



Integrated Climate Adaptation and Resiliency Program

Technical Advisory Council Quarterly Meeting Staff Report September 10, 2021

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Integrated Climate Adaptation & Resiliency Program

ICARP Programmatic Priorities

Under the direction of the Integrated Climate Adaptation and Resiliency Program (ICARP) Technical Advisory Council, and building off of the [ICARP Impact Report and 2020 Program Recommendations](#), ICARP staff advance a suite of programmatic priorities. Descriptions of, and updates on, these priorities are described through these quarterly staff reports.

Resilience Metrics and Measurable Outcomes

Building adaptation and resilience to an equal footing with the state's ambitious climate mitigation efforts requires a clear set of measurable resilience goals. ICARP serves as a venue to elevate current state resilience metrics and to identify critical gaps or areas of additional need and research.

Decision Support Tools and Guidance

ICARP develops and shares tools and guidance to support a community of practice on adaptation and resilience in California. Through the State [Adaptation Clearinghouse](#), ICARP supports integrated, science-based climate resilience decisions, planning, and implementation at all levels of governance.

Building Partnerships and Leveraging Resources

ICARP supports local and regional climate-resilient long-term recovery efforts through facilitation, collaborative partnerships, and technical assistance that help communities integrate long-term resilience into recovery efforts.

Funding and Financing

ICARP's work to scale funding and financing for climate resilience includes supporting state agencies with the integration of climate considerations in existing state programs and investments. ICARP also focuses on the role of the private insurance markets and identifying opportunities to align public and private activities that address climate impacts and support resilience.

Climate Equity and Vulnerable Communities

Climate equity and a focus on vulnerable communities is a core mandate for ICARP, both statutorily and programmatically as defined in [ICARP's vision and principles](#). Building on the Council's leadership to define [Vulnerable Communities](#), and in response to stakeholder needs, ICARP continues to fill critical gaps by developing resources and tools that support equitable adaptation action.

Challenges and Opportunities Necessitating Action

ICARP Staff and Council respond proactively to new and emerging issues and opportunities as they align with the ICARP core vision and principles. This includes building new partnerships and initiatives and providing guidance and support for partner efforts to respond in real time to local, regional, and state needs.

1. Resilience Metrics and Measurable Outcomes

Development of Resilience Metrics

Staff Lead: [Juliette Finzi Hart](#)

Background / Framing Context

California has long led the nation in climate action, both in reduction of greenhouse gases as well as in preparing for the impacts of climate change. To date, while many state and local agencies have indicators and metrics that identify their progress towards a specific climate action and resilience goal, there is no consolidated set of metrics that demonstrate the State's overall progress in reducing climate risk and increasing resilience.

Since its inception, the ICARP Council has recognized that a suite of comprehensive resilience metrics is vital to help the State understand where action is progressing and where further action is needed. Staff are working with the ICARP Council, state agencies, and interested stakeholders to catalogue existing resilience metrics and identify gaps where new resilience metrics are needed. The goal of the consolidated suite of resilience metrics is to build our collective capacity to track how we are reducing climate risk and increasing resilience across built, social-human and natural systems.

Summary of Major Deliverables

- Landscape review of the resilience metrics field (Completed)
- Collection of existing state agency metrics (Ongoing, Winter 2021)
- Resilience Metrics Development Process white paper (Ongoing, Winter 2021)
- Adoption of first set of resilience metrics (Ongoing, Winter 2021 / Spring 2022)

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### Updates for 9/10 ICARP Meeting

- ICARP staff continue to identify state agency resilience metrics through the 2021 State Adaptation Strategy update. Identification of these metrics will allow staff to identify potential gaps, which will inform subsequent Council discussion.
- ICARP staff continue to meet with non-state practitioners to understand the current field of practice and inventory different processes for measuring resilience.

