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SACRAMENTO, CA WASHINGTON, D.C.

AIR QUALITY

Team Leaders: Adrian Rehn, Valley Vision: adrian.rehn@valleyvision.org
Alberto Ayala, Sacramento Metro AQMD: AAyala@airquality.org
Brandon Rose, SMUD: brandondrose@hotmail.com

A CLIMATE RESILIENT CAPITAL REGION

Requested Actions

The projects and programs outlined below are part of a multi-benefit and multi-agency approach to a resilient region. Many of these projects and programs seek future funding in the next few years.

THE FORESTS TO THE EAST OF THE REGION ARE A SOURCE OF WATER, POWER, CARBON SEQUESTRATION, AND NATURAL HABITAT WHICH NEED INVESTMENT TO PREVENT THE DEVASTATING EFFECTS OF WILDFIRE.

El Dorado County:

Project: El Dorado County Fire Adapted Communities

Funding Needed: \$10 million. The Fire Adapted Communities Project will fund public outreach to engage landowners with defensible space and home hardening information. Additionally, it will provide direct funding to homeowners for defensible space work with priority given to structures adjacent to Bureau of Land Management (BLM) land. The project will maintain existing fuel breaks and initiate new fuel breaks adjacent to BLM to protect adjacent communities.

Project: Defensible Space for Low-Income Residents

Funding Needed: \$3 million. The project will fund the El Dorado County Fire Safe Council to provide defensible space assessments and follow up treatments for low-income residents in El Dorado County.

Project: Bioenergy and Wood Utilization Campus

Funding Needed: \$16 million. The project will fund the acquisition of approximately 177 acres encompassing the former sawmill operation owned by Sierra Pacific Industries (SPI) in Camino, CA. The SPI property, uniquely situated in close proximity to an abundant biomass feedstock, will be the future site of a bioenergy project, sawmill, and wood products campus. It will provide the following benefits: utilization of forest biomass resulting from public and private forest restoration projects; reduction of catastrophic wildfire and improved watershed health; prevention of pile-burning and associated air pollution and GHG emissions; permanent sequestration of CO2 through the production of biochar; and workforce development. *(An SPI Camino fact sheet is available).*

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Project: Development of a Clean Energy Freight Rail Line from El Dorado County to Existing Freight Rail Line in Sacramento County.

Regional Funding Needed: The existing rail infrastructure in El Dorado County requires repair and upgrading to carry freight. Additionally, a new freight rail line is required to connect El Dorado County to the nearest available freight line in Sacramento County (former Aero Jet property). This proposed rail line would allow for biomass feedstock to be efficiently transported to bioenergy facilities in western El Dorado County (e.g. SMUD/Mote Hydrogen project) and Sacramento County, as well as the transportation of products produced by these bioenergy facilities (e.g., clean hydrogen, renewable natural gas, diesel, aviation fuel, carbon for sequestration, biochar, etc.) to off takers. The proposed rail line would allow for the import and export of other goods to and from eastern Sacramento County and El Dorado County. Lastly, hydrogen powered locomotives, combined with battery storage, are currently under development and could ultimately be used to replace fossil fuel locomotives resulting in a clean energy freight line.

El Dorado Water Agency:

Project: American River Water Instrumentation Network (ARWIN)

Funding Needed: \$4.5 million (\$1,481,000 committed). This project will install hydrologic monitoring stations in the upper American River watershed in collaboration with various state, federal, and local entities. The objective is to establish hydrometeorological monitoring stations and accessible data for the Upper American River partners to provide a comprehensive review and assessment of multiple stations, avoid redundancy of data collections, reduce maintenance and replacement costs of existing hydrometeorological monitoring for all project partners, and upgrade and replace archaic and labor-intensive snow pillow and other single point measurement technologies when appropriate. The project is ongoing, with two stations already installed.

