

February 25, 2015

The Honorable Bob Wiecekowski
Chair, Senate Environmental Quality Committee
State Capitol Building, Room 2205
Sacramento, CA 95814

Dear Chairman Wiecekowski, Committee Members Gains, Bates, Hill, Jackson, Leno, and Pavley:

The Alliance of Regional Collaboratives for Climate Adaptation (ARCCA) welcomed the opportunity to speak to the committee on February 25th on the very important and timely issue of adaptation to climate change.

California has been tremendously successful in developing and executing a plan to respond to the challenge of climate change. State actions supporting climate mitigation include the AB 32 Scoping Plan, the Low Carbon Fuel Standard, Building Code Title 24, and the Renewable Portfolio Standard. These efforts focus on cities, counties, industries, and technologies. But the scientific community has become increasingly alarmed that we will not be able to avoid the early impacts of climate change, and that while we continue mitigation efforts, we must also adapt to the changes already underway.

Californians have been responding for many years to changes in fire seasons, sea level rise, decreasing snowpacks, an extended drought exacerbated by above-average temperatures, flooding risk, and seasonal changes in precipitation and temperature affecting our agriculture production. Addressing these issues requires actions that consider the geographic footprint framing each of these crises, not just cities and counties but also watersheds, flood basins, forests, coastlines, and more. Providing a forum at the state level and in regions across California for these cross-jurisdictional, cross-sector discussions has been a key mission of ARCCA and each of our member regional collaboratives. Our responses to your questions follow. We have included several attachments:

- Slides from our oral presentation
- The ARCCA Principles for Adaptation
- A fact sheet on ARCCA

Question: To what extent are ARCCA and regional collaboratives working with local governments to plan for and implement climate adaptation and resiliency efforts in California? Highlighting project examples would be helpful.

ARCCA currently has five member regional Collaboratives, as outlined on slide two: The Los Angeles Regional Collaborative for Climate Action and Sustainability (LARC), the San Diego Regional Climate Collaborative, the Capital Region Climate Resilience Collaborative, the Bay Area Climate and Ewnergy Resilience Project, and the Sierra Climate Adaptation and Mitigation Partnership (Sierra CAMP).

All have strong local government memberships. Examples include:

- LARC has the most formal organization with city council resolutions required to become a member.
- The Bay Area is a 300-person stakeholder network that includes many local governments. Bay Area is evolving toward a more formal structure, the Alliance for Climate Resilience.
- Sierra CAMP has three seats on their steering committee reserved for local government.

Some of our specific projects include:

- **LA Framework for Regional Climate Action:** LARC, in consultation with Metro, has received funds through the Strategic Growth Council Sustainable Communities Planning Grant and Incentives Program to develop a unifying structure for climate action in the region, from academia to municipalities to regional agencies. Beginning in October 2013, the Framework is a 3-year project.
- **Bay Area Nine-County Needs Assessment:** The report, produced for the San Francisco Foundation and the Bay Area Air Quality Management District, spotlights more than 100 Bay Area climate initiatives in the public, private, non-profit sectors. The assessment also identifies the top barriers facing cities, counties and others in the region as they address climate adaptation and mitigation.
- **Resilient Business Initiative:** The Sacramento regional collaborative is working with Valley Vision to develop a regionally focused tool that will assist medium and small businesses to identify their climate risks and vulnerabilities, and to provide them practicable steps to take to prepare for potential events.
- **Sierra CAMP & Climate Solutions University:** As part of Climate Solutions University's Model Forest Policy Program, Sierra CAMP will work with local governments and other Sierra stakeholders to create a model adaptation plan that includes the consolidation and organization of climate mitigation studies and efforts in the Sierra Nevada.
- **San Diego Regional Climate Collaborative:** Assisted San Diego County Office of Emergency Services and local districts to incorporate extreme heat, drought, and coastal flooding in the 2015 San Diego Multi-Jurisdictional Hazard Mitigation Plan.

Question: What have been the major challenges and successes to date for ARCCA and regional collaboratives working to plan and implement adaptation projects?

