



ACCELERATING RESTORATION IN THE SACRAMENTO VALLEY AND BEYOND

PROGRESS AND NEXT STEPS TO CUT GREEN TAPE IN CALIFORNIA

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Cover Photos: Top – Sutter Bypass. Photo by [Paul Hames/California Department of Water Resources](#). Bottom, from left to right – juvenile chinook salmon in Butte Creek. Photos courtesy of Northern California Water Association. Western pond turtle, Photo by Jerry Kirkhart. Valley elderberry longhorn beetle. Photo by [Brian Hansen/U.S. Fish and Wildlife Service](#).

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EXECUTIVE SUMMARY

California is at the threshold of a transformative era for landscape-level restoration, fueled by unprecedented funding opportunities from the Bipartisan Infrastructure Law, the Inflation Reduction Act, and the anticipated California Climate Bond (Proposition 4, 2024). This funding arrives at a critical time, as the state confronts escalating and costly challenges posed by climate change. There is growing consensus that proactive strategies to address climate-related impacts and protect declining species populations are more effective and cost-efficient than reactive measures taken after damage occurs. Taking decisive action now is essential to tackle environmental challenges and enhance resilience for the future.

Restoration practitioners and coalitions are poised to implement landscape-scale restoration projects that reactivate floodplains, improve habitat for species, and bolster our resilience to a changing environment. With new funding and increasing restoration demands, agencies must be ready to manage a rising volume of permitting consultations. To seize this once-in-a-generation opportunity, California needs efficient and effective restoration permitting processes that align with its urgent habitat and climate goals.

While California has made substantial progress in developing accelerated permitting pathways for restoration, challenges remain. A deeper understanding and broader implementation of new permitting tools are essential, as are coordinated efforts to address persistent regulatory and organizational hurdles.

This white paper assesses the current regulatory landscape and provides actionable recommendations to maximize the benefits of existing accelerated permitting pathways, advance coordinated permitting efforts, expand successful programs, and fill the regulatory and institutional gaps to better serve the needs of our ecosystems and all those involved in restoring them.

Key Findings

Our analysis, primarily focused on the Sacramento River Basin, was informed by interviews with 39 organizations and over 80 individuals across various sectors, including environmental consulting firms, nonprofits, regulators, California Tribes, private landowners, agriculture, and networks/associations. Several [key themes](#) emerged:

- **Accelerated Permitting Pathways are Considered Essential:** Seventy-five percent (75%) of project proponents interviewed indicated that restoration-specific accelerated permitting pathways are essential for moving their projects forward,

especially when coordinated across multiple agencies. This coordination simplifies processes, reduces administrative burdens, saves money, and speeds up project approvals. The Sacramento River Basin has seen increased interest in tools such as Programmatic General Permits, Restoration Management Permits, Programmatic Biological Opinions, and others.

- **Strategic Leadership Empowers Staff to Innovate:** Agency staff look to their leadership to set a clear direction and empower them to embrace new and innovative approaches. A prime example of the impact of focused, goal-oriented leadership is the California Cutting Green Tape (CGT) Initiative, led by California Natural Resources Secretary Wade Crowfoot. Through the CGT Initiative, Secretary Crowfoot [guided agency staff](#) to take specific actions to accelerate restoration efforts and clarified several policies to help both staff and applicants better understand and utilize various regulatory tools. Alongside other successful programs like the [NOAA Restoration Center's Community-based Restoration Program](#), the CGT Initiative showcases the transformative effect of proactive leadership in streamlining regulatory practices and enhancing restoration outcomes.
- **Restoration-Specific Regulatory Programs Improve Efficiency:** The most effective regulatory programs blend a clear mission for restoration with the strategic use of accelerated permitting pathways. Restoration-dedicated teams like CGT and NOAA Restoration Center have received high satisfaction ratings from applicants for their efficiency, consistency, and collaboration—making the permitting process more predictable for applicants. Integrating funding, technical assistance, and permitting into a unified program is a model for accelerating restoration efforts and leveraging partnerships to get more done. Interviewees recommended expanding these types of proactive restoration programs to other agencies to help accomplish more restoration.
- **Inconsistencies and Gaps Remain in Implementation and Permitting:** Ongoing challenges include the inconsistent interpretation of regulatory requirements by agency staff for both traditional and efficient pathways, sometimes resulting in more stringent application of the law or increased and variable mitigation requirements. Interviews also revealed significant variability in the awareness and understanding of efficient permitting tools among both applicants and agency staff. There is a perception that some staff are reluctant to use efficient permitting tools and are uncertain of their scope or how to apply their protection measures. Project proponents seek more consistent and proactive use of existing restoration-specific permitting tools, expansion of successful pathways and programs, and creation of new pathways or efficiencies to fill gaps. Proponents also advocate for more regulatory certainty and the resolution of persistent policy and funding challenges to prevent delays, increased costs, and setbacks in achieving environmental benefits.

- **Need for Increased Agency Capacity and Project Proponent Engagement:** Agency staff face significant capacity challenges due to limited staffing and turnover, sometimes leading to fewer resources for technical assistance with project implementers and delays in processing applications. As demands on agencies grow with new state plans and funding opportunities, expanding staff capacity and increasing training is essential. Agency staff emphasized that early and consistent engagement from applicants can also help streamline the permitting process, ensure compliance with regulatory requirements from the outset, and better align with funding opportunities.

Recommendations

Our [Recommendations](#) are grouped into five key strategies aimed at enhancing the restoration permitting process and increasing partnerships to accelerate restoration. The recommendations and detailed actions incorporate key interview findings, follow-up research, and Sustainable Conservation's experience. Many of the recommendations call for collaboration among those who regulate, implement, or are affected by restoration efforts.

1. Facilitate Proactive Use of Efficient Restoration Permitting Pathways Statewide

Training and Guidance: Develop and deliver ongoing training and guidance resources for agency staff, applicants, and consultants to promote consistent use of efficient permitting pathways, including for multi-benefit projects. Agency leaders should provide strategic guidance and support that empowers staff to expand collaboration with project implementers and maximize the use of efficient restoration permitting processes.

Early Engagement: Promote early engagement from project proponents to foster collaborative project development, coordinated funding, and efficient permitting with regulatory and funding agencies.

2. Create Dedicated Restoration Teams Within All Regulatory Agencies

Dedicated Units: The most effective regulatory programs for advancing restoration are those that combine a clear mission for restoration with the strategic use of efficient permitting tools. Agencies can use successful models like the California Department of Fish and Wildlife's (CDFW) Cutting Green Tape program and NOAA Restoration Center's Community-based Restoration Program to create dedicated teams/units within all regulatory agencies. These units should house funding, efficient permitting tools, and technical assistance – enabling a fully coordinated approach focused on accelerating restoration.

3. Expand Successful Accelerated Restoration Permitting Pathways

Scale Proven Pathways: Expand successful accelerated restoration permitting regulatory pathways, which have demonstrated substantial time and resource savings, enabling more restoration projects to benefit from efficient permitting options.

4. Create New Restoration Pathways or Efficiencies Where Gaps Exist

Identify and Address Gaps: Create new restoration pathways or efficiencies to address gaps in the current regulatory framework, ensuring a comprehensive and streamlined permitting process that honors environmental mandates.

5. Advance Solutions to Ongoing Restoration Challenges

Collaborative Agency Efforts: Foster deliberate, focused dialogue and collaboration among agency leaders and project implementers to develop effective solutions to ongoing regulatory, funding, and organizational challenges, advancing shared restoration goals.

The supporting information and rationale for each detailed recommendation can be found in the [Recommendations](#) section. The list of recommendations, including involved agencies, partners, and timelines, can be found in [Table 1. Recommendations by Agency and Implementation Timeline](#).

The Path Forward

This white paper is a collective call to action for restoration project proponents, agency officials, California Tribes, environmental organizations, and communities. The progress made so far is a testament to the power of collaborative efforts across these groups. To sustain momentum, agency leadership should engage in the focused dialogue needed to overcome the remaining challenges to scale up restoration. These challenges include resolving policy, funding, and organizational hurdles; ensuring effective training and technical assistance; managing perceived risks associated with working in sensitive habitats; and shifting from reactive to proactive restoration strategies.

By building on recent successes, committing to innovation, and collaborating effectively, we can ensure that regulatory processes and programs enable ecological restoration at the pace and scale needed to fix existing problems and prepare for an uncertain climate future. Together, we can support restoring California's ecosystems to benefit the environment and our communities.

ABBREVIATIONS

AB	Assembly Bill
Army Corps	U.S. Army Corps of Engineers
BLM	Bureau of Land Management
CD	Consistency Determination
CDFA	California Department of Food and Agriculture
CDFW	California Department of Fish and Wildlife
CE	Categorical Exclusion (from NEPA)
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CGT	Cutting Green Tape
CNRA	California Natural Resources Agency
CWA	Clean Water Act
EA	Environmental Assessment (for NEPA)
EIR	Environmental Impact Report (for CEQA)
EIS	Environmental Impact Statement (for NEPA)
Flood Board	Central Valley Flood Protection Board
FRGP	Fisheries Restoration Grant Program
HREA	Habitat Restoration and Enhancement Act
IS/MND	Initial Study/Mitigated Negative Declaration (for CEQA)
LSAA	Lake and Streambed Alteration Agreement
MOU	Memorandum of Understanding
NCWA	Northern California Water Association
NEPA	National Environmental Policy Act
NFWF	National Fish and Wildlife Foundation
NMFS	National Marine Fisheries Service
NOA	Notice of Applicability
NOAA	National Oceanic and Atmospheric Administration
NOD	Notice of Determination

ABBREVIATIONS (CONTINUED)

NRCS	Natural Resources Conservation Service
NWP	Nationwide Permit
OAL	Office of Administrative Law
OHP	California Office of Historic Preservation
OPR	Office of Planning and Research
PBO	Programmatic Biological Opinion
PEIR	Program Environmental Impact Report (for CEQA)
PIR	Partners in Restoration
RCD	Resource Conservation District
RGP	Regional General Permit
RMP	Restoration Management Permit
Regional Water Board	Regional Water Quality Control Board
SERP	Statutory Exemption for Restoration Projects
SHPO	State Historic Preservation Office
SHRP	General Order for Small Habitat Restoration Projects
SRGO	Statewide Restoration General Order
SWRCB	State Water Resources Control Board
TMDL	Total Maximum Daily Load
USBR	U.S. Bureau of Reclamation
USFWS	U.S. Fish and Wildlife Service
WDRs	Waste Discharge Requirements
Water Boards	State Water Resources Control Board and Regional Water Quality Control Boards

1 BACKGROUND



Black-necked stilts foraging for food at the Sacramento National Wildlife Refuge. Photo by Florence Low/ California Department of Water Resources.

California is entering an era of exciting opportunities for landscape-level restoration. With significant increases in federal funding from the [Bipartisan Infrastructure Law](#) and Inflation Reduction Act, a potential new California Climate bond ([Proposition 4, 2024](#)), and extensive project portfolios such as those of the [Floodplain Forward Coalition](#), agencies must prepare to manage a growing volume of permitting consultations for restoration projects. This once-in-a-generation opportunity calls on restoration project proponents, agency officials, California Tribes, environmental organizations, and communities to build on recent success, collaborate, and ensure regulatory processes enable ecological restoration to occur at the pace and scale California needs today.

Habitat restoration project applicants face a complex

and costly process, often involving approvals from six or more state, federal, and local agencies. Although laws like the Clean Water Act and the Endangered Species Acts have been integral to reducing human impacts on the environment, they don't fully support proactive measures for species recovery or long-term ecosystem resilience.

These approvals frequently rely on standard permitting mechanisms intended for traditional development activities, such as building shopping centers, rather than being designed for restoration projects. Consequently, traditional regulatory and permitting processes often fail to address restoration-related conditions or outcomes. In some cases, restoration projects may even face additional ("compensatory") mitigation requirements despite their purpose to improve overall ecosystem health.

To meet the urgent need for timely and cost-effective ecological restoration, it is crucial to put restoration on a separate regulatory path distinct from traditional development, using efficient and specialized permitting tools.

California has recognized the need for changes in the regulatory system through the development of “programmatically” permits, other efficient regulatory pathways, and new agency programs designed specifically to accelerate restoration. The [Cutting Green Tape \(CGT\) initiative](#), launched by Governor Newsom in 2020 and led by the California Natural Resources Agency (CNRA) and the [California Landscape Stewardship Network](#), is a recent landmark program helping to catalyze change in the regulatory landscape and facilitate habitat restoration efforts statewide. Despite this progress, California faces significant environmental challenges that require immediate action. The [Sacramento-San Joaquin Delta \(Whipple, Grossinger, Rankin, Stanford, & Askevold, 2012\)](#) has lost [96.8% of its tidal wetlands \(Mount, Hanak, & Gartrell, 2022\)](#), the [state’s nine largest wildfires occurred in the past seven years \(CAL FIRE, 2022\)](#), and salmon fisheries remain closed for a second consecutive year (CDFW, 2024).

We have a choice to address restoration proactively rather than reactively. Reactive approaches to climate-related disasters are often more costly and less effective, leading to greater environmental damage and exacerbating the need for complex permitting solutions. By taking proactive measures, we can strive to prevent such issues and work towards more sustainable restoration outcomes.

Our analysis of regulatory progress for restoration in the Sacramento River Basin and beyond builds on the decades-long commitment of Sustainable Conservation’s [Accelerating Restoration](#)

WHAT ARE ACCELERATED PERMITTING PATHWAYS?

Accelerated permitting pathways are specialized regulatory tools designed to expedite the approval process for habitat restoration projects. They feature pre-approved frameworks such as programmatic permits and other simplified procedures to help navigate complex regulations, cut approval times, lower costs, and enable quicker project initiation. Their goal is to ensure environmental protection while enabling the need for timely and effective ecological restoration by creating more efficient systems for all involved.

[program](#) and its many partners. In partnership with the [Floodplain Forward Coalition](#), this white paper reviews the current state of restoration permitting in the Sacramento River Basin and considers its statewide implications.

Our recommendations aim to address the immediate needs of restoration projects to maximize efficiency, effectiveness, and impact as new funding opportunities arise. We envision these recommendations fostering a culture of proactive restoration, enabling restoration proponents and agencies to focus on solutions rather than obstacles.

Restoration Permitting Progress-to-Date

Early Federal Efforts

Since the 1990s, federal agencies have worked to create more efficient regulatory pathways for aquatic restoration projects. For example, U.S. Army Corps of Engineers (Army Corps) Nationwide Permit (NWP) 27 for Aquatic Habitat Restoration, Enhancement, and Establishment Activities has been in effect [since 1992](#) (Final Notice of Issuance, Reissuance, and Modification of Nationwide Permits, 1996). Since then, the Army Corps has reissued it every five years, and it is used today for many aquatic restoration projects in California.

