and Sonoma RCDs, Daily Acts**	**$ 185,548**	**$ 185,548**
	1	Provide rebates for rainwater catchment system construction.	2023-2024			
	2	Conduct workshop series for homeowners for designing and installing their own system.	2023			
	3	Conduct training for professional landscapers to receive Qualified Water-Efficient Landscapers (QWEL) certification in rainwater catchment system design & construction.	2023-2024			
W-EA-2	**Conduct a countywide assessment of flood risk management and develop recommendations for integrated flood risk management.**			**Sonoma Water**	**$ 275,000**	**$ 275,000**
	1	Conduct the flood risk assessment considering past, present, and climate-influenced future flooding.	2023			
	2	Conduct an interactive process among partnering entities to discuss areas for improvement.	2024			
	3	Prepare recommendations report for collective flood risk management in Sonoma County.	2024			
W-EA-3	**Improve resiliency & minimize economic loss from future droughts through assessment & evaluation of 2012-2014 & current droughts.**			**Sonoma Water**	**$ 300,000**	**$ 300,000**
	1	Analyze data on water system, environmental, economic, & social impacts from current & prior droughts.	2023			
	2	Evaluate the cause of impacts (bad aquifer, bad reservoir, no water system interties, etc.).	2023			
	3	Identify potential mitigation projects and actions to reduce drought impacts on vulnerable populations.	2024			
	4	Develop a coordinated legislative/funding strategy.	2024			

W-EA-4	**Conduct a feasibility study of Flood-Managed Aquifer Recharge in the Alexander Valley.**			**Sonoma Water**	**$ 400,000**	**TBD**
	1	Collaborate on a feasibility study to evaluate the viability of Flood-MAR projects in the Alexander Valley to improve water supply reliability (drought mitigation), reduce flood risk, and enhance aquatic ecosystems.	2022-2023			
	2	Conduct field investigation such as soil borings, geophysics, infiltration testing, and possibly monitoring well installation.	2024			
	3	Monitor and track effectiveness.	2024+			
W-EA-5	**Enhance rainwater catchment & water storage in Regional Parks.**			**Parks, Sonoma Water**	**$ 303,320**	**TBD**
	1	Select the three highest priority sites for design.	2023-2023			
	2	Design rainwater catchment system.	2023			
	3	Install 45,000-gallon system in Helen Putnam Park; seek funding for installations at additional parks.	2024			
Wildfire Resilience Measures & Actions			**Target Timeline**	**Key Supporting Depts./Agencies**	***CRF Award***	***Estimated Cost of Project***
WF-EA-1	**Conduct a 3-year project to create community-based food networks to increase community resilience to climate change.**			**UCCE, North Coast Community Food Network**	**$ 250,000**	**$ 1,250,000**
	1	Map the Sonoma County emergency food network.	2023			
	2	Contract with community-based organizations (CBOs) for food network coordination.	2023			
	3	Provide financial assistance to mutual aid networks.	2024+			
WF-EA-2	**Invest in strategic community grants to demonstrate and evaluate vegetation management strategies, including:**			**Ag + Open Space, CAO, Permit Sonoma, CalFire, Vegetation**	**Vegetation Management Funds**	**$ 13,500,000**

				Management TAC		
	1	Defensible space				
	2	Forest health treatment and prescribed fire				
	3	Prescribed grazing				
	4	Shaded fuel breaks				
	5	Streamlining planning for vegetation management projects				
	6	Outreach & education				
WF-EA-3	**Reduce wildfire risk from vegetation fuels by promoting managed grazing through education, outreach, and job skills training.**		**2024-2026**	**UCCE**	**$ 300,000**	**$ 375,000**
WF-EA-4	**Develop and implement a community-centered wildfire risk reduction program through Wildfire Adapted Sonoma County, and SoCoAdapts.**			**Permit Sonoma, Fire Districts, CalFire, Climate**	**FEMA HMGP & BRIC Funds**	**$ 60,000,000**
	1	Identify priority communities to receive residential parcel evaluations for wildfire mitigation opportunities.	2021			
	2	Complete residential parcel evaluations for wildfire mitigation opportunities.	2023-2024			
	3	Provide wildfire mitigation grants and streamlined access to financing to implement wildfire mitigation improvements.	2025-2026			
Lands Measures & Actions			**Target Timeline**	**Lead Dept./Agency**	***CRF Award***	***Estimated Cost of Project***
NWL-EA-1	**Create a Climate Adaptation and Resiliency Plan for Regional Parks including a GHG emissions forecast and reduction plan to achieve net carbon neutrality by 2045 in accordance with state legislated target.**			**Parks**	**$ 100,000**	**$ 125,000**
	1	Identify GHG emission reduction strategies through a comprehensive assessment of existing local and regional policies, programs, and actions.				
	2	Assess any gaps in NWL-CO-EA-1-1 and identify additional opportunities for mitigation and adaptation actions.				
	3	Identify clear, tangible ways that Regional Parks can enhance carbon sequestration through parklands and open spaces.				

NWL-EA-2	**Lead grazing effort that educates landowners and managers on vegetation management tool(s) to assist with fuels reduction and ecological enhancement on private and public lands, especially in the Wildlands Urban Interface (WUI).**			**UCCE, Gold Ridge and Sonoma RCDs, Natural Resource Conservation Service (NRCS)**	**$ 300,000**	**$ 375,000**
	1	Work with organizations focused on youth, high school agriculture programs, and the Santa Rosa Junior College to train individuals interested in providing fuel management services, principally grazing.				
	2	Educate landowners on how to utilize grazing as a vegetation management tool.				
	3	Make connections between qualified grazers and fuel reduction projects on public and private wildfire prone lands.				
NWL-EA-3	**Increase carbon sequestration through compost application on agricultural and community sites.**			**Ag+Open Space, RCPA, RCDs, ZWS, Daily Acts, CCI**	**$ 500,000**	**$ 800,000**
	1	Identify and solicit community partners.				
	2	Evaluate and select community & agricultural project locations.				
	4	Secure project workforce.				
	5	Purchase and apply compost on selected sites.				
	6	Monitor results, evaluate expanded opportunities.				
NWL-EA-4	**Increase carbon sequestration through collaborative climate smart agriculture.**			**Ag Commissioner, RCPA, Gold Ridge, Marin & Sonoma RCDs, AIM, MALT, UCCE, CCI, Sonoma Farm Bureau, Climate**	**USDA NRCS grant + partner match**	**$ 12,350,000**
	1	Develop a regional carbon farming supply chain.				
	2	Create a tracking system for climate-smart agricultural products.				

	3	Launch a marketing campaign to promote local climate-smart agricultural products.				
	4	Prepare strategy to increase pace and scale.				

Candidate Energy Community Progress Measures

Energy Community Progress Measures & Actions		
E-CP-1	**Consistent with authorities and update schedules under state regulations, consider reducing energy use at new construction in unincorporated areas.**	
	1	Evaluate establishing requirements for new construction to reduce exterior heat gain in new buildings by 2030.
	2	Evaluate developing an energy performance scoring system requiring the building meet an overall performance score that reduces energy beyond current [Reach] energy codes and allows choice in compliance.
	3	Evaluate requiring new and redeveloped buildings larger than a certain size to achieve LEED certification or meet other Reach Codes approved by the County.
	4	Evaluate feasibility and develop a schedule to phase in requirements for beyond current Reach codes at new construction or modification of residential & commercial buildings.
E-CP-2	**Consistent with authorities and update schedules under state regulations, consider decarbonizing new construction by 10%.**	
	1	Update codes and standards to remove barriers to green building practices.
	2	Establish overall building performance standards for embedded energy in construction materials to reduce embedded energy in new construction.
	3	Establish requirements to mitigate local heat island effects by reducing new site contribution.
	4	Expand the Green Building Ordinance Energy Code.
E-CP-3	**Consistent with authorities and update schedules under state regulations, consider reducing energy use, decarbonizing, and increasing resilience through renewable energy requirements for new construction.**	
	1	Require new construction to incorporate renewable energy generation and/or storage based on the size of the building(s) and/or the estimated energy use.
	2	Establishing standards for the development of community microgrids.