ARCCA Successes:

- **State engagement.** ARCCA has provided a regionally focused response to a number of key state documents.
- **Engagement with the public sector:** Each collaborative has done a great job engaging the public sector in their region and has strong support from local jurisdictional and regional agency participants.
- **Regional Collaborative Toolkit;** Developed by ARCCA out of the shared experience of all the regional collaboratives, this toolkit distills the key elements of forming a regional collaborative and provides various resources, case studies, and linked tools. The goal is to provide a framework and guidance for other regions interested in starting their own regional collaboratives. It is currently free and online at www.ARCCACalifornia.org/toolkit.
- **CivicSpark** — CivicSpark is a new Governor's initiative of AmeriCorps that focuses on building capacity for local governments in the areas of climate change and sustainability. Several regional collaboratives (San Diego, Capital Region, and the Sierra) are directly engaging with this program to provide resources to local governments to support specific adaptation projects (examining climate plans through an adaptation lens, conducting vulnerability assessments, and alleviating the urban heat island impact on health), while other regions (Bay Area and LA) are indirectly working with the program.

Challenges

- **Funding:** This is an emerging issue and one where the state could be helpful. Although we have had a successful start, continuing efforts will require sources of long-term, sustainable funding.
- **Moving to implementation:** Likewise, in order to sustain dialogue in the regions and with the state, each organization will need to build a structure that is sustainable over time, supported by a source of stable funding. Each region will want to develop a participation or membership structure that fits their local geographic and political constraints and has the necessary longevity to oversee and implement projects.
- **Engagement of the private sector:** While the public sector and the NGO community have engaged deeply with regional collaboratives, there is a lack of deep private sector engagement, despite different approaches to engage with businesses. Without across-the-board engagement on adaptation issues and initiatives from the private sector, the efficacy of these efforts will ultimately be hindered.
- **Greater engagement of elected officials:** Many local agency staff are eager to address climate adaptation in their jurisdictions, but they also frequently lack capacity and face competing priorities. It is difficult for staff to place adaptation high on the agenda when elected leadership may prioritize economic development and other immediate priorities. Greater engagement of elected officials and their active involvement is important for increasing public support. Expanding participation beyond the more progressive jurisdictions to a wide range of local governments and agencies representing rural and agricultural interests is another challenge.

Question: How do regional collaboratives work with both the state and local governments to aid in establishing climate adaptation and resiliency efforts? How could this process be improved?

- **Convening Regional Stakeholders:** To date, the most important local role of the regional collaboratives and ARCCA has been as a convener bringing stakeholders together. As communities around California are just beginning to understand the adaptation narrative and examine their risks and vulnerabilities, this conversation and exchange between stakeholders has been critical in each of the regions. Some regions are also actively working on funded projects through grants received from various funding organizations.
- **Adding the Regional Narrative to Key Documents:** A second key role for ARCCA is to ensure that the local/regional perspective is represented in emerging state climate adaptation initiatives, reports, and policies such as the Environmental Goals and Policies Report, Safeguarding California, the State Research Plan, and the SGC's Affordable Housing and Transportation grant program. The regional narrative and connection has been significantly improved in each document through a review and comment process with the respective agencies authoring the reports.
- **Supporting the California State Dialogue on Adaptation:** ARCCA was a major partner in planning for and presenting at the California Adaptation Forum in August 2014, a highly successful effort that brought together over 800 individuals representing agencies, organizations, cities, counties, and companies to discuss the latest adaptation issues facing Californian communities.
- **Participation in the National Adaptation Dialogue:** ARCCA members have been able to extend our "regional adaptation story" through participation in national events such as the National Adaptation Forum, New Partners for Smart Growth Conference, and the recent Sustainable Communities Leadership Academy held by the Institute for Sustainable Communities. Our goal is to encourage the creation of new regional climate collaboratives throughout the US. We will also attend and participate in panels at the National Adaptation Forum in Saint Louis in May 2015.

How to improve this process:

- **Institutionalize climate adaptation as a consideration in policy and funding documents.** Ensure all public expenditures for infrastructure and planning consider climate as an issue of growing impact over time.
- **Allocate greater funding and support for regions and local agencies to work on climate adaptation,** including funding and resources for a statewide downscaled climate impact study at a finer resolution than currently available. Develop resources and technical assistance for local governments, such as a clearinghouse to bring together all adaptation research and tools developed across state agencies.