The U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) developed the ability to do ‘programmatic consultations’ to simplify permitting for groups of specific restoration projects or projects affecting an individual species or set of species in a particular part of California (USFWS and NMFS, 1998). These programmatic biological opinions (PBOs) are an essential tool for restoration projects to comply with [Section 7 of the Endangered Species Act](#).

Partners in Restoration

In parallel with progress at the federal level, California Resource Conservation Districts (RCDs) and Sustainable Conservation began to collaborate on consolidated permitting programs for smaller projects at the local and regional scale starting in 1996. Their collaborative [Partners in Restoration](#) program created one-stop permitting for projects, but

the time and expense (on average, 3-5 years and \$350,000-500,000) to develop these successful programs made them impractical models for the entire state.

California Convenes

In 2002, California took its first step into statewide restoration permitting when former California Natural Resources Secretary Mary Nichols convened a task force and produced [Removing Barriers to Restoration](#) (Task Force on Removing Barriers to Restoration, 2002). This report included a series of reforms, such as the creation of the well-known and widely used [California Environmental Quality Act \(CEQA\) exemption for small restoration projects](#) (Cal. Code Regs. tit. 14 § 15333).



Elkhorn Slough, the location of the first Partners in Restoration program.

New Pathways Emerge

Building on this momentum, the NOAA Restoration Center developed its first PBO for the Central Coast in 2006 with technical assistance from Sustainable Conservation. Soon after, the State Water Resources Control Board (SWRCB) issued the General Order for Small Habitat Restoration Projects in 2007, also known as the SHRP (SWRCB, 2013).

NOAA PBOs were then completed for the North Coast (2012) by the NOAA

Restoration Center, and South Coast in collaboration with Sustainable Conservation (2015). An additional efficiency was created when the California Coastal Commission issued Consistency Determinations (CDs) for NOAA Restoration Center's Community-based Restoration Program in the [North and Central Coast](#) (2013) and [South Coast](#) (2016). The [Central Valley PBO](#), which covers the Sacramento Valley, was completed in 2018.

Statewide Restoration Permitting for Small Scale Projects

In 2014, AB-2193, the Habitat Restoration and Enhancement Act (HREA), was signed into law, providing a faster and simpler process with one single approval from the California Department of Fish and Wildlife (CDFW). This new process replaced the need for separate Lake and Streambed Alteration Agreements (LSAA) and California Endangered Species Act (CESA) incidental take permits, with a 30- or 60-day approval timeline. It was designed to work in tandem with the State Water Board's SHRP, creating coordinated pathway for small projects.

Statewide Restoration Permitting Initiative for Larger Scale Projects

With growing progress in accelerating restoration, [Sustainable Conservation's Statewide Restoration Permitting Initiative](#) formed a collaborative interagency effort based on NOAA's successful regulatory model. The Army Corps, NOAA, USFWS, and the SWRCB worked from 2018 to 2022 to develop the USFWS Statewide Restoration PBO, SWRCB Statewide Restoration General Order (SRGO), and the SRGO

Program Environmental Impact Report (PEIR). These coordinated agency authorizations aimed to create a cohesive set of high-priority project types and common permit conditions to enhance collaborative permitting efficiencies.

Cutting Green Tape Initiative

In 2019, the California Landscape Stewardship Network released a [white paper](#) (Robins, Nelson, & Farrell, 2019) advocating for accelerated restoration efforts. This led to a partnership with California's Natural Resources Secretary Wade Crowfoot, who spearheaded the state's CGT Initiative. The initiative involved convening agencies and restorationists statewide and produced a [report outlining specific actions](#) (California Landscape Stewardship Network, 2020). Secretary Crowfoot also issued a [memo](#) with guidance and direction to agencies under his leadership (Crowfoot, 2021) to form CGT teams and develop efficient regulatory tools, and providing clarity on frequent policy questions to empower agency staff.

Four years later, CGT has proven effective in progressing agency systems and staffing frameworks, as well as creating new regulatory tools to accelerate restoration. The CGT momentum propelled the 2022 completion of the coordinated SWRCB and USFWS statewide authorizations mentioned above. The CGT team at CDFW has also developed new regulatory tools and partner with project proponents to expedite project implementation at reduced costs.

Army Corps Delivers a New Process for Nature-Based Solutions

In August 2024, the Corps reissued [Regional General Permit \(RGP\) 16](#) for aquatic restoration and enhancement activities within their [Sacramento District Office boundaries](#). This programmatic permit directly complements the earlier mentioned NOAA, USFWS, and SWRCB authorizations and covers a sweeping array of nature-based restoration project types to benefit aquatic habitats and remedies some of the limitations of the long-standing Army Corps NWP 27, serving as a potential model for broader action.

See [Appendix A. Existing Efficient Regulatory Processes for Aquatic Habitat Restoration in California](#) for more information on current efficient regulatory processes.

Realizing the Benefits

The CGT and NOAA Restoration Center programs model many of the benefits of efficient permitting for restoration. From 2022-23, CGT saved CDFW an estimated \$2.5 million in permitting costs and reduced processing time to an average of 45 days for permit issuance. Those permits supported 217 restoration projects, collectively restoring 18,728 acres and 477 stream miles (Office of Governor Gavin Newsom, 2024).

As of May 2024, the NOAA Restoration Center estimates that its four PBOs for restoration in California have saved an estimated \$6.8-\$17.6 million in staff time and consultant fees for the National Marine Fisheries Service (NMFS), the Army Corps, and project proponents combined (B. Pagliuco, personal

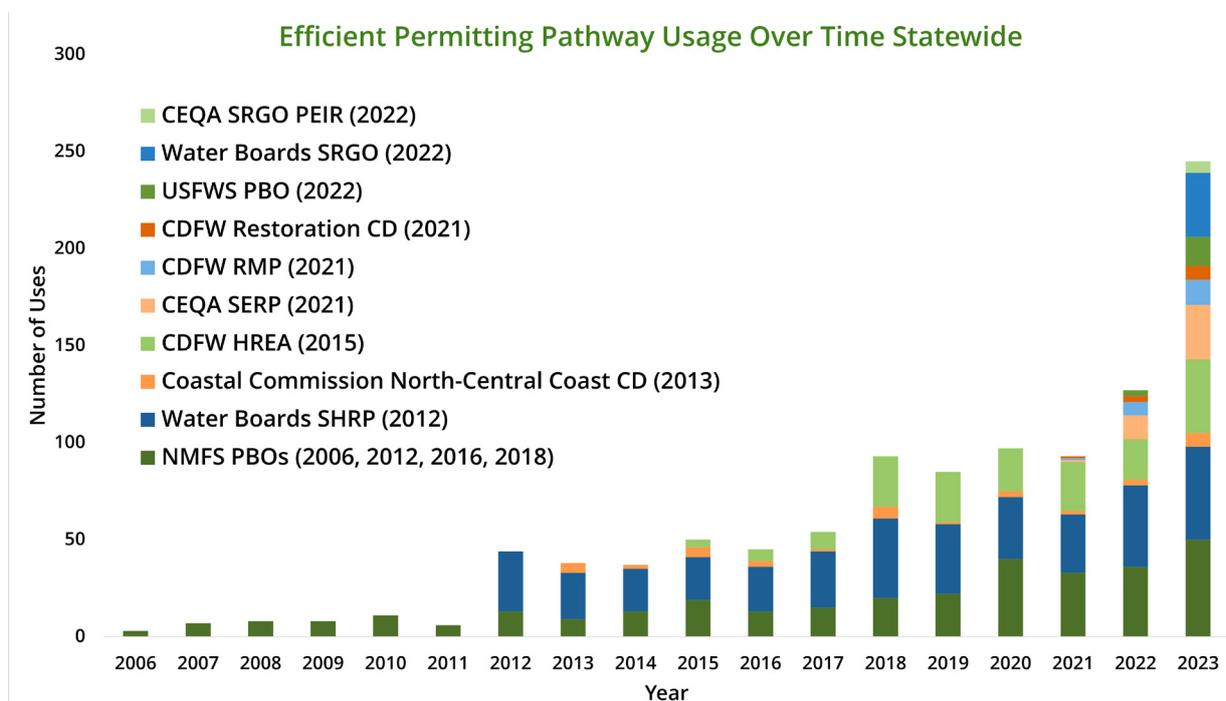


Figure 1. Efficient Pathway Usage Over Time Statewide

Note: The year of each pathway's first use is shown in parentheses. The four NMFS PBOs have been combined. Sources: email communications from the NOAA Restoration Center, USFWS, SWRCB, and CDFW; [HREA Report web page](#) (CDFW, 2024), [CEQAnet Web Portal](#) (Office of Planning and Research, 2024), [SERP Concurrences web page](#) (CDFW, 2024), and [California Integrated Water Quality System Project database](#) (SWRCB, 2024).

communication, May 15, 2024) and (Pagliuco & Samonte, 2015).

See [Appendix B. Comparison of Timing and Effort Between Standard and Efficient Permitting Processes](#) for more information about the benefits of efficient pathways.

As shown in [Figure 1](#), Sustainable Conservation has tracked a steady increase in the use of efficient permitting tools for restoration projects in California over time.

Opportunities for More Progress

Statewide, programmatic permits are changing the landscape of restoration permitting. However, the exact approach to utilizing programmatic permits or other efficient permitting tools can vary significantly between agencies, regions, and even staff within the same office, resulting in decreased regulatory

certainty and unpredictable costs. Despite the increases in the overall use of efficient permitting for restoration, in some cases, traditional permitting approaches are being used when restoration-specific options are available. This variation can be influenced by the practices, perspectives, and training resources within a particular agency office or team.

Given the large pipeline of landscape-scale restoration projects on the horizon, a unified interagency effort is necessary to refine regulatory systems and ensure their successful completion.

What Makes an Efficient Permitting Process for Restoration?

Evaluating what makes an efficient permitting process can be subjective, depending on the role of whom you ask. For example, a project proponent

WHAT MAKES AN EFFICIENT PERMITTING PROCESS?

- ✓ **Avoids Redundant Efforts:** Combines agency processes to prevent duplication of work.
- ✓ **Aligned Environmental Standards:** Consistent measures across agencies with modern restoration practices based on real-world practitioner feedback.
- ✓ **Tailored for Restoration Projects:** Conditions specific to habitat restoration rather than general regulations.
- ✓ **Efficient and Clear Applications:** Simplifies the application process for habitat restoration.
- ✓ **Streamlined Technical Information:** Defines necessary technical data, cutting out unnecessary details.
- ✓ **Efficient and Cost-Effective:** Reduces time and costs compared to traditional permitting while safeguarding natural resources.

focused on helping species and local communities might prioritize a process that ensures quick project approvals and minimizes costs, enabling faster implementation and more funds for on-the-ground work. Regulatory agency staff may prioritize a process that is protective of the resources under their legal mandate, with some staff also valuing efficiency to meet high workload demands. In the end, when both parties' needs are met, they are more likely to see better partnerships and improved outcomes that help achieve their common environmental improvement goals. The interviews and analysis presented later in this paper highlight many fundamental features of efficient permitting.

White Paper Objectives

This white paper seeks to answer a crucial question: **What regulatory processes are working well, and what more can be done to drive progress for restoration?**

By investigating this question, this paper identifies actionable steps for maximizing the benefits from existing efficient permitting pathways, expanding programs that are working well, and filling the regulatory and institutional gaps to better serve the needs of our ecosystems and all those involved in restoring them.

Our objectives are to evaluate current regulatory processes and make actionable recommendations that will increase the pace and scale of habitat restoration.



A drone view looking north over the Sacramento River in Yolo County, with the [Turning Point Floodplain Restoration Project](#) on the left side of the frame. The project is a partnership between [California Department of Water Resources](#), [River Partners](#), and [American Rivers](#). The project will work on the restoration of over 1,000 acres of historical floodplain that will provide flood protection and enhance and expand critical habitat for fish and wildlife. Photo taken October 18, 2023. Fred Greaves / California Department of Water Resources.

2 METHODS

Geographic Focus Area

Our analysis focused primarily on interviewing individuals from Redding to the Yolo Bypass in the Sacramento River Basin (see [Figure 2](#)), the key region for the Floodplain Forward Coalition’s [portfolio of in-river salmon and floodplain restoration projects](#). We also interviewed permitting and agency experts from other areas of California to gain a comprehensive view of the restoration permitting process.

Data Collection

Sustainable Conservation and the Floodplain Forward team developed an

initial list of interviewees and identified additional experts throughout the study for their involvement in habitat restoration as project proponents or regulatory agency staff. Interviews with individuals are not necessarily representative of their organization or agency as a whole. Some individuals outside the Sacramento River Basin were interviewed for their notable statewide roles in restoration projects or permitting (i.e., subject matter expertise).

Sustainable Conservation conducted interviews from August 23, 2023, to February 27, 2024. The interviews were confidential and included a mix of general



Figure 2. Sacramento River Basin Map

and interviewee-specific questions. Interviewees or their expert colleagues were asked clarifying questions as needed to better understand the details of various permitting processes or recommendations. Those who did not participate in an interview had the option to provide written responses via Google Forms. To refine the recommendations, follow-up discussions with individuals and briefings with agency leadership were conducted from April 24, 2024, through August 6, 2024 (see [Key Interview Findings](#) and [Recommendations](#) below). The interviews and follow-up discussions were central to the development of the findings and recommendations below.

In total, we engaged with 39 organizations and over 80 individuals across a diversity of perspectives, including environmental consulting firms, nonprofits, regulators, California Tribes, private landowners, agriculture, and networks/associations. For a complete list of organizations with which participants in this study are affiliated, see the [Acknowledgments](#) section below.



Project partners tour a portion of Tide's End Multibenefit Restoration Project in the Delta in Yolo County (April 2024). Photo credit: Andrew Nixon/California Department of Water Resources.

3 KEY INTERVIEW FINDINGS

The interviews and subsequent research revealed several key themes that highlight both significant achievements by agencies and areas where gaps in processes or resources persist. The following summary provides an overview of these findings, with detailed agency-specific and process-related insights included in the [Recommendations](#) section that follows.

Advancements in Restoration Permitting

The interviews highlighted numerous examples of progress, reflecting the growing momentum of restoration-specific permitting pathways and programs.

Notable Progress and Effective Tools

Interviews revealed significant advancements in the use of efficient permitting tools, which are becoming increasingly integral to the project approval process. These tools have proven successful in expediting project approvals, reducing costs, and enhancing regulatory certainty. Their effectiveness underscores the potential for further training and application to maximize their benefits.