	3	Streamline permitting of microgrids, individual renewable energy systems, and storage.
	4	Evaluate a "No-net Increase" requirement for energy use by new construction.
E-CP-4	**Reduce energy use, decarbonize, and increase resilience through renewable energy plans and policies for existing residential and commercial buildings.**	
	1	Develop a county-wide community microgrid plan and funding/financing strategy
	2	Identify underserved communities that meet other criteria for microgrid development and prioritize microgrid planning and implementation in those communities
E-CP-5	**Reduce energy use and increase resilience at existing residential and commercial buildings through policies and programs.**	
	1	Enhance the Green Business Certification Program by creating a voluntary "Energy Champion" tier for certification.
	2	Develop a voluntary Energy Champion certification for residential buildings in consultation with local realtors and their associations.
	3	Evaluate the feasibility of requiring energy efficiency upgrades at residential and/or commercial buildings at time of sale in consultation with local realtors and their associations.
E-CP-6	**Incentivize energy efficiency and renewable energy uptake in communities.**	
	1	Expand offering of single point of information and access to incentives from multiple sources.
	2	Expand community use of property-assessed financing through the Sonoma County Energy Independence Program (SCEIP).
	3	Seek funding to expand financial incentives for energy efficiency, electrification, renewable energy, and energy storage, (and potentially rebates for EnergyStar appliances).
	4	Develop an exchange program for high energy intensity products, such as halogen lamps.
	5	Work with Sonoma Clean Power to prioritize and develop or expand on-bill financing opportnities for energy efficiency, electrification, renewable energy, and energy storage.
E-CP-7	**Prioritize and support energy efficiency and renewable energy access in underserved communities.**	
	1	Evaluate developing a low-income weatherization program.
	2	Develop an appliance direct-install program for Multi-Family income-restricted properties.
	3	Seek funding to expand incentives for energy efficiency, electrification, renewable energy, & storage at low-income, multi-family properties.
	4	Seek funding for a pilot Neighborhood Retrofit Program to improve resiliency in residential buildings (e.g., on-site power generation and storage, weatherization, cooling, etc.), with an emphasis on connecting incentives and resources with rental property owners and low-income residents. Partner with community organizations to maximize resources.
E-CP-8	**Support and participate in Sonoma Clean Power's GeoZone project by developing conforming policies, ordinances, or other enabling actions.**	

E-CP-9	**Engage and educate communities on energy efficiency, electrification, renewable energy, and energy storage upgrades.**	
	1	Expand consultations on energy efficiency and solar energy.
	2	Develop new outreach partnerships with home owners and business associations, faith-based institutions, and other trusted community partners.
	3	Expand access, curriculum and marketing for the DIY Home Resilience Toolkit, including webinars and workshops at local libraries and community centers.
E-CP-10	**Develop focused "call-to-action" campaigns to motivate community action on energy efficiency, electrification, renewable energy, and energy storage.**	
	1	Launch energy efficiency challenge campaigns focused on single-family residential, multi-family residential, agriculture, and/or business sectors.
	2	Implement residential and commercial conservation campaigns, in conjunction with Sonoma Clean Power.
	3	Partner with schools to provide Home Resilience curriculum and develop energy goal challenges for students and their families.
E-CP-11	**Promote the use of carbon-free electricity in residential and commercial buildings to achieve 100% carbon-free electricity.**	
E-CP-12	**Conduct community engagement to develop additional candidate energy measures and actions for Community Progress and prioritize all Community Progress energy measures and actions.**	
Transportation Community Progress Measures & Actions		
T-CP-1	**Evaluate developing and/or updating transportation measures in the General Plan to reduce travel by single occupancy vehicles.**	
	1	Incorporate the SCTA Model Trip Reduction Ordinance for employers with 25+ employees that includes strategies for carpooling, transit, guaranteed ride home, bicycle use, parking, and pre-tax incentives.
	2	Incorporate the SCTA Model Trip Reduction Ordinance for developers that includes alternate parking requirements, developer transportation demand programming, fees, monitoring, and enforcement.
	3	Evaluate feasibility and develop a VMT mitigation banking structure for new development to fund transportation demand management and VMT reducing projects and programs to achieve countywide VMT reduction goals as defined in the SCTA Comprehensive Transportation Plan (CTP) and other policies.
T-CP-2	**Evaluate developing and/or updating land use measures in the General Plan to reduce travel by single occupancy vehicles.**	
	1	Maintain and where feasible and appropriate increase policies supporting city-centered growth.
	2	Consistent with city-centered growth policies, evaluate requiring increased residential density for housing developments in unincorporated towns including requirements that such developments implement meaningful measures to fully mitigate traffic or other infrastructure impacts.

	3	Consistent with city-centered growth policies, develop or expand as appropriate policies encouraging, incentivizing, or requiring increased job density in or near unincorporated towns.
	4	Consistent with city-centered growth policies, require that new housing developments co-locate with existing transit service routes and stops or provide transit connectivity measures.
T-CP-3	**Evaluate developing and/or updating neighborhood design plans and policies to promote and support active transportation including requirements for developers.**	
	1	Seek funding and/or public-private partnerships to establish or expand car-sharing, ride-sharing, and van-pooling.
	2	Conduct a feasibility study and develop coordinated, county-wide parking pricing policies (including market-based pricing) for public and private lots, employer parking, and on-street parking, as well as mandated employer parking cash-out programs.
	3	In collaboration with SCTA and local cities, develop a community-based trip reduction planning tool.
	4	Develop county-wide marketing campaigns promoting trip-reduction, as well as other promotional events.
T-CP-4	**Create complete and safe streets for active transportation and accessing alternative transportation modes.**	
	1	Developing a safe streets measure in the General Plan consistent with the SCTA Vison Zero Action Plan.
	2	Prioritizing road segments to implement a broad network of low-stress bike and pedestrian facilities (e.g., pathways, bike lanes, sidewalks) connecting to major bus and rail transit hubs, schools, employment centers, medical facilities, and other key destinations as identified in the SCTA Travel Behavior Study.
	3	Evaluating enhancing "complete streets" policies and requirements in the General Plan.
T-CP-5	**Reduce idle engine emissions with congestion management strategies.**	
	1	Upgrading to sensor-based traffic signals with adaptive signal control, and re-timing analog signals.
	2	Installing traffic circles and roundabouts.
	3	In collaboration with SCTA and local cities, develop a community-based trip reduction planning tool.
T-CP-6	**Enhance and coordinate transit service by implementing Phase II and Phase III recommendations of the SCTA Transit Integration & Efficiency Study, and actions from the SCTA Comprehensive Transportation Plan 2050.**	
	1	Complete Phase II recommendations of the SCTA Transit Integration & Efficiency Study to Demonstrate integration effectiveness, such as a coordinated marketing program, identifying bus service integration opportunities, shared customer service operations, coordinated upgrades to transit centers and stops, and joint purchasing of equipment and supplies.
	2	Complete Phase III recommendations of the SCTA Transit Integration & Efficiency Study to achieve complex integration, including unified branding, joint paratransit programming, simplified cross-system fare structures, coordinated short-range transit plans, and expanding Clipper use.
	3	Prioritize routes for increasing transit service frequency and implementing strategies to reduce transit travel time, including express service and bus rapid transit.
	4	Evaluate data from Climate Resilience Fund Fare-free Transit pilot project across three transit agencies and determine appropriate fare-reduction strategies & priorities for Sonoma County Transit users.

T-CP-7	**Implement bicycle and pedestrian improvements consistent with the Countywide Active Transportation Plan to be completed in 2025.**	
	1	Improve bicycle parking at transit stops and hubs, install bicycle locker/racks at park & ride lots, and improve pedestrian facilities especially access to transit stops and activity centers.
	2	Prioritize gaps in the unincorporated bicycle network for improvements with low-stress facilities and improve bicycle connections to transit stops and hubs.
	3	Promote and seek funding for Safe Routes to School projects.
	4	Improve maintenance on bikeways, including path maintenance and debris clearing on on- and off- road facilities.
T-CP-8	**Expand bike sharing as a transportation alternative.**	
	1	Include bike share information on Sonoma County Transit website and trip planning tools.
	2	Post wayfinding and signage directing transit users between bike share and transit hubs.
	3	Educate residents about how to use bike share as a transportation alternative, especially in lower income communities.
	4	Promote and support new bike sharing businesses, collaboratives, and clubs.
T-CP-9	**Incentivize using alternative modes of transportation.**	
	1	Partner with local businesses and health care companies to secure donations for raffles of gear, etc..
	2	Seek funding to expand transit fare subsidies.
	3	Seek funding to expand financial incentives for rebates or vouchers for bicycle parts and gear, commuter backpacks, water bottles, etc..
	4	Seek funding to expand the reimbursement-based Emergency Ride Home program for community members.
T-CP-10	**Increase awareness and support in communities for alternative modes of transportation.**	
	1	Develop or providing educational/promotional content related to transit, bicycling, and walking as preferred modes of transportation.
	2	Seek funding for and launching a marketing campaign on alternative modes of transportation possibly one mode at a time.
	3	Launch a public service messaging campaign promoting electic vehicle use, in conjunction with Sonoma Clean Power.
T-CP-11	**Develop focused "call-to-action" campaigns to motivate community mode shifting.**	
	1	Support bike-to-work, bike-to-school, and other bicycle-focused campaigns in partnership with community organizations and SCTA.
	2	Support the use of electric bicycles and other lightweight electric utility vehicles through an awareness campaign and potentially incentives focused toward specific media market segments that best reach members of frontline communities.
Zero Waste Community Progress Measures & Actions		
ZW-CP-1	**Using the Zero Waste Sonoma model ordinance, develop an ordinance mandating diversion of construction, deconstruction, and demolition wastes.**	