### Looking Ahead

- ICARP staff are preparing a white paper that describes: the findings from the resilience metrics landscape review; work done to date to catalogue existing metrics; and identification of resilience metrics gaps. The paper will also propose a process for building a comprehensive suite of metrics. The white paper will inform the October and November ICARP Council working group meetings, with the goal of having an inventory of resilience metrics to discuss by the December quarterly council meeting.

### Follow-ups for Council

- Mark your calendars for ICARP Resilience Metrics Working Group meetings on Oct. 20, 1:00 – 2:30 and Nov. 18, 10am – 11:30am. Registration and meeting materials will be available on the ICARP Council meeting page on the ICARP website: <https://www.opr.ca.gov/meetings/tac/>

## 2. Decision Support Tools and Guidance Adaptation Clearinghouse

**Staff Lead:** [Nikki Caravelli](#)

### Background / Framing Context

Per ICARP’s enabling legislation, SB 246 (Wieckowski, 2015), ICARP is mandated to establish a clearinghouse for climate adaptation information. The Adaptation Clearinghouse is the State of California’s consolidated searchable database of resources for local, regional and statewide climate adaptation planning and decision-making. Resources for adaptation and a compendium of resiliency efforts in California are searchable and accessible at [ResilientCA.org](#).

### Summary of Major Deliverables

- Outreach and technical assistance to leverage resources (Ongoing)
- [ResilientCA Adaptation Planning Map \(RAP-Map\)](#), [Topic Pages](#), Featured Resources, and database maintenance and updates (Ongoing)
- Wildfire Resilience Plan Alignment Guide (Scoping)
- [2020 Adaptation Planning Guide](#) Integration and [Coastal Plan Alignment Compass](#) (Completed)

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Updates for 9/10/21 ICARP Meeting

- OPR kicked off development of a Wildland Urban Interface Best Practices Inventory, which includes a Wildfire Resilience Plan Alignment Tool (modeled on the Coastal Plan Alignment Compass). Staff are scoping stakeholder engagement and beginning to develop content.
- Staff updated the Equity and Environmental Justice page of the Adaptation Clearinghouse, now renamed to [Climate Equity](#), a priority identified during Fall 2020 engagement workshops. The page includes updated context on defining vulnerable communities, additional background and definitions, and equitable planning and community engagement guidance from the 2020 Adaptation Planning Guide.
- CA’s Fourth Climate Change Assessment Technical and Regional reports were uploaded.
- Intern Sidney Short implemented search feature updates, including simplifying the tag structure, revising search terms, and clarifying the search process with more explicit directions for users.
- Intern James Sedlak updated the [ResilientCA Adaptation Planning Map](#), which included adding additional town and county planning information, streamlining back-end processes, improving the user interface, and evaluating and proposing additional features for future consideration.
- Successfully hosted [five webinars](#) in the spring on how to use the Adaptation Planning Guide, highlighting a variety of state, local and regional partners’ case studies. The series engaged around 500 stakeholders across the state.

Looking Ahead

- Staff will identify opportunities to highlight and integrate the 2021 updated State Adaptation Strategy into the Adaptation Clearinghouse once finalized.
- The Investing in Adaptation Topic page will be assessed for update needs and opportunities.

Follow-ups for Council

- Please contact [Nikki Caravelli](#) to indicate interest in providing information and guidance for the Wildfire Resilience Plan Alignment Guide.
- Provide feedback on the RAP-Map and send updates on local and regional planning efforts for inclusion in the RAP-Map and Adaptation Clearinghouse database.

2. Decision Support Tools and Guidance (continued)

Planning and Investing for a Resilient California Guidebook Update

Staff Lead: [Nuin-Tara Key](#)

Background / Framing Context

[Executive Order N-19-19](#) calls for embedding physical climate risk into state investment decisions. Successful incorporation of physical climate risk into asset investment decisions requires the consistent application of climate science and downscaled risk projections into asset planning and investment processes. It further requires a similarly consistent decision-making framework to identify and prioritize climate adaptation actions.