Key tools that have been particularly well-received for their ability to expedite permitting in the Sacramento River Basin include:

- **Consistency Determinations (CDs), Restoration Management Permits (RMPs), and the Habitat Restoration and Enhancement Act (HREA)** from CDFW.
- **Statewide Restoration General Order (SRGO) and General Order for Small Habitat Restoration Projects (SHRP)** from the SWRCB.
- **CEQA Categorical Exemption 15333 for Small Habitat Restoration Projects, Statutory Exemption for Restoration Projects (SERP), and the SRGO PEIR.**
- **Nationwide Permit 27 and Regional General Permit 16 for Aquatic Habitat Restoration, and Sacramento District 408 Categorical Permission for Environmental Restoration** from the Army Corps.
- **Programmatic Biological Opinions (PBOs)** from NOAA.

While the **USFWS Restoration PBO** has not yet seen widespread use in the Sacramento River Basin, it has demonstrated success in other regions of the state, and there is considerable interest from project applicants in

“Using the SRGO PEIR was straightforward and efficient, and compared to the traditional CEQA process, saved over 100 hours of my time on a project.”

— Environmental consultant

utilizing this tool.

Leadership Support and Staff Empowerment Enhance Program Success

Interviews and follow up research confirmed that proactive, purpose-driven leadership helps to improve restoration permitting outcomes. A prime example is the California CGT Initiative, led by CNRA Secretary Wade Crowfoot. Secretary Crowfoot [guided agency staff](#) to take specific actions to accelerate restoration efforts and clarified several policies to help both staff and applicants better understand and utilize various regulatory tools. Alongside other successful programs like the [NOAA Restoration Center's Community-based Restoration Program](#), the CGT Initiative showcases the transformative effect of proactive leadership in empowering staff to innovate streamlined regulatory practices and enhance restoration outcomes. Some regional agency leaders were also

Seventy-five percent (75%) of project proponents interviewed indicated that programmatic permitting or other restoration-specific pathways (such as CDFW's HREA process) are essential to move their projects forward, especially when agencies' processes are coordinated and can be used together.

recognized for providing effective and consistent training, setting clear direction for staff, and making the permitting process smoother for all involved.

Increased Interagency Coordination

Interviewees consistently emphasized the advantages of improved interagency coordination. They noted that collaborative efforts on permits

"The General Order for Small Habitat Restoration Projects (SHRP) and the Statewide Restoration General Order (SRGO) equip the Water Boards with all the permitting tools that we need to efficiently and effectively regulate beneficial restoration actions throughout the state.

Pairing those permits with CEQA compliance options like the categorical exemption for Small Habitat Restoration Projects (class 33), the SRGO's Program Environmental Impact Report (PEIR), or the Statutory Exemption for Restoration Projects (SERP) allow us to support restoration to a level previously not possible. I feel that the Water Boards finally have all the tools we need. We just need to embrace a paradigm shift that empowers staff to utilize these tools to the maximum extent possible."

-Regional Water Quality Control Board staff member

for similar project types have led to enhanced efficiency and greater regulatory certainty. Coordinated permit conditions have reduced potential conflicts, streamlined the project design process, and integrated protection measures more effectively.

Additionally, common conditions have helped applicants better anticipate regulatory requirements, contributing to a more predictable and manageable permitting process.)

Dedicated Restoration Programs Increase Efficiency and Applicant Satisfaction

Agency offices and programs with a clear mission to advance restoration and to utilize and refine restoration-specific permitting pathways wherever possible received overall higher satisfaction ratings from applicants for efficiency, consistency, and collaboration.

The CGT program at CDFW and the NOAA Restoration Center are highlighted as particularly successful models for accelerating restoration. These programs effectively integrate efficient permitting tools, funding (where available), and technical assistance, demonstrating the benefits of having dedicated teams who are focused on restoration and the use of efficient permitting tools.

Expansion of Successful Models

Along with the satisfaction of working with CGT and other restoration-specific teams like at NOAA Restoration Center, applicants said more capacity is needed for these types of teams and recommended expanding similar proactive restoration programs to

other agencies to help accomplish more restoration in an efficient and collaborative way. Expanding and adapting proven permitting pathways and programs can lead to quicker and more efficient restoration projects, building on established best practices to achieve better outcomes.

Gaps and Areas for Refinement

Inconsistent Interpretation of Regulatory Requirements

An issue frequently identified in interviews was the inconsistent interpretation of regulatory requirements by agency staff. There are differing legal interpretations of requirements for both traditional and efficient permitting routes, sometimes resulting in more stringent application of the law or increased and variable mitigation requirements. Applicants suggested more training, along with increased support



Wood Creek Tidal Restoration Project phases 1 and 2 on the Northcoast Regional Land Trust's Freshwater Farms Reserve restore tidal influence and creates a diversity of estuarine habitats while providing public access and a setting for environmental education. These phases of the project used the NOAA Restoration Center's North Coast PBO. Another project on Wood Creek received a Restoration Management Permit from CDFW. Photo by Stephanie Falzone.

and guidance from agency leadership to clarify the use of different regulatory pathways and resolve persistent policy ambiguities. They further advocated for clear, concise restoration-specific guidance to simplify the regulatory landscape and improve overall effectiveness of the process.

Variability in Awareness, Understanding, and Utilization of Efficient Permitting Tools

Interviews revealed significant variability in the awareness and understanding of efficient permitting tools among applicants and agencies. Many agency staff and applicants are not fully informed about the availability and effective use of these tools, including programmatic permits.

The use and support of efficient permitting tools vary widely across different agency offices and even among individuals within the same office. There is a perception that some staff are reluctant to use efficient permitting tools and are uncertain of their scope or how to apply their protection measures. Project proponents have expressed a strong need for more consistent and proactive application of restoration permitting pathways, including clearer interpretations of project eligibility and requirements. They seek greater regulatory certainty to ensure that permitting pathways are reliable and do not delay projects, jeopardize grant funding, or hinder the timely realization of environmental benefits.

There is the viewpoint that additional time and encouragement may be needed for both agency staff and applicants to

adapt to new processes, underscoring the need for targeted training and supportive leadership to help ensure all parties are well-equipped to use these tools effectively.

Agency Resources Affecting Permitting Timeliness

Both applicants and agency staff reported significant capacity issues, with some agencies struggling to process applications promptly due to insufficient staffing. High staff turnover further complicates the process. As new state plans and funding opportunities emerge, demands on agency staff will increase. Expanding staff capacity and improving training are crucial to meet the growing need and ensure smoother application processing.



Chinook salmon in the Central Valley. Photo by USFWS/Dan Cox.

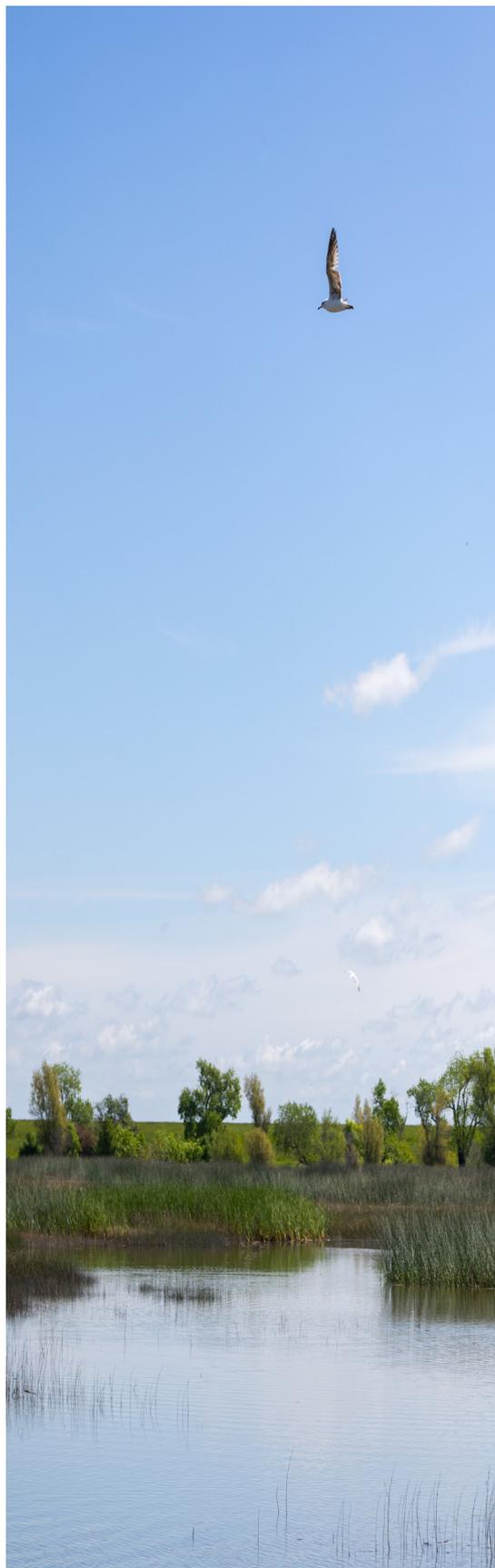
Applicants Should Reach Out Early and Often

Agency staff's number one request to applicants is to engage with them consistently and early in the project development process. Initiating contact at the outset allows staff to provide input during the planning stages and explain regulatory requirements, which can be integrated into the project design. This proactive approach significantly increases the likelihood of qualifying for an efficient permitting pathway. In contrast, reaching

out late in the process can lead to additional costs and extended processing times, as technical and regulatory constraints may not have been addressed.

Calls to Expand or Enhance Programs and Resolve Longstanding Issues

When asked about what else could be done to accelerate restoration efforts, interviewees proposed several solutions, including expanding the scope and agency use of successful permits, and creating new efficient permitting tools based on proven models for agencies that do not already have them in place. There were frequent requests to address longstanding policy issues related to agency mitigation requirements, permitting fees, and securing long-term funding, as well as creating landowner incentives to increase their willingness to partner on projects.



The Tide's End Multibenefit Restoration Project site in Yolo County. Photo by Andrew Nixon/California Department of Water Resources.

4 RECOMMENDATIONS

The following five major categories of recommendations and detailed actions incorporate key interview findings, follow-up research, and Sustainable Conservation’s experience in the field.

The recommendations are designed to inform actions by both state and federal agency decision-makers and other policy leaders to further advance key environmental initiatives. They align with Governor Newsom’s [Executive Order N-82-20](#) (which encompasses [Cutting Green Tape](#) and Pathways to [30x30 California](#)), the [California Salmon Strategy](#), the [Central Valley Flood Protection Plan Conservation Strategy](#), [California’s Natural and Working Lands Climate Smart Strategy](#), [California’s Water Resilience Portfolio](#), the [California Water Plan](#), the [America the Beautiful Freshwater Challenge](#), species recovery plans, and regional [Total Maximum Daily Loads](#) (TMDLs) implementation plans. The recommendations below will contribute to more expedient and cost-effective project completion, prepare for climate change-related impacts on habitats and local communities, and leverage new federal funding for environmental improvements in California.

Many of the recommendations below call for collaboration between government agencies, project implementers, and California Tribes. The full list of these recommendations, including relevant agencies, potential conveners/collaborators, and timelines are included next to each recommendation and listed in [Table 1. Recommendations by Agency and Implementation Timeline](#).

For a summary explanation of the regulatory processes referenced in the recommendations below, please see [Appendix C. Description of Regulatory Processes Discussed in the Findings and Recommendations](#).

[Acronyms and Abbreviations](#) are defined on [page 9](#).

RECOMMENDATION CATEGORIES

1. Facilitate proactive use of efficient restoration permitting pathways statewide
2. Create dedicated restoration teams within all regulatory agencies
3. Expand successful accelerated restoration permitting pathways
4. Create new restoration pathways or efficiencies where gaps exist
5. Advance solutions to ongoing restoration challenges

Recommendation 1: Facilitate proactive use of efficient restoration permitting pathways statewide

This recommendation is supported by the findings highlighted in the [Key Interview Findings](#) section calling for additional training and resources for agency staff and applicants to ensure proactive, consistent, and effective use of efficient permitting tools.

Establishing a new permitting pathway to expedite restoration projects is a positive step, but its success hinges on more than just its creation. Effective implementation by regulatory staff requires investing in training and guidance, supported by clear communication and direction from agency leadership. Comprehensive policy guidance and targeted training are essential for both agency staff and applicants to fully utilize new processes.

Detailed Recommendations:

1.1 Agency leadership continues to provide direction and policy guidance to staff to support the use of efficient restoration permitting pathways. (All regulatory agencies) Example: CNRA Secretary Crowfoot's 2021 [memo](#) to his agencies with specific actions to increase permitting efficiency.

Although there has been a significant increase in efficient permitting pathway usage over time (see [Figure 1](#)), aside from "Cutting Green Tape" and other dedicated restoration program staff, interviewees still noted inconsistency in how different staff apply regulatory requirements or in individual willingness to utilize efficient permitting mechanisms. Even within the same agency, some staff seek to actively use the different tools available, and others may be resistant, resulting in a high level of regulatory uncertainty for applicants.

Agency staff look to their leadership to set a clear direction and empower them to embrace new and innovative approaches. CNRA Secretary Wade Crowfoot's leadership in the CGT Initiative provided a clear example of how a focused, goal-oriented leadership directive can drive progress.

Through the CGT Initiative, Secretary Crowfoot guided agency staff to take specific actions to accelerate restoration efforts and clarified several policies to help both staff and applicants better understand and utilize various regulatory tools. This approach



led to significant positive outcomes, particularly within CDFW. Under this initiative, the Department's new CGT program has made substantial advances in streamlining permitting processes for restoration and species recovery projects.

Interviews found that agency offices and programs, like the CDFW CGT team, with a clear directive to advance restoration and utilize efficient permitting tools wherever possible, were more consistent with the application and use of efficient permitting processes. They received overall higher satisfaction ratings from applicants for efficiency, consistency, and collaboration.

1.2 Develop additional guidance materials and ongoing training for agency staff and applicants to further support the proactive and consistent use of efficient restoration permitting pathways, including for projects with multiple benefits.

The overwhelming majority of both agency and applicant interviewees suggested that more guidance and training for utilizing efficient permitting mechanisms is needed, and applicants recommended that more dedicated agency staff to advance restoration be appointed to work with applicants. Agencies that have not yet developed these resources should consider creating a detailed training plan to support the new process and onboard staff, ensuring all participants are well-prepared for success.

Immediate training needs identified from interviews include:

1.2.1 Guidance and training to effectively utilize the different CEQA tools for restoration (i.e., SERP, SRGO PEIR, Categorical Exemptions) and assign staff to assist with determining the appropriate CEQA lead agency and pathway. (Water Boards, CDFW, CEQA, Applicants)

Interviewees expressed uncertainty about the best course of action for CEQA compliance. A lack of clarity, and in some cases, misinformation, resulted in foregoing otherwise appropriate and more efficient CEQA pathways and opting for a more conservative, expensive, and time-consuming approach. See [Appendix D. Comparison of CEQA Approaches for Restoration Projects](#) for a comparison of CEQA pathways for restoration.