Project: Alder Creek Reservoir and Conservation Project

Funding Needed: The WRDA request is to amend the local project sponsor to El Dorado County Water Agency to reflect that this is a county-wide benefit project and increase appropriation authorization from \$3 million to \$12 million, consistent with costs of more recent similar studies. Additionally, WRDA seeks to modify existing Feasibility Study authority under Public Law 108-361 as submitted under the Water Resources Development Act (WRDA) by Congressman Kiley (CA-3). The upper American River plays an integral role in the upper and lower portions of the American River watershed associated with water supply, flood protection, recreation, and environmental resiliency. The need for high-elevation and off-stream storage upstream of Folsom Reservoir will continue to be critical to address declining snowpack, recurring drought, and flooding events. The American River Basin Study, conducted by the U.S. Bureau of Reclamation and local partners, identified the off-stream high-elevation reservoir as an important climate adaptation strategy to address both water supply and flood vulnerabilities. Alder Creek Reservoir will serve as an adaptation measure and provide a new source of upstream storage for water supplies for local residents, agriculture, and businesses, enhance storage for downstream recreation, and improve operational flexibility for the U.S. Bureau of Reclamation's operation of Folsom Reservoir, which provides water supplies and flood protection within the Basin. The current estimate is a 168 TAF off-stream reservoir with 110MW new hydropower generation. Reclamation is authorized in Public Law 108-361, Title II, Section 202, dated October 2004, to conduct feasibility studies for the project.

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at rheidt@metrochamber.org | www.metrochamber.org*

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Placer County Water Agency:

Project: Ophir Biomass & Carbon Negative Energy Project

Estimated Regional Need: \$160 million (\$25 million committed). The Ophir Biomass & Carbon Negative Energy Project will install a state-of-the-art 3-megawatt energy plant at a critical waterworks location. This will provide the following benefits: water supply reliability; electric grid resilience; utilization of forest biomass resulting from ecological forest management projects; prevention of pile-burning and methane emissions; and permanent sequestration of up to 75,000 tons per year of CO2 contained in the biomass.

Regional Water Authority:

Project or Program: Sacramento Regional Water Bank

Estimated Regional Need: \$300 million. The Sacramento Regional Water Bank is a system of groundwater wells, pumps, and pipelines that allow local water providers to pump out and refill underground water reserves to serve local water customers. The aquifers underlying the Capital Region have enough capacity to store twice the volume of water as Folsom Reservoir. Groundwater banking has proven to be an effective climate adaptation in times of megadrought and local water providers are working to expand water banking in the greater region as we face the ever-familiar impacts of climate change, creating a Catch-22 for our water system: the need to release water from Folsom Reservoir to protect our communities from flood versus storing water for drier days.

SAFCA:

Study: Yolo Comprehensive Study

Funding Needed: \$3 million; \$600,000 in FY 2025. The Yolo Comprehensive Study is critical to strengthening flood protection for Sacramento and other urban areas, the agricultural sustainability of the land in the Yolo Bypass (which is critical for Yolo and Solano counties), and improving the ecosystem and habitat necessary for a number of threatened and endangered species and required for the operation of federal and state water supply facilities. This is a critical component in developing resiliency in our system to address the impacts of climate change.

Project: American River Watershed Forecast Informed Reservoir Operations

Funding Needed: \$200 million. This project will add low-level release capability to Hell Hole and Union Valley Reservoirs and begin implementing a Watershed Forecast Informed Reservoir Operations (FIRO) for Hell Hole, Union Valley, and French Meadows reservoirs to provide climate change resiliency for downstream flood control, and to benefit water supply, hydropower and other reservoir purposes.

Project: Upper American River Flood to Managed Aquifer Recharge

Funding: \$1.4 million. This project, in conjunction with the Upper American River Watershed FIRO, will move water ahead of forecasted flood events into a groundwater recharge aquifer.

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CREATING THRIVING, LOW CARBON, COMMUNITIES OF THE FUTURE MEANS ADJUSTING WHERE WE DEVELOP AND HOW WE TRAVEL.

SACOG

Project: Green Means Go

Funding Needed: \$360 million in federal, state, and local funding. Green Means Go is a program to incentivize housing in infill areas, which would reduce vehicle trips, increase transit-oriented development, and improve air quality. Green Means Go focuses on bridging the funding gap for housing development in these established areas by helping right-size the needed underground infrastructure, like water and sewer. A funding source must also be established to break existing grant silos and allow for innovative building solutions. \$360 million is needed to implement the zones which have been identified.

SMUD

Program: Wildfire and Resiliency Strategy Advancement

SMUD is looking to advance critical strategies to mitigate wildfire risk and improve community resilience if fires occur. Plans include deploying new technologies to support vegetation management, expanding communication pathways to remote areas, equipping under-resourced communities with resilient resources, and investing in regional workforce development and emergency response.