To respond to EO-N-19-19, ICARP staff are updating the [Planning and Investing for a Resilient California Guidebook](#) (Resilience Guidebook, 2017) , initially developed in response to [Executive Order B-30-15](#). Revisions will include updates to the foundational science that underpins the Resilience Guidebook, as well as updating the adaptation decision-making framework to incorporate discussion of adaptation pathways.

Summary of Major Deliverables

- Develop an updated version of the Planning & Investing for a Resilient California Guidebook, to be hosted online in a living document format (ongoing, 2022).

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#### Updates for 9/10/21 ICARP Meeting

- Initial foundational science updates to the Resilience Guidebook incorporated input from an expert Scientific Working Group (SWG), as well as input from adaptation experts on how the guidance is delivered.
- Staff have updated the four-step process included in the Guidebook to reflect best practices in adaptation implementation.

#### Looking Ahead

- Refine the draft and work with agency partners to identify examples of state adaptation efforts.
- Agency partner and SWG review of the draft, including scientific clearance.
- Pending budget appropriations, hire ICARP Climate Science position to continue project and support agency implementation of updated guidance.

#### Follow-ups for Council

- None at this time.

### 3. Building Partnerships and Leveraging Resources (continued)

#### Community Planning and Capacity Building Recovery Support Function

**Staff Lead:** [Clay Kerchof](#)

#### Background / Framing Context

In partnership with Cal OES, OPR serves as the lead state agency on the Community Planning and Capacity Building Recovery Support Function (CPCB-RSF), which strengthens the adaptive capacity of local governments to plan for and implement long-term disaster resilience and recovery programs by coordinating information, technical assistance, and funding. CPCB is one of six Recovery Support Functions (RSF) established under [California's Disaster Recovery Framework](#), which is modeled after the [National Disaster Recovery Framework](#). OPR works to integrate climate adaptation and resilience policies into hazard mitigation, emergency management, and disaster recovery programs. In leading the CPCB-RSF, OPR staff is both building the capacity of the CPCB program as well as connecting and aligning it to other state agencies and programs that address disaster resilience and recovery. To extend the impact of the CPCB-RSF, the ICARP team will lead the development of a peer-to-peer learning network for long-term wildfire resilience and disaster recovery.

#### Summary of Major Deliverables

- Engage stakeholders from fire-prone and fire-affected localities and/or regions and solicit feedback on adaptive capacity and technical assistance needs for wildfire resilience and long-term disaster recovery policies and programs (Ongoing, Fall 2021).
- Convene local governments as part of Wildfire Recovery Peer Learning Network to build connections, share best practices, and build capacity on long-term wildfire resilience and recovery (Beginning late 2021).
- Produce case studies of community wildfire resilience and long-term recovery efforts informed by the peer learning network (Ongoing, Finalized by Spring 2023).



#### Updates for 9/10/21 ICARP Meeting

- Finalizing scope for the Peer Learning Network, with the consultation of interagency partners to build support and avoid duplication.
- Council voted to approve the partnership between ICARP and the Department of Housing & Community Development for the TAC to serve as the Citizen Advisory Committee for the Community Development Block Grant – Mitigation (CDBG-MIT) Program.

#### Looking Ahead

- Continue local and regional stakeholder engagement

#### Follow-ups for Council

- Please contact [Clay Kerchof](#) if you or local partners are interested in sharing needs and priorities for wildfire resilience and long-term recovery and/or interested in participating in a learning network.

### 3. Building Partnerships and Leveraging Resources (continued)

#### Technical Assistance for Integrated Planning

**Staff Lead:** [Juliette Finzi Hart](#) & [Nikki Caravelli](#)

#### Background / Framing Context

OPR ICARP and Planning staff provide technical advice and support, upon request, to local and regional governments in support of statewide planning objectives and requirements, such as safety and housing element General Plan updates, alignment between resilience and local hazard mitigation planning, climate adaptation and resiliency planning, and other regulatory requirements. A priority objective is to help local and regional governments across the state implement integrated planning concepts to achieve more holistic and effective climate-resilient outcomes.