	1	Evaluate opportunities to increase diversion outcomes through policy enhancements.
	2	Incorporate monitoring, recordkeeping, and reporting of key comliance/diversion indicators.
	3	Consider incentivizing reuse partnerships with reduced requirements for monitoring, recordkeeping, and reporting.
ZW-CP-2	**Develop a food recovery ordinance pursuant to SB 1383.**	
	1	Evaluate opportunities to increase diversion outcomes through policy enhancements.
	2	Incorporate monitoring, recordkeeping, and reporting of key compliance/diversion indicators.
	3	Consider incentivizing reuse partnerships with reduced requirements for monitoring, recordkeeping, and reporting.
ZW-CP-3	**Evaluate planning, zoning, and permitting needs related to anticipated increases in needs for waste diversion facilities.**	
ZW-CP-4	**In partnership with RCPA and Zero Waste Sonoma, develop a policy framework to create and support regional building material reuse markets.**	
ZW-CP-5	**In partnership with Zero Waste Sonoma, develop a program and incentives structure for compliance & monitoring under SB 1383 food recovery regulations.**	
	1	Collaborate with regional partners to support a sustainable model linking restaurants and local growers in a circular commodity cycle (food-to-compost-to-food).
	2	Partner with Public Infrastructure, hospitality and food industry organizations to reduce overpurchasing of food and encourage lowercarbon intense menu choices.
	3	Partner with Community Food Network to expand infrastructure & partnerships for edible food recovery.
ZW-CP-6	**Expand waste diversion elements in Sonoma Green Business certification in consideration of SB 1383.**	
	1	Develop virtual training and consultation offerings
	2	Collaborate with Zero Waste Sonoma and waste service providers to offer an on-site visit andtailored recommendations to help businesses reduce waste and save money
ZW-CP-7	**Support and seek to expand beach clean-up days with local organizations (e.g., Russian Riverkeeper and Coastwalk) to build awareness of the issues of trash and reduce impacts on coastal assets.**	
ZW-CP-8	**Expand outreach & education to residents, schools, and businesses on the benefits of, and best practices for, waste diversion, recycling, & composting.**	
	1	Engage communities through multilingual signage, art installations, and participatory activities or projects that showcase innovative or highly effective diversion practices
	2	Prioritize Regional Parks' community activities and events, and include Leave No Trace Seven Principles, in particular the concept of "pack it in, pack it out," to reduce waste and litter in parks
	3	Partner with CalRecycle, Recology, Conservation Corps North Bay and Zero Waste Sonoma to more broadly distribute educational information regarding free curbside Bulky Items Recycling collection and reduced waste services cost

	4	Launch a community-wide zero waste campaign with a focus on reusing waste products and reducing consumption of new materials
ZW-CP-9	**Conduct community engagement to develop additional candidate waste measures and actions for Community Progress and prioritize all Community Progress waste measures and actions.**	

Water Resilience Community Progress Measures & Actions		
W-CP-1	**Coordinate solutions to protect our most vulnerable coastal residents and businesses from sea-level rise, including those who live in the inundation zones, displaced community members, and workers who face lost wages during flood events.**	
	1	Leveraging progress under W-CO-8, assemble a working group to identify, assess, and guide the prioritization of areas facing repeat sea-level rise hazards with expected near-term climate impacts.
	2	Based on the findings of W-CP-1.1, strategically share out public-facing maps associated with the Sonoma County Hazard Mitigation plan to increase awareness of residents and aid in disclosure of potential hazards in real estate transactions.
	3	Develop a plan that includes prioritized strategies to protect, accommodate or retreat that aligns with the County of Sonoma Multi-Jurisdictional Hazard Mitigation Plan and a five-year implementation plan and the Local Coastal Plan.
	4	Implement top-priority projects.
	5	Present the results of the initial priority project to the County of Sonoma Board of Supervisors and devise a long-term funding plan to complete projects recommended in W-CP-1.3.
	6	Convene partners to develop funding mechanisms to address coastal communities and ecosystems vulnerable to sea-level rise impacts.
W-CP-2	**Coordinate solutions to protect our most vulnerable community members from flood hazards, including those who live in the floodplain, displaced community members, & workers who face lost wages during flood events.**	
	1	Leveraging progress under W-CO-8, assemble a working group to identify, assess, and prioritize areas facing increased repeat flood hazards due to climate impacts.
	2	Based on the findings of W-CP-2.1, strategically share out public-facing maps associated with the Multi-Jurisdictional Hazard Mitigation plan to increase awareness of residents and aid in disclosure
	3	Develop a plan that includes strategies to protect, accommodate or retreat that aligns with the County of Sonoma Multi-Jurisdictional Hazard Mitigation Plan and a five-year implementation plan.
	4	Implement top-priority projects.
	5	Present the results of the initial priority projects to the County of Sonoma Board of Supervisors and devise a long-term funding plan to complete projects recommended in W-CP-2.3.
	6	Convene partners to develop funding mechanisms to address communities and ecosystems vulnerable to flood hazards.

W-CP-3	**Advance recommendations from the Summary Report on Improved Flood Risk Management in Sonoma County.**	
	1	Launch a Countywide Flood Risk Management Partnership to serve as a voluntary information-sharing entity for flood risk coordination countywide, which may also help advise on Recommendations implementation.
	2	Develop an Action Plan for Countywide Flood Management by identifying and prioritizing top recommendations and conducting a deeper community engagement process.
W-CP-4	**Advance drought resiliency projects from the Countywide Drought Resilience Plan.**	
	1	Prioritize potential projects from the County-wide Drought Resilience Plan, with a focus on domestic wells and state small water systems, highlighting short-term drought response and long-term drought mitigation actions.
	2	Leverage recommendations made in the County-wide Drought Resilience Plan to seek and secure funding for prioritized projects.
W-CP-5	**Expand the pilot rebate and training program to promote household-level water storage through rainwater catchment.**	
W-CP-6	**Establish a program to support agricultural lands in development and maintenance of on-site water storage infrastructure to ensure drought preparedness.**	
	1	Assemble a working group to identify high-priority water storage issues landowners face and gaps in technical service provision and/or funding. Working group will analyze Alameda County's Voluntary Local Program.
	2	Draft a memo including recommended next steps including emergency action recommendations post-drought declaration and a set of demonstration projects.
	3	Implement the demonstration projects.
	4	Evaluate demonstration project outcomes and present recommendations for further collaboration.
W-CP-7	**Conserve and reduce the use of potable water for non-potable uses.**	
W-CP-8	**Develop a literature review and analysis to determine septic water sources of pollution in the Lower Russian River region and seek community input on potential wastewater solutions.**	
W-CP-9	**Collaborate with local tribes, state and federal agencies, and other stakeholders to advance riparian corridor protection and coastal habitat restoration in near-shore areas, including kelp forests and sea grass beds.**	
	1	Leveraging progress under W-CO-8, assemble a coastal restoration working group to identify feasible local actions to advance coastal restoration.
	2	Prioritize actions and develop a coastal restoration workplan, with public engagement, and present it to appropriate governing bodies.
	3	Seek necessary permits, authorizations, and funding to implement the workplan.