We believe that our regional collaboratives will allow Californian communities to prepare for climate impacts more effectively and efficiently, through sharing dialogue, resources, funding opportunities, and best practices with one another. This spirit of collaboration and cooperation is part of California's unique identity and strength in overcoming past challenges, and is no less important today. Thank you again for the opportunity to provide information on ARCCA and the important role regional collaboratives can play in adapting to our changing climate in California.

Sincerely,



Krista Kline
ARCCA Chair
The Los Angeles Regional Collaborative



Larry Greene
ARCCA Vice-Chair
Capital Region Climate Readiness Collaborative



Cody Hooven
The San Diego Regional Climate Collaborative



Bruce Riordan
Bay Area Climate & Energy Resilience Project



Kerri Timmer
Sierra Climate Adaptation & Mitigation Partnership

Introduction to ARCCA

The Alliance of Regional Collaboratives for Climate Adaptation (ARCCA) was formed in early 2012 out of the urgent need to prepare California's urban centers for the emerging impacts of climate change, including extreme storm events, heat waves, droughts, and sea level rise. ARCCA currently brings together five Regional Collaboratives—from San Diego, Los Angeles, the San Francisco Bay Area, Sacramento, and the Sierras — that are coordinating and supporting local climate partners in projects to enhance public health, protect natural. ARCCA will add additional California regions as they develop their own capacity and collaborative structures. At the same time, we will widen and deepen our joint state/regional agenda to make our urban centers stronger, more prosperous, and more sustainable.

ARCCA was formed by regional climate adaptation leaders in California's four largest urban centers in conjunction with the Governor's Office of Planning and Research. ARCCA's current membership includes the San Diego Climate Collaborative, the Los Angeles Regional Collaborative for Climate Action and Sustainability (LARC), the Bay Area Joint Policy Committee, the Capital Region Climate Readiness Collaborative, and the Sierra Climate Adaptation and Mitigation Partnership (Sierra CAMP). These regional groups include a wide range of public, private, non-profit, and academic institutions.

ARCCA's agenda for accelerated action includes two parallel tracks

1. ARCCA members are sharing information and intelligence among regions on best practices and lessons learned. We are identifying each region's most innovative and successful strategies and then determining how they could be adapted to another region's particular needs. This will reduce reinventing of the adaptation "wheel" while preserving regional identity and context.
2. The four regions are working collectively with state agencies to create a formal partnership that will make the most efficient use of our limited resources and streamline state and regional adaptation assistance to local governments. We see initial opportunities for on-the-ground state/regional joint initiatives on climate adaptation research, funding, training, and communications, with the great potential to create a long-term partnership around policies and programs that will benefit all Californians.

ARCCA Principles of Collaboration

- Composed of collaboratives organized to address climate in particular regions of California, ARCCA is dedicated to helping the state prepare for impacts of climate change
- Through collaboration each region will accomplish more than by working alone and can better help the State succeed in protecting Californians
- ARCCA will generally operate by democratic principles and seek to reach consensus as much as possible through dialogue and negotiation
- Recognizing that regions have different climate adaptation priorities, ARCAA will focus efforts where there is common ground
- Each collaborative will share information that it believes will be valuable to other regions, including pilot projects and case studies, best practices, funding models and partnerships
- We will seek to be inclusive of other regions in the state interested in participating and be a resource to those outside California where appropriate
- We will strive to find common objectives to develop joint funding opportunities
- Our common voice will increase the credibility and effectiveness of our efforts to inform state and federal policy, guidance and resource allocation

ARCCA Principles of Adaptation¹

Context

Climate change is happening now, and is expected to accelerate in the years ahead. California's economy, infrastructure, public health and natural systems will be significantly impacted by extreme storm events, flooding, wildfire, heat waves, loss of water supply, air quality degradation and sea level rise. We are facing a historic governing challenge from climate change. A \$2 trillion annual economy and the needs of nearly 40 million residents ride on the outcome of the state's preparations and response.

California is already enacting an initial set of measures intended to prevent, prepare for, and adapt to climate change. While these efforts are an encouraging and positive sign, the measures are spread across a variety of sectors and agencies, and encompass a wide range of initial strategies. Reducing our risks and increasing our resiliency to the changes ahead will require a new and unprecedented degree of collaborative action throughout California. We must begin now to encourage this level of cooperation, starting with a shared set of goals and principles that allow us to balance economic, social and environmental needs as we seek to align state, regional and local governments, and bring them together with community organizations, businesses and other key stakeholders for the benefit of all Californians.