Project: Neighborhood Electrification Project

Funding Needed: \$3 million. SMUD's Neighborhood Electrification Project will provide clean energy technology for up to 300 single family homes in underserved neighborhoods, aiming for 100 percent electrification of homes when feasible. The project will increase home values and reduce customers' utility bills, maintenance costs and pollution, which will improve the health and welfare of the people across these communities.

Program: Urban Canopy and Heat Mitigation Projects

Funding Needed: \$1,600,000 for five years. This program will increase the tree canopy in under-canopied areas, decrease the Urban Heat Island effect, promote active transportation modes, beautify communities, and assist in carbon capture. In the first year, a comprehensive study will be conducted, including community focus groups, test sites, and future site mapping. Goals include decreasing the Urban Heat Island effect by planting 400 trees a year in disadvantaged communities to directly shade impervious surfaces (streets, parking lots, playgrounds) for four years. Tree care education to residents, businesses, and public services to promote a healthy and sustainable urban forest.

FLEET AND CHARGING /FUELING: FROM ENERGY PRODUCTION TO OPERATIONS, THE CAPITAL REGION HAS WORKED COLLABORATIVELY ON THE ZERO CARBON TRANSPORTATION STRATEGY TO ALIGN THE REGION ON THE TRANSITION.

Sacramento Regional Transit

Project: Light Rail Modernization Project

Funding Needed: \$150 million (\$400 million committed). SacRT is modernizing its 30-year-old light rail system with low-

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floor trains and stations to increase boarding speed, capacity, reliability, and safety, and greatly enhanced access for passengers. This project includes converting 19 light rail stations on the Blue Line to accommodate the new low-floor LRVs. Without these conversions, SacRT is unable to operate its new cars on the Blue Line.

SacRT's service area is 53 percent minority and 28 percent low-income and communities of color make up 60 percent of transit riders. Most of SacRT's riders are transit dependent with 65 percent from low-income households earning an annual household income of less than \$24,000. The investment will encourage ridership, increase safety, enhance access and mobility for people with disabilities, and eliminate 1,170,128MT of CO2 emissions over the life of the project.

Project: SacRT EV Fleet Transition

Funding Needed: \$10 million (\$5 million committed). SacRT provides public transportation via light rail and bus service. The bus fleet consists of 259 buses: 193 powered by Clean Natural Gas (CNG), 53 by gasoline, seven by diesel, and six battery electric buses (BEBs). To comply with the California Air Resources Board's (CARB) Innovative Clean Transit (ICT) regulation and further advance sustainability goals, SacRT is looking to transition its fleet to zero emission buses (ZEBs) by 2040.

Project: ZEV Bus Maintenance & Hydrogen Hub

Funding Needed: \$75 million. The proposed project will convert SacRT's existing facility into a ZEB facility, purchase 60 40' BEBs and develop a workforce development training program for bus operators, mechanics, and first responders to ensure safe and efficient operations of its electric bus fleet. This project will support SacRT's plans to accelerate its transition to a fully zero-emission bus fleet. The Project will reduce GHG by helping convert 100 percent of SacRT's CNG and diesel fleet to zero-emission ZEBs by 2040 and build a ZEB infrastructure that supports the transition of 100 percent of SacRT's fleet to zero-emission technology by 2040, with enough capacity to support the zero-emission fueling needs of local partner agencies and "over-the-fence" customers.

Project: Downtown Riverfront Streetcar Project (West Sacramento Light Rail Extension)

Funding Needed: \$30 million (\$130 million committed). SacRT is seeking \$30 million to support a comprehensive station and corridor capital project for a new 1.5-mile light rail connection between West Sacramento and downtown Sacramento that includes nine stops and the procurement of two vehicles. The project includes multimodal enhancements such as 1.2 miles of new Class IV cycle track, pedestrian safety upgrades at each intersection, and signal technology advancements. This project aims to seamlessly interconnect intercity rail and local multi-modal systems by linking two of the nation's largest infill development sites and offering multimodal connections at the terminals of the system in both Yolo and Sacramento counties. The project will also integrate and expand the Sacramento Intermodal Transportation Facility, which will facilitate direct connections to Amtrak, SacRT light rail, and regional bus services. The project, combining all project components, will account for 25,533 metric tons of reduction in GHG over the entire life of the project.

