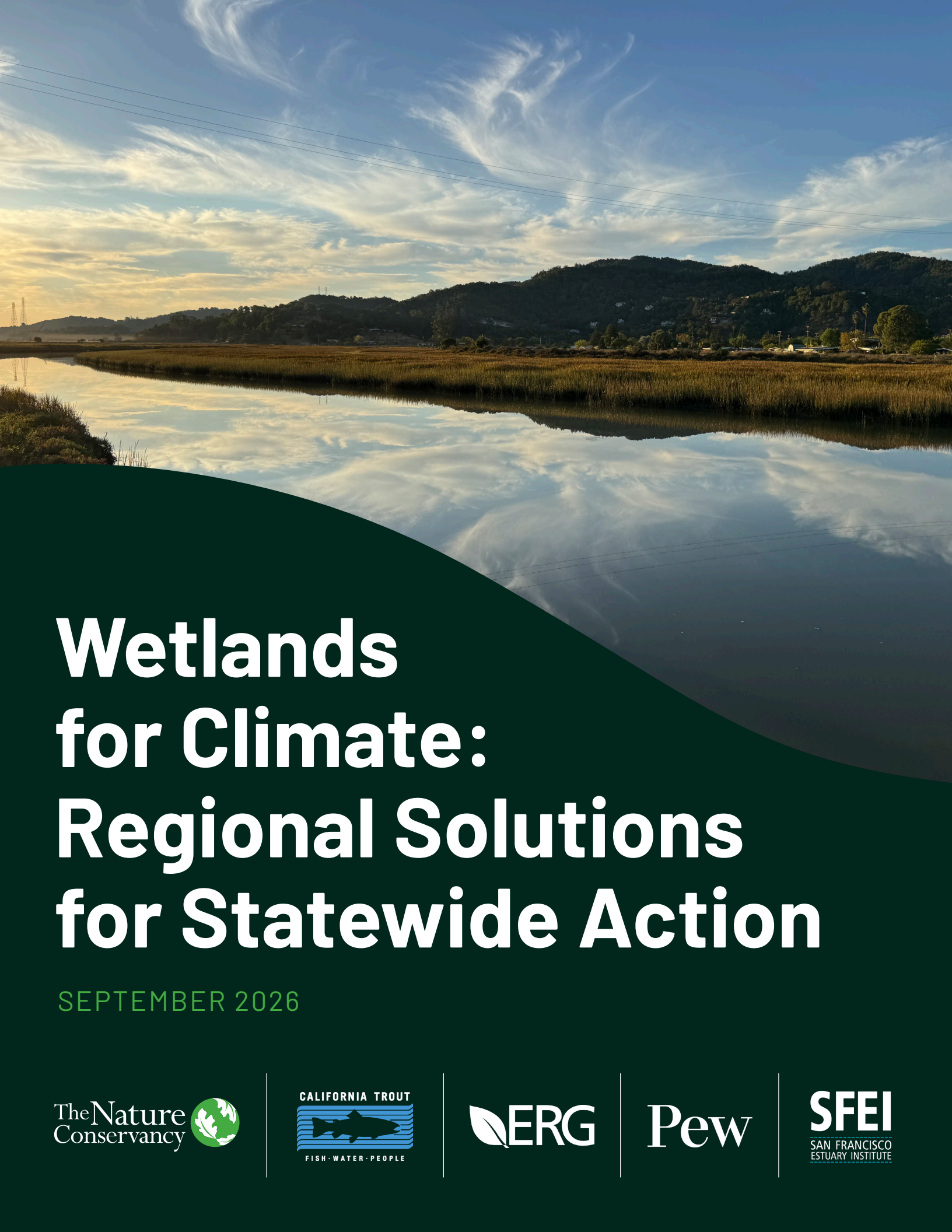




Wetlands for Climate: Regional Solutions for Statewide Action

SEPTEMBER 2026





WETLANDS FOR CLIMATE: REGIONAL SOLUTIONS
FOR STATEWIDE ACTION REPORT

Executive Summary

“Healthy and resilient wetlands are vital to meeting California’s climate goals. To achieve these goals, we must increase the pace and scale of wetland restoration and conservation. Cross-region learning, problem-solving, and collaboration, through efforts like the Wetland for Climate Partnership, are key to unlocking these opportunities.”

Clesi Bennett, California Natural Resources Agency

California’s coastal and deltaic wetlands are among its most valuable climate assets, yet more than 90 percent of the state’s historic wetlands have been lost. To help reverse the dramatic loss of this critical natural resource, California has built one of the most ambitious wetland and climate policy frameworks in the country. Initiatives such as Assembly Bill (AB) 1757, the California Air Resources Board’s (CARB) Scoping Plan for Achieving Carbon Neutrality (Scoping Plan), the California Natural Resources Agency’s (CNRA) Pathways to 30x30, and the \$10 billion Proposition 4 climate bond together recognize wetlands as fundamental contributors to the state’s climate, resilience, and biodiversity goals, and have meaningfully expanded the resources available to advance them. Even given these efforts to meet California’s ambitious goals, there is an urgent need to increase the pace and scale of climate-focused wetland restoration and management projects.

The Nature Conservancy, the San Francisco Estuary Institute, Pew Charitable Trusts, and California Trout created the Wetlands for Climate (W4C) Partnership to help close the distance between state commitments and on-the-ground project implementation. The Partnership serves as a sustained convening and learning platform for the wide range of partners doing wetland work across the state: state and local

agencies, community-based organizations, non-governmental organizations (NGOs), academic institutions, Tribes, and other wetland practitioners. The Partnership strives to understand progress and challenges of wetland projects across California’s regions and develop strategies to improve outcomes at the pace the state’s climate goals require.

This report synthesizes the work of the Partnership over the last two and a half years. The report presents findings from a series of in-depth engagements with subject matter experts and practitioners—including a series of workshops held across five California regions between 2024 and 2026, smaller focused discussions with state and federal agencies, and ongoing conversation with practitioners and agencies implementing wetland restoration projects. This report highlights what is working, names the barriers that persist, and points to the most promising opportunities to close the gap between California’s wetland commitments and on-the-ground delivery.

Across this work, four interconnected challenges, described on next page, emerged consistently. In each, the state has made strides to overcome these challenges, creating a clear opportunity to build on what is already working.





Funding. A significant proportion of project funding for nature-based solutions flows through competitive grants, which presents challenges for wetlands projects which are often multi-phase and require maintenance and adaptation over time. Additionally, grant-based funding leaves ongoing monitoring, stewardship, and workforce development chronically underfunded. Recent investments—Proposition 4 chief among them—and a growing state recognition that restoration requires sustained, lifecycle funding—mark important progress. There are also a growing number of regional models that are pioneering new models of funding, such as the North Coast Resource Partnership (NCRP), a long-standing collaboration among North Coast counties, Tribes, and local partners that pools and administers state and federal funds on behalf of the region. The NCRP illustrates how coordinated, aggregated funding can improve sequencing and outcomes by allowing a single regional entity to prioritize across projects and distribute resources to local implementers rather than leaving each to compete on its own. The state has an opportunity to learn from and support successful regional funding models for wetlands projects and design funding programs that address wetland needs across the full project lifecycle.



Permitting. Restoration projects routinely navigate permitting and regulatory requirements across multiple agencies with the process taking on average two to five years. The state has made concerted efforts to address these bottlenecks through programs and tools such as Cutting the Green Tape, the Statutory Exemption for Restoration Projects, and the Restoration Management Permit. Workshop participants discussed how these tools have benefited their projects, particularly when paired with dedicated coordination capacity. They also identified ideas to make predictable, efficient permitting the norm rather than the exception through regional permitting hubs, sustained investment in regulatory staff capacity, more consistent application of existing tools, and adaptive management built directly into permits.



Monitoring. Monitoring remains poorly coordinated across regions, limiting comparability and often omitting key co-benefits such as carbon sequestration and flood-risk reduction. Momentum is building through

regional programs such as the San Francisco Estuary Wetlands Regional Monitoring Program and statewide forums like the California Wetland Monitoring Workgroup. There is an opportunity to connect these efforts into an integrated statewide framework built on existing regional programs, anchored by a shared set of metrics with room for local adaptation, and supported by dedicated, multi-year funding.



Governance. Underlying the other three challenges is governance: the coordination capacity needed to align partners, priorities, and resources across jurisdictions. In many regions, regional entities, community-based organizations, and local agencies support coordination functions through existing partnerships or informally. However, without the stability, authority, and formal connection to state decision-making, these coordinating entities often must draw from their own resources to sustain coordination and work in silos within jurisdictions. Regional partnerships such as the NCRP and the Monterey Bay Climate Adaptation Action Network (MBCAAN) demonstrate the value of coordinating at this scale. When adequately resourced, regional organizations can align partners, prioritize projects, and connect local implementers to state and federal programs in ways individual organizations cannot. There is an opportunity to formalize and provide resources to support existing regional governance structures or help initiate new coordinating entities, through dedicated, multi-year funding and structured state-regional partnerships.

These findings point to a consistent theme: the solutions California needs to accelerate the pace and scale of wetland restoration and management are already visible in its regions. Models like the NCRP, the Wetlands Regional Monitoring Program, MBCAAN, and the Los Cerritos and Staten Island restoration projects (all highlighted within the report) show what becomes possible when funding, permitting, coordination, and partnership align. The central opportunity is to scale successful efforts, in partnership with the regions, rather than build new structures from scratch. The W4C Partnership can play a pivotal role in connecting regional innovation to statewide practice, supporting learning across regions, and helping translate the patterns emerging on the ground into state policy, funding, and coordination decisions.

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SUGGESTED CITATION :

Pietri, D., L. Lowe, P. Felix, M. Passero, A. Mann, P. Wallingford, A. Drici, L. Vaughn, C. Grosso, R. Hayden. 2026. *Wetlands for Climate: Regional Solutions for Statewide Action*. The Nature Conservancy, Sacramento, CA. 53 pages.



WETLANDS FOR CLIMATE: REGIONAL SOLUTIONS
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ACKNOWLEDGMENTS

The authors and Wetlands for Climate Partnership gratefully acknowledge the regional and state partners whose knowledge, leadership, and relationships made this work possible.

We especially thank the regional partners who helped shape and convene the workshops, identify participants, develop regional case studies, and ground the discussions in the distinct opportunities and challenges facing wetland restoration across California:

- **North Coast:** Analise Rivero and Ashley Shannon, CalTrout; Karen Gaffney, North Coast Resource Partnership
- **San Francisco Bay Area:** Heidi Nutters, San Francisco Estuary Partnership
- **Sacramento–San Joaquin Delta:** Campbell Ingram, Sacramento–San Joaquin Delta Conservancy
- **Central Coast:** Emily Franc, Monterey Bay Climate Adaptation Action Network (MBCAAN); Kevin O'Connor and Paige Siegel, Central Coast Wetlands Group
- **South Coast:** Karen Bane, California Coastal Conservancy; Eric Stein, Southern California Coastal Water Research Project

We also thank Clesi Bennett and the California Natural Resources Agency for their guidance and engagement throughout the Partnership process, and for helping connect the findings of this work to California's broader wetland, climate, and nature-based solutions priorities. We also want to especially thank Sydney Chamberlin, Peter Van De Burgt, and Megan Cleveland from TNC for their dedication, insights, and guidance.

Finally, we are grateful to all workshop and convening participants who shared their experiences, ideas, and candid perspectives. Their contributions form the foundation of this report.



WORKSHOP AND CONVENING PARTICIPANTS

The following organizations participated in one or more Wetlands for Climate Partnership workshops, convenings, or related discussions held between 2024 and 2026. Participation does not necessarily indicate endorsement of all findings or ideas presented in this report.

- Batiquitos Lagoon Foundation
- Bay Area Clean Water Agencies
- Big Sur Land Trust
- Blue Lake Rancheria
- California Air Resources Board (CARB)
- California Coastal Commission
- California Department of Fish and Wildlife (CDFW)
- California Department of Transportation (Caltrans), District 4
- California Department of Water Resources (DWR)
- California Marine Sanctuary Foundation
- California Natural Resources Agency (CNRA)
- California Ocean Protection Council (OPC)
- California Ocean Science Trust (OST)
- California Office of Planning and Research (OPR)
- California State Polytechnic University, Humboldt (Cal Poly Humboldt)
- California State Coastal Conservancy (SCC)
- California State Parks
- California State University, Monterey Bay
- California State Water Resources Control Board (SWRCB)
- California Trout (CalTrout)
- Central Coast Wetlands Group
- Central Valley Joint Venture
- City and County of San Francisco
- City of Arcata
- City of Imperial Beach
- City of San Diego
- City of Santa Cruz
- Climate Science Alliance
- Coastal Conservation & Research, Inc.
- Collaborative for Right Relations
- Conservation Farms and Ranches
- Contra Costa Resource Conservation District
- County of Contra Costa
- County of Monterey
- County of San Mateo
- Delta Stewardship Council
- Ducks Unlimited
- East Bay Dischargers Authority
- East Bay Regional Park District
- Eastern Research Group, Inc. (ERG)
- Ecological Workforce Initiative
- Ecology Action
- Elkhorn Slough Foundation
- Elkhorn Slough National Estuarine Research Reserve
- Environmental Science Associates (ESA)
- Farallon Strategies
- Four Directions Indigenous Consulting
- Friends of the Eel River
- Gold Ridge Resource Conservation District
- Hartnell College
- Humboldt Area Foundation
- Humboldt County Resource Conservation District
- Hydrofocus
- John Muir Land Trust
- Karuk Tribe
- Land Trust of Santa Cruz County
- Los Angeles Waterkeeper
- Los Cerritos Wetlands Land Trust
- Los Peñasquitos Lagoon Foundation
- Marine Protected Area Collaborative Network
- Marquez & Associates Biological Consultants
- Metropolitan Transportation Commission (MTC)
- Metropolitan Water District of Southern California
- Monarch Services
- Monterey Bay Central Labor Council
- Monterey Bay Climate Adaptation Action Network
- Monterey County Water Resources Agency
- Monterey Peninsula Regional Park District
- Morro Bay National Estuary Program
- National Oceanic and Atmospheric Administration (NOAA)
- Natural Resources Conservation Service (NRCS), U.S. Department of Agriculture
- Newport Bay Conservancy

WORKSHOP AND CONVENING PARTICIPANTS (CONTINUED)