1.2.2 Guidance and training on the use of Restoration CDs and RMPs to accelerate CESA permitting. (CDFW, Applicants)

Restoration Consistency Determinations (CDs) and Restoration Management Permits (RMPs) are relatively new processes that applicants found to be easier, less expensive, and significantly faster than obtaining a traditional California Endangered Species Act (CESA) incidental take permit. These approaches support large-scale landscape projects, resulting in substantial environmental benefits.

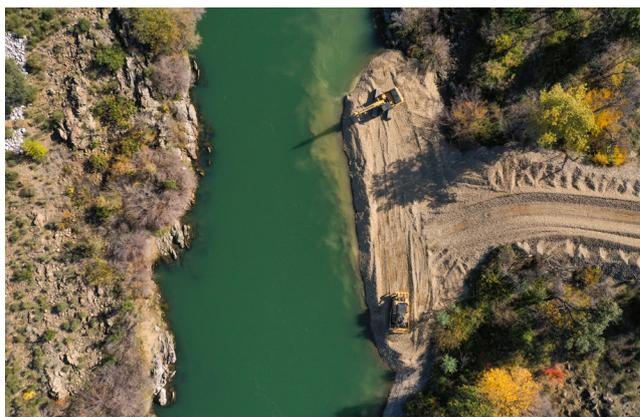
However, both in the Sacramento River Basin and statewide, there is inconsistent knowledge and use of these tools among agency staff and applicants. Many restoration

implementers and non-CGT CDFW staff are unaware of or lack direct experience with the RMP or CD, leading them to opt for traditional permitting methods.

Interviewees also noted that CGT staff face capacity limitations and they recommended expanding the CGT team and providing statewide training to ensure all CDFW staff have access to the same tools, knowledge, and collaborative approaches.

1.2.3 Guidance and training on how to use the SHRP and HREA processes to efficiently authorize small restoration projects. (Water Boards, CDFW, Applicants)

Applicants praise the State Water Board's SHRP and CDFW's HREA for their efficiency in advancing small-scale projects (five acres or less), especially when used together for a more coordinated, less duplicative, and faster approval process. However, inconsistent use and uncertainties about project qualifications and the combined use of these authorizations still exist. To increase the benefits of these tools, additional training is needed to boost their utilization, improve interagency coordination, and standardize their application.



Gravel augmentation project to improve spawning conditions for Chinook salmon in the Sacramento River. Photo credit: Sacramento River Settlement Contractors.

1.2.4 Guidance and training on how to use the SRGO and SRGO PEIR to accelerate large-scale restoration projects. (CEQA, Water Boards, Applicants)

The State Water Board's SRGO (programmatic permit) and SRGO PEIR for CEQA compliance have been highly praised for their efficiency, regulatory certainty, and cost-effectiveness in expediting permitting and CEQA compliance for restoration projects that exceed the limitations of the SHRP.

Both agency staff and applicants recognize the SRGO's potential to incentivize projects and deliver substantial environmental benefits due to its restoration-specific criteria. In the Sacramento River Basin study area, the Redding Regional Water Board office stood out with interviewees for its effective and proactive use of these tools. Applicants said staff, even new staff, seemed to be well-trained and were applying restoration tools consistently.

The SRGO has notably increased permit-writing efficiency by allowing staff at the approving Water Board office to use a pre-written "Notice of Applicability" (NOA), reducing NOA length (minus attachments) to be as brief as seven pages, compared to 25 to 30 pages for a typical individual permit.

Consultants estimate that using the SRGO PEIR takes 1-3 months through a Notice of Determination (NOD) or Addendum, or 3-9 months for a Supplemental or Subsequent Environmental Impact Report (EIR), compared to 6-10 months for an Initial Study/ Mitigated Negative Declaration (IS/MND) or 12-24 months for an EIR ([Appendix D. Comparison of CEQA Approaches for Restoration Projects](#), provided by Environmental Science Associates).

Despite these advantages, since going into effect in 2022, the PEIR has yet to be widely adopted as standardized practice, having been used for [16 projects](#) (Office of Planning and Research, 2024) across the state as compared to the SRGO which has been used for [63 projects](#) across the state (SWRCB, 2024). At the December 12-13, 2024, Cutting Green Tape Interagency Summit, Regional Water Board staff emphasized the need for additional training and guidance to effectively apply these tools to high-priority projects that offer multiple benefits, such as flood protection, groundwater recharge, and climate change adaptation.

1.2.5 Collaborate with agency staff, California Tribes, and project proponents to develop effective guidance and training on conducting Tribal consultation processes for SERP, SRGO, SRGO PEIR, AB 52, and Section 106/SHPO, aimed at reducing duplication, improving efficiency, and achieving meaningful consultation. (CNRA, CEQA, CDFW, Water Boards, SHPO, Army Corps, California Tribes, Applicants)

A project may need to comply with up to five different regulatory processes related to cultural resources before it can proceed to implementation. Most applicants and numerous agency interviewees expressed confusion and overwhelm about how to ensure meaningful consultation with California Tribes, meet legal requirements, and not duplicate actions or tax Tribal resources. Tribal representatives stated the importance of early, often, and meaningful consultation with California Tribes, identifying the appropriate Tribal point of contact for consultation, and having cultural resource monitors maintain close communication with construction contractors. Interviewees also emphasized a need for more guidance and training for agency staff, Tribes, and applicants.

To address these challenges, greater state and federal interagency coordination is needed with California Tribes to coordinate these processes, reduce redundancy, and provide clear, consolidated guidance for both applicants and agencies. Involving the Army Corps, which frequently leads Section 106 compliance for restoration projects, could further enhance these coordination efforts.

1.2.6 Guidance and training on how to effectively use the USFWS Restoration PBO to accelerate habitat restoration and species recovery. (USFWS, Army Corps, Applicants)

Interviewees strongly support and prefer the use of programmatic authorizations for Section 7 compliance, citing them as highly efficient and cost-effective for meeting

federal Endangered Species Act requirements. The [2022 USFWS Statewide Restoration PBO](#) has yet to be utilized by the Sacramento Fish and Wildlife Office.

Interviews and follow-up research indicate lower-than-expected PBO usage may be due to uncertainty and sometimes misinformation about the project types the authorization can cover; adapting to a new process; and staff and applicants still learning how to utilize it. Additionally, some project proponents have opted to use existing programmatic informal consultations for Upper Sacramento River projects, and certain in-river projects targeting salmonids might not affect USFWS jurisdictional species, such as the valley elderberry longhorn beetle or the yellow-billed cuckoo, thereby not requiring USFWS take authorization.

The PBO, however, has been successfully used by the USFWS Partners Program and Ducks Unlimited within San Francisco Bay-Delta Office jurisdiction, for a project involving the giant garter snake (OAL, 2023), which inhabits much of the Sacramento Valley (USFWS, 2022). The PBO is also gaining traction across California, with at least 24 projects covered statewide and positive feedback from applicants, including for large-scale and complex projects in the San Francisco Bay area. To fully realize the PBO's time and cost-saving benefits, there is a pressing need for comprehensive training and additional leadership support to boost its use.



*Listed as a threatened species, the giant garter snake is found on agricultural wetlands and other waterways in California's Central Valley.
Photo credit USFWS/Brian Hansen.*

“Programmatic biological opinions for restoration are essential for expedited Section 7 compliance that is required as part of Corps 404 permit and 408 permission issuance. Section 7 compliance can be done in weeks rather than months if a programmatic is in place.”

- Federal agency staff member

1.3 Plan for and develop guidance and training for any new restoration-specific permitting pathways. (All agencies) (see also [*Recommendation 4: Create new restoration permitting pathways or efficiencies where gaps exist*](#))

Even the best-designed permitting process will only reach its full potential with effective rollout and implementation. It takes time for agencies and applicants to adapt to a new process. Continuity in staff knowledge and approach to implementation over time is especially important given regular staff turnover in agencies — both noted by interviewees as common issues delaying project approvals, causing regulatory uncertainty and increased cost. To institutionalize the new process and ensure consistent use, strong leadership support and a sustained training program are essential.

1.4 Promote early engagement from project proponents to foster collaboration with funding and regulatory agencies on technical assistance, coordinated funding, and efficient permitting.

Regulatory agency staff overwhelmingly agree that early engagement with agencies is crucial for effective project planning, funding, and permitting. When project proponents engage late in the process, it can result in inefficient permitting because integrating agency input into advanced designs becomes challenging, and aligning permitting and funding requirements can be more difficult. By initiating contact early, staff can provide valuable technical assistance to enhance environmental benefits and utilize efficient permitting pathways, while also improving coordination of funding across agencies.

Recommendation 2: Create dedicated restoration teams within all regulatory agencies

The most effective regulatory programs for advancing restoration are those that marry a clear mission for restoration with the strategic use of efficient permitting tools, such as pre-written programmatic authorizations. This approach establishes a consistent regulatory pathway that guides applicants to meet agency expectations, reduces administrative burdens, avoids duplicated efforts, and speeds up staff review. Integrating project funding (where available), technical assistance, and efficient permitting into a unified program is the ultimate framework for accelerating restoration efforts.

Detailed Recommendations:

2.1 Use the CDFW Cutting Green Tape program and NOAA Restoration Center as models to create dedicated teams/units to efficiently permit and fund restoration projects and help roll out restoration permitting tools agency-wide (i.e., teams

where funding, efficient permitting tools, and technical assistance are all housed in one program with a mission to accelerate restoration). (All Agencies)

Interviewed applicants cited the CDFW CGT and NOAA Restoration Center programs as the most effective at accelerating restoration. These teams advise on project development, expedited permitting, and how to leverage funding. They also work in close partnership with applicants to see projects to implementation. A unique element of both programs is a mission to advance restoration and proactively develop, utilize, and promote efficient permitting tools that protect and restore sensitive habitats.

Other notable programs with similar models include CDFW's Fisheries Restoration Grant Program, USFWS' Partners Program, Coastal Program, and Fisheries and Aquatic Conservation Program, which also aid in funding and advancing restoration using efficient permitting tools wherever possible. Integrating project funding, technical assistance, and efficient permitting into a unified program is the ultimate framework for accelerating restoration efforts.



Juvenile salmon in Butte Creek. Photo courtesy of Northern California Water Association.

2.1.1 Dedicate additional Cutting Green Tape staff at CDFW to help meet increased restoration permitting needs statewide. (CDFW)

CDFW CGT staff receive consistently high ratings for their collaboration and technical assistance, as they advise on project strategy and effectively integrate other agencies' environmental protection measures into their authorizations to ensure consistency and avoid duplication of effort.

Many interviewees, including applicants and agency staff, expressed concerns that the CDFW CGT team needs more capacity to meet the growing demand for technical assistance and permitting services statewide. This challenge is expected to intensify with the increasing number of projects requiring approval, including those funded by federal funds and the proposed \$10 billion climate bond (Proposition 4). Additionally, CDFW's capacity is particularly strained in inland and desert regions of the state. While there are concerns about California's current budget



Brad Henderson, Environmental Program Manager, CDFW Cutting the Green Tape program, giving a presentation during the 2023 Salmonid Restoration Federation Conference. Photo by Stephanie Falzone.

constraints for expanding staffing, investing in dedicated restoration program staff could be a strategic move. This investment could help achieve state restoration goals more efficiently and prevent costly reactive measures for addressing climate-related ecological disasters in the future.

2.1.2 Develop a Cutting Green Tape program at the State and Regional Water Boards with a dedicated lead and regional staff. (Water Boards)

The model for the CDFW CGT Team has been extremely successful with a high rating from applicants. The State and Regional Water Boards have made significant strides in efficient permitting, especially after implementing the recently adopted SRGO. That said, by creating a similar structure to CDFW's CGT team, the Water Boards could leverage their new permitting tools and further increase interagency coordination. A possible model could be a CGT lead(s) at the SWRCB working closely with CGT leads at the Regional Water Boards to help permit high-priority projects and to further develop and roll out efficient permitting tools agency-wide.

2.2 Assign USFWS staff with a mission to advance restoration to review and permit Sacramento River Basin restoration projects, utilizing efficient permitting tools whenever possible. (USFWS)

Additional staffing needs are anticipated to complete the estimated \$1 billion of projects proposed for the Sacramento River Basin. Increasing capacity for restoration-specific programs and the ability for staff to partner with project proponents and directly leverage efficient permitting could provide a major boost to implementing species recovery plans.

The USFWS has effective and well-regarded restoration programs in place (e.g., Coastal, Partners, and Fisheries and Aquatic Restoration programs); however, staffing is currently limited and only for those projects funded by the USFWS, leaving many Sacramento River Basin projects without these program benefits. Staffing could occur through designating specific mission-driven staff, reorganizing staff, securing new teams, and/or arranging funding agreements with outside entities if internal budgets cannot support new staff.

Because increased funding and project activity are also expected across the state, this model could be expanded statewide. Restoration-specific programs with dedicated staff could directly issue Section 7 ESA coverage using programmatic authorizations, and then help roll out the use of these regulatory tools agency wide.

2.3 Appoint Army Corps Section 408 staff dedicated to accelerating permitting for restoration projects, with continued coordination with Army Corps Section 404 permitting staff for Section 106 and Section 7 compliance. (Army Corps) (See also [Recommendation 4](#) below)

The Army Corps has vast experience developing and utilizing programmatic

authorizations and actively works with other agencies on permitting efficiencies. Most recently, they collaborated with several agencies as part of the adoption of coordinated authorizations with the SWRCB SRGO and the USFWS Statewide Restoration PBO. These efficiencies help the Corps meet multiple levels of regulatory compliance before issuing their own agency's permits.

Like other agencies, the Corps also faces an increased permitting workload in the Sacramento River Basin and elsewhere due to new federal funding allocations to nature-based solutions.

Interviews and research have shown the Army Corps in California has an overall agency directive of not encouraging one type of project over another. However, designating specific nature-based solutions and restoration mission-driven staff who could coordinate with other regulatory agencies on permitting efficiencies could accelerate the implementation of restoration projects in the Sacramento River Basin and other regions in the state. Achieving this goal could include reorganizing staff, securing new teams, and/or developing funding agreements with outside entities.

2.4 Convene a roundtable of Floodplain Forward MOU participants and key agencies to optimize funding and regulatory processes for habitat restoration in the Sacramento River Basin. (CNRA, CDFA, NFWF, USFWS, NRCS, USBR, Army Corps, NOAA, BLM, CDFW, SHPO, Water Boards)

With an estimated \$1 billion worth of projects anticipated over the coming years, a coordinated interagency effort will be important to strategically fund and efficiently permit projects.