#### Summary of Major Deliverables

- Local and regional workshops as requested (Ongoing)

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Updates for 9/10/21 ICARP Meeting

- Staff partnered with a number of local and regional governments to present on [SB 379](#) and related climate resilience planning topics, and to provide technical assistance to support local implementation. These engagement opportunities also help build awareness of ICARP and the Adaptation Clearinghouse.

Looking Ahead

- Plan integration workshops with other communities.

Follow-ups for Council

- If interested in holding a plan integration workshop in your region, please contact Nikki Caravelli (nikki.caravelli@opr.ca.gov).

4. Funding and Financing

FEMA Cooperative Technical Partners

Staff Lead: [Sarah Samdin](#)

Background / Framing Context

ICARP received a Cooperative Technical Partners (CTP) grant from FEMA to provide coordination support to align federal Hazard Mitigation Assistance (HMA) funding with state resilience goals. This 18-month partnership will identify projects that strengthen California’s portfolio of nature-based, social and environmental justice projects. Eligible project types include natural infrastructure to build coastal resilience, urban greening, wildfire mitigation, and transportation-related planning and implementation projects. With a specific focus on hard-to-reach priority project types, as identified by FEMA, these pilot projects will help shape a pipeline of projects that can be eligible for future FEMA funding.

ICARP, in partnership with CalOES, will provide technical assistance to state partners who are new to the federal HMA space, and help identify innovative projects for FEMA’s newest pre-disaster infrastructure funding program, [Building Resilient Infrastructure and Communities \(BRIC\)](#) program. This partnership will advance California’s climate resiliency goals, as well as the Governor’s priority of leveraging state and federal funding.

Summary of Major Deliverables

- Work with state partners to develop project pipeline for FEMA HMA funding (Ongoing)
- Develop case studies that document lessons learned and highlight challenges and opportunities with aligning state/federal priorities and programs (Ongoing, Spring 2022)
- Database feasibility study on public-facing local government risk mitigation database (Completed, June 2021)

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#### Updates for 9/10/21 ICARP Meeting

- OPR is working in partnership with Caltrans to identify potential transportation-related projects for the BRIC program.
- OPR is working with several Ocean Protection Council Proposition 68 grantees, who are in the early stages of their planning grants to develop phased project proposals for BRIC.

#### Looking Ahead

- On August 9<sup>th</sup>, FEMA released the Notice of Funding Opportunity (NOFO) for BRIC FY21. \$1 billion has been allocated to the second round of BRIC, double what was available in the first round. Notice of Intent (NOI)’s are due to CalOES by September 20<sup>th</sup>. OPR will continue to work with state partners to help flesh out potential projects for BRIC.
- California received \$484 million in funding for FEMA’s Hazard Mitigation Grant Program (HMGP) DR-COVID-19. OPR is exploring opportunities to align this funding with state resilience goals and programs.

#### Follow-ups for Council

- Please contact Sarah Samdin ([sarah.samdin@opr.ca.gov](mailto:sarah.samdin@opr.ca.gov)) if you have BRIC project concepts.

## 4. Funding and Financing (continued)

### CDI Climate-Safe Insurance Working Group Partnership

**Staff Lead:** [Juliette Finzi Hart](#)

#### **Background / Framing Context**

California’s changing climate has implications on the availability and affordability of insurance. [SB 30 \(Lara, 2018\)](#) created the CA Climate Insurance Working Group, which is charged with exploring innovative insurance strategies with the aim of reducing climate risk.

Given the shared programmatic goals of reducing climate risk, the Integrated Climate Adaptation and Resiliency Program (ICARP) and the California Department of Insurance (CDI) created a collaborative subgroup of the ICARP Council and the SB 30 Climate Insurance Working Group. This subgroup explores opportunities to improve community climate resilience using landscape-scale insurance-related mechanisms and strategies.