- North Coast Regional Water Quality Control Board
- North Coast Resource Partnership
- One Coastal Community Project
- OneShoreline
- Pacific Forest Trust
- Pajaro Regional Flood Management Agency
- Pajaro Storm Drain Maintenance District
- Pajaro Valley Water Management Agency
- Regeneración
- Resource Conservation District of Monterey County
- Resource Conservation District of the Santa Monica Mountains
- Restore the Delta
- Sacramento–San Joaquin Delta Conservancy (Delta Conservancy)
- San Diego Association of Governments (SANDAG)
- San Diego Bird Alliance
- San Diego Foundation
- San Diego Regional Climate Collaborative
- San Diego Regional Water Quality Control Board
- San Francisco Bay National Estuarine Research Reserve
- San Francisco Bay Regional Water Quality Control Board
- San Francisco Estuary Institute (SFEI)
- San Francisco Estuary Partnership
- San Francisquito Creek Joint Powers Authority
- Santa Clara River Conservancy
- Santa Cruz County Parks Department
- Santa Lucia Conservancy
- Sempervirens Fund
- Social and Environmental Entrepreneurs
- Sonoma County Agricultural Preservation and Open Space District
- Sonoma Land Trust
- Southern California Coastal Water Research Project (SCCWRP)
- Suisun Resource Conservation District
- Sustainable Conservation
- The Nature Conservancy (TNC)
- The Pew Charitable Trusts (Pew)
- Tidal Influence
- Tijuana River National Estuarine Research Reserve (Tijuana NERR)
- Transportation Agency for Monterey County (TAMC)
- Trout Unlimited
- U.S. Environmental Protection Agency (EPA)
- U.S. Fish and Wildlife Service (USFWS)
- University of California San Diego – Scripps Institution of Oceanography
- University of California, Center for Coastal Climate Resilience
- University of California, Santa Barbara – LEAF Lab
- University of California, Santa Barbara – Marine Science Institute
- University of California, Santa Barbara – Natural Reserve System
- University of California, Santa Cruz
- University of San Diego
- University of Southern California Sea Grant Program
- Ventures
- Watsonville Wetlands Watch
- Wiyot Tribe
- California Estuary Monitoring Workgroup
- Yurok Tribe



Introduction & Background



INTRODUCTION & BACKGROUND

State Context and Climate Commitments

California has lost over 90 percent of its historic coastal and deltaic wetlands, and with them, the natural systems that sequester carbon, buffer communities from flooding, filter water, and support the biodiversity that coastal and Delta ecosystems, communities, and economies depend on (Dahl, 1990; Zedler, 1996). The coastal and deltaic wetlands that remain face sustained and compounding pressure: urban development, agricultural conversion, levee construction, and climate impacts including accelerating sea-level rise continue to threaten both the extent and function of surviving wetlands. Additionally, projected sea-level rise threatens to inundate over half of remaining coastal marsh habitats without intervention (Heady et al., 2018).

California's response to wetland threats has increased over time, moving from isolated conservation efforts toward an integrated, climate-focused wetland agenda. The Nature Conservancy's (TNC) "Hope for the Coast" vision marked an early and important shift in ambition.* The vision articulated an initial statewide commitment to maintaining and expanding natural coastal habitat in the face of sea-level rise, grounded in a comprehensive vulnerability assessment of California's coastal lands. That vision helped establish the conceptual foundation for what has since become a more formal suite of policy efforts to strengthen conservation and management of coasts and wetlands.

* Hope for the Coast was a TNC-led vision and campaign. The State Coastal Conservancy and other state agencies later adopted resolutions reflecting language consistent with the vision; the related Coastal Assessment was jointly developed by TNC and the Conservancy.

CALIFORNIA'S WETLAND AND CLIMATE COMMITMENTS

- **Assembly Bill (AB) 1757 (2022)**: Requires statewide nature-based solutions targets for carbon reduction and resilience, with wetlands among eight priority land types. Includes a target to conserve 234,000 acres of coastal wetlands and re-wet 50,000 acres of deeply subsided Delta lands by 2045.
- **California Air Resources Board (CARB) Scoping Plan (2022)**: Incorporates natural and working lands into the state's climate strategy for the first time, recognizing wetlands as active contributors to carbon neutrality.
- **Pathways to 30x30 California (2022)**: Commits to conserving 30 percent of California's lands and coastal waters by 2030.
- **The California Ocean Protection Council's (OPC) 2026-2030 Strategic Plan (2026) and Roadmap to Achieving 30x30 in California's Coastal Waters (2025)**: Both contain priority actions and targets for coastal wetlands and other estuarine conservation initiatives, including OPC's Strategic Plan goals to restore at least 7,000 acres of coastal wetlands by 2030 and fund at least three land acquisition projects that increase opportunities for coastal habitat restoration and upland migration in the face of sea level rise.
- **Natural and Working Lands Climate Smart Strategy (2022)**: Establishes a framework for managing California's landscapes as carbon sinks and climate resilience assets, updated to reflect AB 1757 targets.
- **Proposition 4 (2024)**: A \$10 billion climate bond with up to \$8 billion available for nature-based solutions, including wetland restoration and natural lands protection.



“Healthy and resilient wetlands are vital to meeting California’s climate goals. To achieve these goals, we must increase the pace and scale of wetland restoration and conservation. Cross-region learning, problem-solving, and collaboration, through efforts like the Wetland for Climate Partnership, are key to unlocking these opportunities.”

Clesi Bennett, California Natural Resources Agency

In addition to these commitments, the state has also made progress to address some of the systemic challenges that face wetland projects. Notable efforts include the California Department of Fish and Wildlife’s [Cutting the Green Tape](#) initiative and its improved permitting pathways and the development of early coastal tracking and monitoring systems (e.g., California Wetlands Monitoring Workgroup coordination efforts). Collectively, these policy commitments and strategies are beginning to improve outcomes in some regions. But the gap between California’s wetland commitments and on-the-ground implementation remains wide: stable funding across the full project lifecycle (from planning through implementation to long-term monitoring) is hard to obtain, permitting complexity continues to slow implementation, monitoring systems are fragmented and can be difficult to compare across regions, and implementation is uneven across the state.

Some regions have begun to unlock solutions at the project level and are seeking to advance climate-focused wetlands restoration at a larger, regional scale. Closing the gap between commitments and implementation—and ensuring that regions have the support they need to deliver on ecological, climate, and social goals—is the purpose of the Wetlands for Climate (W4C) Partnership.



ABOUT THE WETLANDS FOR CLIMATE PARTNERSHIP REGIONAL WORKSHOPS

The Nature Conservancy (TNC), San Francisco Estuary Institute (SFEI), and the Pew Charitable Trusts established the W4C Partnership to identify the opportunities and challenges associated with California’s wetland commitments and on-the-ground implementation. The W4C Partnership aims to serve as a sustained convening and learning platform for the diverse partners doing wetlands work: state and local agencies, community-based organizations (CBOs), non-governmental organizations (NGOs), Tribes, and other wetland researchers and practitioners across the state. It provides a mechanism for understanding progress and challenges across California’s regions, and for developing strategies that can improve outcomes at the pace required to achieve both regional and state goals. Participation in the Partnership continues to grow as regional partners engage with, and join in, its work.

In-person engagement with regional partners was essential to understand opportunities and challenges because restoration happens locally. Between 2024 and 2026, the W4C Partnership convened a series of workshops across five California geographies to explore the challenges and emerging strategies and approaches shaping wetland restoration in each region. The workshops also served as a venue for shared learning—which participants across every region identified as a valuable but rare opportunity. Each region brought a distinct context and set of challenges to the conversations.



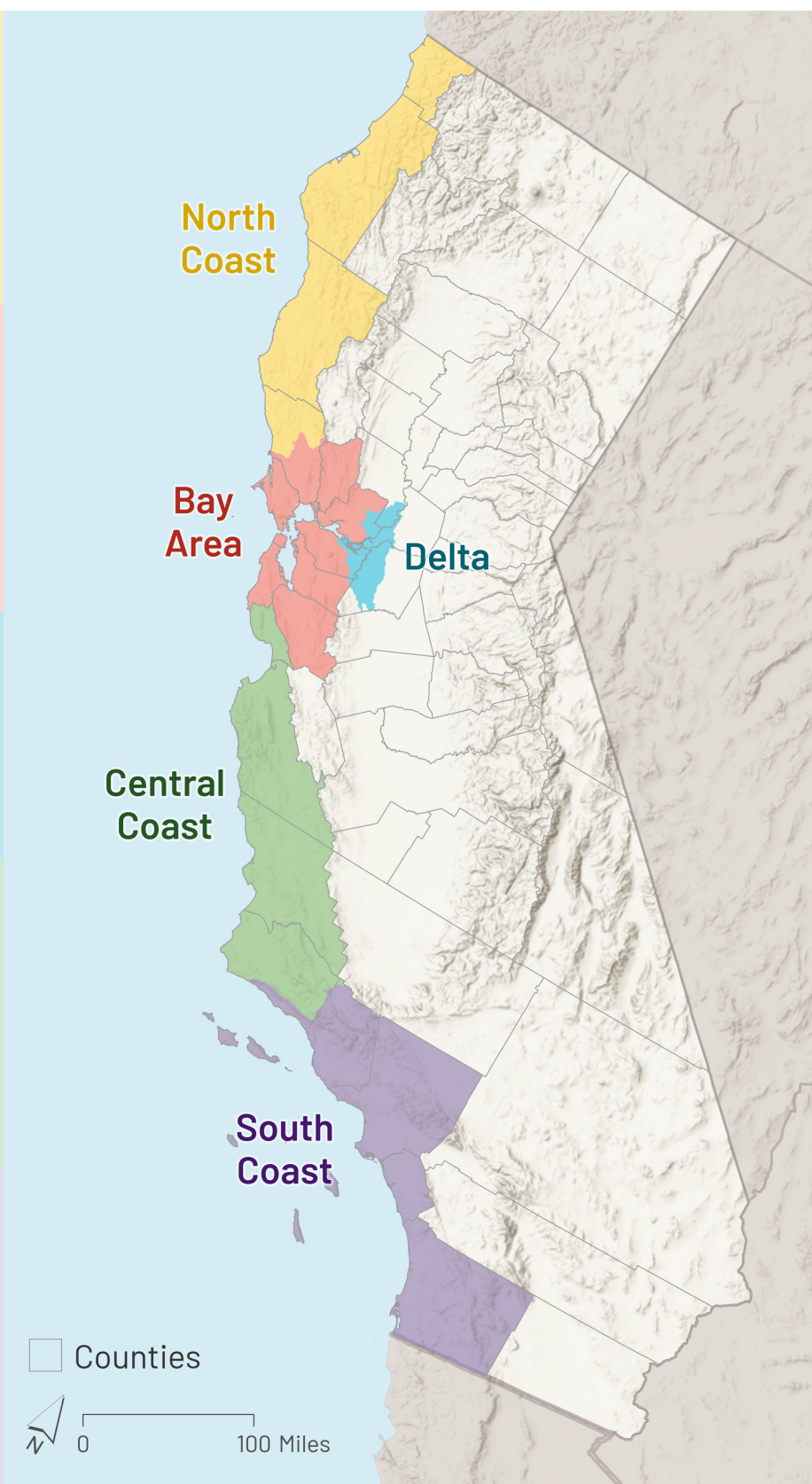
North Coast: A less urbanized region with relatively intact ecosystems, where restoration is often integrated with watershed-scale processes and community priorities, and where local governments and regional partnerships play a particularly active coordination role.

Bay Area: A highly urbanized and infrastructure-constrained landscape where restoration is inseparable from shoreline adaptation, flood protection, and sea-level rise planning, and where strong existing regional frameworks create both opportunities and coordination demands.

Delta: A working landscape shaped by agriculture, water management, and ongoing subsidence, where restoration must be negotiated alongside levee stability, water supply, and deeply rooted land use considerations.

Central Coast: A mix of agricultural lands, estuaries, and smaller coastal systems where restoration work brings together research institutions, landowners, local and regional agencies, and communities, with a focus on estuarine function and pilot-scale projects that can inform broader adaptation strategies.

South Coast: A densely developed region with fragmented wetlands, high land values, and complex ownership patterns, where restoration opportunities are more limited and highly site-specific, requiring long-term planning, layered funding, and extensive regulatory coordination.



This report synthesizes the views expressed during the five regional workshops, as well as the broader statewide convening described below, focused on what is working and what remains challenging in wetland stewardship, and actions that could accelerate wetland restoration. We identified common themes, unique perspectives, and some regional success stories that could help inform policy, program, and funding decisions.



Methods



The findings and recommendations presented in this report are grounded in a broad body of evidence, collected through multiple methods and over many years. The synthesis draws together four complementary lines of evidence: in-depth qualitative research on California wetland restoration; a structured series of convenings held across the state between January 2024 and January 2026, including one statewide-focused workshop and five regional workshops; sustained consultation with regional and state experts; and a review of the relevant state planning, policy, and background documents that frame California’s wetland commitments (for a list of the documents reviewed, see Appendix B). The conclusions presented here reflect the convergence of analysis across these sources. The work was led by the W4C Partnership (the original partners plus California Trout, who joined at a later phase), with support from Eastern Research Group, Inc. (ERG). The ERG team—which included climate resilience experts and social scientists—served as a facilitator, meeting designer, analyst, and writer.

Foundation in prior research

The Partnership’s engagement built on an earlier body of work that established many of the recurring barriers and solutions explored in this report. Between 2021 and 2023, TNC convened a series of five regional roundtables and one statewide roundtable on nature-based climate solutions involving more than 190 participants, including landowners, agencies, Tribes, community-based organizations, academic institutions, and funders. Those discussions were analyzed by a social scientist using qualitative coding against predetermined rubrics, producing a structured set of barrier and solution categories. This prior synthesis motivated the W4C convening series and shaped its cross-cutting focus on funding, permitting, monitoring, and governance.

A structured series of convenings

The five regional workshops capped a sequence of eight convenings held between January 2024 and January 2026, each designed to build on the last:

- A **pre-convening** (virtual, January 31, 2024) with state agencies and implementing organizations, to align on agency priorities, targets, and timelines and to establish shared direction.
- A **regional workshop** (virtual, May 7, 2024) with regional and local government organizations and regionally focused NGOs, to surface implementer needs and priorities across permitting, funding, and state support and metrics.
- An **agency workshop** (Sacramento, hybrid, August 28, 2024) with more than thirty representatives from state and federal agencies, focused on discussions around tracking progress toward targets, pathways for accelerating implementation, and a roadmap for partnership-based action.
- The **five region-specific workshops** that anchor this report: Bay Area (San Lorenzo, December 5, 2024); Delta (Sacramento, March 17, 2025); Central Coast (Moss Landing, September 9, 2025, co-convened with the Monterey Bay Climate Adaptation Action Network); South Coast (Upper Newport Bay, January 14, 2026); and North Coast (Humboldt County, January 22, 2026).

Participation in each convening was strategic: through targeted outreach and consultation with regional partners, the Partnership assembled participant groups that reflected the relevant mix of agency, regional and local government, Tribal, NGO, academic, and on-the-ground practitioner expertise for each discussion. Collectively, these convenings and workshops resulted in gathering perspectives from over 150 individuals representing regional organizations from throughout California (see the Acknowledgments section for a list of the participating organizations).