Principles

Work Within the Appropriate Scale and With Meaningful Partners

1. Focus on the Regional Level

Communities are already bound together at a regional scale by shared geography and mutual reliance on certain resources. Additionally, local and regional adaptation efforts are more likely to have common goals, and be more nimble in application than efforts across broader, less connected geographic areas. For these reasons communities should work together inter-regionally on adaptation. All of these efforts should be in coordination with state and federal agencies active in this area to preserve resources, avoid duplication, and align with existing jurisdictional authority (MPOs, COGs, Water Districts, IRWMPs, AQMDs, etc.).

2. Consider Health, Safety, and Equity of all Californians

Adapting to climate change is fundamentally about protecting people and the communities and resources we rely upon. Actions to increase resiliency and reduce risk must prioritize the health and safety of all Californians, especially our most vulnerable, by devising solutions that simultaneously encourage economic growth, improve environmental quality, and increase opportunity for all.

3. Empower Collaboration Across All Sectors and Levels of Leadership

Empower action by establishing and/or expanding traditional and non-traditional alliances and networks to accelerate effective and durable problem-solving (e.g., between/among public and private resource managers, scientists, decision-makers); share knowledge openly and actively; regularly engage the public on the science as well as solutions; and build capacity for local community action. This includes

¹The introductory text and principles are adapted from concepts, and language utilized in a number of key adaptation related resources and reports; The 2014 [Safeguarding California Plan](#), the 2014 Little Hoover Commission [Report on Climate Change Adaptation](#), National Wildlife Federation's [Climate Smart Principles](#) as framed by Point Blue Conservation Science, the [Ahwahnee Principles for Climate Change](#), the California Adaptation Forum [Action Framework](#), 2014 [California Economic Summit](#), [Resilient Rhode Island Act of 2014](#) (2592), the 2014 [New York Community Risk and Resiliency Act](#), and content taken from ARCCA's various comment letters to state agencies

developing peer-to-peer horizontal linkages and vertical linkages across levels of leadership and related geographic areas to ensure economies of scale and consistency of effort.

4. Provide Consistency at the State Level

The State of California should provide access to the best-available climate science, standardized sources of climate change information, and sophisticated risk assessment tools which help local governments, regional agencies and other climate practitioners take climate action to prepare for the impacts of climate change and make their communities more resilient to its effects.

Employ Key Strategies

5. Utilize Existing Policy Mechanisms

In order to minimize disruptions and maximize existing institutional capacities in the face of change and uncertainty, adaptation should be integrated throughout existing local, regional and state plans, policies and decision-making, rather than creating new stand-alone policies.

6. Prioritize Multiple Benefits

Because adapting to climate change will require significant resource investments, great changes to the status quo, and engagement of people from all sectors of society, it is important to prioritize those actions that yield the greatest collective benefits. For example; adopt landscape or watershed scale analyses; focus on natural system function and services; establish a preference for green or nature-based responses to the maximum extent feasible; evaluate changes in carbon stocks and give preference to actions that also help reduce the source of climate change – GHG emissions.

7. Employ Forward-Looking, Adaptive Management Approaches

In order to realize timely, effective responses to continual change in climate, ecology and economics, as well as the evolution of our understanding due to new research and data, employ an adaptive management framework with regular monitoring and reassessments with a meaningful time horizon, at least up to 2050.

8. Invest In Resiliency

Public dollars, as well as private, should be prioritized to invest in developing state, regional and local policies and projects that reduce our risks and increase our resiliency. Mitigating our GHG emissions and preparing for the impacts of climate change through targeted and smart investments can give California a competitive advantage over other states that are ill-prepared to deal with climate change and its effects.