#### **Summary of Major Deliverables**

- Insurance primer that describes key insurance principles (Ongoing, Winter 2021)
- Planning primer that describes key planning principles (Ongoing, Winter 2021)
- Recommendations to ICARP Council on future research and identification of potential pilot projects (Ongoing, Spring 2022)

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Updates for 9/10/21 ICARP Meeting

- Insurance primer has been finalized
- Planning primer draft is being reviewed by sub-group members

Looking Ahead

- Present planning primer at Q4 TAC quarterly meeting for Council feedback.

Follow-ups for Council

- None at this time.

4. Funding and Financing (continued)

Prop 84 Wildfire Recovery and Resiliency Grants

Staff Lead: [Juliette Finzi-Hart](#) & [Clay Kerchhof](#)

Background / Framing Context

Prop 84 Wildfire Resiliency and Recovery Planning Grants are a collaborative effort between the Office of Planning & Research, the Strategic Growth Council, and the Department of Conservation. The grants support community wildfire resilience and recovery planning efforts in four California jurisdictions. Grantee activities vary depending on local context, need, and scale, but the overarching goals of the program are to: 1) support land use planning activities at the local and region levels that advance climate adaptation and resilience efforts specific to wildfire risk reduction; 2) advance local understanding and consideration of vulnerable communities in an adaptation context; and 3) support local or regional capacity building to incorporate climate adaptation and resilience into wildfire planning and recovery.

Summary of Major Deliverables

- Administer planning grants to wildfire-affected communities (Ongoing, Fall 2022)
 - Los Angeles County: Development of a holistic climate adaptation and planning strategy that includes an Integrated Wildfire Safety Program, comprised of a Unified Vegetation Management Plan and Countywide Community Wildfire Protection Plan. These will be used to inform the update of the General Plan Safety Element.
 - Sonoma County: Development of a comprehensive ordinance to manage forest resources, ensuring protection and stewardship of the beneficial uses of forest resources.
 - City of Ventura: Develop a Climate Action and Resiliency Plan that serves both as a technical document guiding used day-to-day by city staff and a visionary document to help the community understand the city's long-term direction.
 - Town of Paradise: Update of the Town's General Plan Housing Element and policies for the Landscaping Master Plan, as the community rebuilds for resilience following the catastrophic 2018 Camp Fire.
- Develop case studies and share lessons learned from grantees to encourage the nexus of resilience planning with wildfire recovery and resilience. (Not yet underway, Winter 2022)

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#### Updates for 9/10/21 ICARP Meeting

- All grants are active as of July 1, 2021.
- Grantees expressed interest in a Fall 2021 grantee convening to share out grantee progress, as well as challenges and best practices.

#### Looking Ahead

- Continue to work with grantees to hold fall convening.
- Explore including presentations from grantees at Q4 ICARP Council meeting

#### Follow-ups for Council

- None at this time.

## 5. Climate Equity and Vulnerable Communities

### Vulnerable Communities Platform

**Staff Lead:** [Lisa Hu](#)

#### Background / Framing Context

Building off the 2018 ICARP TAC definition of “vulnerable communities” in the context of climate adaptation, and in response to queries from a range of cross-sector stakeholders, OPR is developing an integrated platform to make this definition actionable for adaptation policy and investments decisions. The goal for the Vulnerable Communities Platform is to develop an open, accessible, and community-grounded platform that holistically identifies the communities most vulnerable to climate change.

Developing the ICARP Vulnerable Communities Platform consists of several workstreams: (1) background research synthesis, analysis, and comparison with existing policy guidance, vulnerability assessments and approaches & existing data platforms and tools; (2) convening an interagency state technical workgroup to knit together existing statewide data; (3) robust stakeholder engagement with vulnerable communities through listening sessions and pilot community partnerships, with ongoing input from frontline communities (details pending 2021 climate budget decisions); (4) technical assistance and support from ESRI; and (5) consistent integration and guidance on existing ICARP, OPR & SGC, and interagency programmatic work.