The convenings shared a consistent analytical backbone while also reflecting regional context and concerns. The same cross-cutting challenge areas—funding, permitting, monitoring, and governance—anchored every meeting, allowing for comparative analysis across regions. Within that frame, the discussion questions, topic emphasis, and the case studies featured in lightning talks were tailored to each region based on pre-workshop consultation with local partners and background desktop research, reflecting the distinct regional contexts described in the introduction of this report. All convenings followed a common structure: context-setting on California’s wetland goals and targets and the takeaways from prior convenings followed by a structured, facilitated discussion organized around guiding questions. The five regional workshops built on this with an expanded format that added a series of case-study “lightning talks,” each followed by facilitated discussion and a site visit to a local restoration project. Confidentiality and shared meeting agreements were established at the outset of each convening to encourage candid exchange. This deliberate, regionally tailored design was intended to maximize relevance for participants and to surface the emerging, place-based ideas that inform the concepts presented in this report. An example agenda for the regional convenings is included in Appendix A.

Supporting evidence and ongoing consultation

The convening discussions were complemented by additional lines of evidence. The Partnership reviewed the principal state plans and policy frameworks shaping wetland and nature-based solutions targets including the CARB Scoping Plan, AB 1757, the Ocean Protection Council Strategic Plan, and Pathways to 30x30. Partners also drew on findings from TNC’s earlier Synthesis of California Nature-based Climate Solution Roundtable Dialogues, the 2021–2023 roundtable series described above, along with region-specific desktop research conducted in advance of each workshop. ERG and TNC maintained ongoing consultation with state agencies, particularly the California Natural Resources Agency, throughout the process to refine the approach and confirm which findings were most useful to decision-makers. In advance of each regional workshop, the Partnership worked directly with regional partners and lightning-talk presenters to develop case studies that illustrated regional challenges, solutions, and lessons learned.

Analysis and synthesis

Partners analyzed findings through an iterative process of qualitative coding and thematic synthesis, comparing findings across convenings and refining themes as new evidence emerged. After each convening, ERG converted raw meeting notes into a structured record that captured the agenda, participants, and synthesized discussion, including representative quotations, concrete project examples, and references to key documents and resources. The findings from each record were then distilled into a cumulative synthesis document maintained across the full series.

As the series progressed, partners identified and revisited emerging themes: input from each new convening was compared against the themes identified to date, and categories were revised, reconciled, and refined to add nuance after each meeting. The Partnership circulated the cumulative synthesis to participants of subsequent convenings as a read-ahead document. Multiple ERG staff and W4C partners conducted and reviewed findings collaboratively. The convergence of multiple lines of evidence—convening discussions, partner and expert consultation, prior research, and the policy literature—served as a form of triangulation that strengthened confidence in the resulting themes.

The sections that follow present the results of this synthesis. They are organized around the four cross-cutting challenge areas that emerged most consistently across the engagement—funding, permitting, monitoring, and governance—each describing what is working, what remains challenging, and the concepts participants identified to improve outcomes. Throughout, the report distinguishes between what participants reported from their direct experience and the synthesis-level analysis developed by the Partnership; the recommendations presented are the product of this triangulated analysis across all lines of evidence, not the position of any single participant, agency, or partner organization.





What's Working, What's Challenging, and Opportunities to Improve



WHAT'S WORKING, WHAT'S CHALLENGING,
AND OPPORTUNITIES TO IMPROVE



Sustained Funding Across the Wetland Project Cycle

California's wetland restoration ambitions are increasingly well-articulated in policy; however, the funding mechanisms are often not well aligned with the realities of project implementation. A significant proportion of funding for nature-based solutions flows through competitive grants, creating a stop-start dynamic that is at odds with the long-term, multi-phase nature of restoration. When funding is structured around discrete project stages, with more funding available for implementation than the necessary pre-planning and post-restoration monitoring and maintenance, the consequences are predictable. Projects stall between phases, staff capacity erodes, partnerships fracture, and the cumulative cost of reassembling momentum routinely exceeds what continuous investment would have required. Workshop participants across regions consistently flagged that monitoring, maintenance, adaptive management, workforce development, and long-term stewardship remain chronically underfunded not because their importance is unrecognized, but because funding structures have not been designed to reflect that these are necessary components of wetlands work. Post-restoration land management drew particular concern. Participants

stressed that ensuring long-term stewardship requires sustained capacity that has to be maintained over time, and that state support in facilitating this could help mitigate a challenge that current funding structures largely leave unaddressed.

Current funding gaps can delay project completion, limit the full impact of restoration investments, and require regional implementers to devote a disproportionate share of their capacity to navigating funding logistics rather than delivering restoration. One participant described the practical experience of this as managing a "Jenga game," where aligning project requirements against fragmented and restrictive funding sources becomes a precarious balancing act. The challenge is not simply a resource gap but a structural misalignment between current funding sources and mechanisms and the requirements for wetland restoration. Participants were also candid that these systems carry real equity consequences and noted that funding and administrative processes are often built in ways that are exclusionary and place the heaviest burden on the organizations with the least capacity to absorb it. Closing this gap requires deliberate action at both the state and regional level.



ADMINISTRATIVE BURDEN IS AN EQUITY ISSUE

Complex application, contracting, reimbursement, and reporting requirements do not affect all organizations equally. They can disadvantage smaller and community-based implementers with limited staff, technical expertise, or cash reserves—leaving the communities with the greatest needs least able to compete for and manage public funding. More equitable funding systems reduce unnecessary requirements, align processes across programs, provide technical assistance, and offer flexible or advance-payment options (Buchanan and Wozniak-Brown, 2023; California Natural Resources Agency, n.d.).

What's Working and Opportunities for Broader Action

Recent state investments signal real progress. [Proposition 4](#) Climate Bond and associated climate resilience funding have meaningfully expanded the resources available for natural and working lands. Participants across all the regional workshops also emphasized that wetland restoration requires sustained, lifecycle-oriented investment rather than funding separate phases within short timeframes. This concern is reinforced by research showing that short project cycles often constrain monitoring to project timelines rather than ecological timescales, limiting the ability to establish meaningful baselines and assess long-term outcomes (Cui et al., 2026; Stephenson et al., 2025). These commitments matter and have begun to improve outcomes in some regions. At the same time, regional entities across the state are demonstrating that coordinated, aggregated funding approaches can reduce duplication, improve project sequencing, and better align investments with landscape-scale priorities, offering proof of what more intentional funding approaches could look like statewide. Examples include the Bay Area's [Wetland Regional Monitoring Program](#), which illustrates how coordinated funding can support consistent monitoring across multiple projects in ways that individual project budgets simply cannot sustain. Regional coordination structures like the [North Coast Resource Partnership \(NCRP\)](#) and the [Monterey Bay Climate Adaptation Action Network \(MBCAAN\)](#) demonstrate how regional coordination structures, when adequately resourced, can function as effective intermediaries between state and federal funding programs (to learn more about the NCRP and the MBCAAN, see the report section "Regional Success Stories") to meet regional resilience goals. Both entities have served critical roles in their respective regions helping distribute funds to local organizations to support on-the-ground delivery of strategic projects that support regional wetland and climate goals.

What these examples share, and what regional workshop participants consistently pointed to, is that funding works best when it is stable, coordinated, and comprehensive. This includes supporting projects across the full lifecycle rather than discrete phases, aggregated at a regional scale to enable prioritization and sequencing, and treating monitoring, stewardship, and workforce development as core program costs rather than optional items. The opportunity now is for state agencies to engage directly with the structural question these regional models raise: how can state funding sources and mechanisms be designed to improve outcomes for wetland restoration on the ground? The concepts described below represent ideas shared by workshop participants as being the most effective for building partnerships that result in achieving both regional and state wetland goals.



Emerging Concepts from the Regional Workshops

Throughout the regional workshops, participants identified concepts to better support implementers across the full wetland project lifecycle. The concepts included evaluating existing program funding frameworks; identifying gaps and opportunities; supporting, strengthening, and creating new regional entities to prioritize actions and distribute funds; and ensuring integration of key project needs like monitoring and permitting into funding programs.

Design funding programs to support stable, multi-phase project delivery. Workshop participants identified that current grant cycles of three years or less are usually not sufficient for projects that often take a decade or more to show measurable progress. Participants across regions suggested that funding horizons of ten years or longer are needed to reflect the actual timeline of wetland restoration, from engagement to monitoring. Others emphasized that block grants could provide more flexibility for long-term funding, avoiding the limitations of project-specific grants. Participants also noted that removing the prohibition on layering multiple grants to support different phases of the same project would alleviate a critical challenge: many projects must pause and restart due to funding constraints, with the cumulative cost of reassembling momentum far exceeding what continuous investment would have required. Participants flagged that where gaps between funding phases are unavoidable, dedicated bridge funding mechanisms, such as a standing rapid-response fund or expedited no-cost extensions with continued staff support, can prevent the loss of momentum, community trust, and technical capacity.

To address these challenges, state agencies administering wetland and climate resilience funding, including those overseeing Proposition 4 allocations, could examine whether the design of their grant structures can provide stable funding over the lifecycle of projects, rather than isolated phases. In practice, this could mean allowing multi-year awards that span engagement, planning, design, implementation, and monitoring. Alternatively, agencies could consider creating explicit funding sources for key project needs like permitting and early engagement.

A productive first step would be convening a focused workgroup of state program staff and regional

implementers to map where the gaps are most costly and what structural changes to eligibility criteria, reporting requirements, and award amounts and timelines would have the most immediate impact. Regional practitioners are well-positioned to contribute real project timelines and cost data that make the case for restructuring, including documentation of what gaps between project phases cost in practice both financially and in terms of lost progress, public trust, and escalating costs. Aspects of this issue could likely be addressed by funding program design changes before the need for broader legislative action.

Expand the role of regional entities from funding recipients to funding coordinators. Workshop participants identified ownership complexities, fragmented jurisdictions, and decision-making silos as barriers that hinder coordinated restoration efforts. Participants noted that when established regional entities have coordination roles, they can help align priorities and serve as effective intermediaries. Workshop participants voiced that interagency and stakeholder collaboration has been effective in advancing coastal and wetland restoration objectives, particularly when regional entities facilitate these connections.

State agencies could work with established regional entities, such as the NCRP, MBCAAN, and comparable bodies, to develop and resource an expanded coordination role that goes beyond pass-through grant administration. This means providing operational funding for regional coordination capacity, in addition to project funding, and developing shared frameworks for how regional entities can support and inform prioritization and sequencing functions that currently fall to individual applicants. Early conversations between state program offices and regional entities could focus on identifying where coordination gaps are creating the most burden and delay, and how a more formalized regional stewardship role would improve outcomes and reduce administrative burden. Regions, in turn, can strengthen their case by documenting the coordination work they are already doing, making visible the value that is currently not tracked in state accounting. The goal is not to create new bureaucratic layers but to align resources where support and coordination is already happening and could be leveraged to provide expanded benefits to individual implementing organizations.



Shift from project-by-project funding toward portfolio-based investment strategies. Workshop participants across regions emphasized the importance of landscape-scale prioritization and sequencing, noting that individual project applicants currently navigate this alone. Participants suggested that a coordinated suite of projects, evaluated collectively as a regional investment rather than as standalone projects, would better support both state goals and regional priorities.

State agencies and regional entities could pilot a portfolio approach in at least one region, ideally one with an existing regional coordination structure, where a suite of coordinated projects is funded and evaluated as a collective investment rather than as individual, standalone projects. This would require state funders to adapt review criteria and reporting frameworks to assess landscape-scale outcomes alongside project-level metrics, a shift that is achievable but requires deliberate design. Regional entities are natural partners in defining what a portfolio that prioritizes state and regional goals looks like for their geography. State agencies could support this approach by signaling openness to portfolio applications in funding guidelines and by working with regional organizations to develop evaluation frameworks that capture regional and state priorities as well as the benefits of the portfolio of projects. Starting with a pilot creates a learning opportunity that can identify the best elements of the approach while flagging any pitfalls or challenges that need refinement prior to broader application.

Elevate workforce development and long-term institutional capacity as core funding priorities.

Workshop participants emphasized that workforce capacity is not separate from funding structure; it is what determines whether available funding can actually be deployed at scale.

Participants identified that during periods of high grant funding, consultant and contractor capacity itself becomes the constraint, as the workforce pipeline cannot absorb the volume of work that funding could support, meaning that money sits unspent or projects are delayed not only for lack of resources but also for lack of people trained to do the work. Data from the [Ecological Workforce Initiative's analysis](#) (2026) of 50 restoration projects, featured in the North Coast regional workshop, found that most funding flows directly to workers implementing projects, underscoring that workforce investment is not ancillary but central to restoration delivery itself. Yet existing licensing structures like the Landscape Contractor License do not capture the skills required for ecological restoration work, and standard industry classification systems lack categories for this work entirely, limiting workforce recognition, compensation, and career pathways.

State agencies overseeing natural resources workforce programs could work with regional entities to identify where workforce gaps are creating project bottlenecks and direct training investments toward those specific points, treating workforce development as infrastructure that enables sustained implementation rather than a parallel initiative. Integrating workforce development holistically into funding structures builds the capacity needed to deliver available funding, demonstrates economic return on investment, and strengthens the case for continued and expanded state investment. Regional implementers can play a direct role by participating in curriculum development, offering apprenticeship pathways, and flagging to state partners where the pipeline is breaking down. A useful early action could be a joint state-regional mapping exercise connecting workforce program outputs with projected restoration staffing needs over the next five to ten years, a gap analysis that does not currently exist at the scale needed to drive investment decisions.



Align and diversify funding sources to reflect real project complexity.

Workshop participants noted that the multi-source funding landscape is difficult to navigate, and that technical assistance in identifying complementary funding sources is essential. Participants described private and foundation funding as more flexible than public grants and particularly valuable for early planning, feasibility studies, and long-term monitoring, with early private investment often signaling credibility that helps position projects for subsequent public and private funding. Participants also pointed to infrastructure funding models, such as those used for transportation and water, as a promising and underexplored avenue that could provide more stable, long-term financial support for wetlands. Workshop participants also highlighted innovative financing tools such as carbon markets, revolving loan funds, bio-byproduct sales, hunting and fishing fees, mitigation banking through programs like Caltrans' Advanced Mitigation Program, and local tax measures, with Santa Cruz County's Measure Q and similar local funding initiatives offering models for how place-based revenue can sustain stewardship over time.

To address this challenge, state agencies could take a more active role in helping implementers navigate the multi-source funding landscape by resourcing dedicated technical assistance through regional entities who understand both the state funding ecosystem and the on-the-ground realities of project implementation. Regional coordinators are often best positioned to provide this assistance because they can see across multiple projects simultaneously, identify where funding sources and mechanisms are complementary, and help prioritize applications strategically.