The purpose of this proposed roundtable would be to bring together Floodplain Forward MOU (Memorandum of Understanding) signatories along with relevant state and federal agencies to:

- **Enhance Coordination:** Foster collaboration among agencies to better align funding sources and streamline the regulatory review processes
- **Streamline Processes:** Develop and implement efficient procedures to expedite regulatory reviews, helping projects progress more quickly
- **Optimize Funding:** Coordinate funding efforts to ensure financial resources are effectively allocated for habitat restoration initiatives
- **Secure Staff:** Develop funding agreements or other necessary mechanisms to secure staff to review projects
- **Address Challenges:** Discuss and address ongoing challenges and find innovative and expedient solutions to advance habitat restoration projects

Recommendation 3: Expand successful accelerated restoration permitting pathways

Accelerated restoration permitting pathways have proven to save substantial time and resources (Pagliuco & Samonte, 2015), resulting in more restoration implemented with greater partnership between project proponents and agency staff. Expanding successful pathways can be accomplished more quickly than developing new pathways, allowing more restoration projects to take advantage of efficient permitting options.

Detailed Recommendations:

3.1 Remove the 500 linear foot stream length limit from the SWRCB's SHRP to enable more projects to utilize both the SHRP and HREA processes. (Water Boards, CDFW)

CDFW's HREA Program is statutorily linked to the SWRCB's SHRP, and both permitting pathways provide coordinated, simplified, and expedited approvals for voluntary small-scale restoration projects. Multiple project proponents and agency staff indicate that the SHRP and HREA processes are highly beneficial to their work, and there is a widespread desire for these programs to encompass more projects. There is considerable backing to remove the 500 linear foot stream length limit from the SHRP, which would expand opportunities for numerous small-scale projects to benefit from the accelerated restoration permitting pathways provided by both programs.



Rockwads project to provide deep-water rearing habitat for juvenile salmonids on the Sacramento River. Photo courtesy of the Sacramento River Settlement Contractors.

3.2 Permanently remove the legislative sunset date for the SERP so agencies and applicants can continue to utilize this CEQA exemption to advance beneficial habitat restoration projects more quickly and efficiently. (CDFW, Legislature, CEQA)

In 2024, the SERP program was legislatively extended by Senate Bill 174 until January 1, 2030 (California Legislative Information, 2024). A proposal to eliminate the sunset provision was not accepted, meaning the program will undergo reassessment in 5 years. In the year preceding the most recent reconsideration, some eligible projects used a different pathway, whether that be the SRGO PEIR, or the more costly and time consuming traditional CEQA compliance process because of the uncertainty around SERP's future, and to avoid jeopardizing grant funding or halting already approved

projects. We anticipate a similar circumstance starting in late 2028 as the SERP again gets closer to expiration.

The SERP pathway has been successfully used for over [55 projects](#), saving hundreds of thousands of dollars in CEQA costs and shortening the timeline for CEQA compliance by several months to years. While interviewees acknowledge the nuances and complexities of obtaining a SERP concurrence, they expressed overwhelming satisfaction with collaborating with CDFW's CGT team to secure SERP concurrences and achieve considerable time and cost savings.

Given the SERP's established statutory status and strong support within agencies and the restoration community, eliminating the sunset provision during its next evaluation in 2029 would require relatively minimal effort compared to other potential initiatives aimed at expanding effective accelerated restoration permitting pathways.

3.3 Allow restoration project proponents to provide alternative maps or information in lieu of formal wetlands delineations for Army Corps or Water Board permit applications (e.g., NWP, RGP, Individual Permits, General Orders, etc.). (Army Corps, Water Boards)

“Formal” wetland delineations can be very expensive and time-consuming and may not always be necessary to meet legal intent or restoration goals. A development project that permanently and negatively impacts wetlands may need a formal wetland delineation to accurately quantify impacts and mitigation requirements. While such delineations are essential for development projects that negatively impact wetlands, they may be less relevant for aquatic restoration projects, when the focus is on improving conditions rather than quantifying impacts or establishing mitigation. Allowing the use of alternative maps or information in lieu of formal wetlands delineations for these projects could align with regulatory intent, simplify permitting, and allocate resources more effectively to on-the-ground restoration efforts.



Wetlands in the San Joaquin River National Wildlife Refuge. Photo by Joanna Gilkeson/USFWS.

Potential ways to implement this recommendation could include policy guidance developed by agency leadership for Army Corps or State or Regional Water Board Actions. In some instances, it may be warranted to update programmatic restoration permits (e.g., for NWP 27, RGP 16, or other permits) to ensure this flexibility is broadly allowed for projects whose primary intent is restoration.

3.4 Increase the size limit of the Army Corps Section 408 categorical permission for environmental restoration to allow for coverage of larger-scale projects. (Army Corps)

Project proponents and agency staff expressed that the existing Section 408 Categorical Permission for Restoration in the Sacramento Corps District is a helpful tool for accelerating restoration project permitting in the Sacramento Valley. Since a Categorical Permission has already undergone legal review and National Environmental Policy Act (NEPA) compliance, expanding its size limits could enable more qualifying projects to save months on the permitting timeline compared to the standard 408 Letter of Permission process. (See [Appendix C. Description of Regulatory Processes Discussed in the Findings and Recommendations](#) for an explanation of the 408 process).

3.5 Update Army Corps NWP 27 to allow for conversion of habitat type or relocation of tidal waters to restore degraded habitat and address sea level rise from climate change without requiring mitigation. (Army Corps) (see also [Recommendation 5.1](#) below regarding mitigation for restoration)

Recognizing the need for habitat restoration throughout a species' range will require improvements to salmon habitat beyond the Sacramento River Basin, including nature-based solutions that restore coastal areas and estuary habitat in the San Francisco Bay-Delta. Such projects can require relocation of tidal waters or conversion of tidal waters or wetlands to prepare for sea level rise and support habitat for different species. In addition, restoring wetland and tidal hydrology that has been highly altered back to natural conditions may be integral to an effective project design.

These critical projects are currently excluded from using the Army Corps' efficient NWP 27 programmatic permit since NWP 27 currently does not allow for those activities.

Allowing habitat type-conversion or relocation for restoration, similar to the approach in the newly reissued [RGP 16 Aquatic Habitat Restoration and Enhancement](#) would increase the range of project types that could be covered under NWP 27, providing a faster and simpler process as compared to applying for an individual permit from the Army Corps.

3.6 To facilitate species recovery, reissue RGP 12 Fisheries Restoration Grant Program, San Francisco District to model the more comprehensive RGP 16 Aquatic Habitat Restoration and Enhancement, Sacramento District. (Army Corps)



San Pablo Bay Marsh. Photo by Joshua Hull/USFWS.

Given the hydrologic connectivity between the San Francisco Bay-Delta and the Sacramento River Basin, integrating relevant elements of the Army Corps' newly updated RGP 16 into a future reissuance of the more limited RGP 12 for the San Francisco Bay could boost species recovery efforts from inland to the sea. The recently updated RGP 16, which directly aligns with SRGO, NMFS/NOAA PBOs, and USFWS Statewide Restoration PBO, is expected to significantly enhance environmental benefits through aquatic habitat restoration and improvement. It also permits the conversion of 'waters of the US' from one type to another, provided there is an overall benefit to aquatic resource functions and services. Adopting the RGP 16 framework, along with allowing alternative maps or information instead of formal wetland delineations (see [Recommendation 3.3](#)) would expand RGP 12's applicability to more projects, reduce costs, and preserve environmental protections.

Thinking more broadly, applying the RGP 16 model to future RGP 78 reissuances in the Los Angeles District could further support statewide aquatic habitat restoration and enhancement efforts.

3.7 Create an efficient mechanism to cover newly listed species under the USFWS Restoration PBO, without limiting or pausing the ability for projects to utilize the authorization. (USFWS, Army Corps, NOAA Restoration Center)

With the [recent listing of Bay-Delta longfin smelt](#) (USFWS, 2024) and the potential future listing of species such as the western pond turtle and other species that might be present at restoration project sites, project proponents and agency staff highlighted the need for a streamlined process to add these species to the existing USFWS Restoration PBO. Developing an efficient mechanism to allow for programmatic coverage of additional species, while maintaining the PBO's ongoing use, would build on the strong foundation of this statewide authorization and enhance its impact to aid in the recovery of species.



Western pond turtles (Actinemys marmorata). Photo by Peter Pearsall/USFWS.

Recommendation 4: Create new restoration permitting pathways or efficiencies where gaps exist



Stone Lakes National Wildlife Refuge, Elk Grove, CA. Photo by Justine Belson/USFWS.

Detailed Recommendations:

4.1 Develop an HREA/SHRP-modeled process for larger-scale projects that works in coordination with the SWRCB's SRGO. (CDFW, Water Boards, Legislature)

The HREA/SHRP process is a highly efficient, successful model that coordinates State and Regional Water Boards with CDFW permitting for small-scale projects. This model could also be applied to larger-scale projects permitted by both agencies. This proposal would include combining CDFW's multiple permitting processes into one comprehensive restoration permit that directly links to the common elements required in the SWRCB's SRGO. The resulting permit would facilitate shared application information, use of common conditions, and coordinate otherwise duplicative permit content. Such an effort could further save agency resources and speed up CDFW restoration permit processing time by using SWRCB's SRGO eligibility as a baseline for review.

One option for implementing this recommendation could include further coordinating CDFW's Restoration Management Permit (RMP) with the SRGO, with a focus on reducing duplicative permitting and reporting requirements.

This recommendation would also complete the implementation of Recommendation 7 in the [November 2020 Cutting Green Tape report](#) (California Landscape Stewardship Network, 2020).

4.2 Develop a programmatic or other efficient permitting process for floodplain and riparian restoration for the Central Valley Flood Protection Board. (Flood Board, Army Corps) *(Note: a new process should work in coordination with Army Corps Section 408 review, as applicable).*

The Central Valley Flood Protection Board's Conservation Strategy presents a broad vision for habitat enhancement and ecosystem uplift occurring within the footprint of the State Plan of Flood Control. However, current Flood Board regulations and permitting do not distinguish between restoration activities and other types of projects. Although applicants acknowledged that the Flood

Board encroachment permit process and the related Army Corps 408 permitting process have improved, interviewees frequently highlighted them as a source of delays and complexity. These permitting processes can have some of the longest and most uncertain timelines of any permitting process, in part due to the technical nature of the application review and interagency consultation and coordination they often require.

Potential options to achieve this recommendation could include creating a simplified programmatic permitting process for similar types of projects, developing Board review and approval efficiencies, delegating authority to staff for more routine activities, and producing a joint application and pre-application meeting process with the Army Corps Section 408 program.

4.3 Dedicate SHPO staff to work with agencies and project implementers to create a set of equitable measures for inclusion in Programmatic Agreements for restoration and to help develop the Programmatic Agreements. (SHPO, Army Corps, California Tribes) *(See also Recommendation 4.4 below; language could be used for the Army Corps and/or Programmatic Agreements with other agencies.)*

With significantly increased federal funding for restoration from the Bipartisan Infrastructure Law, the California State Historic Preservation Office (SHPO) must deal with a large and increasing volume of requests for consultation without a resulting increase in resources. Numerous interviewees noted that the SHPO consultation process can frequently be a source of permitting delays and uncertainty. Some agencies and at least one large-scale restoration effort already have a programmatic agreement to guide and expedite work with SHPO. Developing programmatic agreements with standard, equitable measures for aquatic restoration projects, in consultation with California Tribes, would provide more regulatory certainty for applicants while better utilizing limited SHPO staff resources.



A new stream channel created during the final stage of the [Lower Clear Creek Floodway Rehabilitation Project](#) provides islands, riffles, side channels and alcoves that improve fish habitat and fish passage. Credit: Aaron Martin/ Yurok Tribe Design Team

4.4 Develop and implement a Programmatic Agreement between SHPO and the Army Corps with equitable measures to ensure Section 106 compliance for restoration projects; design the agreement to allow other federal lead agencies to join or adopt these measures for their own agreements. (SHPO, Army Corps, California Tribes other federal agencies) *(See also associated dedicated staffing in Recommendation 4.3 above and designating a lead federal agency to complete Section 106*

process, in Recommendation 4.5, below.)

A key step towards improving SHPO consultation efficiency while upholding cultural resource protections and preservation practices is to develop a programmatic agreement with standard, equitable measures between the Army Corps — the federal agency that most routinely issues permits for aquatic habitat restoration projects — and SHPO. This agreement could establish a process for developing project site-specific measures in consultation with local California Tribes and create a framework that allows other federal lead agencies (e.g., USBR, NOAA, or others) to join the agreement for their own Section 106 compliance. In addition to avoiding duplication of effort, developing standard measures that would also satisfy state requirements for Tribal cultural resource protection would better coordinate state and federal processes and potentially avoid conflicting measures.

4.5 Federal agencies designate a single entity to complete Section 106 consultation with SHPO to avoid multiple consultations for the same project. (Army Corps, NOAA/ NMFS, USFWS, NRCS, USBR, others)

Although the Section 106 regulations support the designation of a lead federal agency for Tribal consultations, interviewees observed that, in practice, federal agencies sometimes conduct parallel processes leading to duplicate efforts, conflicting or confusing outcomes, and increased uncertainty around project timelines. Designating a single entity to manage Section 106 consultation with local Tribes would foster better coordination between federal agencies, ease the workload of SHPO, and prevent unnecessary strain on Tribal resources. Respondents also emphasized the importance of building upon existing relationships with Tribes to honor previous agreements and maintain trust.

4.6 New restoration permitting pathways should be consistent with terms and protection measures included in existing coordinated permitting processes such as the Statewide Restoration General Order (SWRCB) and USFWS/NOAA Programmatic Biological Opinions for Restoration. (CDFW, Water Boards, Flood Board, SHPO, NMFS, Army Corps, USFWS)

The SWRCB Restoration General Order (SRGO) and USFWS/NOAA Restoration PBOs are the result of several years of close collaboration between project proponents and multiple state and federal agencies to develop efficient, coordinated authorizations to advance restoration while honoring all environmental mandates. These authorizations build upon decades of programmatic permitting experience and represent best practices for environmental protection through refinements to hundreds of protection measures into common, shared agency conditions. New permitting pathways should align with these existing tools so that the same restoration project can ideally have access to expedited permitting pathways and coordinated processes at each state and federal agency from which they must obtain permits.

The recommendations outlined below reflect recurring themes identified through interviews, follow-up research, and Sustainable Conservation’s decades of experience working with agencies to develop policy and regulatory incentives. They involve complex and unresolved issues that have been the focus of extensive discussions among agencies and project implementers. Each recommendation calls for deliberate, focused dialogue and collaborative efforts among agency leaders to develop effective solutions and advance shared goals with the restoration community.