RT/SMAQMD

Program: CarShare

Estimated Regional Need: \$52 million. This program will provide transportation access for underserved communities.

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SMAQMD/ SMUD

Program: EV Charging Networks

Estimated Regional Need: \$282 million (\$100 million for medium/heavy duty - see Green Hydrogen below; \$182 million for eMobility Hubs from the ZEV Deployment Strategy). Funding would support regional charging networks, including public-private partnerships to accelerate the planning and deployment of equitable EV infrastructure, deploying regional charging hubs, and zero emission goods movement. Many of the efforts are in collaboration with private and public partners, including SacRT, SACOG, and AQMD.

Strategy: Green Hydrogen

Estimated Regional Need: \$100 million for goods movement. Green Hydrogen-Northern California can play a role in the strategy. Hydrogen created from growing bioresources, or other renewable means, can be a transportation fuel and aid in power generation and energy storage.

Business Nexus

California's Capital Region is comprised of six-counties (El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba), making it incredibly diverse with communities that vary in demographics and geography, and which have unique climate vulnerabilities. As such, the region is coordinating a multi-benefit and multi-agency approach to resiliency because coordinated action and collective investment is needed to protect critical assets while taking new and innovative steps to adjust how we grow and plan for times ahead.

A Multi-agency Approach to a Resilient Capital Region

SACOG SMAQMD RWA SMUD SAFCA El Dorado SacRT PCWA

The region faces a range of climate-related threats, which have compounding effects on lives and livelihoods. The region has experienced a series of devastating wildfires, flood events, and other emergencies in recent years. These include the 2017 Oroville Dam crisis that evacuated nearly 190,000 people, the 2021 Caldor Fire that burned 221,835 acres, and record-breaking heat in the summer of 2022 causing an energy emergency statewide to avoid rolling blackouts. In the winter of 2023, the region faced multiple atmospheric rivers, with high winds and rain resulting in an urban loss of an estimated 1,000 trees within the city of Sacramento, flooding in the rural areas of the region, and widespread power outages.



These impacts collide with the lives of residents in unpredictable and challenging ways and intersect with existing vulnerabilities, stresses, and traumas. There is a critical need to strengthen the capacity of community members to respond to these climate impacts, due to:

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- Higher extreme and average precipitation levels and changing snowmelt patterns could increase flooding and erosion in both the more mountainous areas and in downstream drainage basins, which threatens lives, infrastructure, and property.
- Sea level rise and storm surges pose flood risks to Delta communities and threaten water supply infrastructure of critical statewide importance. Additionally, sea level rise places pressure on local water supplies to push back salt water from intruding on freshwater infrastructure.
- Deeper and more prolonged droughts threatening reliability of water for residents today and tomorrow, while water shortages risk devastating the region's vibrant agricultural economy from large-scale enterprises to small organic farms. Drought also diminishes the essential clean power generated by existing hydro-electric systems.
- Extreme heat poses serious life and infrastructure threats, with cascading implications for grid stability, energy use, air quality, mental and physical health, and even educational performance, productivity, and crime. The combination of extreme heat and drought has already fueled more frequent and hotter wildfires in the region's mountains, foothills, and valleys.
- A dramatic increase in acreage burned from wildfires in the mountainous portions of the region. Wildfires decrease air quality, threaten to disrupt critical energy infrastructure, and put stress on evacuation and response transportation options.
- Disproportionate harm to low-income communities and racially marginalized residents from extreme heat and inhalation of wildfire smoke that increases hospitalizations.

Background

Geographically, the region is situated with the Sierra Nevada Mountain range to the east, the San Joaquin Valley to the south, and the Bay Area to the west. The region spans roughly 4 percent of California's total land area with about 6,000 square miles and contains more than 2.5 million residents—about 6 percent of the state's total population.

- Much of the population is concentrated near the city of Sacramento, with significant populations in Placer and Yolo counties.
- Roughly 85 percent of the region is covered by rural lands and a booming agricultural economy.
- Portions of three U.S. National Forests are within the region and serve as the headwaters for much of the states' developed water supply.
- The region anticipates about 20 percent population growth by 2050.