Climate Adaptation in the San Diego Region

Update for ARCCA Meeting – 12.12.14

Several key activities form the basis for climate adaptation work in the San Diego region:

(1) **Climate Collaborative** – www.sdclimatecollaborative.org

Key activities of the Collaborative in second half of 2014 include:

- 6 new members in 2014
- Monthly Steering Committee meetings and Quarterly Network meetings
- Engaging in the California Adaptation Forum
- Convening the sea level rise working group
- Monthly newsletter
- Hosting trainings including a sea level rise training with USC Sea Grant
- Supporting individual members' adaptation/resilience efforts
- Support/coordination for various regional climate mitigation and adaptation projects

(2) **County Multi-Jurisdictional Hazard Mitigation Plan Update**– ICLEI-Local Governments for Sustainability, in partnership with The San Diego Foundation and Scripps Institution of Oceanography (SIO), is providing technical assistance and stakeholder engagement around the incorporation of climate change impacts and adaptation in the 2015 update to the San Diego County Multi-Jurisdictional Hazard Mitigation Plan. Deliverables the project will use to inform the County's process include case study and best practice research, training workshops, stakeholder engagement as well as climate science delivery and modeling from SIO. Most recently, ICLEI hosted a workshop in September 2014 to engage stakeholders in the planning effort, before the plan is submitted to FEMA for input in early 2015. The project has a website up here:

http://www.icleiusa.org/climate_and_energy/Climate_Adaptation_Guidance/hazard-mitigation-planning-emergency-managers-as-partners-in-climate-adaptation

(3) **Individual agency/government-level planning to adapt to climate change.** An increasing number of jurisdictions in the San Diego region are incorporating preparedness into their own climate action planning processes and documents, for example:

- [City of Chula Vista](#)'s adopted municipal climate adaptation strategies
- [Port of San Diego](#) adopted a Climate Action plan, and is now working on an adaptation plan and living shorelines pilot project
- [City of San Diego](#) has completed a draft revised Climate Action Plan which is expected to be finalized in 2015
- [San Diego County Water Authority](#) completed a Climate Action Plan in March 2014
- [Tijuana River National Estuarine Research Reserve](#)'s (TRNERR) Climate Understanding & Resilience in the River Valley
- [Imperial Beach](#) –Received \$300k grant to conduct a vulnerability assessment and support modeling (CoSMoS)
- [Solana Beach](#) – Developing a Climate Action Plan and developing a Local Coastal Plan that

considers climate change impacts with funding from

- Both the cities of [Carlsbad and Del Mar](#) have been recommended for 2015 funding to update their Local Coastal Plans to include assessment of, and policies for, adaptation to sea-level rise

(4) **Launch of CivicSpark in San Diego.** The San Diego Regional Climate Collaborative is the CivicSpark regional partner for the San Diego region and has helped to recruit local government participation and assist in placement of AmeriCorps members to help cities pursue projects that promote clean energy, reduce greenhouse gas emissions, safeguard against climate change impacts, or implement sustainable community strategies. Three AmeriCorps members have been recruited to work on a variety of projects with cities throughout the County such as greenhouse gas emissions inventories, alternative transportation projects, and climate action planning.

Upcoming priorities in 2015

- Supporting collaboration among cities on sea level rise projects through working group and implementation of State grants
- Completing hazard mitigation project with ICLEI and sharing lessons learned
- February 2015 facilitation workshop with NOAA, Climate Collaborative and TRNERR
- Supporting individual cities' adaptation work through collaboration, coordination, workshops and technical assistance
- Completing an economic analysis to determine resilience of the private sector in the region
- Support pipeline of projects for CivicSpark AmeriCorps members



Expanding Membership

The Sacramento Tree Foundation and Valley Vision, a local non-profit consultancy, have joined the Capital Region Climate Readiness Collaborative (CRC) as members this year. CRC plans to undertake a membership campaign in the coming months.

Business Resiliency in the Capital Region

Valley Vision is leading an initiative to help reduce the risk and economic impacts of weather-related disasters to businesses in the region. Key deliverables will include a toolkit of interventions to help businesses reduce risk and enhance business resiliency. The project will create a comprehensive assessment of risks facing the region; increase business and policymaker awareness and understanding of risks and their associated consequences; and conduct a strategic outreach effort to engage leaders from business, government, and the community to enhance planning for economic resiliency. Founding partners are Valley Vision, the Sacramento Metropolitan Air Quality Management District (SMAQMD), and the CRC. For more information about the initiative: <http://bit.ly/1vmmneW>

CivicSpark in the Capital Region

CivicSpark, a Governor's Initiative of AmeriCorps launched by the Local Government Commission, is working with CRC members on projects to increase regional climate resiliency. Two CivicSpark members are conducting a vulnerability assessment for the region's transportation network, with the goal of incorporating the findings into SACOG's update of its Sustainable Community Strategy. Another project focuses on developing a regional plan to increase the urban tree canopy for disadvantaged communities, with multiple benefits for public health, air quality, energy savings, housing value, and more. The third active project will help the City of Davis implement their One Cool City Campaign, specifically focused on climate mitigation and adaptation activities that address consumption, transportation, and energy.