Recommendation 5: Advance solutions to ongoing restoration challenges

Detailed Recommendations:

5.1 Modify agency practices and policies to ensure that habitat restoration projects that will have a net environmental benefit are not required to provide compensatory mitigation. (Army Corps, USFWS, NMFS, Water Boards, CDFW)

Compensatory mitigation can be required to offset impacts to protected species and their habitat or aquatic resources, adding further expense, time, and uncertainty to project implementation. Mitigation ratios can also vary significantly for similar impacts, with some agencies requiring much higher ratios than others for the same species/habitats.

CDFW’s CGT Team, SWRCB, and Army Corps have made progress by reducing or eliminating compensatory mitigation requirements for those projects with a net environmental benefit on the project site that use the RMP, SERP, SRGO, NWP 27, or RGP 16. Therefore, it is essential to first maximize the utility of these pathways (See also [Recommendation 1: Facilitate proactive use of efficient restoration permitting pathways statewide](#) and [Recommendation 3: Expand successful accelerated restoration permitting pathways](#)).

This recommendation is not limited to a single agency but identifies a widespread,



An aerial view of the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project in Solano County, taken in February 2024. This project is a multi-benefit effort to restore the site to a tidal wetland, create habitat that produces food for Delta Smelt and other fish species, while also creating new flood capacity in the Yolo Bypass and reducing overall flood risk in the Sacramento area. Project features include a new, 25-foot-tall setback levee, excavation of 20 miles of open tidal channels, and native habitat restoration. Photo by Sara Nevis/California Department of

recurring issue. Agency leaders could tackle this significant problem by working together on common solutions that will change agency practices to speed up and incentivize project implementation.

5.2 Convene agencies to collaborate on efficiently permitting mitigation, and establishing mitigation banks and in-lieu fee programs, ensuring restored habitat and strategically supporting species recovery. (CNRA, CDFW, USFWS, SWRCB, NMFS)

Two key issues arise with permitting mitigation. First, some agencies are hesitant to use efficient permitting mechanisms for required compensatory mitigation as part of a previously approved project, thus delaying species and habitat recovery. Second, until policies are enacted across agencies to eliminate compensatory mitigation for restoration (see 5.1 above), and given the demand for essential public infrastructure projects (e.g., water, energy, etc.) to conduct required mitigation, there will be a persistent need for the use of mitigation banks and in lieu fee programs to ensure restoration is completed in a timely manner. Both banks and fee programs can help to implement larger scale, focused species recovery projects with significant beneficial ecological outcomes.



Sandhill cranes in Lodi. These cranes can be seen feeding in fields throughout the Sacramento - San Joaquin Delta and Central Valley in the fall and winter months. Photo by Florence Low/California Department of Water Resources.

Delays in approving mitigation projects, banks, and related in-lieu fee programs can substantially impede ecological recovery. A unified interagency effort is needed to reform the system around approving mitigation in order to achieve broader conservation goals.

5.3 Establish a stable, permanent State funding source for restoration project planning and implementation. (Legislature, CNRA)

Concerns were raised by some interviewees about the challenges of securing long-term, comprehensive funding for restoration projects given ongoing fluctuations in annual funding. Traditional funding approaches often focus more on project implementation than on covering the essential costs of planning and permitting. Adequate funding for all phases of a project is crucial for moving forward without delays.

California could establish additional revenue streams to provide a more stable, permanent funding source for restoration. For instance, Oregon dedicates a

percentage of lottery funds as well as proceeds from salmon license plate sales to watershed enhancement and salmon restoration activities (Oregon Lottery, 2024) (Oregon State Parks, 2024).

5.4 To incentivize restoration, ensure restoration permitting pathways are not cost-prohibitive and omit or otherwise minimize fees. (CDFW, Water Boards)

There is a delicate balance between ensuring agencies have sustainable budgets and not charging applicants fees that can disincentivize or even prevent good projects from either moving forward or doing as much restoration on the ground. Many regulatory agencies have restoration and resource protection missions and partnership with external entities is imperative to get essential recovery work done. Applicants have shown concern about high fees affecting their ability to get work done. This issue most frequently came up with CDFW1600 LSAA fees. The SWRCB has a structure in place that can charge less fees for some restoration projects, however they are still dependent upon fees.

Agencies have shrinking budgets, and without our state and federal government leaders prioritizing funding for staffing needed to ensure restoration and climate adaptation goals are met, they are compelled to raise fees to manage shortfalls.

5.5 Explore the development of Safe Harbor Agreements, conservation easements, tax incentives, and other actions to increase restoration on private lands.

(Legislature, CNRA, CDFW, USFWS, NOAA)

Implementing the portfolio of Floodplain Forward and other restoration projects in the Sacramento River Basin will in some cases take the cooperation of private landowners willing to implement conservation actions on their property. Some landowners have historically been hesitant to improve the quality of species habitat out of concern that they will attract listed species and so limit their ability to fully utilize their property for agricultural or other purposes. In other words, they could be penalized for “doing the right thing” if any unintentional species impacts were to occur. Although USFWS and CDFW have developed Safe Harbor Agreement Programs, these Programs have historically been underutilized and could benefit from additional promotion and outreach to private landowners, so that they better understand the benefits of these tools. A programmatic or template Safe Harbor Agreement process could be considered to advance floodplain reactivation projects in the Sacramento River Basin and beyond.

In addition, conservation easements can be required on private land to ensure a restoration project is in place indefinitely. Although the proceeds from such an easement can help compensate landowners, additional financial incentives to implement restoration on private lands will likely be necessary to fully realize the potential for landscape-scale restoration in the Sacramento River Basin and beyond.

Recommendations by Agency and Implementation Timeline

The table below lists the five main categories of recommendations, detailed actions for each category, involved agencies or authorities, and the expected timeline for implementation—short-term (1-2 years) or long-term (3+ years). Agencies with the primary responsibility for implementation are listed in the table. Other interests may also need to be engaged to collaborate on implementation.

Table 1. Recommendations by Agency and Implementation Timeline

Recommendation 1: Facilitate proactive use of efficient restoration permitting pathways statewide	Agency/Authority										Implementation Timeline	
	Legislative	CDFW	CEQA	CNRA	Flood Board	SHPO	Water Boards	Army Corps	NOAA	USFWS	Short-term 1-2 year	Long-term 3+ years
1.1 Agency leadership continues to provide direction and policy guidance to staff to support the use of efficient restoration permitting pathways. (e.g., <i>CNRA Sec Crowfoot's memo</i>)		•		•	•	•	•	•	•	•	X	
1.2 Develop additional guidance materials and ongoing training for agency staff and applicants/consultants to further support the proactive and consistent use of efficient restoration permitting pathways, including for projects with multiple benefits. <i>Immediate needs identified include:</i>												
1.2.1 Guidance and training to effectively utilize the different CEQA tools for restoration (i.e., SERP, SRGO PEIR, Categorical Exemptions), and assign staff to assist with determining the appropriate CEQA lead agency and pathway.		•	•				•				X	
1.2.2 Guidance and training on the use of Restoration CDs and RMPs to accelerate CESA permitting.		•									X	X
1.2.3 Guidance and training on how to use SHRP and HREA processes to efficiently authorize small restoration projects.		•					•				X	X
1.2.4 Guidance and training on how to use the SRGO and SRGO PEIR to accelerate large-scale restoration.			•				•				X	X
1.2.5 Collaborate with agency staff, California Tribes, and project proponents to develop effective guidance and training on conducting Tribal consultation processes for SERP, SRGO, SRGO PEIR, AB 52, and Section 106/SHPO, aimed at reducing duplication, improving efficiency, and achieving meaningful consultation.		•	•	•		•	•	•			X	X
1.2.6 Guidance and training on how to effectively use the USFWS Restoration PBO to accelerate habitat restoration and species recovery.								•	•		X	X
1.3 Plan for and develop guidance and training for any new restoration-specific permitting pathways. (i.e., Recommendation 4.)		•		•	•	•	•	•	•			X
1.4 Promote early engagement from project proponents to foster collaboration with funding and regulatory agencies on technical assistance, coordinated funding, and efficient permitting.		•		•	•	•	•	•	•		X	

Table 1. Recommendations by Agency and Implementation Timeline (continued)

Recommendation 2: Create dedicated restoration teams within all regulatory agencies	Agency/Authority										Implementation Timeline	
	Legislative	CDFW	CEQA	CNRA	Flood Board	SHPO	Water Boards	Army Corps	NOAA	USFWS	Short-term 1-2 year	Long-term 3+ years
2.1 Use the CDFW Cutting Green Tape program and NOAA Restoration Center as models to create dedicated teams/units to efficiently permit and fund restoration projects and help roll out restoration permitting tools agency-wide (i.e., teams where funding, efficient permitting tools, and technical assistance are all housed in one program with a mission to accelerate restoration).	●	●		●	●	●	●	●	●	●		X
2.1.1 Dedicate additional Cutting Green Tape staff at CDFW to help meet increased restoration permitting needs statewide. (CDFW)		●									X	
2.1.2 Develop a Cutting Green Tape program at the State and Regional Water Boards with a dedicated lead and regional staff.						●					X	
2.2 Assign USFWS staff with a mission to advance restoration to review and permit Sacramento River Basin restoration projects, utilizing efficient permitting tools whenever possible.									●			X
2.3 Appoint Army Corps Section 408 staff dedicated to accelerating permitting for restoration projects, with continued coordination with Army Corps Section 404 permitting staff for Section 106 and Section 7 compliance. (Army Corps) (See also Recommendation 4 below.)							●					X
2.4 Convene a roundtable of Floodplain Forward MOU participants and key agencies to optimize funding and regulatory processes for habitat restoration in the Sacramento River Basin.		●		●		●	●	●	●	●	X	

Table 1. Recommendations by Agency and Implementation Timeline (continued)

Recommendation 3: Expand successful accelerated restoration permitting pathways	Agency/Authority										Implementation Timeline	
	Legislative	CDFW	CEQA	CNRA	Flood Board	SHPO	Water Boards	Army Corps	NOAA	USFWS	Short-term 1-2 year	Long-term 3+ years
3.1 Remove the 500 linear foot stream length limit from the SWRCB's SHRP to enable more projects to utilize both the SHRP and CDFW's HREA processes.		•					•					X
3.2 Permanently remove the legislative sunset date for the SERP so agencies and applicants can continue to utilize this CEQA exemption to advance beneficial habitat restoration projects more quickly and efficiently.	•	•	•								X	
3.3 Allow restoration project proponents to provide alternative maps or information in lieu of formal wetlands delineations for Army Corps or Water Board permit applications (e.g. NWP's, Individual Permits, General Orders, etc.).							•	•			X	
3.4 Increase the size limit of the Army Corps Section 408 categorical permission for environmental restoration to allow for coverage of larger-scale projects.								•				X
3.5 Update Army Corps NWP 27 to allow for conversion of habitat type or relocation of tidal waters to restore degraded habitat and address sea level rise from climate change without requiring mitigation. <i>(Also see Recommendation 5.3 regarding mitigation for restoration)</i>								•			X	
3.6 To facilitate species recovery, reissue RGP 12 Fisheries Restoration Grant Program, San Francisco District to model the more comprehensive RGP 16 Aquatic Habitat Restoration and Enhancement, Sacramento District.								•			X	
3.7 Create an efficient mechanism to cover newly listed species under the USFWS Restoration PBO, without limiting or pausing the ability for projects to utilize the authorization.								•	•	•	X	

Table 1. Recommendations by Agency and Implementation Timeline (continued)

Recommendation 4: Create new restoration permitting pathways or efficiencies where gaps exist	Agency/Authority										Implementation Timeline	
	Legislative	CDFW	CEQA	CNRA	Flood Board	SHPO	Water Boards	Army Corps	NOAA	USFWS	Short-term 1-2 year	Long-term 3+ years
4.1 Develop an HREA/SHRP-modeled process for larger-scale projects that works in coordination with the SWRCB's SRGO.	●	●					●				X	
4.2 Develop a programmatic or other efficient permitting process for floodplain and riparian restoration for the Central Valley Flood Protection Board. <i>(Note: a new process should work in coordination with Army Corps Section 408 review, as applicable).</i>					●			●				X
4.3 Dedicate SHPO staff to work with agencies and project implementers to create a set of equitable measures for inclusion in Programmatic Agreements for restoration and to help develop the Programmatic Agreements.						●		●				X
4.4 Develop and implement a Programmatic Agreement between SHPO and the Army Corps with equitable measures to ensure Section 106 compliance for restoration projects; design the agreement to allow other federal lead agencies to join or adopt these measures for their own agreements. <i>(See also associated dedicated staffing in Recommendation 4.3 above and designating a lead federal agency to complete Section 106, in Recommendation 4.5, below.)</i>						●		●	●	●		X
4.5 Federal agencies designate a single entity to complete Section 106 consultation with SHPO to avoid multiple consultations for the same project.								●	●	●		X
4.6 New restoration permitting pathways should be consistent with terms and protection measures included in existing coordinated permitting processes such as the Statewide Restoration General Order (SWRCB) and USFWS/NOAA Programmatic Biological Opinions for Restoration.	●	●			●	●		●	●	●		X

Table 1. Recommendations by Agency and Implementation Timeline (continued)

Recommendation 5: Advance solutions to ongoing restoration challenges	Agency/Authority										Implementation Timeline	
	Legislative	CDFW	CEQA	CNRA	Flood Board	SHPO	Water Boards	Army Corps	NOAA	USFWS	Short-term 1-2 year	Long-term 3+ years
5.1 Modify agency practices and policies to ensure that habitat restoration projects that will have a net environmental benefit are not required to provide compensatory mitigation.		●					●	●	●	●		X
5.2 Convene agencies to collaborate on efficiently permitting mitigation, and establishing mitigation banks and in-lieu fee programs, ensuring restored habitat and strategically supporting species recovery.		●		●			●		●	●	X	
5.3 Establish a stable, permanent State funding source for restoration project planning and implementation.	●			●							X	X
5.4 To incentivize restoration, ensure restoration permitting pathways are not cost-prohibitive and omit or otherwise minimize fees.		●					●				X	X
5.5 Explore the development of Safe Harbor Agreements, conservation easements, tax incentives, and other actions to increase restoration on private lands.	●	●		●					●	●	X	X

5 THE PATH FORWARD

The progress made in California to optimize regulatory systems for accelerated restoration is a testament to the power of collaborative efforts among agency leaders, project proponents, and the broader restoration community. To sustain the momentum, agency leadership should commit to the deliberate and focused dialogue needed to overcome remaining challenges and quickly scale up restoration. These challenges include resolving policy, funding, and organizational hurdles; ensuring effective training and technical assistance; managing perceived risks associated with working in sensitive habitats; and shifting from reactive to proactive restoration strategies.