	4	Leveraging the comprehensive stream and riparian corridor map from W-CO-8, and in coordination with Russian River Regional Monitoring Program (R3MP) and San Francisco Estuarine Institute (SEFI), evaluate riparian corridor ordinance protections as part of the General Plan Update.
W-CP-10	**Conduct community engagement to develop additional candidate water measures and actions for Community Progress and prioritize all Community Progress water measures and actions.**	

Wildfire Resilience Community Progress Measures & Actions		
WF-CP-1	**Develop and implement a whole community-centered, landscape-based wildfire resiliency program through the Wildfire Resilient Sonoma County project, and SoCoAdapts.**	
	1	Complete residential parcel evaluations for wildfire mitigation opportunities.
	2	Provide wildfire mitigation grants and streamlined access to financing to implement wildfire mitigation improvements by developing a single point-of-entry portal.
	3	Evaluate opportunities to increase/expand community-centered wildfire resilience, in coordination with WF-CO-1, including potential funding.
WF-CP-2	**In collaboration with Fire Districts, Calfire and other partners, assist in the development of a County-wide vegetation management plan to map existing and future project locations, identify current gaps and opportunities, and ensure long term maintenance.**	
	1	In coordination with WF-CO-3, evaluate existing resilient buffer zones to protect critical infrastructure and communities from wildfire.
	2	Identify gaps in existing buffer zone service and prioritize opportunities/locations for developing buffer zone service.
	3	Propose a phased plan to establish complete wildfire buffer zones and prioritize land acquisition, conservation easements, and implementation of land-based wildfire resilience strategies for increased buffer zone capacity.
WF-CP-3	**Reduce loss of existing carbon stocks due to wildfire through conservation of natural lands, conservation easements, new policies, and land acquisition.**	
	1	Establish and update policies to facilitate the protection and establishment of conservation easements, including designation of required conservation easements.
	2	Plan and Implement restoration of riparian corridors, wetlands, mesic meadows in headwaters to improve water storage by May 2030.
	3	Learn from successful collaborations with tribes and pursue opportunities to grow informed engagement frameworks in Sonoma County that provide multiple benefits to tribe partners including land access, management resources, and opportunities to visit, design, inform, local conservation projects.
WF-CP-4	**Reduce wildfire risk from vegetation fuels by optimizing opportunities for prescribed and agricultural grazing on public and private lands across Sonoma County.**	

	1	Collaborate with partners to support new, start-up business opportunities in managed grazing, specifically for those who are economically disadvantaged.
	2	Promote grazing best practices and increase awareness of available funding.
	3	Educate rural community members to increase resident-led managed grazing on their own properties.
	4	Improve understanding of the use of grazing cooperatives by Homeowners Associations (HOAs) to improve grazing cooperatives' outcomes.
	5	Assist prescribed grazing/herbivory efforts led by RCDs, potentially with funding, technical assistance, and other essential equipment.
	6	Monitor and track prescribed grazing/herbivory to analyze the amount of grazing occurring annually, along with any impacts and/or benefits.
WF-CP-5	**Support urban infrastructure resilience planning that utilizes nature-based solutions to improve the ability for infrastructure to withstand extreme weather and natural disasters.**	
	1	Identify vulnerability and nature-based solutions for buildings and infrastructure in wildfire hazard area.
	2	Develop outreach and educational programming to highlight incentive and rebate programs, like SCEIP and BayREN, for businesses, homeowners, and other entities in wildfire hazard areas to become wildfire resilient.
	3	Support implementation of nature-based solutions in wildfire hazard areas, based on WF-CO-1.1, and WF-CP-2.1.

WF-CP-6	**Integrate climate resilience into other County plans, ordinances, programs and projects, specifically in regard to land use decisions and land management .**	
	1	Develop a lens for equitable integration of these plans, and long-term implementation.
	2	Develop metrics for climate resilience, to include in planning updates for County documents, programs, and plans.
WF-CP-7	**In coordination with the California Department of Insurance and key stakeholders, and the planning work of WF-CO-1, develop and implement the Sonoma County Wildfire Risk Reduction Insurance Pilot Program.**	
WF-CP-8	**Expand the Chipper program to include a community chipping and/or curtain burner rotation program for areas designated as Very High or High wildfire vulnerability.**	
	1	Seek funding to develop and implement a community chipping and/or curtain burner rotation pilot program.
	2	In coordination with WF-CO-1, develop guidelines and marketing materials for the pilot program.
	3	Identify and prioritize at least five communities designated as Very High or High vulnerability.
	4	Seek partners and implement the pilot program in five prioritized communities.
	5	Propose a sustainable, ongoing community chipper and/or curtain burner rotation program with funding by 2030.
WF-CP-9	**In coordination with WF-CO-1, WF-CP-4, and the SoCoAdapts program, collaborate with HOAs to develop policies for increasing wildfire resilience for homeowners.**	

	1	Develop policy recommendations for HOAs to implement, to increase wildfire resilience for homeowners in their jurisdiction.
	2	In coordination with WF-CO-1, develop guidelines and marketing materials for the pilot program.
	3	Identify and prioritize at least five communities designated as Very High or High vulnerability.
	4	Seek partners and implement the pilot program in five prioritized communities.
WF-CP-10	**Prioritize fuel management projects with EMS considering feasibility, costs, and potential impact in wildfire hazard areas using the CWPP Project Entry Portal Project List and Map.**	
WF-CP-11	**Coordinate code enforcement and inspections for vegetation management between County programs, fire districts and CAL FIRE in the highest fire hazard zones.**	
WF-CP-12	**Develop workforce pathways to permanent employment for transitional adolescents (18- to 24-year-olds), focusing on wildfire resilience job skills and technical expertise.**	
	1	Evaluate and identify workforce pathway programs focused on wildfire resilience, with a specific focus on systems-impacted youth.
	2	Provide outreach and education on workforce program opportunities, in coordination with community institutions like Santa Rosa Junior College.
	3	Evaluate and identify workforce pathway programs focused on wildfire resilience, with a specific focus on systems-impacted youth.
WF-CP-13	**In coordination with WF-CO-1, expand and enhance the CWPP Hubsite to serve as a larger single-point-of-entry portal for wildfire resilience and risk reduction resources, grants, and other community information.**	
WF-CP-14	**Support and enhance ongoing programs to increase awareness and preparedness for wildfire and other climate hazard emergencies in vulnerable and socially disadvantaged communities by increasing access to clear and actionable information in multiple languages.**	
WF-CP-15	**Increase wildfire resilience in new construction by exploring the potential expansion of California Building Code Chapter 7A.**	
WF-CP-16	**Conduct community engagement to develop additional candidate wildfire measures and actions for Community Progress and prioritize all Community Progress wildfire measures and actions.**	

Lands Community Progress Measures & Actions

NWL-CP-1	**Sustain and enhance Ag + Open Space's Community Spaces Matching Grant Program to expand opportunities for public agencies, non-profits, and tribes serving under-resourced communities to implement projects for urban farming, access to green spaces, and/or preservation of urban carbon stocks.**	
	1	Continue to contribute funding annually towards potential urban open space acquisitions or project implementation.
	2	Continue to solicit applications for project proposals that expand and/or enhance urban farming, access to green spaces, and/or preservation of urban carbon stocks.
NWL-CP-2	**Evaluate opportunities to secure state and federal funding or other funding mechanisms to sustain and scale climate smart practice implementation within Sonoma County.**	
	1	Establish a working group with local agricultural partners to develop a plan for financially sustainable, local circular food waste management & climate smart practices on private agricultural lands.
	2	Evaluate available models.
	3	Make recommendations to the Board or Supervisors and/or other governing bodies.
	4	Partner on grant proposals to fund climate smart practices on urban and rural lands.
NWL-CP-3	**Partner with public agencies and CBOs to continue to host compost giveaways and workshops to educate and provide resources for landowners to apply compost where application is feasible and advisable.**	
	1	Set County compost procurement goals as defined by both SB 1383 and the Carbon Stock Inventory & Potential Sequestration Study.
	2	Plan educational workshops and compost giveaways for urban residents and rural landowners in partnership with local public agencies and CBOs.
	3	Provide rebates and incentives, in partnership with local public agencies, to enable agricultural producers to spread compost.
	4	Support long-term research on compost applications and the relationship between soil compost applications, soil organic matter, and carbon storage by integrating monitoring into programs.
NWL-CP-4	**Increase carbon sequestration on croplands and working lands through soil carbon amendments, hedgerow planting, grassland restoration, and implementation of other climate-smart practices.**	
	1	Provide funding for agricultural producers and local agency technical service providers to plan and implement climate smart practices.
	2	Identify long-term funding sources to support coordination between the County and small, local agencies/technical service providers.
	3	Work with local agencies/technical service providers to identify areas where the County can act to fortify local programs.
	4	Bring a proposal to the Board of Supervisor and/or other governing Boards for approval.
	Explore partnerships and seek opportunities to support residents and local businesses to decarbonize their workflows and lifestyles.	