#### Summary of Major Deliverables

- Compilation of existing statewide datasets (Ongoing, Winter 2021)
- External draft beta platform launch (Ongoing, 2022)

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Updates for 9/10/21 ICARP Meeting

- Signed final MOU with ESRI for in-kind donation & technical support.
- Stakeholder meetings
- Landscape analysis on existing agency definitions, data platforms, and tools.

Looking Ahead

- Interagency technical workgroup kickoff planned for September 2021
- Scoping engagement process, pending budget/funding for stakeholder engagement activities

Follow-ups for Council

- Staff seek input from the Council on the following questions:
 1. What use cases does the Council recommend we explore for the initial buildout phase?
 2. If we host listening sessions focused on vulnerable communities across the state, what perspectives and communities does the Council recommend we include?

6. Additional Relevant Projects

California State Adaptation Strategy

Staff Lead: [Nuin-Tara Key](#)

Background / Framing Context

California state agencies are statutorily required to release an updated, comprehensive, state-level climate adaptation strategy every three years ([AB 1482, Gordon, 2015](#)). Previous strategies were released in 2009, 2014, and 2018. For the 2021 Update, the California Natural Resources Agency is partnering with OPR to coordinate the development of California’s 2021 State Adaptation Strategy. Past State Adaptation Strategy documents can be found [here](#).

The 2021 State Adaptation Strategy (Strategy) will set strategic directions for actors, sectors, and regions across California, outline specific and time-bound actions, and increase accountability through goals and metrics. This approach reflects the Administration’s broader effort to integrate and coordinate existing adaptation efforts by utilizing over-arching, intersectional priorities to drive action.

Summary of Major Deliverables

- Stakeholder engagement webinars to gather feedback on Strategy priorities (Completed, Summer 2021)
- Draft of Strategy for public comment and review (Ongoing, Fall 2021)
- Final draft of web-based Strategy launched, with accompanying summary print materials (Ongoing, Winter 2021)

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#### Updates for 9/10/21 ICARP Meeting

- An introductory webinar for the 2021 State Adaptation Strategy was held on May 26<sup>th</sup>. This webinar provided key background information on the Administration’s approach, timeline, and priorities for the 2021 Strategy. The Virtual Kick-off Webinar recording can be found [here](#).
- In June, CNRA and OPR-ICARP held 10 regional virtual workshops throughout the state to ensure the state’s Strategy reflects and reinforces regional priorities; draws connections among our collective efforts; and serves as a useful resource for all Californians. Workshop summaries and input will be posted on the [2021 Adaptation Strategy’s webpage](#).

#### Looking Ahead

- The Strategy will be released for public comment in Fall 2021.

#### Follow-ups for TAC Council

- None at this time.

## 5. Additional Relevant Projects (continued)

### The California State Adaptation Strategy's Extreme Heat Framework

Staff Lead: [Taylor Carnevale](#)

#### Background / Framing Context

Communities across the state are already impacted by rising temperatures and extreme heat poses significant threats to our public health and well-being, infrastructure, and natural systems. As a part of the 2021 update to the [State Adaptation Strategy \(Strategy\)](#), California is developing an Extreme Heat Framework. The state's last interagency, coordinated approach to extreme heat was released in 2013.

#### Summary of Major Deliverables

- Discussions with state agencies to catalogue ongoing or planned work preparing for extreme heat (Ongoing, Fall 2021)
- Development of Extreme Heat Framework (Ongoing, Winter 2021)

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Updates for 9/10/21 ICARP Meeting

- In March, July, and August, the Governor's Office of Planning and Research and the California Natural Resources Agency hosted three Extreme Heat Workshops. At these workshops, the state gathered participant input and expertise to ensure California takes the actions necessary to build resilience to the impacts of extreme heat events across built, natural, and social systems.
- Staff are meeting with state agencies to understand their respective efforts on extreme heat to inform the 2021 Extreme Heat Framework.

Looking Ahead

- The Extreme Heat Framework will be released in Winter 2021.

Follow-ups for Council

- None at this time.