At the state level, interagency coordination among funding programs—to align timelines, reduce duplicative reporting requirements, and create clearer pathways for aggregating funds—would meaningfully reduce the administrative burden that currently falls on implementers. In parallel, state agencies could begin structured exploration of complementary financing tools, such as carbon markets and revolving loan funds, in partnership with regional entities and implementers, ensuring these mechanisms are designed around actual project economics rather than in the abstract. Piloting one or two of these approaches in regions with active restoration programs would generate the practical learning needed to assess their broader applicability.



WHAT'S WORKING, WHAT'S CHALLENGING,
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Complex Restoration Permitting and Regulatory Compliance

The state has made critical progress in reducing permitting complexity under the Cutting the Green Tape initiative and the implementation of tools such as the Statutory Exemption for Restoration Projects (SERP) under CEQA and the Restoration Management Permit (RMP). Wetland restoration efforts, however, still must grapple with complex, multi-agency regulatory processes. Permitting challenges include overlapping and sometimes inconsistent requirements across federal, state, and local agencies, as well as variable interpretations of regulations and regional differences. One point emerged consistently across regions: often the challenge is the interpretation of regulations rather than the regulations themselves. Multiple participants highlighted staff turnover at regulatory agencies as a persistent source of inconsistency, forcing project proponents to repeatedly prove their methods and rebuild relationships with new reviewers even on projects with established methods and best management practices in place. Projects often require multiple permits with distinct timelines, standards, and review processes, increasing costs and extending implementation timelines, with permitting alone taking two to five years for most projects. Participants noted that federal permits in particular can take years, jeopardizing grant timelines and delaying critical restoration actions such as levee breaching that are needed to create sediment and marsh vegetation. These extended timelines result in reduced interest by partners and community members, lost trust, inability to work due to limited work windows, and escalating costs.

These delays compound the funding fragmentation challenges described in the previous section. When a project is already navigating fragmented funding cycles, permitting delays do not slow just one phase, they can collapse the window in which funding is available entirely. These timelines often force projects to restart the funding process alongside the regulatory one. Participants repeatedly noted this relationship between funding and permitting, and the need to address the high costs of project delivery by streamlining permitting and reducing regulatory inefficiencies. For smaller organizations and community-based implementers without dedicated permitting staff or legal capacity, these delays are particularly acute and disproportionately limit the types of organizations that can advance projects. Participants stated that it is unrealistic for local groups to absorb the costs and expertise required to meet complex permitting demands, and that the burden needs to shift to state agencies and legislative reform rather than continue to be managed locally. While recent state efforts have improved the process, participants in the regional convenings shared that based on their experiences, these tools are not yet consistently applied or accessible across project types. Even where structural improvements and streamlining efforts have helped, participants noted that multi-objective and phased projects still face overlapping and duplicative authorities across federal and state agencies. As a result, permitting remains a significant and persistent barrier to advancing restoration at the scale needed to support durable climate benefits.



PERMITTING DELAYS CAN BECOME CLIMATE DELAYS

When restoration projects take years to reach implementation, communities and ecosystems must also wait for their flood-protection and climate-resilience benefits. For tidal wetlands, delays can narrow the window for restored marshes to establish and naturally adapt before sea-level rise accelerates. More efficient, coordinated permitting can therefore increase not only the pace of restoration, but also the durability of its climate benefits (Pottinger, 2020; California Natural Resources Agency, 2022).

Bay Restoration Regulatory Integration Team (BRRIT) has demonstrated that structured, multi-agency coordination with consistent funding and staffing can meaningfully improve permitting predictability. Participants pointed to BRRIT specifically as a platform well-suited to addressing the interpretation inconsistencies that drive so many delays, precisely because it brings agencies into alignment rather than leaving each to interpret requirements on their own. The North Coast's experience with Cutting the Green Tape for large-scale restoration projects with multiple partners in sites like Ocean Ranch illustrates how alignment between state and local partners can make such tools work in practice even where formal structures are still developing (to learn more about Ocean Ranch, see Appendix C on featured projects).

What's Working and Opportunities for Broader Action

State-led efforts such as Cutting the Green Tape, SERP, and the RMP have begun to create more efficient permitting processes and reflect an important shift in how the state understands the supporting role it can play in restoration delivery. Workshop participants highlighted that these approaches have begun to improve outcomes in some regions. Regional models are demonstrating what is possible when these tools are paired with dedicated coordination capacity. For example, the Bay Area's

The difference between regions where the permitting process is improving and regions where it is not is not only tied to the regulatory environment. A key factor is whether the infrastructure exists to navigate the permitting requirements and available tools. Participants expressed a desire for a broader shift in permitting culture: regulatory agencies moving from an authority-based mindset toward a collaborative one. There is an opportunity for state agencies to move from recognizing regional models as bright spots to actively investing in the infrastructure that makes predictable, efficient permitting the norm, not the exception, across all regions and project types. The emerging concepts below were shared by workshop participants as approaches that could improve outcomes on permitting and regulatory processes.





Emerging Concepts from the Regional Workshops

Participants identified ways to effectively reduce permitting complexity and build more consistent, scalable pathways for wetland restoration. These approaches included establishing dedicated regional coordination infrastructure; embedding adaptive management directly into permit structures; and a consistent emphasis on reducing the project-by-project variability that currently makes permitting outcomes hard to predict even for experienced and resourced implementers. Running through these concepts was a call for greater risk tolerance in permitting and design, with participants suggesting that reducing the rigidities around regulatory thresholds could open the door to more innovative and adaptive approaches. They also noted that framing projects around community benefits could help mitigate the concerns that make agencies risk-averse in the first place.

Establish dedicated regional permitting and regulatory hubs. One of the most consistent ideas shared across the regions was the creation of structures where the many agencies and partners involved in wetland permitting can work through complexity together rather than in parallel and often misaligned silos. Participants noted that siloed approaches can result in conflicting directions and requirements, and that pre-consultation meetings work when they happen but weaken significantly when they occur informally or agency-by-agency rather than through a structured shared process.

State agencies could develop a mechanism or funding source to establish regional permitting and regulatory hubs that bring together federal and state regulators, regional agency staff, Tribes, local governments, CBOs/NGOs, and implementers to collectively manage permitting complexity, align expectations, reduce administrative burden, address conflicting requirements, and improve communication across the process. These hubs could serve as a centralized resource for navigating permitting, hosting technical guidance, checklists, templates, and case studies so that all parties are working from the same information and project proponents understand regulatory requirements before they encounter them mid-project. These hubs could also include practical implementer-facing tools such as an online permit identification wizard, a virtual helpdesk staffed by

practitioners with permitting experience, and a standardized checklist modeled on a common application framework.

Across the regions, participants stated that regional entities and CBOs/NGOs are well-positioned to document and share successful permitting approaches from within their regions, and hubs provide the platform to make those lessons broadly accessible. A practical first step could be for state agencies to assess which existing regional coordination bodies are closest to being able to serve in this function, targeting early investment toward stabilizing and expanding what already works rather than building new structures from scratch. This approach recognizes that funding for coordination and technical workgroup functions is often not included in project budgets and needs to be explicitly resourced rather than assumed to emerge organically from project-level grants.

Invest in dedicated permitting and regulatory staff capacity and training at both the state and regional level. Understaffing, staff turnover, and inconsistent training are among the most direct drivers of permitting delays and variable outcomes across regions. Staff turnover at regulatory agencies was named across four of the five regional workshops as one of the most consistent and damaging sources of permitting inconsistency, requiring project proponents to rebuild relationships and re-prove methods that experienced staff would already understand, at significant cost in time and trust. Participants were clear that the underlying issue is often how regulations are interpreted rather than the regulations themselves, which makes retaining consistent institutional knowledge critical.

The solution is not simply adding more staff. State regulatory agencies already receive general fund appropriations and permitting fees to support regulatory positions. Staff turnover, which participants noted as being driven by burnout and salary compression relative to local and regional government positions, undermines continuity as staff often lack the training and institutional support needed to confidently interpret laws and policies in the context of restoration projects. State agencies could invest in coordination capacity that reduces regulatory siloing, with structures like BRRIT that enable cross-agency alignment and provide staff with clear pathways for collaboration rather than isolated decision-making. This could include training and



mentorship that builds staff confidence in applying existing tools and interpreting regulations in ways that support restoration goals, not just compliance checkboxes. Regional hubs could play an active role by coordinating training across local agency staff and building shared understanding of regulatory requirements and restoration goals, reducing the project-by-project variability that makes permitting outcomes hard to predict. Creating positive incentives for early collaboration, such as clearer eligibility for streamlined permits, reduced review timelines, or internal agency recognition, would do more to shift agency behavior than guidance documents alone, and these incentives are largely absent from the current system. Investing in staff capacity and support is not just an operational improvement. It is one of the most direct ways the state can reduce the timeline and cost burden that permitting currently places on regional implementers.

Expand awareness, accessibility, and consistent application of permitting tools. Participants noted that uneven awareness and application of existing permitting and regulatory tools remains a significant and largely unnecessary gap. SERP's current five-year timeframe is already too short for many projects, with implementers suggesting extensions of 10 to 20 years to reflect realistic restoration timelines, pointing to a gap between how the tool was designed and how long projects actually take. Participants also noted that some lead agencies need further motivation to use exemptions because engaging with new processes can itself involve significant bureaucratic effort, suggesting that accessibility is not just about awareness but about reducing the cost of using the tools themselves.

Project proponents, particularly smaller organizations and first-time implementers, should have access to technical assistance that helps them understand which tools apply to their project and how to use them effectively. Uneven awareness and application of these tools remains a significant and unnecessary gap, and one that regional hubs and state agency outreach can work in tandem to close by treating tool accessibility as an ongoing program function rather than a one-time communication effort. Regional entities are well-positioned to provide frontline technical assistance, while state agencies ensure that guidance is current, consistent, and reaches implementers across all geographies.

Embed adaptive management provisions and monitoring frameworks directly into permits.

Participants across regions pointed to a lack of mechanisms that allow for adaptive management, which they saw as essential not only for improving project outcomes but for climate adaptation itself, and as a way to let lessons from pilot projects feed into the design of larger ones. Participants also raised a related concern about how "no action" is treated in permitting: the assumption under CEQA and NEPA that no action means no change is inaccurate, since climate change and land subsidence will continue to drive shifts in habitat conditions regardless. They saw an opportunity within CEQA to analyze how "no action" itself produces environmental change and to communicate that reality more clearly in permitting processes.

State agencies could work with federal partners and regional implementers to establish permit language and structures that allow projects to adjust based on observed outcomes without requiring repeated approvals and permits for needed changes and adaptations. In dredging examples from across the regions, permitting delays rather than funding shortages posed the greatest risk to wetland function, particularly when constrained by nesting seasons and other biological timelines, illustrating how the inability to act quickly within permit structures can have direct ecological consequences.

Projects with adaptive management provisions built directly into their permits can address unforeseen conditions, climate change, and other changing site dynamics without having to amend permits or apply for new ones. This approach ensures projects can respond to ecological and climate uncertainties over time and generate consistent data to inform both regional learning and state-level reporting, connecting directly to the statewide monitoring framework described in the next section. Regional implementers and monitoring programs can support this shift by documenting instances where adaptive management provisions accelerated or improved project outcomes to normalize this approach across permit types and move it from exception to standard practice.





WHAT'S WORKING, WHAT'S CHALLENGING,
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Monitoring and Tracking Metrics to Evaluate Outcomes

Comprehensive monitoring and tracking are essential for state, regional, and local entities to evaluate progress toward defined targets and to understand and communicate whether restoration investments are delivering results. Yet metrics for wetland restoration projects remain poorly coordinated across regions, and critical benefits such as carbon sequestration, flood risk reduction, and water quality and quantity improvements, are frequently omitted from what gets measured and reported. Regions need frameworks that align with statewide programs while accounting for local ecological and climate context, community priorities, and regulatory requirements. The absence of standardized yet adaptable systems limits comparability across projects and regions, reduces opportunities for implementers to learn from each other, and complicates state-level reporting and funding decisions. Monitoring programs also need to capture net gains and losses, not just restoration successes, to give decision-makers a complete picture of whether California's wetland investments are moving the needle on overall wetland extent and condition.

What's Working and Opportunities for Broader Action

The past several years have seen meaningful momentum toward addressing these challenges, with the establishment of several regional monitoring programs that are beginning to build the foundation for a more connected statewide system. Ongoing or emerging programs include the regional programs: [San Francisco Estuary Wetlands Regional Monitoring Program \(WRMP\)](#), the [Climate Resilient Monterey Bay Regional Monitoring Program \(CRMB\)](#), and the [Southern California Wetland Recovery Project Regional Monitoring Program \(WRP RMP\)](#), and the statewide [California Estuary Monitoring Program \(CalEMP\)](#). These efforts demonstrate growing momentum toward coordinated, science-based monitoring and provide a foundation for linking regional efforts into a broader statewide framework. Forums such as the [California Estuary Monitoring Workgroup \(CEMW\)](#) and [California Wetland Monitoring Workgroup \(CWMW\)](#) are beginning to support alignment across these programs, providing ready venues for coordinating regional and statewide monitoring efforts.



Regional experience also offers important lessons for strengthening and expanding monitoring efforts. Participants indicated that monitoring systems are most effective when they:

- Combine a core set of shared metrics with flexibility for regional adaptation.
- Operate at a coordinated, regional scale rather than on a project-by-project basis.
- Connect with permitting and planning processes to reduce duplication and increase the usefulness of data.
- Establish clear baselines, standardized indicators, and consistent reporting formats.
- Receive sustained funding and support for technical capacity, and data infrastructure.

Funding toward the end of restoration projects for monitoring becomes increasingly difficult as budgets tighten during final project stages (meaning sometimes the monitoring does not get done), a pattern named by participants from multiple regions that underscores why monitoring cannot be left to compete for whatever remains in a project budget. While regions are building these systems, broader impact will depend on better alignment between regional programs and state-level frameworks, as well as sustained investment to scale and connect these efforts.

Emerging Concepts from the Regional Workshops

Across the regions, participants identified a need for more consistent, connected, and actionable monitoring systems for wetland restoration. Participants emphasized ensuring that monitoring generates data that is useful for decision-making, not just compliant with reporting requirements, which highlights the need for centralized and publicly accessible data repositories. Ideas to address this need include establishing a coordinated statewide framework built on existing regional programs, and leveraging emerging technologies to extend monitoring reach to smaller organizations and under-resourced implementers.