Coordinating a Regional Response to Cap and Trade Funding

The SMAQMD and Valley Vision have been coordinating regional stakeholders to effectively respond to the 2013-2014 funding allocations from the Greenhouse Gas Reduction Fund. With multiple state agencies each responsible for grant processes, coordination is key to helping cities and counties, agencies, and non-profit organizations to design projects that maximize benefits for disadvantaged communities. Proposed projects include increasing urban forestry, electrifying bus routes, and developing an EV car share program.

Understanding Barriers to Climate Adaptation in the Water Sector

Working with a UC Berkeley graduate student, the CRC conducted a needs assessment of water agencies in the Sacramento region. Through stakeholder interviews and a review of planning documents, the assessment analyzed local water agencies' current understanding of climate risks for reliable water supply, and identified critical knowledge gaps and barriers to incorporating climate change into long-term planning. To read the report: <http://bit.ly/1w4lmiy>

Quarterly Meeting

The CRC is hosting Quarterly Meetings with the goal of bringing together regional stakeholders to increase understanding of critical issues, provide updates, identify opportunities for support and collaboration, and determine future goals and direction for the CRC. The first official Quarterly Meeting in October featured updates on climate impacts to water and wildfires and a number of updates on adaptation activities and opportunities in the Capital Region. Forty-four people from across the region, representing community organizations, non-profit organizations, academia, and local and regional governments were in attendance. The next Quarterly Meeting, scheduled for February, will bring hospital administrators and public health experts together to discuss how the healthcare sector is responding to the challenges and risks of climate change.

***Los Angeles Region Climate Action Initiatives, Programs, and Efforts
ARCCA All-Hands Meeting, December 12, 2014, San Diego***

LOCALIZED RESEARCH AND DATA

GHG Emissions Inventory

LA County emissions inventory by city and by industry was released through our sub-regional Councils of Governments and is available on the LARC website.

Los Angeles Downscaled Climate Modeling

2 km scale downscaled data analysis for Los Angeles climate impacts by Dr. Alex Hall (UCLA, IPCC). Projections for years 2040 to 2060 for heat and local snowpack completed. Precipitation study released December 2014 and available on the Climate Resolve website; Santa Ana wind & Wildfire to be released in 2015. Soil moisture and Sierra Nevada snowpack studies to be completed, as well.

Interactive Web-based Energy Atlas for the County of LA

This LARC/CCSC/County of Los Angeles project combines an analysis of granular energy consumption data with an analysis of LA-specific energy and climate best practices and GIS technologies. The result will be a web-based energy atlas that can inform energy efficiency and climate action plans and policies across the region. This tool will provide detailed information about Los Angeles County energy consumption, greenhouse gas emissions and climate action strategies overlaid on census data in an interactive web-based format. Project funded by the County of Los Angeles and will be launched June 2015.

COASTAL

Regional AdaptLA

USC Sea Grant, with partners including LARC, launched a new project – *Regional AdaptLA: Sea Level Rise and Coastal Impacts*. This multi-year project is focused on providing planning guidance, building regional capacity, and linking the best available scientific tools with local governments as they plan for the impacts of sea level rise. Eleven coastal municipalities and L.A. County have joined the initiative, as well as a strong coalition of support organizations including LARC, Heal the Bay, the Santa Monica Bay Restoration Commission and others. Funding support is provided by the State Coastal Conservancy and the Ocean Protection Council.