Our recommendations underscore several key themes essential for accelerating restoration:

- **Proactive Use of Efficient Permitting Pathways:** Ensuring consistent and widespread use of efficient permitting tools requires ongoing training, early engagement, and strategic planning for new pathways.
- **Creation of Dedicated Teams:** Dedicated units within regulatory agencies, like the CDFW CGT program and NOAA Restoration Center, are critical for integrating funding, permitting, and technical assistance into a unified effort.
- **Expanding and Developing Permitting Mechanisms:** Scaling up successful permitting mechanisms and creating new pathways where gaps exist will further streamline processes and reduce delays.
- **Addressing Ongoing Challenges:** Collaborative efforts to tackle complex issues, such as expediently implementing already approved mitigation and minimizing fees, are necessary to remove barriers and incentivize restoration.

Efficient permitting alone will not achieve California's restoration goals. A stable, permanent state funding source is essential, as well as increased staffing capacity within agencies to manage the influx of projects, the ecological workforce to implement them, and the necessary supply of native seeds and plants to complete the job. Funding must support project phases, from planning through implementation and adaptive management.

The next stage of this journey calls for agency leadership to build on past successes to create a sustainable framework that accelerates restoration in the Sacramento River Basin and Statewide. Proactive ecological restoration is far more effective than reactive approaches to climate-related disasters, which often result in higher costs, greater environmental damage, and the need for complex permitting solutions. With more proactive measures in place, we can anticipate and mitigate potential issues—ultimately leading to more resilient and enduring restoration outcomes. By strengthening

partnerships, streamlining processes, and committing to ongoing innovation, we can create a regulatory environment that meets California's ecological restoration needs and sets a global standard for resilience and sustainability.

This is our moment to act decisively. Together, we can ensure that California's ecosystems are restored and preserved for generations to come.



The confluence of the Feather River (left) and the Sacramento River (right), north of Sacramento, California in Sutter County. Photo credit: California Department of Water Resources.

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Below is a list of study participants' affiliations. The information gathered during this study does not necessarily represent the views of an organization as a whole.

Alnus Ecological	Ecosystem Investment Partners	Reclamation District 108
American Rivers		Reclamation District 1500
California Department of Fish and Wildlife	Environmental Policy Innovation Center (EPIC)	River Partners
California Department of Water Resources	Environmental Science Associates (ESA)	Sacramento River Forum
California Landscape Stewardship Network	Hamer Environmental	State Historic Preservation Office
California Natural Resources Agency	Kjeldsen Sinnock & Neudeck (KSN), Inc.	State Water Resources Control Board
California Rice Commission	Mechoopda Indian Tribe of Chico Rancheria	Tehama Environmental Solutions, Inc.
California State Parks	Natural Resources Conservation Service (NRCS)	The Urkov Group
California Trout	NOAA Fisheries	Trout Unlimited
Central Valley Flood Protection Board	NOAA Restoration Center	U.S. Army Corps of Engineers 404 and 408 Programs
Central Valley Regional Water Quality Control Board (Region 5 – Redding Office)	Northern California Water Association (NCWA)	U.S. Bureau of Reclamation
Chico State Foundation	North Coast Regional Water Quality Control Board (Region 1 – Santa Rosa Office)	U.S. Fish and Wildlife Service
Conaway Preservation Group		WRA, Inc.
Ducks Unlimited	Paskenta Band of Nomlaki Indians	

7 ABOUT THE AUTHORS

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Katie Haldeman (Project Director) has supported the development and implementation of new expedited permitting pathways for restoration for many years and enjoys bringing people together to find win-win solutions to environmental challenges. Prior to Sustainable Conservation, she helped to steward working lands at Resource Conservation Districts and developed a composting program for Toyota's "zero waste to landfill" initiative. Katie has a B.A. in Biology from UC Berkeley and her graduate research at UC Santa Cruz focused on how microbes play a role in controlling carbon dioxide in marine ecosystems.

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8 REFERENCES

- CAL FIRE. (2022, October 24). *Statistics*. Retrieved 2024, from The Department of Forestry and Fire Protection: <https://34c031f8-c9fd-4018-8c5a-4159cdff6b0d-cdn-endpoint.azureedge.net/-/media/calfire-website/our-impact/fire-statistics/top-20-largest-ca-wildfires.pdf>
- California Department of Water Resources. (n.d.). *California Water Plan*. Retrieved from California Department of Water Resources: <https://water.ca.gov/programs/california-water-plan>
- California Department of Water Resources. (n.d.). *Central Valley Flood Protection Plan (CVFPP) Conservation Strategy 2022 Update*. Retrieved from California Department of Water Resources: <https://water.ca.gov/Programs/Flood-Management/Flood-Planning-and-Studies/Conservation-Strategy>
- California Department of Water Resources. (n.d.). *Water Resilience Portfolio*. Retrieved from California Department of Water Resources: <https://resources.ca.gov/Initiatives/Building-Water-Resilience/portfolio>
- California Landscape Stewardship Network. (2020, November). *Cutting Green Tape: Regulatory Efficiencies for a Resilient Environment*. Retrieved from https://calandscapestewardshipnetwork.org/sites/default/files/2020-12/CGT_FINAL_hires.pdf
- California Landscape Stewardship Network. (n.d.). *Cutting Green Tape*. Retrieved from California Landscape Stewardship Network: <https://calandscapestewardshipnetwork.org/cutting-green-tape>
- California Natural Resources Agency. (2022, April 22). *Natural and Working Lands Climate Smart Strategy*. Retrieved from California Natural Resources Agency: https://resources.ca.gov/-/media/CNRA-Website/Files/Initiatives/Expanding-Nature-Based-Solutions/CNRA-Report-2022---Final_Accessible.pdf
- California Natural Resources Agency. (n.d.). *Cutting Green Tape*. Retrieved from California Natural Resources Agency: <https://resources.ca.gov/Initiatives/Cutting-Green-Tape>
- CDFW. (2024, August). *CDFW Cutting the Green Tape Projects*. Retrieved from CDFW Cutting the Green Tape Projects: <https://storymaps.arcgis.com/stories/f2ff115a6add4732bcd128cc594009ca>

- CDFW. (2024, June). *Habitat Restoration and Enhancement Act Report*. Retrieved from California Department of Fish and Wildlife: <https://wildlife.ca.gov/Conservation/Environmental-Review/HREA/Report>
- CDFW. (2024, May 17). Ocean Recreational and In-River Salmon Sport Fisheries in California Closed for Second Consecutive Season. Retrieved from <https://wildlife.ca.gov/News/Archive/ocean-recreational-and-in-river-salmon-sport-fisheries-in-california-closed-for-second-consecutive-season#:~:text=2022%2D2024%20News%20Releases&text=The%20California%20Fish%20and%20Game,for%20the%20second%20consecutive>
- CDFW. (2024). *SERP Concurrences*. Retrieved from California Department of Fish and Wildlife: <https://wildlife.ca.gov/Conservation/Cutting-Green-Tape/SERP/Concurrences>
- Crowfoot, W. (2021, January 7). Cutting Green Tape Report Implementation. California Natural Resources Agency. Retrieved from <https://resources.ca.gov/-/media/CNRA-Website/Files/Initiatives/Green-Tape/Secretary-Crowfoot-Cutting-Green-Tape-Memo.pdf?la=en&hash=36BCFD912020064CF59E207730A043F344476DC3>
- Exec. Order No. N-82-20. (2020, October 7). Retrieved from <https://www.gov.ca.gov/wp-content/uploads/2020/10/10.07.2020-EO-N-82-20-.pdf>
- Final Notice of Issuance, Reissuance, and Modification of Nationwide Permits. (1996, December 13). *61 Fed. Reg. 65874*. Retrieved from <https://www.govinfo.gov/content/pkg/FR-1996-12-13/pdf/96-31645.pdf>
- Floodplain Forward. (2024). *Advancing Floodplain Reactivation in the Sacramento River Basin*. Retrieved from Northern California Water Association: https://norcalwater.org/wp-content/uploads/FFC_PortfolioDoc_DigitalProjectPages.pdf
- Floodplain Forward. (2024). *Floodplain Forward 2024*. Retrieved from Northern California Water Association: <https://norcalwater.org/wp-content/uploads/Floodplain-Forward.pdf>
- Mount, J., Hanak, E., & Gartrell, G. (2022). *The Sacramento–San Joaquin Delta*. Retrieved from <https://www.ppic.org/publication/the-sacramento-san-joaquin-delta/>
- NOAA Fisheries. (2023, December 1). *Community-Based Habitat Restoration*. Retrieved from NOAA Fisheries: <https://www.fisheries.noaa.gov/national/habitat-conservation/community-based-habitat-restoration>
- OAL. (2023, February 10). California Regulatory Notice Register. *Register 2023, Number 6-Z*. Retrieved from <https://oal.ca.gov/wp-content/uploads/sites/166/2023/02/2023-Notice-Register-Number-6-Z-February-10-2023.pdf?emrc=63ed306b0fa2b>

- Office of Governor Gavin Newsom. (2024). *California Salmon Strategy for a Hotter Drier Future: Restoring Aquatic Ecosystems in the Age of Climate Change*. Retrieved from <https://www.gov.ca.gov/wp-content/uploads/2024/01/Salmon-Strategy-for-a-Hotter-Drier-Future.pdf>
- Office of Planning and Research (OPR). (2024). *SCH Number 2019100230*. Retrieved from CEQAnet Web Portal: <https://ceqanet.opr.ca.gov/Project/2019100230>
- OPR. (2024). *Query the CEQAnet Database*. Retrieved April 17, 2024, from CEQAnet Web Portal: <https://ceqanet.opr.ca.gov/Search/Advanced>
- Oregon Lottery. (2024). *Lottery Dollars Support Natural Habitats & Watersheds*. Retrieved August 8, 2024, from Oregon Lottery: <https://www.oregonlottery.org/natural-habitats/>
- Oregon State Parks. (2024). *Oregon Salmon License Plates*. Retrieved August 8, 2024, from Oregon Parks and Recreation: <https://www.oregon.gov/oprd/pcb/pages/pcb-oregon-salmon-plates.aspx>
- Pagliuco, B., & Samonte, G. (2015). *NOAA Restoration Center's Programmatic Biological Opinion Comparative Cost Analysis*. National Atmospheric and Ocean Administration. Unpublished.
- Robins, J., Nelson, K., & Farrell, S. (2019). *Shifting the Regulatory Paradigm Toward Bold Immediate Action*. California Landscape Stewardship Network. Retrieved from https://calandscapestewardshipnetwork.org/sites/default/files/2019-06/FINAL_shifting_the_paradigm_white%20paper_2019_03_01_0.pdf
- S.B. 174. (2024, July). *Public resources: California Environmental Quality Act: exemptions: native fish and wildlife: Capitol Annex*. Retrieved from California Legislative Information: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202320240SB174
- S.B. 867. (2024, July). *Safe Drinking Water, Wildfire Prevention, Drought Preparedness, and Clean Air Bond Act of 2024*. Retrieved from California Legislative Information: https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202320240SB867
- San Francisco Bay Regional Water Quality Control Board. (2024, September 21). *Total Maximum Daily Loads (TMDLs)*. Retrieved from California Water Boards: San Francisco Bay - R2: https://www.waterboards.ca.gov/rwqcb2/water_issues/programs/TMDLs/
- Sustainable Conservation. (2011). *Creating a Statewide Program for Voluntary Restoration on Private Lands*. Retrieved from <https://suscon.org/wp-content/uploads/2016/08/Partnersinrestorationreport.pdf>

- Sustainable Conservation. (2023, January). *NEW Statewide Tools to Accelerate Aquatic Habitat Restoration*. Retrieved from Sustainable Conservation: https://suscon.org/wp-content/uploads/2023/01/New-Statewide-Tools-to-Accelerate-Aquatic-Habitat-Restoration-Permitting_January-2023.pdf
- Sustainable Conservation. (2023, March 27). *North and Central Coast Federal Consistency Determination (CD) – Coastal Commission and NOAA Restoration Center*. Retrieved from Accelerating Restoration: <https://acceleratingrestoration.org/permits/north-and-central-coast-federal-consistency-determination/>
- Sustainable Conservation. (2024, March 15). *Central Valley NMFS Programmatic Biological Opinion (PBO)*. Retrieved from Accelerating Restoration: <https://acceleratingrestoration.org/permits/central-valley-nmfs-pbo/>
- Sustainable Conservation. (2024, September 6). *South Coast Federal Consistency Determination (CD) – Coastal Commission and NOAA Restoration Center*. Retrieved from Accelerating Restoration: <https://acceleratingrestoration.org/permits/south-coast-federal-consistency-determination/>
- Sustainable Conservation. (n.d.). *Partners in Restoration*. Retrieved from Sustainable Conservation: <https://suscon.org/project/partners-in-restoration/>
- SWRCB. (2013, March 27). Amended Order for Clean Water Act Section 401 General Water Quality Certification for Small Habitat Restoration Projects File #SB12006GN. Retrieved from https://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/generalorders/shrpcert032713.pdf
- SWRCB. (2024). California Integrated Water Quality System Project (CIWQS). Retrieved July 24, 2024, from <https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/PublicReportGeneralOrderServlet?reportID=1&firstRun=Y®Drop=SB&progDrop=CERREST&orderNo=&statusDrop=Active&typeDrop=401+Certification&enrolleeRegDrop=1&enrolleeRegDrop=2&enrolleeRegDrop=3&enrolleeRegDrop=4>
- Task Force on Removing Barriers to Restoration. (2002). *Removing Barriers to Restoration*. Secretary for Resources. Retrieved from <https://suscon.org/wp-content/uploads/2021/03/Removing-Barriers-to-Restoration-2002.pdf>
- The White House. (2024, January). *A Guidebook to the Bipartisan Infrastructure Law*. Retrieved from The White House: <https://www.whitehouse.gov/build/guidebook/>
- The White House. (2024, April). *The America the Beautiful Freshwater Challenge: A Partnership to Conserve and Restore America's Rivers, Lakes, Streams, and Wetlands*. Retrieved from