Addressing the participant perspectives voiced below could make it easier to embed adaptive management into regional monitoring programs and connect it to state policy and funding. Existing regional monitoring programs are structured to support adaptive management practices, where collected data is intended to inform project design, permitting processes, and funding decisions at the regional scale. State agencies can reinforce and scale these practices by incorporating lessons learned from regional monitoring into policy guidance, grant program design, and statewide reporting structures, creating a feedback loop between on the ground outcomes and state-level decisions that shape state funding and policy programs. This connection between regional learning and state action is what transforms monitoring from a compliance exercise into a genuine driver of continuous improvement, and it becomes increasingly important as climate uncertainty makes adaptability a core feature of effective restoration.





Establish an integrated statewide-regional monitoring framework built on existing regional efforts.

Participants voiced that monitoring varies across projects due to differing goals, funding sources, and regulatory requirements, leading to gaps in data quality and comparability. Linking datasets across agencies and programs could streamline reporting and reduce burdens on grantees and enable a better understanding of cumulative effects, recovery trajectories, and the effectiveness of restoration strategies across multiple sites. Participants recommended requiring funded projects to share data openly; a shared data infrastructure with regional data portals could reduce duplication and provide common baselines for analysis. Participants shared that a coordinated monitoring framework could balance regional coordination with regionally specific needs to support both comparative analyses and locally relevant decision-making. They suggested that regional monitoring cooperatives or centralized support networks can lower participation burdens and ensure quality data even when capacity is limited. Strategies like data aggregation and confidentiality protections could alleviate concerns over data sharing, particularly with the state, that hinder participation in monitoring programs.

Ideas to address these issues include state agencies and regional programs working together to link existing regional monitoring initiatives (e.g., WRMP, CRMB, WRP RMP) and others in developing a coordinated but regionally adaptable system. This framework could define a core set of metrics tied to statewide restoration and climate goals (e.g., wetland extent and condition, carbon sequestration, flood risk reduction, biodiversity), while preserving flexibility for regions to add metrics that reflect local priorities. State agencies could lead the development of the overarching framework and standards, while regional programs would guide how those standards are applied and augmented in their geographies. Existing forums, such as the CEMW and the CWMW are ready venues for this collaboration and could be actively used to align regional programs with statewide metrics and frameworks. Where feasible, the framework could also be designed to fulfill monitoring requirements for permits and grants, reducing duplication and improving regulatory compliance across the project lifecycle.





Standardize the core building blocks of monitoring systems in partnership with regions. Participants suggested that state agencies could work with regional partners to establish and consistently apply foundational components that make monitoring data useful and comparable. Such components include clear wetland definitions that can be applied statewide, and standardized baselines and methodologies for measuring change over time. Participants emphasized the importance of tracking both ecological and social dimensions of projects, including tangible benefits for flood mitigation, water quality improvements, carbon sequestration, and wildlife habitat, as well as climate resilience, public access, equity, and community well-being, in order to capture how improvements in wetland health translate to climate and community benefit. Participants also highlighted the need to incentivize environmental co-benefits to maximize ecological benefits and complement restoration efforts and better recognize wetland co-benefits. They noted that monitoring frameworks that capture both restoration successes and potential habitat trade-offs are needed to evaluate net gains and losses, and that SF Estuary Wetlands Regional Monitoring Program shows how regularly updated habitat maps provide a backbone for analyzing temporal change. To aggregate and communicate monitoring information, participants suggested that adapting tools that require GIS fluency into web-based interactive formats can make data more accessible and actionable for decision-makers.

Participants called for a working group to align Standard Operating Procedures (SOPs) to enhance consistency in data collection and comparability across sites and programs. Keeping these SOPs simple, adaptable, and cost-effective allows for flexibility across different projects and facilitates their implementation. Participants voiced that regional monitoring programs and technical partners are essential to this process, both to ground-truth whether proposed standards are workable in practice and to build the buy-in needed for consistent adoption across diverse geographies. Linking datasets across agencies and programs could streamline reporting and reduce burdens on grantees.

Ideas to implement these participant suggestions include defining core metrics with specific indicators and consistent reporting formats that enable cross-region comparison. This level of standardization would

ensure uniformity is shared across regions to support statewide learning and accountability. Regional monitoring programs and multi-agency collaboratives could lead the development of dashboards and visualization tools that make indicators of restoration progress, co-benefits, and outcomes accessible to decision-makers, funders, and the public. State agencies could play an important supporting role by providing guidance, setting minimum standards for consistency and accessibility across regions, and ensuring fund sources are available to develop and maintain these tools over time.

Secure dedicated, multi-year funding for regional monitoring programs. Across regions, participants stressed that sustained monitoring requires funding and institutional support that extends beyond individual project-based grants. Participants shared that challenges supporting monitoring often arise in the later stages of projects when funding becomes limited, and that both multi-year funding and sustained staff capacity are needed for project monitoring, maintenance, and stewardship. This need for sustained resourcing, and the current reliance on project-by-project or cycle-by-cycle funding, add to the continuity problems that plague project delivery more broadly. The uncertainty of sustained funding discourages some landowners from engaging in wetland restoration, particularly when it involves significant shifts in land use or operations.

Ideas to address these issues include dedicated, multi-year funding for regional monitoring programs and cooperatives supporting data collection, management, analysis, staffing, and the infrastructure needed to keep these programs functional over time. State agencies could explore allocating funding through climate bond funds and other state programs, while regional entities and partnerships with Metropolitan Planning Organizations (MPOs) and other regional institutions can provide complementary support. Regional monitoring programs for water quality in the Bay Area and Southern California, which receive stable funding through permit fees from wastewater discharges, offer a useful funding model worth examining as wetlands monitoring programs are scaled and sustained.





Provide technical assistance to build capacity across regions, especially for smaller organizations.

Participants identified the need for technical assistance to accelerate implementation of restoration projects. They noted that technical support, funding, and training are critical to enable meaningful engagement, and that programs that build capacity for community partners increase both the scope and accuracy of monitoring efforts. Leveraging newer and emerging technologies could make monitoring achievable for smaller projects and community organizations with limited resources.

To address this call for expanded technical assistance programs, support for these programs could be embedded in the stable, multi-year funding provided to regional entities for coordination and capacity-building. Doing so could allow those entities to deliver technical assistance alongside their other functions like permitting support and project coordination. Regional entities, NGOs, and monitoring consortia are well-positioned to manage the delivery of such programs because they understand the specific capacity constraints and context of implementers in their region. This approach could distribute the work of capacity-building to those closest to the ground while giving state agencies a scalable mechanism for improving monitoring quality and consistency across the full range of project implementers, not just the largest and most resourced ones.

Incorporate Traditional Ecological Knowledge and community knowledge into monitoring design and interpretation. Participants shared that coastal systems in Southern California rely on community-based partners for long-term monitoring and restoration success. They highlighted the importance of local knowledge for enhancing data quality and

ensuring that projects reflect community priorities. In particular, participants voiced that successful restoration projects require early and transparent community and partner engagement to build trust and prevent conflicts.

Ideas to foster effective Tribal and community partnerships include regional implementers and monitoring programs engaging with Tribes and local communities to incorporate Traditional Ecological Knowledge (TEK) and community knowledge into metric design, monitoring protocols, and data interpretation, ensuring that engagement is culturally informed and contextually appropriate. State agencies can support this work by providing coordination support and guidance, and by ensuring that TEK-informed approaches are recognized and valued within broader state reporting frameworks and policy structures. Integrating these knowledge systems builds a more comprehensive understanding of ecological processes and expands the range of social, cultural, and climate benefits that monitoring can capture and communicate with Tribes and local communities to incorporate TEK and community knowledge into metric design, monitoring protocols, and data interpretation, ensuring that engagement is culturally informed and contextually appropriate. State agencies can support this work by providing coordination support and guidance, and by ensuring that TEK-informed approaches are recognized and valued within broader state reporting frameworks and policy structures. Integrating these knowledge systems builds a more comprehensive understanding of ecological processes and expands the range of social, cultural, and climate benefits that monitoring can capture and communicate.



WHAT'S WORKING, WHAT'S CHALLENGING,
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Governance and Regional Coordination Capacity

Many of the challenges identified across the regional workshops including fragmented funding, permitting complexity, and inconsistent monitoring, stem in part from limited coordination structures at the regional scale. Working at the regional scale in an aligned and coordinated way can bring together the many partners needed to design and implement wetland projects that deliver climate benefits. This is not a coincidence. Governance is the challenge that underlies all the others: without coordination structures that can align partners, priorities, and resources across jurisdictions, even well-designed funding programs, permitting tools, and robust monitoring frameworks struggle to produce restoration at scale. While wetland restoration is implemented locally, the systems that support projects all require coordination across jurisdictions, agencies, and partners that no single organization can provide on its own. Participants repeatedly noted that this is ultimately a question of systems change: moving the needle on wetland restoration at the scale needed to improve climate, biodiversity, and community outcomes will require building coordination structures that currently do not exist in most regions.

In the absence of dedicated regional coordination capacity, these functions are carried out in a fragmented, project-by-project manner that increases inefficiencies and limits the ability to advance work at the pace and scale California's climate targets and regional objectives require. Participants described how, in many regions, there is no formal way to communicate, and coordination becomes an extended game of telephone when it would be far more effective and efficient through multidisciplinary teams. What makes this significant is that the coordination work is still happening. CBOs, regional entities, and local agencies across the state are already performing governance functions informally, absorbing coordination responsibilities that no one has formally resourced or authorized them to carry. The challenge is not necessarily the lack of coordination; it is that the coordination where it is being carried out is without the stability, authority, or formal connection to state decision-making needed to make it durable and effective at scale. Formalizing and resourcing what already exists and connecting and building it in areas where it does not could provide significant benefits across all other challenges and opportunities.



What's Working and Opportunities for Broader Action

State efforts to improve coordination and alignment across agencies and regions are emerging and represent genuine progress. Initiatives such as Cutting the Green Tape have helped improve interagency coordination around permitting, while Proposition 4 and other state funding efforts are beginning to provide resources that can support regional-scale planning and collaboration. State agencies such as the Coastal Conservancy, Delta Conservancy, and the San Francisco Bay Conservation and Development Commission (BCDC) provide important models of agencies that work regionally, carry genuine understanding of regional context, and are playing an increasingly active role in coordinating planning and implementation. Participants noted that in some regions, organizations such as conservancies or collaboratives are well-positioned to play a larger role in coordinating programmatic approaches to permitting and funding, reducing burdens on individual landowners and project proponents. For example, the Delta Conservancy already functions as a meaningful coordinator of funding and permitting in ways that reduce burdens on individual landowners and projects. These are not small achievements, and they signal a growing institutional recognition that coordination across jurisdictions and agencies is a prerequisite for delivery at scale.

At the same time, the most instructive examples of what effective governance makes possible are coming from the regions themselves. The NCRP demonstrates what regional governance can accomplish when it is adequately resourced and formally structured. The Bay Area's BRRIT shows that intentionally designed, multi-agency coordination with stable staffing and cross-agency authority, not just the ability to convene, can meaningfully improve permitting predictability. These models work not

because the regions that developed them faced fewer challenges, but because they built the infrastructure to navigate complexity consistently rather than relying on individual relationships and high levels of effort that cannot be sustained or scaled.

What these models share are effective coordination structures that provide dedicated capacity for convening partners and managing cross-cutting functions. Regional coordinating entities can serve as a bridge between state agencies and local implementers in both directions when they are backed by stable, long-term funding and staffing; and are designed with feedback mechanisms that allow the state to assess whether policies are functioning as intended and adapt when they are not. Regions without a coordinating entity may benefit from funding and technical assistance to elevate an existing organization into this role or create a new entity that can provide this capacity.

Emerging Concepts from the Regional Workshops

Across the workshops, participants consistently returned to governance as the underlying condition that can influence whether progress on funding, permitting, and monitoring translates into restoration at scale. A recurring theme was that strengthening collaboration must be intentional and resourced. Participants emphasized that it requires proactive, ongoing communication among partners, establishing partnerships before a project begins, and holding regular meetings to share strategies, challenges, and successes so that everyone is working toward common goals and can adjust as they learn. The concepts below reflect that understanding, moving from securing the stable funding that regional coordination requires, to formalizing the partnerships that give regional entities the authority and resources to act. Such an approach would build the state-regional feedback mechanisms that could connect on-the-ground experience to the policy and funding decisions shaping what is possible across California.



Establish dedicated, multi-year funding for regional coordination capacity, including staffing, convening, and technical functions.

Regional coordination is essential to connect isolated restoration sites into a functioning landscape, and it requires stable funding to serve in that role. Participants described the relationship between funding and governance directly, noting that large block grants deliver funding efficiently and flexibly, allowing multiple partners to implement projects on the ground while capacity building and adaptive planning occur at the program level. Political and leadership turnover was named across multiple regions as one of the most consistent disruptors of continuity, with teams repeatedly having to rebuild relationships and re-establish credibility with new leadership rather than advancing work.

State agencies could identify and dedicate funding sources and mechanisms that support the full range of coordination functions that were mentioned by workshop participants across the state, including project prioritization, partner convening, engagement with Tribes and communities, monitoring alignment, and cross-sector coordination. The Sustainable Groundwater Management Act (SGMA) program and the Regional Forest and Fire Capacity Program offer models for how state grant structures can be designed to build regional capacity and participants suggested that a similar legislative mechanism, potentially modeled on the Multibenefit Land Repurposing Program, could be developed specifically for climate resilience, restoration, and stewardship. This would provide flexible funding resources to regionally governed entities. This funding needs to be multi-year and stable enough to sustain staffing and operations across political transitions and long restoration timelines. Another point highlighted by participants was the need for funding to provide adequate compensation, such as advance payments, and structures that make participation viable for Tribes and CBOs, which currently face steep financial barriers to engaging with large or complex state and federal grants.

Formalize and strengthen partnerships between state agencies and regional governance structures.

Participants described the value of gaining buy-in from the beginning, including having staff from across disciplines to help make decisions. They were candid that this can be a substantial effort, one that is not currently realistic for every project without dedicated resources to fund such collaboration, and that it is both a big lift and critical for success. Partnerships between state agencies and regional governance structures could be created and strengthened within each region, building on models such as NCRP. Regional models demonstrate what becomes possible when regional entities have clear roles, adequate resources, and direct lines of communication with state agencies. In a state as large as California, the state would also benefit from being deliberate about replicating and scaling these conditions across all regions.

Regional entities could manage day-to-day operations and administrative and convening tasks, while maintaining local engagement and responsiveness. State agencies could provide resources, policy alignment, and accountability frameworks. This division of responsibility reflects how the most effective regional models already operate in practice.