- The project was launched at two public informational forums with over 100 attendees. USC Sea Grant partnered with L.A. County Department of Beaches & Harbors for the June open house held in Marina del Rey, an area at-risk for coastal flooding. For the second open house, USC Sea Grant targeted the more socially vulnerable community of Wilmington and the surrounding Harbor region, and partnered with the community-based environmental justice organization Communities for a Better Environment. The event was conducted in both English and Spanish with materials provided in both languages.
- In November, USC Sea Grant hosted the first in a series of professional development workshops for local and regional government planners and managers. The ability to build and maintain partnerships was a main goal of the workshop, which drew attendees from city governments across the region, including Santa Monica, Redondo Beach, Malibu, Los Angeles city and county, Long Beach, Hermosa Beach, El Segundo, and Torrance. Attendees discussed the various sea level rise planning efforts underway across the region, learned

about sea level rise science and the forth-coming CoSMoS modeling, and participated in a training on vulnerability assessments.

For more information: <http://dornsife.usc.edu/uscseagrant/adaptla/>

Southern California Coastal Impacts Project – Outreach on the CoSMoS Model

USC Sea Grant is also leading a wider Southern California capacity building and outreach project. USC Sea Grant partnered with the US Geological Survey and the California State Coastal Conservancy to secure over \$1 million to support downscaled sea level rise and coastal storm modeling for Southern California and capacity building for local communities. USC Sea Grant is tasked with providing the outreach, communication and training to ensure the model meets user needs and effectively supports policy and planning decisions. This includes in-person process and technical workshops in the 4 sub-regions of Southern California – Santa Barbara/Ventura, Los Angeles (in concert with Regional AdaptLA), Orange County, and San Diego – as well as a webinar series to enhance capacity and engagement.

- USC Sea Grant held its first sub-regional workshop in the San Diego region in October. USC Sea Grant partnered with the San Diego Climate Collaborative, the San Diego Foundation and the Tijuana River National Estuarine Research Reserve to deliver the workshop, which included 55 planners, leaders, and consultants working on sea level rise planning across San Diego. USC Sea Grant tailored the workshop to fit regional needs, including sea level rise modeling and tools comparison, an overview of the state policy and regulatory framework, adaptation planning process, as well as breakouts to spur regional collaboration.
- Other workshops are planned for Santa Barbara/Ventura and Orange County in early 2015. The webinar series will also commence in early 2015. For more information: <http://dornsife.usc.edu/uscseagrant/sccip/>

Education and Teacher Engagement on Climate Change

USC Sea Grant engages teachers and students about the science of climate change and the associated impacts on coastal communities. USC Sea Grant collaborated with Aquarium of the Pacific staff at NOAA Day to provide a teacher workshop with hands-on lessons to utilize in classrooms, and with the L.A. Unified School District to provide teachers with hands-on experiences to understand the impacts of sea level rise on beaches. USC Sea Grant also collaborated with King Tides Initiative to develop a lesson for educators to enable them to integrate information on sea level rise and to engage students in citizen science. USC Sea Grant is currently working with the Southern California Aquarium Collaborative to develop climate change curriculum for teachers. For more information: <http://dornsife.usc.edu/uscseagrant/king-tides/>

HEAT AND PUBLIC HEALTH

Public Health Training Modules

The LA County Department of Public Health partnered with the UCLA School of Public Health to create training modules and conduct targeted outreach on the nexus between climate change impacts and public health issues. These training materials are available on the LARC website.

ENERGY

South Bay Clean Power [Community Choice Aggregation]

The cities in the LA region's south bay are exploring the feasibility of creating a JPA for a Community Choice Aggregation. To date, 3 cities have passed resolutions to join in this effort. Outreach is occurring with the other dozen cities, as this effort gains very real traction.

PORTS

Port of Long Beach Climate Change Adaptation and Coastal Resiliency Strategic Plan

Phase 1 of the Port's Climate Change Adaptation and Coastal Resiliency Strategic Plan (CRS Plan) has been completed. This phase comprises the Port's climate impacts study, which includes an assessment of the current science available on climate change, a robust asset inventory of all infrastructure owned or leased by the port, a vulnerability and risk assessment of those assets by system, an assessment of the 3 sections of the Long Beach breakwater, and a series of sea level rise inundation maps assessing 6 different SLR scenarios within the port's harbor district. Phase 2 has recently commenced and will encompass the writing and implementation of the actual CRS Plan, including the associated mitigation and adaptation measures to be taken at the port to ensure business continuity now and into the future.