	1	Provide information to residents and businesses about the carbon content of goods and services consumed in Sonoma County with emphasis on options that will reduce GHG emissions.
	2	Provide training opportunities for local landscaping professionals on climate smart practices.
	3	Provide opportunities for residents to learn about climate smart practices that can be implemented in their gardens including drought-tolerant, perennial, native plantings tailored to their eco-region, soil amendments, tree care, etc..
	4	Explore partnerships and seek opportunities to support local businesses reducing the carbon supply chains intensity of their supply chain.
	5	Integrate into existing educational programming curriculum that promotes awareness of the cultural, ecosystem, and recreational value of conserved and stewarded lands.
NWL-CP-6	**Partner with members of underserved, low-income, and frontline communities to inform planning and implementation of climate smart practices to improve human health.**	
	1	Build on Tree Equity Map in the Carbon Stock Inventory & Potential Sequestration Study to identify priority areas to support climate smart practice implementation.
	2	Identify key areas for outreach to potential community partners.
	3	Work with identified partners to develop project proposals for demonstration project.
	4	Lead a collaborative grant proposal or pursue alternative funding opportunities for project implementation.
NWL-CP-7	**Evaluate land-based strategies to reduce the impacts of extreme heat, with a focus on community needs for cooling centers.**	
NWL-CP-8	**Enhance tidal marsh conservation, restoration, and sediment supply through planning, design, permitting, and construction of projects.**	
	1	Review and identify current restoration and conservation opportunities in Sonoma County
	2	Develop a plan outlining strategic acquisitions for conservation and restoration projects
	3	Implement restoration and conservation projects, with continuous monitoring for resiliency impacts and carbon sequestration potential
NWL-CP-9	**Conduct community engagement to develop additional candidate natural and working lands measures and actions for Community Progress and prioritize all Community Progress natural and working lands measures and actions.**	
NWL-CP-10	**Increase wetland restoration to restore native plants, create wildlife corridors and habitat, reduce peak flows, disrupt spread of wildfires, sequester carbon, and create outdoor recreation opportunities .**	

County Measures & Actions

Energy County Operations Measures & Actions				Target Timeline			Estimated Cost	CO2e Reduced	Lifetime Savings	Net Cost per MT CO2e
E-CO-1	**Reduce energy use and increase resilience at existing County facilities in the near term through energy upgrades:**			**N**			**$28,226,572**	**4,996**	**$44,300,000**	**-$3,217**
	1	Upgrading existing lighting and controls at 46 buildings to LED Lighting with high-efficiency controls.					$6,376,474	114,165		
	2	Installing 2.1 MW (dc) Solar Photovoltaic systems in a carport configuration at the County Administration Center.					$13,423,541	209,186		
	3	Installing Battery Energy Storage Systems at the County Administration Center [964/1927 kWh] and Los Guillicos [240/516 kWh].					$4,907,425	-2,925		
	4	Installing water conservation fixtures at 44 buildings.					$3,147,560	132,763		
	5	Replacing domestic hot water heating systems with heat pump systems at Petaluma & Cloverdale Veterans Buildings, and Heavy Fleet Facility.					$96,573	34,782		
E-CO-2	**Reduce energy use and increase resilience at existing County facilities in the midterm through energy upgrades:**				**M**		**$81,097,962**	**109,864**	**$61,600,000**	**$177**
	1	Upgrading existing HVAC at 38 facilities to heat pump systems.					$38,526,400	2,775,790		
	2	Installing 110 EV Chargers to support municipal fleet electrification.					$4,467,100	43,800		
	3	Upgrade water heating systems.								
		1	Replace 46 domestic water heaters w/heat pumps.				$5,573,100	1,484,440		
		2	Upgrading the hot water heating system at the Central Mechanical Plant to air & water source heat pumps.				$17,766,200	7,964,220		
	4	Replace gas-consuming kitchen equipment with high-efficiency electric equipment at 17 County facilities.					$4,000,000	251,230		

	5	Installing high efficiency transformers at 23 county facilities.				$690,000	9,720		
	6	Replace the existing ice plant at the Spud Point Marina with a new, efficient ice-making facility.				$3,200,000	1,200		
	8	Upgrading existing HVAC controls at 42 facilities to advanced building management systems.				$6,875,162	0		
E-CO-3	**Prepare plan & reduce energy use and increase resilience in the longer term at remaining County facilities planned for continuing use through energy upgrades**				**L**	**> $100,000,000**	**TBD**		
E-CO-4	**Reduce greenhouse gas emissions due to electricity use for County operations by purchasing Evergreen power from Sonoma Clean Power for all electricity use**		**N**						
	1	Assign all current SCP electricity accounts to Evergreen.				$63,767	107,129 lbs CO2e/yr or 48.6 MT CO2e/yr		$1,312
	2	Migrated PG&E + Direct Access electricity accounts to Sonoma Clean Power CleanStart.				5-7% savings	neutral		
	3	With Sonoma Clean Power evaluate costs & benefits of Evergreen for migrated accounts; recommend assignment based on results.				no charge			
	4	Implement recommended assignment of migrated accounts to Evergreen.				5-7% cost > CleanStart	9% reduction in C02e		
E-CO-5	**Minimize energy use and maximize resilience in new County facilities by developing energy policies:**			**M**		**$90,000**			
	1	Building energy design for new construction of buildings				$18,000			
	2	Building energy requirements for new leases of buildings.				$18,000			
	3	Embedded energy of materials in new construction.				$18,000			
	4	Mitigate heat gain/island effect through cool roofs, cool coatings, utilization of greenspace cover (shade trees, green roofs, etc.).				$18,000			

	5	EV-ready parking lot projects and EV capable-parking spaces consistent with CALGreen Tier 2 requirements .				$18,000			
E-CO-6	**Minimize energy use and maximize resilience in the new County Government Center by following approved building energy design policies (E-CO-5), or by achieving LEED certification**			**M**		**~$350,000 for design modeling**			
E-CO-7	**Improve refrigerant leak detection & repair, and transition to lower global warming intensity as feasible**			**M**		-			
	1	Conduct regular & frequent maintenance of equipment using refrigerant, adopt enhanced leak detection & repair, and evaluate & implement additional refrigerant management improvements.				$20,000			
	2	Adopt an expedited schedule to phase out transition to refrigerants w/ lower global warming potential.					wide variation, depends on refrierant		
	3	Implement and document best practices for refrigerant handling and disposal; require periodic training on refrigerant handling.							
E-CO-8	**Reduce energy use and increase resilience in the mid-term by completing public lighting upgrades to high-efficiency systems:**		**N**			**$300/light install $2k/light savings/yr**	**18.4 lbs CO2e/light per year or 0.0083 MT CO2e/light per yr**		**-$204,819**
	1	Upgrade County-owned public lighting to high-efficiency systems.							
	2	Upgrade public lighting in County-managed lighting districts to high-efficiency systems.							204,819/light/yr
E-CO-9	**Support decarbonization transition by planning for maintenance needs and staff training related to operation and maintenance of new technologies**			**M**		$10,000	NA		

E-CO-10	**Implement Regional Parks plan (when/as approved) to improve efficiency and decarbonize Parks buildings**		**N**	**M**	**L**				
	1	Feasibility study on current status of buildings and electrical service.	N			$150,000			
	2	Reduce propane use in Parks buildings, and implement energy upgrades at Park Ranger Residences.		M	L				
	3	Prepare a feasibility study for renewable energy and solar charging hub installations in parks.			L				
	4	Implement renewable energy installations in parks and create solar charging hubs serving underserved communities.			L	~$7M/ 1 MW system; $664.8k/yr savings	max 45.2 MT CO2e/yr per system	$19,943,730	-$9,546
Transportation County Operations Measures & Actions			**Target Timeline**			**Estimated Cost**	**CO2e Reduced**	**Lifetime Savings**	**Net Cost per MT CO2e**
T-CO-1	**Decarbonize the County fleet of light duty vehicles by 2040**		**N**	**M**	**L**	14,100,000	3,333 MT CO2e / yr all fleet	$14 M ($2M/yr after full transition)	$4 (vehicles only); $327 (inc. chargers)
	1	Achieve 30% zero-emission vehicle light-duty fleet by 2026 & purchase the lowest emission model available for the service need if purchasing gasoline powered vehicles.	N			5,400,000			$327
	2	Decarbonize 50% of light duty vehicle fleet by 2030.		M		3,800,000			
	3	Decarbonize 70% of light duty vehicle fleet for replacement each year and purchase the lowest emission model available for the service need when purchasing gasoline powered vehicles.			L	4,900,000			
	4	Decarbonize 100% of light-duty vehicles scheduled for replacement each year.			L	-			