Participants in the North and South Coast workshops, in particular, emphasized that Tribal engagement within these partnerships requires special attention. As equal governments, Tribes need to have an equal seat at the table, but without the resources that other government agencies have, it is a hard role for most Tribes. Participation could be sustained through relationship-based engagement rather than one-off outreach, and with fellowship programs, leadership funding, and Tribal-directed projects that build long-term capacity and local authority within decision-making processes. Regional entities, collaboratives, and CBOs/NGOs could actively document how their governance models are addressing funding, permitting, monitoring, and engagement challenges to help map how to resource these partnerships at the state level.



Create structured, ongoing coordination mechanisms between regions and the state. Participants described the need for regional forums that can create and support an interdisciplinary community of practice, one that integrates the expertise of practitioners, agency staff, and scientists rather than leaving these groups to connect ad hoc. The connection between regional experience and state decision-making is not consistent enough to drive the alignment that meeting California's wetland and climate targets will require. State agencies could establish regular, structured forums, whether coordination bodies, advisory groups, or formal feedback processes, that give regional entities a consistent and meaningful channel to share lessons, surface barriers, and directly inform state policy, funding programs, and regulatory guidance. These mechanisms should be designed so that regional input shapes state decisions, not just informs them, otherwise participation will erode.

Convene regional partners to assess existing governance structures, strengths, gaps, and priorities. Participants across regions were clear that the coordination work already underway is largely invisible to the state, and that any effort to strengthen regional governance has to start from an accurate picture of what exists on the ground rather than what is visible from Sacramento. They pointed to the value of documenting where structures are strong, where gaps are most acute, and where investment would have the greatest leverage. State agencies could lead regional convenings in each geography to engage directly with implementers, collaboratives, and local partners, ensuring the assessment reflects on-the-ground realities rather than what is visible from Sacramento. These convenings would identify existing coordination structures, surface capacity gaps that are creating bottlenecks, and clarify regional priorities for state support. Participants noted that the Humboldt Bay Shoreline Adaptation Atlas offers one model of how regional project inventories can help agencies identify priorities and support innovative projects efficiently. A statewide assessment built through regional engagement could function similarly, giving the state a strategic foundation for investment decisions. The findings could directly inform funding allocation, partnership formalization, and the design of state-regional coordination mechanisms, making this a logical and relatively low-cost first step that unlocks more targeted action across all the governance concepts above.





Regional Success Stories



REGIONAL SUCCESS STORIES

North Coast – North Coast Resource Partnership (NCRP)



The North Coast Resource Partnership (NCRP) is a long-standing regional collaboration led by Tribes and counties that coordinates across seven counties and thousands of partners along California's North Coast to plan, fund, and implement watershed resilience projects, including wetland restoration. Since its formation in 2004, the NCRP and its partners have invested over \$250 million dollars in hundreds of projects, using an equitable and transparent regional prioritization process to identify priorities, develop a pipeline of projects, and allocate funding accordingly.

This regionally coordinated approach enables funding stability, flexibility, and strategic use of funds. Furthermore, the NCRP is able to sequence projects across phases, provide technical assistance, fund implementation, and track performance in a consistent manner across the region, resulting in scale and impact that individual project sponsors could not achieve alone.

State support plays a central role in enabling this model. NCRP aligns its regional plans with state priorities and funding programs, while also providing feedback to the state on regional priorities and needs.

When the state invests in and partners with regional entities as co-managers of funding and implementation, it enables more strategic, continuous, and landscape-scale resilience and restoration, reducing fragmentation barriers and improving funding effectiveness and other outcomes.



REGIONAL SUCCESS STORIES

Bay Area – Bay Area Wetlands Regional Monitoring Program (WRMP)

Between the mid 1800s and 1990s, about 80 percent of the San Francisco Estuary's tidal marshes were diked and filled. Tidal wetlands in the Estuary are currently being restored, but they still face an uncertain future due to many factors including climate change, accelerating sea level rise and decreased sediment supplies. These threats risk undoing previous restoration gains and undermine the success of future projects. Coordinated regional monitoring is necessary to track the recovery of wetlands, streamline permitting, and make informed management decisions. The San Francisco Estuary Wetlands Regional Monitoring Program (WRMP) has navigated the complexity of monitoring tidal wetlands across 400 miles of shoreline. By bridging 100+ cities and nine counties, the program tracks ecological change over time and identifies critical management needs for this vast, multi-jurisdictional landscape. These wetlands and waterways provide habitat for a multitude of wetland species and several endemic and federally threatened and endangered species. After more than two decades of advocacy for a program like this, the WRMP was established with crucial funding from the US Environmental Protection Agency and the San Francisco Bay Restoration Authority to coordinate monitoring across tidal wetland restoration projects in the Estuary. Instead of requiring each project to independently design its own monitoring, WRMP creates a shared framework with standardized indicators, a regional monitoring network, and an open-access data system.

The WRMP's mission is to deliver coordinated regional monitoring of the San Francisco Estuary's wetlands to:

- 1 Inform science-based decision-making for wetland restoration and adaptive management.
- 2 Increase the cost-effectiveness of permit-driven monitoring associated with wetland restoration projects.

This coordinated monitoring approach used by the WRMP reduces duplication, lowers costs, and produces standardized data that can be used by project managers, regulators, and funders to inform adaptive management and future investments. Local, state, and federal agencies play a key role by supporting the development of shared metrics, aligning monitoring requirements with permitting and funding programs, and using WRMP data to track progress toward regional and statewide goals. The WRMP is a key partner in the CalEMP, a statewide effort to standardize monitoring. By transitioning from project-by-project tracking, this collaborative approach delivers the consistent, comparable data essential for informed decision-making, greater accountability, and effective long-term outcomes.



REGIONAL SUCCESS STORIES

Delta – Staten Island Wetlands Restoration & Working Lands Integration

Staten Island is a 9,200-acre farm, located in the heart of the Sacramento-San Joaquin Delta, which provides critical habitat for migratory birds along the Pacific Flyway and showcases wildlife-friendly agriculture as a viable conservation strategy. In addition to enhancing habitat for native species, restoration goals at the site are to reverse ongoing subsidence by resaturating organic peat soils, slowing microbial activity in the soil and reducing greenhouse gas emissions. TNC and partner Conservation Farms & Ranches (CFR) are restoring approximately 1,000 acres of managed seasonal and semi-permanent wetlands on parts of the Island that are most at risk for future subsidence due to high amounts of organic content in the soil. At the same time, CFR has transitioned 4,500 acres from corn to rice cultivation, which reduces subsidence. Rice fields can also provide important resting and feeding grounds for migratory birds and other native species, in addition to the habitat enhanced through wetland restoration.

A primary challenge at Staten Island has been navigating complex and sometimes conflicting regulatory frameworks. To meet these challenges, early and sustained engagement with state agencies and regulators was critical for navigating regulatory pathways, receiving technical input, and enhancing staff capacity, especially as permitting requirements shifted at the federal level in response to changes to the Clean Water Act. Through this coordinated effort,

TNC was able to receive a CEQA Statutory Exemption for Restoration Projects, or SERP, for Staten Island through the Cutting the Green Tape initiative. This significantly reduced the permitting and regulatory barriers for this restoration project.

There were also challenges around the multi-benefit nature of the project, as a mosaic that incorporates both wetland restoration and rice cultivation. Despite the two approaches providing similar benefits in terms of halting subsidence, reducing greenhouse gas emissions, and creating habitat, wetland restoration comes with complex regulatory requirements while conversion to rice from corn is not seen as a land-use change and therefore has no such requirements. Working directly with state agencies was again critical for aligning expectations and reducing uncertainty for the complex, multi-benefit project.

As a living laboratory, Staten Island demonstrates how sustainable farming practices can support both ecological conservation and agricultural productivity in the face of climate change and land conversion. The project provides a roadmap for advancing multi-benefit wetland restoration projects, demonstrating that restoration efforts require clear, flexible regulatory pathways and sustained engagement with regulators. Scaling these approaches will depend on expanding and standardizing these support systems.





REGIONAL SUCCESS STORIES

Central Coast – Monterey Bay Climate Adaptation Action Network (MBCAAN)

The Central Coast's tidal marshes have declined significantly from diking, urban development, and agricultural conversion. Elkhorn Slough and Morro Bay's marshes have declined 62 percent (Brophy et al. 2019). Opportunities for wetland restoration are complicated by geographically dispersed wetlands and existing land use patterns. Much is privately owned and actively farmed. There is a strong need for a more coordinated and cohesive framework for wetlands in this region to advance unified goals, assess historic ecology, identify regional targets, and coordinate a regional monitoring framework.

In 2024, The Monterey Bay Climate Adaptation Action Network (MBCAAN) was established as part of a larger transformational regional grant of \$71.1 million from NOAA's Climate Resilience Regional Challenge (CRR) grant program. The need for consistent high-level collaboration and coordination to coordinate climate adaptation efforts across Monterey Bay is a consistently voiced need across the region. Thirty organizations partnered on this initiative, with leadership from California Marine Sanctuary Foundation, to develop adaptation actions focused on Monterey Bay's low lying, vulnerable, coastal communities threatened by sea level rise, storm surge, wildfires and flooding. MBCAAN brings together local and regional governments, nonprofits, community-based organizations, Tribes and indigenous communities, scientists, and educational institutions to align priorities, advance a shared pipeline of projects, and plan future adaptation strategies. In addition to advancing 15 specific on-the-ground restoration and resilience projects, MBCAAN is also advancing regional initiatives including:

- Job and workforce development, which supports 285 local jobs and creates 350 paid internships (led

by Watsonville Wetlands Watch, Hartnell College, California State University Monterey Bay, and University of California Santa Cruz), and over 700 upskilled learners to build a local, skills ready workforce.

- Walking the Path of Right Relations program, an education and relationship building initiative between Indigenous and non-indigenous partners.
- Pilot testing innovative financing through the establishment of a regional revolving fund to bridge funding for climate adaptation projects as well as rapid response to urgent needs.
- Launching a Regional Monitoring Program (RMP) to assess the extent, health, function, and resilience of coastal wetlands and dunes in the Monterey Bay region, led by the Central Coast Wetlands Group.

While still relatively new and initially time-bound under the grant period, MBCAAN demonstrates how dedicated funding for regional coordination can accelerate progress by connecting planning, funding, and implementation. State alignment with this type of effort—through complementary funding, technical support, and recognition of regional coordination functions—can help extend and build on this momentum. At the same time, its reliance on federal grant funding highlights a broader challenge: without sustained support, through state, local or other sources, regional coordination capacity may be difficult to maintain beyond initial funding periods. Time-limited investments, such as state and federal grants, can catalyze effective regional coordination, but scaling and sustaining these models will require ongoing funding and institutional support to maintain continuity and long-term impact.



REGIONAL SUCCESS STORIES

South Coast – Southern Los Cerritos Wetlands Restoration Project

The Southern Los Cerritos Wetlands Restoration Project represents a landmark success in advancing large-scale coastal wetland restoration within one of the most urbanized landscapes in Southern California. Spanning more than 100 acres, the project seeks to restore tidal marsh, transitional uplands, and associated habitats that were heavily altered over the past century by oil extraction, industrial development, transportation infrastructure, and fragmented land ownership.

The primary challenge facing the project has been the complexity of coordinating across multiple state and local agencies, each with distinct regulatory authorities, mandates, and timelines. Advancing restoration in this setting required sustained alignment of land acquisition, funding, environmental review, and permitting over many years—often across shifting policy and funding landscapes. Contaminated soils, legacy infrastructure, and proximity to surrounding development further complicated project design and regulatory approval.

State agencies have been instrumental in overcoming these challenges by providing long-term engagement across all phases of the project. This has included funding support for land acquisition and restoration planning, leadership in environmental review and permitting processes, and active participation in multi-agency coordination efforts. Crucially,

sustained state involvement allowed the project team to move forward incrementally while maintaining momentum, even when faced with extended timelines and layered constraints.

The project has also grappled with secondary challenges around funding continuity and workforce capacity. Multi-phase restoration projects require reliable, long-term investment not only in construction, but also in planning, monitoring, and adaptive management. By supporting workforce development and technical expertise over time, partners have been able to maintain institutional knowledge and ensure continuity as the project progressed from vision to implementation.

Today, the Los Cerritos Wetlands Restoration Project demonstrates how intensive coordination, patient capital, and persistent public-sector leadership can unlock transformative outcomes. The project integrates ecological restoration with public access, flood risk reduction, and climate resilience, delivering benefits to both wildlife and surrounding communities. Beyond site-specific gains, Los Cerritos offers a broader lesson for the state: complex urban wetland restoration efforts require sustained engagement across funding, permitting, and coordination. When that support is maintained, even highly constrained projects can move forward and deliver lasting ecological and community value.





The Role of the Wetlands for Climate Partnership



THE ROLE OF THE WETLANDS FOR CLIMATE PARTNERSHIP

California is at a pivotal moment for wetland restoration. Decades of regional experience, ambitious climate and restoration targets, and evolving policy architecture have created conditions that make systemic change possible in ways it has not been before. The challenge sections of this report described the barriers that stand in the way of scaling wetland restoration: fragmented funding, permitting complexity, inconsistent monitoring, and governance structures that depend on individual effort rather than institutional design. The emerging concepts from the regional workshops pointed to the interventions most likely to move the needle. What remains is the question of how to connect, amplify, and translate recommended interventions into the kind of sustained, coordinated action that can close the gap between California's wetland commitments and on-the-ground delivery. That is the role the Wetlands for Climate Partnership is positioned to play.

The W4C Partnership seeks to bridge the distance between regional innovation and statewide practice to ensure that what is working in one region informs what becomes possible in others, and that the patterns emerging across regions shape the policy, funding, and coordination decisions at the state level.

The W4C Partnership is a convening, learning, and catalyzing platform, aiming to connect practitioners, synthesize lessons, and advance the collective action needed to turn regional insight into systemic improvement. Its purpose is not only to help implementers learn from one another, but to help create the conditions for the kind of cross-region alignment and state-regional partnership that can sustain progress over the long timelines restoration requires.

The workshops that informed this report demonstrated both the need for that platform and what it can accomplish. Across all five regions, participants identified the same desire: for more structured opportunities to learn from peer regions, to problem-solve around persistent challenges with others navigating the same barriers, and to ensure that the insights generated by on-the-ground experience actually reach the decision-makers whose choices shape what is possible. The W4C Partnership is positioned to help address that need not by creating new structures where functional ones already exist, but by strengthening the connections among regional efforts, state commitments, and the evolving policy landscape that can support progress toward California's wetland restoration goals.