TRANSPORTATION & LAND USE

The South Bay Cities Council of Governments (SBCCOG) Climate Action Plans and Mobility Matrix - The SBCCOG and its partners [Metro as the lead applicant; San Diego State University; and LARC] has received SGC funding to enable the development of a Sustainable South Bay Transportation and Land Use Implementation Framework and to implement the Sustainable South Bay Strategy (SSBS). The SSBS is a policy framework for mutually reinforcing land use and transportation initiatives that have been field tested and are now ready for implementation by cities and incorporated into the regional policy framework. The new tools that will be developed consist of Climate Action Plan transportation and land use chapters that identify greenhouse gas (GHG) emissions reduction strategies at the sub-regional and local levels, a Sub-Regional Implementation Toolkit to provide technical assistance for local level adoption of GHG reduction strategies and a Mobility Matrix for the South Bay, which includes evaluation and screening criteria for identifying priority mobility projects.

TYING IT ALL TOGETHER...

LA Regional Framework for Climate Action - LARC, in consultation with Metro, has received funds through the Strategic Growth Council Sustainable Communities Planning Grant and Incentives Program to perform regional climate action work. The Framework is a structure for climate action. It will include: a comprehensive survey of existing localized research, information, practices, ordinances, policies and guidelines (called the "State of the Region"); recommended Priorities and Actions based on climate change mitigation responsibilities and local climate impacts; relevant Best Management Practices; a discussion of Roles and Responsibilities; an analysis of Financing and Funding; and, an assessment of tools and mechanisms to be developed for local practitioners and decision-makers to better enable them to take climate action. The Framework is a 3-year project, and began in October 2013.

To date LARC has promulgated an engagement plan and has developed a methodology to determine regionally relevant climate action strategies. In addition, LARC will have a final-for-now State of the Region report, which includes all of the current locally relevant data, information, and research on climate change impacts in the LA region. Immediate next steps are to promulgate recommended Priorities and Actions for review by local stakeholders. This process will run through June 2015.



BAY AREA CLIMATE & ENERGY RESILIENCE PROJECT

Bay Area Report — December 12, 2014

Selected Highlights — Current and Planned Activities:

Climate Readiness Institute Workshop

Conducted December 9th workshop on best roles for cities and counties for adaptation and GHG reduction. Featured case studies/discussions with staff from San Mateo County and City of Berkeley to explore key actions by those entities and what they need from state, region, private sector, etc. to succeed. Topics: Heat, water, sea level rise and GHG reduction.

Climate Readiness In Coastal Cities — Sustainability Research Network

BACERP is providing key practitioner support to UC Berkeley, Stanford, and UC Davis proposal to NSF for Sustainability Research Network. Held reverse site visit 3-hour finalist interview on 12/8 for possible \$12M 5-year grant. Key topic areas: Flooding (sea level rise, storms, tides), water supply, GHG reduction, governance, and equity.

Bay Conservation and Development Commission

- Rising Sea Level Commissioner Working Group will look at projects through the lens of “total water level,” the impacts of sea level rise on public access to the bay, and how to talk about sea level rise with the public.
- Bay Fill Policies Commissioner Working Group will work with an advisory group to determine whether and how to amend BCDC’s current Bay fill policies to ensure that appropriate fill is allowed in the Bay as a way to adapt to rising sea level (hardscape and softscape). NOAA grant will help fund staff.
- Staff will take the sea level rise/ART show on the road. Will visit all 9 countywide planners meetings to discuss ART and shoreline resilience planning.
- Staff is working to expand the ART program into northern Contra Costa County.
- Staff is taking part in Natural Resources Agency project to ensure coordination/collaboration among all coastal zone management agencies.
- Staff is working with Coastal Conservancy and ABAG to drive shoreline resilience program around the Bay.

SFPUC's Guidance for Incorporating Sea Level Rise into Capital Planning

Excellent new document from City/County of San Francisco turns climate science into practical guidance for capital planning.

Bay Area Air Quality Management District — Regional Climate Protection Strategy

BAAQMD is embarking on major initiative to develop 9-county GHG strategy to meet the tough 2050 goal (80% below 1990 levels).

Transition in 2015 from BACERP to the new Alliance for Climate Resilience

JPC, Kresge Foundation, San Francisco Foundation and stakeholders are designing new ACR for the Bay Area in 2015.