T-CO-2	**Implement demonstration projects & plan decarbonizing Sheriff pursuit vehicles as suitable vehicles are available.**			**M**	**L**	**130,000**			
	1	Implement a demonstration project with a decarbonized pursuit vehicle and evaluate performance, limitations, opportunities.		M		80,000			
	2	Develop a feasibility study and plan by 2028 to decarbonize pursuit vehicles as early as feasible (vehicle costs in E-CO-1).		M	L	50,000	benefits in T-CO-1		
T-CO-3	**Decarbonize the fleet of Medium & Heavy Duty vehicles (greater than 8,500 lbs gross vehicular weight) by 2042.**			**M**		**2,700,000**	**93 to 98% CO2e reduction, dep. on vehicle age & class**		
	1	Decarbonize 50% of heavy duty vehicles scheduled for replacement each year (unless exempted by CARB under the Advanced Clean Fleets regulation) and purchase the lowest emission model available for the service need when purchasing diesel powered vehicles.		M		900,000			
	2	Beginning in 2030, decarbonize 100% of heavy-duty vehicles scheduled for replacement each year unless exempted by CARB under the Advanced Clean Fleets regulation.			L	1,800,000			
T-CO-4	**Decarbonize the transit bus fleet by 2040.**					**$59,862,545**	**5,394 MT/CO2e/yr**	**$13,272,000**	**$721**
	1	Zero emission buses will comprise at least 25% of all new transit bus purchases.		M		$28,040,000	3,555 MT CO2e/yr		
	2	Zero emission buses will comprise 100% of all new transit bus purchases, to achieve 100% zero emission transit buses by 2035.			L	$22,772,545	1,839 MT CO2e/yr add'l		
	3	Install DC charging infrastructure at SCT Op Yard to support ZE buses 2026-28.		M		$4,550,000			
	4	Install DC charging infrastructure at SCT Op Yard + in-route charging in 2030.			L	$4,500,000			
T-CO-5	**Deploy zero emission vehicle infrastructure in number and locations to support the**		**N**	**M**	**L**	**$7,526,324**	**NA - because supporting ZEV fleets**		

	decarbonization schedule for light and heavy-duty fleets.								
	1	Develop a zero-emission vehicle infrastructure plan that ensures charging/fueling infrastructure is in place in locations to support the decarbonization schedule for light and heavy-duty fleets.	N			$230,000			
	2	Seek funding to deploy 100 level II electric vehicle charging stations.	N			$186,950			
	3	Phased implementation of zero emission infrastructure plan.		M		$2,925,000			
	4	Complete installation of vehicle charging infrastructure.			L	$4,184,374			
T-CO-6	**Decarbonize off-road heavy-duty equipment by 2042.**		**N**	**M**	**L**	**$550,000 + longer term fleet decarbonization**	**223.76 MT CO2e/yr**		
	1	Develop an inventory of existing off-road equipment engine tiers & begin phase-out of Tier 0 engines, per CARB IUOR Reg.	N			NC			
	2	Retire existing Tier 1 & 2 engines per CARB IUOR Reg.		M		$500,000			
	3	Develop a feasibility study & upgrade plan to minimize equipment emissions and maximize decarbonization to the extent feasible.			L	$50,000			
T-CO-7	**Reduce idling emissions from county fleet vehicles and vehicles visiting County facilities through policies/ordinances as appropriate**		**N**	**M**		**$18,000**	**1,184 MT CO2e/yr**	**$1,152,000**	**-$96**
	1	Require drivers of county-owned vehicles to turn off engines after 3 minutes when not in use or when the driver leaves the vehicle, except as provided for specified vehicle types and circumstances.	N						
	2	Prohibit idling on county-owned properties except as provided for based on analysis and input.		M					

T-CO-8	**Support vehicle fleet transition by planning for maintenance facility needs and staff training related to vehicle and fueling/charging infrastructure technologies.**						**M**		$10,000	NA
T-CO-9	**Reduce emissions from employee commute by 50% by 2030.**						**N**	**M**	**$977,020**	**1,352 MT CO2e/yr**
	1	Continued licensing the Clean Commute Trip Tracker.					N	M	$72,000	
	2	Evaluate opportunities to expand telework and revising telework policy.					N		$20,000	
	3	Evaluate and recommend options to increase employee incentives to commute other than by single occupancy vehicles.					N		$50,000	
	4	Expanding employee access to electric vehicle charging through:								
		1	Seeking public-private partnerships to develop onsite charging infrastructure at County facilities.				N		$60,020	
		2	Evaluating opportunities to expand subsidized charging at County charging infrastructure or provide stipends for charging at privately managed charging infrastructure.				N		$50,000	
	5	Developing a feasibility study of first mile and last mile connectivity opportunities for county employees in collaboration with local transit partners.						M	~$500,000	
	6	Developing a feasibility study & plan to expand active transportation infrastructure, e.g. bike lockers, fix-it stations, and shower facilities.						M	~$150,000	
	7	Evaluating options and developing a program to support mid-day trips and guaranteed rides home for employees using alternative transportation.						M	~$75,000	

T-CO-10	**Support the Sonoma County Airport Sustainability Master Plan (when/as approved) to reduce emissions.**			**M**	**L**	**TBD, Airport Sustainability Master Plan**	**TBD, Airport Sustainability Master Plan**		
	1	Establishing plan elements to transition ground support vehicles and equipment to zero or near-zero emissions as feasible.							
	2	Enhancing procedures and other opportunities to reduce on-the-ground emissions from aircraft, and advocating for cleaner aviation fuels and fuel economy standards.							
T-CO-11	**Create and connect to an interconnected system of Class 1 Bikeways through partnerships, acquisitions, and collaborative efforts.**			**M**	**L**		**displaces up to 0.8% of CO2e from cars on parallel road**		
T-CO-12	**Decarbonize small offroad engines beginning in 2024 by requiring all purchases be zero-emission equipment.**		**N**	**M**		**$360,000**	**CARB SORE: CO2=90-95%; NOx=43%; VOC=51%**	**$270,000**	**$133**
Zero Waste County Operations Measures & Actions			**Target Timeline**			**Estimated Cost**	**CO2e Reduced**	**Lifetime Savings**	**Net Cost per MT CO2e**
ZW-CO-1	**Establish a measurable Zero Waste program with leadership and accountability in all County departments and facilities to increase waste diversion.**		**N**			**$288,491**			
	1	Establish a Zero Waste Champion at every facility to advance facility progress towards zero waste (for some facilities, e.g. park ranger residences the Champion may oversee multiple sites).							
		1 Share information about and promote waste diversion among employees at that facility, including facility-specific challenges and targets.							

		2	Conduct and submit monthly spot checks on waste diversion using a checklist and visual inspection.							
	2	Convene a Zero Waste Team including facility Zero Waste Champions, department management representatives, and Climate.								
		1	Meet periodically to review and promote waste diversion progress.							
		2	Review trends in monthly spot check data & identify diversion successes & needed improvements.							
		3	Recommend improvements to the spot check process and/or waste diversion options.							
	3	Establish a county-wide Zero Waste Coordinator								
		1	Collect, analyze, and summarize the monthly waste diversion spot checks and other key organic waste compliance data							
		2	Develop mid-term waste diversion strategies for each of the facility types							
		3	Prepare annual report to the Board on progress toward Zero Waste by 2030.							
ZW-CO-2	**Establish and update facility-specific near-term measures and actions to increase waste diversion by 50% based on results of the 2023 Zero Waste Audit and Characterization Study for each facility type.**				**M**		**$685,000**	**851**		**$805**
	1	Airport For Airport facility types, create a campaign, work with vendors, and incentivize vendors to increase waste diversion and reach zero waste goals.								
	2	For Animal Services facility types, identify organic waste streams, create infrastructure								

		to decrease organic waste, and train staff on proper disposal.							
	3	For Corporate Yard and Maintenance facility types, create policy on CD&D waste, train staff on proper handling, and host weekly waste education meetings.							
	4	For Detention facility types, provide waste disposal infrastructure, staff training on waste disposal, and assign waste sorting tasks, focused on organics.							
	5	For Office facility types, provide paper recycling infrastructure, organic waste disposal infrastructure, and staff training on waste disposal.							
	6	For Parks and Recreational facility types, provide organic waste disposal infrastructure, staff training on waste disposal, and build partnerships with vendors to decrease single-use plastic waste.							
	7	For Veterans Memorial Building facility types, provide signage on waste disposal infrastructure, staff training on waste disposal, and require waste diversion plans for events with more than 50 people.							
ZW-CO-3	**Demonstrate and document compliance with statewide organic waste diversion requirements (SB 1383).**		**N**			**$107,914**	**1276**		**$84**
	1	Perform and document monthly spot checks of waste bins at each facility.							
	2	Prepare an annual report to the Board on waste diversion outcomes.							

	3	Identify a target number of facilities and frequency of review, and implement a periodic audit of facility waste streams; document audit results and corrective action taken in annual report.							
	4	Develop a system to document and summarize compliance with requirements regarding procurement, mandatory policies and ordinances, education and outreach, etc.							
ZW-CO-4	**Increase diversion of organic waste (compostable materials) from landfills by 100% in County facility types that generate organic waste.**			**N**			**$209,413**	**636**		**$329**
	1	Increase employee access to simple, clean composting infrastructure:							
		1	Provide compost collection cans in break rooms and in-office areas with microwaves, refrigerators and/or food areas.						
		2	Locate green compost collection bins with signage where paper towels are dispensed.						
		3	Provide counter-top composting cans and liners for workspaces with employee agreements to empty the cans daily.						
		4	Establishing centralized, covered and contained compost collection bins.						
	2	Inform employees that food waste must be diverted and identify proper uses of waste receptacles.							
		1	Procure informational signage for waste collection areas.						
		2	Post signage developed in 4.2.1.						