THE ROLE OF THE WETLANDS FOR CLIMATE PARTNERSHIP



HIGH AMBITION THROUGH COLLABORATIVE GOVERNANCE BEYOND CALIFORNIA

Broadening a coastal wetlands conservation effort beyond California is also worth consideration. On the U.S. East Coast, the [South Atlantic Salt Marsh Initiative \(SASMI\)](#) launched as a partnership in 2021 across four states—North Carolina, South Carolina, Georgia, and Florida—to determine the greatest threats to the salt marsh ecosystem and advance an ambitious goal to conserve and restore 1 million acres of this essential habitat. In 2023, a regional plan was established and in April 2026, [all four states finalized specific conservation plans](#). This type of collaboration is food for thought on the U.S. West Coast, and could be instructive for entities like the [Pacific Coast Collaborative \(PCC\)](#). With executive branch representatives from British Columbia, Washington, Oregon, California, and the cities of Vancouver, Seattle, Portland, San Francisco, Oakland, and Los Angeles, PCC has a history of collaboration and shared agreements across multiple climate and clean energy efforts and could be a future site for work on coastal wetlands as a climate and biodiversity initiative.

Moving forward, the Partnership aims to focus on the interconnected functions below, each grounded in what regions have identified as most valuable and most needed.

Convening practitioners and partners across regions. The Partnership aims to continue to host regional and multi-region convenings that bring together practitioners, CBOs, NGOs, Tribes, local governments, and state agency staff to share lessons, align approaches, and problem-solve around common challenges. These convenings are working sessions designed to produce tangible outcomes, whether that means developing shared guidance on a specific permitting pathway, aligning monitoring approaches across adjacent regions, or translating on-the-ground experience into actionable recommendations for state agencies. Where specific issues require sustained attention, the Partnership can facilitate issue-specific working groups on topics such as Cutting the Green Tape utilization, hybrid land-use projects, or workforce development strategies that draw on regional expertise to develop solutions that can be tested, refined, and scaled. The value of this work is not just what happens in the room, but what participants take back to their own regions and projects: stronger relationships, practical tools, and a clearer sense of what others are learning and where collaboration makes the most sense.

Support cross-region learning and knowledge exchange. Whereas convening creates the venues and relationships, this function is about capturing what those convenings produce and moving it to where it is needed, including between meetings and beyond the regions in the room. Regions do not need to solve the same problems independently, and innovations that work in one geography often have relevance elsewhere even when the specifics differ. The Partnership seeks to document and share solutions emerging from multiple regions, highlighting both successes and the conditions that made them possible, as well as the lessons learned from efforts that did not work as intended. This could include maintaining communication between formal convenings and identifying gaps in participation or geographic representation to ensure that knowledge sharing is equitable and inclusive. The goal is to build a genuine feedback loop where local and regional successes inform statewide patterns and priorities, and where state guidance, funding opportunities, and policy shifts are clearly communicated back to practitioners in ways that shape how projects are designed and delivered.

Catalyze systemic improvement. Individual projects and regional innovations are essential, but they are not sufficient on their own to meet California's wetland restoration targets. Systemic barriers require systemic responses, and the Partnership is positioned to aggregate lessons from across regions to highlight where structural changes in policy, funding design, or coordination infrastructure would have the greatest impact on the pace and scale of restoration statewide. This function focuses on ensuring that the patterns emerging from regional experience are visible to the state agencies, legislative staff, and decision-makers whose choices determine what gets funded, how programs are designed, and where coordination capacity is invested.



THE ROLE OF THE WETLANDS FOR CLIMATE PARTNERSHIP

The Partnership aims to elevate multi-benefit projects, those that deliver on climate, habitat, infrastructure, recreation, and community resilience goals simultaneously, and help make the case for why those projects deserve prioritization in state planning and resource allocation. Supporting long-term planning and accountability through consistent tracking, reporting, and communication across regions could also be part of this function, ensuring that progress is measurable and that the state has the information it needs to assess whether its investments are translating into outcomes at the scale its targets require.

Collectively, these functions represent a vision for how the W4C Partnership can serve as the convening, learning, and catalyzing platform that connects California's wetland restoration system, creating the space for actors to share knowledge, align priorities, and advance collective action. The Partnership can amplify what regions are learning and help ensure those lessons reach the state agencies and decision-makers whose program design and funding choices determine what becomes possible statewide. It can help ensure that smaller organizations and

underrepresented communities have access to the knowledge, relationships, and convenings that larger, better-resourced entities can access more easily, fostering more equitable participation in the collaborative learning that shapes implementation. The Partnership also can help maintain visibility for wetlands within California's evolving climate strategies, providing continuity and sustained attention across the political transitions and long timelines that restoration operates on. The value of this platform is that it creates the conditions for those who do that work to do it better, more efficiently, and in closer partnership with one another. The workshops that informed this report were a beginning. As the Partnership moves forward, it hopes to sustain momentum, deepen the regional partnerships the workshops began to build, and support the development of the kind of state-regional partnership that can close the implementation gap and deliver the wetland restoration California's climate and communities depend on.



Appendices



Sample Regional Workshop Agenda and Discussion Questions

The five regional workshops that anchor this report followed a shared structure, adapted in each region to reflect local context, priorities, and the case studies featured by regional partners. Each workshop opened with context-setting on California's wetland goals and targets and takeaways from prior convenings, followed by a series of case-study "lightning talks," each paired with a structured, facilitated discussion organized around guiding questions. Each workshop ended with a site visit to a local restoration project. Lightning-talk topics were organized around the report's cross-cutting challenge areas of permitting, funding, governance, and monitoring, and were delivered by regional practitioners whose projects illustrated those challenges and the solutions emerging to address them. Confidentiality and shared meeting agreements were established at the outset of each workshop to encourage candid exchange.

The agenda below is a representative composite rather than a reproduction of any single workshop. It is intended to illustrate the common format across the regional workshops; actual agendas varied in their specific speakers, case studies, site visits, and topic emphasis based on pre-workshop consultation with regional partners. Speaker names and project sites have been generalized for this sample. The discussion questions that follow are drawn directly from the questions used across the five regional workshops and the statewide agency workshop, and are presented here as a representative selection of how discussions were framed in each region.

SAMPLE REGIONAL WORKSHOP AGENDA

TIME	AGENDA ITEM
9:00–9:20 AM	Welcome and Introductions (W4C Partners; regional partner organization) • Welcome and introductions, confidentiality, and general meeting agreements • Agenda review • Overview of goals of the W4C Partnership • Meeting purpose
9:20 – 9:50 AM	Overview of Context and W4C Work To-Date (W4C Partners) • Opening remarks from Clesi Bennet, California Natural Resources Agency (CNRA) • California and regional context, wetland goals, and targets • Context and takeaways from previous workshops • Overview of the discussion format • Questions and discussion
9:50 – 10:40 AM	Lightning Talk 1: Planning and Permitting • Case-study presentation from a regional practitioner, followed by facilitated discussion around key discussion questions
10:40 – 10:50 AM	Break
10:50 – 11:40 AM	Lightning Talk 2: Collaborative Governance and Sustainable Funding • Case-study presentation from a regional practitioner, followed by facilitated discussion around key discussion questions
11:40 AM – 12:30 PM	Lightning Talk 3: Tracking, Monitoring, and Workforce Capacity • Case-study presentation from a regional practitioner, followed by facilitated discussion around key discussion questions
12:30 – 1:30 PM	Lunch and Networking • Extended lunch and networking session.
1:30 – 1:45 PM	Wrap Up, Next Steps, and Prepare for Site Visit
1:45 – 5:00 PM	Site Visit • Guided visit to a local wetland restoration project



SAMPLE DISCUSSION QUESTIONS

The questions below are a representative selection from across the workshops, organized by region. They illustrate how discussions were framed around each region's priorities while returning consistently to the cross-cutting themes of permitting, funding, governance, and monitoring.

Statewide Agency Workshop

- What are the most significant gaps and barriers to establishing coordinated targets and metrics that work at both statewide and regional scales?
- What are the best strategies for addressing funding challenges such as limited duration and project-by-project scaling – for example, block grants, regional plans, or an infrastructure funding approach – and what has worked in other efforts?
- Where is the W4C Partnership's expertise and capacity most needed to support work at the state scale, and to support regional and local implementers?

Bay Area

- How effective have state efforts designed to advance and streamline wetland restoration and planning (e.g., Cutting the Green Tape, SB 272) been in supporting your work, and what potential do you see for newer initiatives such as the Climate Bond?
- How well do current state metrics capture the full range of wetland benefits? What additional metrics could help measure progress in a way that is meaningful to both state and regional efforts?
- What is one thing the W4C Partnership can do to bring lessons learned from the region to the state to inform action?

Delta

- Looking at successful projects like Staten Island, what governance and permitting strategies have been most effective, and what key lessons can be applied to future projects?
- Wetland restoration in the Delta must often align with agricultural land uses and other priorities. What governance and permitting approaches have successfully integrated these needs, and where do conflicts still exist?
- How can funding strategies like carbon markets and dedicated nature-based solutions funds be leveraged more effectively? What barriers prevent broader use of these tools, and how might we overcome them?

Central Coast

The Central Coast workshop used a special format, convened jointly with the Monterey Bay Climate Adaptation Action Network (MBCAAN) quarterly meeting. The audience was therefore broader than a typical regional workshop, and the questions were written to engage that wider group of climate-resilience practitioners alongside wetland-focused participants.

- Climate resilience projects often run into similar permitting hurdles, such as multiple agencies, timelines, and conflicting requirements. What common strategies or lessons could we share across sectors to make permitting more efficient?
- What funding challenges and successes have you experienced across the project cycle, from planning through implementation, maintenance, and long-term monitoring?
- What kinds of information do you most need from monitoring programs to guide decisions on wetlands, wildfire, and broader climate resilience projects, and how might the CRMB Regional Monitoring Program or similar programs help fill those needs?

South Coast

- Which lessons from past projects could inform statewide strategies for wetland permitting and planning?
- How have partnership and governance approaches helped advance coastal stewardship in the South Coast, and what strategies have been most effective in engaging Tribes, local communities, and cross-border partners?
- What are the best examples of long-term funding structures that support the full lifecycle of wetland projects, from planning and design to adaptive management and stewardship?

North Coast

- What are the incentives for collaboration, and are there positive incentives that could drive it locally and across agencies? What templates for collaboration could be shared to help facilitate that?
- Considering other regions that have formalized coordination processes, such as the Bay Area's BRRIT, is there appetite for something similar in the North Coast, and how could funding agencies help with early consultation?
- How can workforce development strategies better support Tribal partners and integrate Indigenous knowledge and leadership in wetlands restoration?



Documents Reviewed and Discussed

The materials below include literature cited directly in the report and selected plans, policies, program materials, and other background resources reviewed or discussed during the Wetlands for Climate Partnership process. These materials provided context for the report and were considered alongside regional workshop discussions, expert consultation, and prior Partnership research.

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Featured Projects and Initiatives

This appendix highlights the projects and initiatives featured across the five regional workshops held between December 2024 and January 2026. At each workshop, regional partners presented case studies through a series of “lightning talks,” and most workshops also included a lunchtime presentation and a site visit to a nearby restoration project. These featured projects were selected by regional hosts and partners to illustrate the challenges, innovations, and opportunities discussed throughout this report—spanning permitting and governance, funding and financial stability, monitoring and tracking, workforce and capacity, and community and cross-jurisdiction collaboration.

For each featured project, we note the presenting organization and speaker(s), the project or initiative discussed, a link to learn more, and a brief description of the project and what the presentation covered in the context of the workshop. Presentations reflect the projects and framing as they stood at the time of each workshop, and project details, phases, and web resources may have since evolved.

Bay Area | DECEMBER 5, 2024

LIGHTNING TALKS

Margaret Bruce, Executive Director, San Francisquito Creek Joint Powers Authority (SFJPA)

The SFJPA, formed in 1999, addresses creek flooding and, since 2011, shoreline flooding. Early efforts focused on East Palo Alto but revealed broader solutions were needed. The complex project has undergone various studies and CEQA processes.

Learn more: <https://www.sfcjpa.org/safer-bay-project>

Laura Cholodenko, Deputy Program Manager, SF Bay Area Program, California State Coastal Conservancy

The South Bay Salt Pond Restoration Project, a multi-agency initiative, aims to restore hundreds of acres of wetlands to improve habitat, protect against flooding, and enhance public access.

Learn more: <https://www.southbayrestoration.org/>

Devan Reiff, Principal Planner, East Bay Regional Parks District

The Hayward Area Shoreline Planning Agency (HASPA), established 54 years ago, manages a mix of public and private land along the San Francisco Bay shoreline. Climate adaptation projects include converting former treatment plants into marshes and protecting habitats from sea-level rise.

Learn more: <https://www.ebparks.org/hayward-area-shoreline-planning-agency-haspa>

Ryan Hernandez, Principal Planner, Contra Costa County

Contra Costa County, with nine shoreline cities and 15 unincorporated communities, includes over 90 miles of shoreline, much of it designated as Environmental Justice (EJ) areas. The county's jurisdiction includes both the SF Bay and the Delta, adding complexity to planning efforts. The County is currently engaged in efforts as part of SB 272 to determine an approach for developing a subregional shoreline adaptation plan.

Learn more: <https://www.contracosta.ca.gov/9981/Contra-Costa-Resilient-Shoreline-Plan>

James Muller, Principal Environmental Planner, San Francisco Estuary Partnership

James Muller discussed efforts in Novato Baylands, focusing on a planning project in collaboration with the County of Marin, Marin Audubon Society, and SFEI. The project emphasizes a parcel-by-parcel data gathering approach to manage the Baylands and involves collaboration with a wide array of partners, including transportation agencies (due to the Highway 37 corridor).

Learn more: https://www.sfei.org/documents/novato-creek-baylands-strategy?__cf_chl_f_tk=DpHoGN1A1aPP4BvCcOpudKv537L02Zo6Plu4Vly5y5E-1782918257-1.0.1.1-6GkP0iKAa.L8QGxpvUuUgeaRD4dlmkFI974Xm4T1C60



APPENDIX C: FEATURED PROJECTS AND INITIATIVES

LUNCHTIME PRESENTATION: WETLANDS RESTORATION AND RISK-REDUCTION MODELING

UC Santa Cruz Presentation on Wetlands Restoration and Risk Reduction Modeling

Over lunch, Dr. Borja González Reguero presented his team's study, highlighting nature-based solutions for addressing sea-level rise and flood risks in San Mateo County. This collaborative effort between the University of California, the Center for Coastal Climate Resilience, The Nature Conservancy, and other stakeholders quantified the socio-economic and flood risk reduction benefits of salt marsh restoration and horizontal levees. The study revealed that sea-level rise will significantly increase flood risks, disproportionately impacting disadvantaged communities. The analysis also explored financing mechanisms, such as integration with flood insurance systems, to support the implementation of these strategies.

Learn more: [Nature-based adaptation in San Francisco Bay; https://climateresilience.ucsc.edu](https://climateresilience.ucsc.edu)

SITE VISIT: FIRST MILE HORIZONTAL LEVEE, ORO LOMA SANITARY DISTRICT

Led by: Jackie Zipkin, General Manager, East Bay Dischargers Authority (EBDA)

The First Mile Horizontal Levee is the first full-scale "living levee" in the Bay Area. Located along Oro Loma Marsh between Bockman Canal and Sulphur Creek and led by EBDA in partnership with the San Francisco Estuary Partnership, the project transforms a conventional levee into a broad, gently sloped, vegetated landscape that improves water quality (by passing treated wastewater through the levee), enhances marsh habitat, and builds resilience to sea-level rise. It scales up the concept first demonstrated at the nearby Oro Loma Horizontal Levee pilot. Participants toured the demonstration site and continued on to the First Mile site.

Learn more: <https://ebda.org/projects/first-mile-horizontal-levee/>

Delta | MARCH 17, 2025

LIGHTNING TALKS

Sydney Chamberlin, Project Director, The Nature Conservancy and April Zohn, Manager of Environmental Compliance, Ducks Unlimited

Staten Island, an 8,500-acre farm in the Sacramento-San Joaquin Delta, serves as a critical wintering ground for Sandhill Cranes and other migratory birds along the Pacific Flyway. Acquired by The Nature Conservancy in 2001, it showcases wildlife-friendly agriculture as a viable conservation strategy while protecting habitat from development pressures. As a living laboratory, Staten Island demonstrates how sustainable farming practices can support both ecological conservation and agricultural productivity in the face of climate change and land conversion.

Learn more: <https://www.nature.org/en-us/get-involved/how-to-help/places-we-protect/staten-island/>

Dylan Chapple, Program Manager, Delta Stewardship Council

The Delta Plan, established by the Delta Stewardship Council under the 2009 Delta Reform Act, is a comprehensive, legally enforceable strategy guiding the management of California's Sacramento-San Joaquin Delta's water and environmental resources. As of the 2024 Five-Year Review, significant progress has been made toward achieving a reliable water supply, with many performance targets nearly or fully met. Funding for Delta projects comes from a variety of sources, including state general funds, grants from propositions like Proposition 68, and allocations from the California Drought, Water, Parks, Climate, Coastal Protection, and Outdoor Access for All Act of 2018.

Learn more: <https://deltacouncil.ca.gov/delta-plan/>

Rachel Wigginton, Senior Environmental Scientist, The Delta Conservancy

The Delta Conservancy is a lead agency supporting wetland restoration and monitoring in the Delta, working closely with state, federal, and local partners. It helps coordinate restoration funding, tracks project progress, and advances science-based approaches through programs and uses tools such as EcoAtlas' Habitat Project Tracker.



APPENDIX C: FEATURED PROJECTS AND INITIATIVES

Other key groups involved include the Delta Stewardship Council, which oversees Delta Plan Performance Measures, and organizations implementing wetland assessments like SFEI (CRAM, EcoAtlas) and the Department of Water Resources (Fish Restoration Program).

Learn more: <https://deltaconservancy.ca.gov/>

SITE VISIT: STATEN ISLAND, SACRAMENTO-SAN JOAQUIN RIVER DELTA

Led by: Jerred Dixon, Director, Conservation Farms and Ranches

Staten Island is a large island in the heart of the Sacramento–San Joaquin Delta, owned and managed by The Nature Conservancy since 2001 as a working farm and wildlife-friendly “living laboratory.” The featured wetland restoration project will restore roughly 420 acres on a deeply subsided portion of the island as part of a broader carbon-farming effort. Its goals are to build high-quality wildlife habitat, reduce greenhouse-gas emissions, halt and reverse land subsidence (easing pressure on surrounding levees), and demonstrate how wetland restoration can be scaled across the Delta while maintaining economic returns for landowners. Participants toured the site by caravan.

Learn more: <https://www.nature.org/en-us/get-involved/how-to-help/places-we-protect/delta/>;
<https://deltaconservancy.ca.gov/delta-carbon-program/>

Central Coast | SEPTEMBER 9, 2025

Co-hosted with the Monterey Bay Climate Adaptation Action Network (MBCAAN)

LIGHTNING TALKS

Monique Fountain, Director of the Tidal Wetland Program and Dash Dunkell, Stewardship Director, Elkhorn Slough National Estuarine Research Reserve (NERR)

Located a few miles east of Moss Landing, the Elkhorn Slough National Estuarine Research Reserve (NERR) is home to one of California’s largest coastal salt marshes, providing critical habitat for a wide diversity of birds, plants, marine mammals, and fish. As one of 30 NERRs nationwide, it serves as a hub for environmental stewardship, research, and education. The Reserve is administered by the National Oceanic and Atmospheric Administration (NOAA), owned and managed by the California Department of Fish and Wildlife, and supported through its partnership with the Elkhorn Slough Foundation.

Learn more: <https://elkhornslough.org>

Bryan Largay, Conservation Director, Land Trust of Santa Cruz County

The Land Trust of Santa Cruz County is a nonprofit devoted to protecting, caring for, and connecting people to the extraordinary natural and working lands of the region. Over the years, it has conserved more than 14,000 acres of forests, open space, wildlife habitat, coastal lands, and farmland. The Trust is deeply involved in agricultural land preservation and sustainable farm operations, managing about 5,000 acres of working lands. They also support local farmers and ranchers through easements, sustainable production practices, soil conservation, and water/irrigation upgrades. Their vision is that wild forests, rich farming heritage, unique habitats, and the coastline all be preserved and cared for by community and valued by future generations.

Learn more: <https://landtrustsantacruz.org>

Kevin O’Connor, Director, Central Coast Wetlands Group (CCWG)

Central Coast Wetlands Group (CCWG), based at Moss Landing Marine Laboratories, advances the study, preservation, and restoration of wetlands across California’s Central Coast. Working with local, state, and federal partners, CCWG supports a long-term vision of sustaining diverse and resilient wetland ecosystems.

CCWG is currently working under a NOAA CRRC grant to establish a new Regional Monitoring Program (RMP) for Monterey Bay using the USEPA’s Level 1–2–3 framework: developing statewide wetland mapping and status-and-trends programs (Level 1), serving as the Central Coast lead for the California Rapid Assessment Method (Level 2),



APPENDIX C: FEATURED PROJECTS AND INITIATIVES

and conducting field-based monitoring such as water quality, vegetation, soils, and invertebrate surveys (Level 3). This integrated approach provides essential science and tools to guide wetland protection and restoration.

Learn more: <https://mlml.sjsu.edu/ccwg/>

SITE VISIT: SALINAS RIVER STATE BEACH DUNE RESTORATION, MONTEREY COUNTY

Led by: Sarah Stoner-Duncan, Coastal Resilience Program Manager, Central Coast Wetlands Group at Moss Landing Marine Laboratories

A short walk from the workshop, participants visited the Salinas River State Beach dune restoration site. Since 2015, CCWG and California State Parks (with partners) have worked to restore roughly 20 acres of sensitive dune habitat. The effort has resulted in removing invasive iceplant, reestablishing native dune vegetation, and enhancing the dunes' capacity to buffer the coast against sea-level rise and storm-induced flooding. The visit offered a hands-on look at regional collaboration and the challenges of long-term habitat stewardship.

Learn more: <https://mlml.sjsu.edu/ccwg/habitat-restoration/>

South Coast | JANUARY 14, 2026

LIGHTNING TALK 1: PLANNING AND PERMITTING

Neysa Frechette, Senior Restoration Ecologist, Tidal Influence

The Southern Los Cerritos Wetlands Restoration Project illustrates the complexity and long time horizon required for large-scale tidal wetland restoration in Southern California. The project's planning and permitting pathway involves foundational considerations such as land ownership, governance, partnerships, funding strategies, and community engagement, with sustained local support and trusted partners playing a critical role in navigating complex regulatory processes and maintaining project momentum. The project has also required navigating CEQA, core regulatory permits, and mitigation monitoring requirements while protecting biological, hydrological, cultural, and archaeological resources during design and construction. Lessons from Los Cerritos Wetlands and other regional projects demonstrate the importance of planning for extended permitting timelines, anticipating unforeseen conditions, remaining flexible during construction, and balancing restoration outcomes with compliance across multiple agencies.

Learn more: <https://intoloscerritoswetlands.org/>

Phillip Musegaas, Executive Director, San Diego Coastkeeper and Kara Conner, Science Program Manager, Climate Science Alliance

The Tijuana River Estuary illustrates the stewardship and governance challenges associated with managing a watershed that spans an international border, with approximately 75 percent of the watershed located in Mexico. Efforts such as the One Coast One Community initiative seek to strengthen binational coordination and address the long-standing pollution challenges affecting the Estuary. Key considerations include aligning local, state, and federal actors across two countries; building shared data, trust, and communication mechanisms; addressing misinformation; establishing cross-border water working groups; and creating forums for shared learning while navigating language barriers, capacity constraints, and differing political and cultural contexts for advocacy and government engagement.

The Climate Science Alliance's Hear Our Names initiative demonstrates a community-led approach to stewardship and co-governance. The initiative began with questions about the absence of Indigenous plant names on the landscape and Indigenous access to and participation in coastal lands, and evolved into a long-term collaboration integrating Indigenous knowledge, language, storytelling, art, and ceremony into coastal stewardship. The initiative demonstrates how relationship-building, guided access to ancestral coastal lands, and Indigenous leadership can reshape how coastal reserves are used and governed.

Learn more: <https://www.sdcoastkeeper.org>; <https://www.onecoastonecommunity.org>; <https://www.climatesciencealliance.org>



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Eric Stein, Biology Department Head, Southern California Coastal Water Research Project (SCCWRP)

The Southern California Estuary Regional Monitoring Program is designed to move away from project-specific monitoring programs, which can be expensive and inefficient, toward a consistent, regionally coordinated approach. The program includes a framework for regional reference sites, standardized monitoring protocols, agency guidelines, and an implementation strategy to support planning and funding. It is designed to provide vertical and horizontal consistency, integrate with statewide monitoring efforts, and enable agencies and partners to track progress toward wetland recovery goals, prioritize restoration investments, and evaluate restoration outcomes.

Learn more: <https://www.sccwrp.org>

SITE VISIT: BIG CANYON COASTAL HABITAT RESTORATION PROJECT, UPPER NEWPORT BAY

Led by: Thomas Shields, Restoration Manager, Newport Bay Conservancy

Big Canyon is the largest remaining natural canyon on the east side of Upper Newport Bay, encompassing a 60-acre nature park at the downstream end of the Big Canyon watershed. This multi-phase habitat restoration, water-quality, and adaptation project is led by the City of Newport Beach in partnership with the Newport Bay Conservancy, the California Department of Fish and Wildlife, and other partners. The project aims to restore historic salt marsh and riparian habitat, improve degraded water quality—including reducing selenium inputs and eliminating a stagnant pond—remove invasive species, and enhance the bay's resilience to sea-level rise. It illustrates multi-benefit restoration in a highly urbanized setting.

Learn more: <https://newportbay.org/projects/big-canyon-project/>

North Coast | JANUARY 22, 2026

LIGHTNING TALKS

Leslie Wolff, Retired NOAA, and Jennifer Olson, Senior Environmental Scientist, California Department of Fish and Wildlife

The Redwood Creek Watershed provides a case study in navigating regulatory compliance and permitting for wetland restoration. Successful outcomes rely heavily on collaboration and on treating regulatory processes as an opportunity for coordination within the project team rather than simply as a compliance requirement. While structural improvements and streamlining efforts have helped, multi-objective and phased projects continue to face overlapping and duplicative authorities across federal and state agencies. Comprehensive planning and early, coordinated engagement are therefore critical to navigating complex regulatory environments.

CDFW's Cutting the Green Tape program seeks to streamline restoration permitting and increase the pace and scale of restoration projects by shifting the regulatory approach toward treating restoration as beneficial management for protected species rather than as a development-style compliance exercise. The program places dedicated restoration staff in CDFW regions to collaborate with project proponents and includes tools such as the expanded Restoration Management Permit under AB 1581 and the Statutory Exemption for Restoration Projects (SERP) under CEQA. Together, these tools are intended to reduce regulatory constraints, simplify permitting, and enable larger, multi-objective restoration projects to move forward more efficiently.

Learn more: <https://wildlife.ca.gov/Conservation/Cutting-Green-Tape>; <https://wildlife.ca.gov/Regions/1>

Supervisor Steve Madrone, Humboldt County Co-Vice-Chair, North Coast Resource Partnership (NCRP)

The North Coast Resource Partnership (NCRP) uses a regional approach to advance resilient watersheds and communities, emphasizing multi-benefit outcomes through state and regional partnerships. Its governance model is grounded in Tribal and county co-leadership, local autonomy, and collaborative principles including equity, transparency, and common ground. NCRP leverages flexible block grants, many from state agencies, to support project implementation, capacity building, and adaptive planning while integrating regional data and local



APPENDIX C: FEATURED PROJECTS AND INITIATIVES

knowledge to prioritize investments. The Partnership also explores innovative funding strategies, including private-sector engagement, land stewardship tax credits, and mitigation banking, to expand restoration opportunities and support long-term sustainability.

Learn more: <https://northcoastresourcepartnership.org>

Sally Bolger, Executive Director, and Mark Cederborg, Policy Director, Ecological Workforce Initiative

The Ecological Workforce Initiative highlights the central role of the ecological workforce in delivering restoration projects and demonstrates how investment in ecological restoration can also support local jobs and community economic resilience. Through the Ecological Workforce Career Pathways project, the initiative developed a new dataset linking restoration projects to job creation and found that much of project funding flows directly to workers implementing restoration. The work underscores the importance of planning for workforce development early so that local communities are positioned to benefit from restoration investments. It also frames the restoration sector as part of the broader economy and emphasizes the value of greater recognition, collaboration, and data-driven strategies to maximize both ecological and economic outcomes.

Learn more: <https://www.ecologicalworkforce.org>

SITE VISIT: OCEAN RANCH RESTORATION PROJECT, EEL RIVER WILDLIFE AREA

Led by: James Ray, Senior Environmental Scientist, California Department of Fish and Wildlife

The Ocean Ranch Restoration Project demonstrates a collaborative, conservation-focused approach to restoring tidal connectivity, coastal dunes, and estuarine habitats in the Eel River Wildlife Area. The project integrates Tribal partnerships, ecological monitoring, and both traditional and expedited permitting approaches. It has involved close coordination among CDFW, Ducks Unlimited, the Wiyot Tribe, neighboring landowners, state and federal regulatory agencies, and funding partners. Tribal members have played a direct role in project planning, native vegetation planting, fish monitoring, and interpretive signage, illustrating how restoration planning and implementation can incorporate ecological, cultural, and community priorities.

Learn more: <https://caltrout.org/news/collaborative-efforts-to-restore-the-eel-river-estuary/>

TO LEARN MORE, PLEASE VISIT:

nature.org/caclimate

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