		3	Place labels on all bins and cans for waste, recycling, & compost collection.							
	3	Prepare & deliver a short training video about waste diversion goals, requirements, benefits, & procedures.								
	4	Evaluate and update janitorial services and waste collection agreements as needed to support increased compost diversion measures.								
ZW-CO-5	**Review the diversion outcomes of near-term measures and actions and develop a comprehensive Zero Waste Plan**				**M**		**$68,641**			
	1	Establish facility-specific waste reduction targets and strategies.								
	2	Require monitoring and documentation of implemented practices.								
	3	Incorporate periodic waste stream auditing.								
ZW-CO-6	**Decrease the use of disposable foodware for onsite and offsite County-facilitated dining by 100% through a County-wide policy.**				**M**		**$177,439**	**13**		**$13,664**
	1	Identify requirements for staff to provide their own foodware by 2027.								
	2	Incentivize County staff to comply with the policy by providing branded reusable foodware.								
	3	Provide a centralized foodware storage system for County staff to utilize County-owned reusable foodware by 2030.								
	4	Provide education & training on the centralized foodware system, policy compliance, and resources to support County staff.								
ZW-CO-7	**Develop centralized universal waste collection stations in every County facility to ensure that people have access to hazardous waste collection sites by 2030.**				**M**		**$138,885**	**265**		**$524**

	1	Establish or update services contracts as appropriate, to ensure universal waste is handled properly.							
	2	Establish policies and procedures regarding proper handling and disposal of universal wastes.							
	3	Provide universal waste training, developed by Recology and ZWS through Sonoma Higher Ed, to new and current employees with a periodic refresher course on the centralized universal waste system.							
ZW-CO-8	**Prioritize five types of procurement contracts with upstream suppliers, review, and develop waste reduction benchmarks for future contracts.**			**M**		**$50,000**			
ZW-CO-9	**Evaluate and implement waste diversion options for the Reuse and Recycling Program Center for furniture, appliances, and other useful, non-hazardous items.**			**M**		**$50,438**			
ZW-CO-10	**In partnership with the Bay Area Air Quality Management District and the Northern Sonoma County Air Pollution Control District, evaluate opportunities to cost-effectively reduce landfill gas emissions from closed landfills.**			**M**		**$807,734**			
Water Resilience County Operations Measures & Actions			**Target Timeline**			**Estimated Cost**	**CO2e Reduced**	**Lifetime Savings**	**Net Cost per MT CO2e**
W-CO-1	**Develop low-impact rainwater harvesting systems on County-owned facilities.**			**M**		**$560,000**	**64.7**	**$540,000**	**$170**
	1	Evaluate existing rainwater harvesting on County-owned lands.							

	2	Identify & prioritize locations to develop rainwater harvesting systems.							
	3	Recommend top priorities to the County of Sonoma Board of Supervisors and secure funding.							
	4	Implement projects based on the approved priorities and using low-impact development practices.							
	5	Evaluate project outcomes & recommend a phased implementation plan to the Board of Supervisors for remaining suitable locations.							
W-CO-2	**Evaluate and implement restoration projects of upland watersheds on critical landscapes that have been impacted by wildfire or identified as highly vulnerable areas, on County owned lands.**			**M**	**L**	**$4,595,125**	**34,812**		**$132**
	1	Prioritize highly vulnerable areas for upland watersheds restoration projects based on a pre-hazard analysis to identify critical landscapes and suitable restoration activities by 2030.		M					
	2	Identify & recommend restoration projects based on factors and the outcomes of W-CO-7.1, including environmental review.		M					
	3	Implement restoration in key areas, aiming for 2% restoration completed by 2030.		M					
	4	Evaluate restoration project outcomes and recommend further collaboration to complete 100% restoration by 2045.			L				
W-CO-3	**Identify & address areas contributing to soil instability & erosion on County-owned lands, with a focus on wildfire hazard areas with high risk of post-fire geohazards to critical assets, including water infrastructure & critical habitats.**				**L**	**$57,594**	**7,059**		**$8**
	1	Identify & prioritize infrastructure areas contributing to erosion & soil instability based on costs, mitigation potential & feasibility by 2028.			L				

	2	Develop recommendations for addressing soil erosion and instability of prioritized areas, with environmental review, to the Board of Supervisors by 2028.			L				
	3	Implement demonstration projects and present recommendations for broader implementation by 2030.			L				
W-CO-4	**Evaluate and prioritize conservation practice projects on County-owned lands to enhance water resilience and mitigate drought, flood, and debris flows.**			**M**		**$39,519**	**730**		**$54**
	1	Identify conservation projects to implement in conjunction with W-CO-8, sea-level rise and inland flooding.							
	2	Evaluate and prioritize conservation projects based on feasibility, cost effectiveness, and climate hazard priorities.							
	3	Recommend 10% of priority projects for implementation by 2030 w/environmental review and evaluate feasibility for future implementation of remaining projects.							
W-CO-5	**Evaluate, prioritize, and implement water saving features into current and new construction of County facilities.**			**M**	**L**	**$1,327,000**	**~23.6 lbs CO2e /1,000 gal saved**		**TBD**
	1	Identify and prioritize water resilience opportunities based on feasibility, timeline, and potential water savings from water conservation measures in E-CO-1 (near term energy upgrades).		M		$300,000			
	2	Propose a water resiliency policy for new construction of specific facility types and current County facility types.		M		$27,000			
	3	Implement demonstration projects, verify actual water savings, and propose appropriate policy updates.			L	$1,000,000			

W-CO-6	**Evaluate opportunities and barriers to utilizing grey water at new and existing County-owned facilities/ lands with high water demand.**			**M**		**$450,000**	**TBD**		**TBD**
	1	Conduct a feasibility study for using grey water for County landscaping and new construction scenarios.							
	2	Propose grey water demonstration projects at County facilities, and include appropriate complimentary actions, eg: replace non-functional turf, plant low water use plants, add stormwater retention.							
	3	Based on demonstration projects outcomes, prioritize & recommend grey water use & complimentary actions at County facilities.							
W-CO-7	**Develop policies standardizing use of future climate data in planning, designing, and maintaining County infrastructure and facilities.**			**M**		**$1,018,000**	**NA**		**NA**
	1	Assemble a working group to define climate planning initiatives and recurring data applications to evaluate opportunities to standardize practices and identify gaps in current data use processes.		M		$500,000			
	2	Develop appropriate data resources & system(s) to maintain them.							
	3	Present recommendations to the Board of Supervisors to consider.		M		$500,000			
	4	Develop training through SonomaHigherEd to educate all relevant staff on an on best data management practices.		M		$18,000			

W-CO-8	**Conduct a vulnerability assessment/ feasibility study for County-owned infrastructure & lands that are at-risk of sea-level rise & riverine flooding and/or erosion to identify strategies to protect, accommodate, and/or retreat.**		**N**	**M**	**L**	**$1,850,000**	**NA**		**NA**
	1	Working with Russian River Regional Monitoring Program (R3MP) and San Francisco Estuary Institute (SFEI), develop a new, comprehensive stream and riparian corridor map headwaters to ocean/ bay for Sonoma County. Incorporate readily available hydrography datasets to feed into a comprehensive vulnerability assessment to help accomplish this task.	N			$50,000			
	2	Prepare vulnerability assessment using readily available hydrography datasets.							
	3	Assemble working groups, as appropriate, to identify, assess, & guide prioritization of areas facing repeat sea-level rise hazards and riverine flooding/erosion with expected near-term climate impacts.		M		$370,000			
	4	Develop a plan that includes prioritized strategies to protect, accommodate or retreat that aligns with the County of Sonoma Hazard Mitigation Plan, a five-year implementation plan & the Local Coastal Plan, including environmental review.		M		$1,430,000			
	5	Secure funding & implement top-priority projects.		M	L				
	6	Present results of the top-priority projects to the Board of Supervisors and propose a long-term funding plan for priority projects.			L				
	7	Convene partners to develop funding mechanisms to address coastal communities and ecosystems vulnerable to sea-level rise impacts.			L				

Wildfire Resilience County Operations Measures & Actions			Target Timeline			Estimated Cost	CO2e Reduced	Lifetime Savings	Net Cost per MT CO2e
WF-CO-1	**Implement the Sustainable Wildfire Resilience project with the Resiliency Coordination Team to formalize near term wildfire resilience planning and implementation coordination between departments, agencies, and partners, and prepare and present recommendations for a sustainable, integrated, long-term wildfire resilience program and funding.**		**N**			**$400,000**	**NA**		**NA**
	1	Establish Resilience Coordination Team of department heads with wildfire resilience programs.	N						
	2	Establish Technical Advisory Committees for 1) landscape hardening, 2) near-structure hardening. 3) climate resilient lands, and 4) organizational structure and funding	N						
	3	Coordinate efforts with different partners to determine wildfire resilience programming and funding opportunities long-term.	N						
	4	Present recommendations to the Board of Supervisors for a long-term sustainable program	N						

WF-CO-2	**Develop a phased wildfire risk reduction and structure hardening plan for County-owned lands and facilities.**		**N**	**M**		**$550,000**	**NA**		**NA**
	1	Conduct a wildfire vulnerability assessment of existing County buildings, infrastructure, and lands (built assets, parks, public rights of way, wooded/brush covered areas, & other vegetated spaces) in wildfire hazard areas to identify applicable defensible space & structure hardening practices.	N			$400,000			
	2	Prioritize wildfire risk reduction and hardening for County buildings, infrastructure, and lands.		M		$150,000			
	3	Recommend a phased municipal wildfire resilience plan County buildings, infrastructure, and lands with potential funding strategies to the Board of Supervisors.		M					
WF-CO-3	**Review County-owned lands to identify current buffer zone service, gaps, and opportunities.**			**M**		**$157,450**	**4,384**		**$36**
	1	In coordination with WF-CP-2, evaluate where County-owned lands serve as existing resilient buffer zones to protect critical infrastructure and communities from wildfire.							
	2	Identify County-owned lands that could fill gaps in existing buffer zone service & prioritize locations for developing buffer zone service.							
	3	Propose a phased plan to implement land-based wildfire resilience strategies on County-owned lands for increased buffer zone capacity by 2030.							
WF-CO-4	**Identify & prioritize suitable vegetation treatment & mulching project areas on County lands & prepare environmental review for priority projects.**		**N**	**M**		**$697,000**	**19,727**		**$71**

	1	Identify & prioritize suitable vegetation treatment & mulching project areas on County lands.	N			$50,000			
	2	Prepare a CAL VTP programmatic CEQA analysis for environmental compliance for priority projects.		M		$647,000			
WF-CO-5	**Implement fire-safe landscape practices, tree care, and protection on County-owned lands.**		**N**	**M**		**$717,524**	**19,727**		**$36**
	1	Inventory and evaluate existing landscape practices on County-owned lands in wildfire hazard areas by 2026.	N			$9,000			
	2	Identify and prioritize improved fire-safe landscape practices for County-owned lands in wildfire hazard areas by 2027.		M		$9,000			
	3	Secure funding & environmental review, and implement prioritized practices on County-owned lands in wildfire hazard areas by 2030.		M					
WF-CO-6	**Evaluate schedule of vegetation management along roadsides/right-of-way areas for fire risk reduction.**			**M**	**L**	**$50,000**	**22,777**		**$169**
WF-CO-7	**Based on risk and vulnerability assessments, recommend assets and plan for managed retreat from wildfire risk or other climate hazards.**			**M**	**L**	**$200,000**	**NA**		**NA**
	1	In conjunction with WF-CO-2, W-CO-3, and W-CO8, identify County facilities and infrastructure at severe or extreme risk from wildfire or other climate hazards due to their location.		M					
	2	Propose criteria to determine appropriateness of managed retreat in response to wildfire, sea level rise, or other climate hazards.		M					
	3	Identify & prioritize facilities & infrastructure where managed retreat is the most appropriate response to climate hazards.		M					

	4	Propose a phased strategy to implement and fund managed retreat while maintaining safety and core services to the extent feasible.			L				

Lands County Operations Measures & Actions			Target Timeline			Estimated Cost	CO2e Reduced	Lifetime Savings	Net Cost per MT CO2e
NWL-CO-1	**Ag + Open Space will continue to consider conservation of important carbon stocks in their easement selection process.**		**N**	**M**	**L**	**$ 53,038,441*** Estimate based on State Goals – See Ag + Open Space programs for actual costs	**40,755**		**$1,301**
	1	Ensure solicitation for easements extends to parcels with significant carbon stocks including forests, woodlands, wetlands, rangelands, and grasslands by 2027.		M					
	2	Consider additional factors in established selection criteria that assign value to carbon stocks and landowner interest in adopting carbon sequestration practices for acquisition of easements by 2025.	N						
	3	Evaluate carbon sequestration for existing and at the close of new easement acquisitions to include in County Greenhouse Gas goal monitoring and tracking by 2027.		M					
	4	Evaluate the inclusion of climate resilience metrics for consideration in the reauthorization of Ag + Open Space's sales tax to engage with through the public review process.			L				

NWL-CO-2	**Increase coordination with tribes and opportunities for tribal collaboration of land management on County owned lands by 2026, based on traditional and historic stewardship practices.**		**N**	**M**	**L**	**$50,000**	**NA**		**NA**
	1	Restore the tribal engagement liaison for the County of Sonoma, and/or engage a tribal engagement facilitator to help coordinate land management activities.	N			$50,000			
	2	Engage with local tribes to coordinate on climate resilience efforts and collaboratively identify co-management goals and opportunities by 2025.	N						
	3	Identify specific stewardship projects for the Board of Supervisors to consider, in collaboration with local tribes by 2026.	N						
	4	Implement stewardship projects identified in NWLCO-3.3, in collaboration with local tribes by 2035.		M	L				
	5	Evaluate the project outcomes and present recommendations for further collaboration to the appropriate governing bodies.			L				
NWL-CO-3	**Identify appropriate sites and establish formal targets for compost and mulch application on County lands based on SB 1383 and monitor and track applications every 3 years.**		**N**	**M**	**L**	**$130,585**	**88**		**$1,484**
	1	Identify & prioritize County-owned lands suitable for increased compost application based on feasibility & cost-effectiveness by 2025.	N			$20,000			
	2	Identify the appropriate quality and quantity of compost to be applied on County-owned lands to meet regional SB 1383 requirements.		M		$10,000			
	3	Establish procurement & quality assurance policies to protect against ecological harm from compost application, with guidance, by 2026.		M		$11,000			

	4	Coordinate with Public Infrastructure and Regional Parks to apply compost, and audit application every 3 years by 2030.		M	L	$21,000			
NWL-CO-4	**Create urban forested green space on County-owned lands, utilizing as appropriate egresses and ingresses of county buildings, vacant lots, rooftops, medians, and walkways.**			**M**	**L**	**$393,291**	**71,606**		**$5**
	1	Evaluate and prioritize County-owned lands for potential green space feasibility.		M		$75,000			
	2	Develop & propose demonstration project gardens at highly frequented County facilities to educate employees and visitors about climate-smart landscaping practices by 2030.		M		$200,000			
	3	Evaluate the demonstration project outcomes from NWL-CO-4-2, present recommendations for future projects.			L	$25,000			
	4	Develop a plan to increase green space coverage on County-owned lands, with a focus on carbon sequestration, water conservation, feasibility and cost-effectiveness.			L	$60,000			
NWL-CO-5	**Increase carbon sequestration on County-owned lands by implementing beneficial practices described in the Carbon Stock Inventory and Potential Sequestration Study thru 2030.**			**M**	**L**	**$640,869**	**526**		**$1,218**
	1	Develop Climate/Carbon Farm Plans for Regional Parks, including prioritization of climate-smart practice implementation thru 2030.		M		$550,000			
	2	Establish short-and long-term targets for practice implementation to increase carbon sequestration by 2030 based on NWL-CO-5-1.		M		$62,400			
	3	Propose & implement regenerative land management practices at municipal scale, including practices that draw down carbon, reduce GHG emissions, and improve		M	L				

		watershed and human health thru 2030 based on NWL-CO-5-1 and NWL-CO5-2.							
	4	Evaluate progress-to-date for short-term and long-term targets established for NWL-CO-5-1 and NWLCO-5-2, & determine next steps for implementation of sequential practices beyond 2030.			L				
NWL-CO-6	**Provide County facilities and parks staff with ongoing training for best practices on climate smart landscaping practices by 2028.**			**M**		**$7,500**	**NA**		**NA**
	1	Evaluate and prioritize climate-smart landscaping trainings and programs for County staff focused on landscaping and soil management.							
	2	Provide training for County staff, through Sonoma Higher Ed along with change management to ensure implementation by 2030.							
NWL-CO-7	**Establish a Climate Resilient Lands Working Group.**		**N**	**M**		**$15,000**	**NA**		**NA**
	1	Convene the working group to meet on a regular, periodic schedule to recommend priorities and coordinate projects and funding applications.	N			$15,000			
	2	Develop a strategic vision for coordinated land resilience in Sonoma County and a framework for ongoing implementation.	N						
	3	Identify, prioritize, and seek funding for demonstration projects using the Project Concepts of the Climate Resilient Lands Strategy.		M					
	4	Develop recommendations for sustainable ongoing funding and implementation of a coordinated, ongoing land resilience program.		M					