- The White House: <https://www.whitehouse.gov/wp-content/uploads/2024/04/America-the-Beautiful-Freshwater-Challenge.pdf>
- U.S. Army Corps of Engineers. (2024, August 14). *Regional General Permit 16*. Retrieved from Regional and Programmatic General Permits: https://www.spk.usace.army.mil/Portals/12/documents/regulatory/public_notices/FY2024/EXP-AUG-24/Att.1-RGP%2016-201400534-reissue.pdf
- U.S. Army Corps of Engineers. (2024, August 14). *Regulatory Branches, Sections, Offices, and Areas of Responsibility*. Retrieved from Regional and Programmatic General Permits: https://www.spk.usace.army.mil/Portals/12/documents/regulatory/public_notices/FY2024/EXP-AUG-24/Att.2-District-Map.pdf
- USFWS. (2022, August 31). *20220831-2022-0005149-S7 Statewide Restoration Final PBO with appendices*. Retrieved from U.S. Fish and Wildlife Service: <https://www.fws.gov/media/2022083120220005149-s7-statewide-restoration-final-pbo-appendices>
- USFWS. (2024, July 29). *U.S. Fish and Wildlife Service Lists Bay-Delta Longfin Smelt as Endangered*. Retrieved from U.S. Fish & Wildlife Service: <https://www.fws.gov/press-release/2024-07/us-fish-and-wildlife-service-lists-bay-delta-longfin-smelt-endangered#:~:text=%E2%80%94The%20U.S.%20Fish%20and%20Wildlife,Bay%20estuary%20in%20recent%20decades.>
- USFWS and NMFS. (1998, March). *Consultation Handbook: Procedures for Conducting Section 7 Consultations and Conferences*. Retrieved from <https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf>
- Whipple, A. A., Grossinger, R. M., Rankin, D., Stanford, B., & Askevold, R. A. (2012). *Sacramento-San Joaquin Delta Historical Ecology Investigation: Exploring Pattern and Process*. Richmond, CA: Prepared for the California Department of Fish and Wildlife and Ecosystem Restoration Program. A Report of SFEI-ASC's Historical Ecology Program, Publication #672, San Francisco Estuary Institute & The Aquatic Science Center. Retrieved from <https://www.sfei.org/DeltaHEStudy>

9 APPENDICES

Appendix A. Existing Efficient Regulatory Processes for Aquatic Habitat Restoration in California

Agency/ Authority	Permit/Approval	Project Size Limits
California Environmental Quality Act (CEQA)	Categorical Exemptions 15333 - Small Habitat Restoration Projects and 15304 - Minor Alterations to Land There are additional categorical exemptions , some of which may be used for restoration projects	<ul style="list-style-type: none"> • ≤ 5 acres for Sec. 15333 (all areas of temporary and permanent disturbance, including work areas, access routes, and staging areas) • No acreage limit for Sec. 15304
	Program Environmental Impact Report (PEIR) for the Water Board Statewide Restoration General Order (SRGO)*	No size limit- for projects exceeding size limits for Categorical Exemption 15333 - Small Habitat Restoration Projects
	Statutory Exemption for Restoration Projects (SERP) Administered by CDFW	No size limit
Water Boards (SWRCB and Regional Water Boards)	General Order for Small Habitat Restoration Projects (SHRP)	≤ 5 acres and 500 cumulative linear feet of disturbance to stream segment or coastline
	Statewide Restoration General Order (SRGO)*	No size limit - for projects ≥ 5 acres/500 linear feet outside of scope of SHRP (see above)
California Department of Fish and Wildlife (CDFW)	Habitat Restoration and Enhancement Act (HREA)*	≤ 5 acres and 500 cumulative linear feet of disturbance to stream segment or coastline; follows requirements from the SHRP (see above)
	Restoration Consistency Determination (CD)	No size limit
	Restoration Management Permit (RMP)	No size limit

Agency/ Authority	Permit/Approval	Project Size Limits
National Environmental Policy Act (NEPA)	Categorical Exclusion (CE) or tiering off an existing Environmental Assessment (EA) or Environmental Impact Statement (EIS). In some cases, when an efficient permitting pathway is used with a federal agency (e.g. NWP's or RGP's below) it includes NEPA compliance.	Depends on the Categorical Exclusion or programmatic NEPA document
U.S. Fish and Wildlife Service (USFWS)	USFWS Statewide Restoration Programmatic Biological Opinion (PBO)*	No size limit, but includes annual incidental take limits for each species
	Additional PBOs or programmatic informal consultations exist, some of which may include parts of the Sacramento River Basin.	Depends on the PBO or informal consultation
National Marine Fisheries Service (NMFS)	NMFS PBOs for areas of anadromy in the: North Coast ^N , Central Coast ^{*N} , Central Valley [*] , and South Coast ^{*N}	No size limits, but see limitations on dewatering length/timing
	Additional PBOs or programmatic informal consultations exist, some of which may include parts of the Sacramento River Basin.	Depends on the PBO or informal consultation
California Coastal Commission	NOAA Restoration Center Federal Consistency Determinations (CD) for the Coastal Zone in the North and Central Coast ^{*N} and South Coast ^{*N}	Linked to NMFS Biological Opinions (see above); applies to California coastal zone
U.S. Army Corps of Engineers (Army Corps)	Nationwide Permits (2021 NWP's) 27-Aquatic Habitat Restoration , 33-Temporary Construction Access and Dewatering , and 54-Living Shorelines ^N	<ul style="list-style-type: none"> • No size limits for NWP 27 and 33 • NWP 54 - No more than 500 linear feet

continued)

Agency/ Authority	Permit/Approval	Project Size Limits
U.S. Army Corps of Engineers (Army Corps) contd.	Regional General Permits (RGPs): 16 – Aquatic Habitat Restoration and Enhancement Activities (Sacramento District) and 41 – Invasive Plant Removal (LA District) ^N	No Size Limits
	Section 408 Categorical Permission (Sacramento District), including ones for Environmental Restoration and Fish Screens . More than one CP can be used for a project.	<ul style="list-style-type: none"> • Environmental Restoration: ≤ 500 acres and 5,000 cumulative linear feet of channel restoration • Fish Screens: Maximum area of construction for fish screen support facilities is 1 acre
Programs that include more than one permit or approval		
CDFW Fisheries Restoration Grant Program (FRGP)	CEQA Mitigated Negative Declaration (MND), Water Quality Certification from SWRCB, Army Corps 404 permit (RGP 12 San Francisco District , 16 Sacramento District , or 78 Los Angeles District) ^N , and programmatic informal consultation with USFWS	No Size Limits
Partners in Restoration (PIR) Programs	Marin , Santa Cruz , and Alameda County Resource Conservation District (RCD) PIR Programs that can include a variety of permits available (e.g., CEQA, SWRCB, USFWS, NMFS PBOs)* ^N	Size limits vary based on program and project type

* Sustainable Conservation provided technical assistance on the development of this or earlier versions of this authorization.

^N Not applicable to the Sacramento River Basin

Appendix B. Comparison of Timing and Effort Between Standard and Efficient Permitting Processes

Authority	Standard Pathways		Efficient Pathways	
	Pathway(s)	Timeline/Effort for Approval	Pathway(s)	Timeline/Effort for Approval
Army Corps	Individual 404 permit and Individual 408 Permission	Requires NEPA compliance, an alternatives analysis, and a public process (404 permits) Requires legal review and NEPA (408 permission).	NWPs, RGPs, Categorical Permissions	Pre-determined Terms and conditions Typically, a pre-construction notification is required. NEPA has been completed.
CDFW	Individual Lake and Streambed Alteration Agreement (LSAA) and Incidental Take Permit	No approval timelines.	HREA (one approval)	Qualifying projects must be approved in 30-60 days.
CEQA	Individual CEQA document (e.g., IS/MND, EIR)	Includes document preparation and in some cases a public process. The process can take 6 – 24 months depending on the type of document being prepared.	SRGO PEIR, SERP, CatEx 15333, 15304, other Categorical Exemptions	CDFW has a goal of completing a SERP concurrence in less than 60 days. If a project fits within the scope of analysis of the SRGO PEIR or a CatEx the process can take 2 weeks to 1 month. If project must do additional analysis, it can take up to 9 months.
USFWS/ NMFS	Individual Biological Assessment (BA) and Biological Opinion (BO)	Protection measures and effects analysis must be done on a project-by-project basis. A BA must be prepared and then a BO can be issued within 135 days.	USFWS Statewide Programmatic BO (PBO) and NMFS PBOs	Agencies have a goal of approving complete application forms in 30-60 days. PBOs include a suite of protection measures. Effects analysis has already been completed.
SWRCB	Individual Water Quality Certification or WDR. Develop project-specific protection measures.	Permit is approximately 25-30 pages in length.	SRGO Protection measures included	Permit (minus attachments) can be approximately 7 pages in length.

Appendix C. Description of Regulatory Processes Discussed in the Findings and Recommendations

Process	Purpose
AB 52	Assembly Bill 52 (AB 52) requires analysis of potential impacts to Tribal Cultural Resources when complying with CEQA. AB 52 also requires the CEQA lead agency to conduct meaningful Consultation with California Tribes.
Categorical Permissions	The Army Corps has created this more efficient permission process for Environmental Restoration that covers a variety of restoration activities 500 acres or less in size or 5,000 linear feet or less in total length of channel restoration. Already completed federal agency legal review and advanced NEPA compliance and other efficiencies allows for a faster approval process than the standard 408 permission process. This categorical permission can be combined with other categorical permissions such as one for fish screens.
Compensatory Mitigation	Both state and federal agencies may require compensatory mitigation, even for projects that will have a net benefit to the environment. These requirements might be imposed to offset impacts to protected species/species habitat or aquatic resources.
Flood Board Encroachment Permit	Central Valley Flood Protection Board (Flood Board) approval will be required for any proposed work that is located within a Board-Adopted Plan of Flood Control, as defined by the California Code of Regulations Title 23 Waters (Title 23). The Flood Board encroachment permit and Army Corps 408 processes are closely related.
HREA	The Habitat Restoration and Enhancement Act (HREA) is an expedited process administered by CDFW for restoration projects 5 acres and 500 cumulative linear feet in stream length or less that is in lieu of any other approval needed by the Department, including 1600/Lake and Streambed Alteration Agreements (LSAA) and California Endangered Species Act (CESA) permitting. It works in conjunction with CEQA Categorical Exemption 15333 and the Water Board General Order for Small Habitat Restoration Projects (SHRP).
NWP-27	Nationwide Permit 27 (NWP 27) for Aquatic Habitat Restoration is a programmatic permit for aquatic habitat restoration, enhancement, and establishment activities. Using a nationwide permit is more efficient than obtaining individual Section 10 and Section 404 Clean Water Act permits in part because NEPA compliance has been completed for this permitting pathway and the primary terms and conditions are pre-established. NWP 27 does not currently authorize restoration projects that relocate or convert tidal wetlands or waters to other aquatic uses/habitats.
PBO	Both NMFS and USFWS have Programmatic Biological Opinions (PBO) for commonly implemented aquatic restoration project types in California. PBOs offer a more efficient and predictable mechanism for coverage under Section 7 of the Endangered Species Act for restoration projects that may impact species or their habitat in each agency's jurisdiction. The USFWS authorization includes many plants, animals, and fish species that are present in the Sacramento River Basin, while the NMFS authorization covers anadromous fish.

Process	Purpose
Restoration CD	CDFW may issue a Restoration Consistency Determination (CD) when a project is covered by either a federal programmatic or other biological opinion for impacts to species that are listed under both state and federal endangered species acts, but it does not cover state fully protected species). Restoration CDs do not include fees and are typically faster to issue than a CESA incidental take permit.
RGP 16	Regional General Permit 16 (RGP 16) issued by the Army Corps Sacramento District , was titled Anadromous Salmonid Fisheries Restoration and was in the process of being reissued while interviews were conducted for this paper. The RGP was formerly limited to anadromous salmonid fisheries restoration project types in the Delta, Suisun Bay, and parts of the Central Valley. While designed for projects funded by CDFW's Fisheries Restoration Grant Program (FRGP), it could also be used for projects without FRGP funding. In August 2024, the Corps reissued Regional General Permit (RGP) 16 with a new title – Aquatic Restoration and Enhancement Activities, for projects within their entire Sacramento District Office boundaries . This newly reissued RGP directly complements statewide authorizations with NOAA, USFWS, and the SWRCB, and covers a broader list of project types than the previous version of the RGP. It also allows for conversion from one wetland type to another provided that a project has a net benefit to aquatic resource functions and services.
RMP	The Restoration Management Permit (RMP) process can authorize state-defined take (hunt, pursue, capture, catch, or kill, or attempt to do so) of endangered, threatened, and candidate species pursuant to the CESA as well as fully protected species pursuant to Fish and Game Code sections 3511, 4700, 5050, and 5515, without the need for financial assurances or mitigation. Sustainable Conservation is currently sponsoring a bill introduced by Assemblymembers Kalra and Mathis (AB-1581 The Restoration Management Permit Act) to combine all necessary approvals from CDFW (e.g., 1600/LSAA, etc.) into one approval process for restoration projects. If enacted, the new law would go into effect January 1, 2025.
Section 106/SHPO	The California Office of Historic Preservation (OHP) is responsible for administering federally and state mandated historic preservation programs to further the identification, evaluation, registration and protection of California's irreplaceable archaeological and historical resources under the direction of the State Historic Preservation Officer (SHPO) . OHP reviews and comments on thousands of federally sponsored projects annually pursuant to Section 106 of the National Historic Preservation Act and state programs and projects pursuant to Sections 5024 and 5024.5 of the Public Resources Code. For example, Section 106 compliance is needed before the Army Corps may issue Section 404 or 408 permits. OHP also reviews and comments on local government and state projects pursuant to the California Environmental Quality Act (CEQA) .
SERP	The CEQA Statutory Exemption for Restoration Projects (SERP) , administered by CDFW, provides a statutory exemption from the California Environmental Quality Act (CEQA) for fish and wildlife restoration projects that meet certain requirements.

Process	Purpose
SHRP	<p>The purpose of the General Order for Small Habitat Restoration Projects is to provide a more efficient programmatic permitting process than the Individual Water Quality Certification process for qualifying small restoration projects up to 5 acres or 500 cumulative linear feet in size. This process works in combination with CDFW's HREA process and the CEQA 15333 exemption. Larger projects or projects that do not meet the terms and conditions of the SHRP would seek use of the SRGO.</p>
SRGO	<p>The purpose of the Statewide Restoration General Order (SRGO) is to provide a more efficient programmatic permitting process with greater regulatory certainty than individual permitting for Clean Water Act (CWA) Water Quality Certification for projects that require authorization from the Army Corps under CWA Section 404 and Rivers and Harbors Act of 1899 (RHA) Section 10 and Section 14 (33 USC 408, known as "Section 408"). The SRGO also provides Waste Discharge Requirements (WDRs) pursuant to the Porter-Cologne Water Quality Control Act (California Water Code §1300 et seq.). Protection measures were coordinated with USFWS, NMFS, and CDFW for consistency with their restoration permitting efforts.</p> <p>When enrolling under the SRGO, various CEQA compliance pathways can be used, including the SRGO PEIR, SERP, or a project-specific CEQA document.</p>
SRGO PEIR	<p>The SRGO PEIR is a more cost-effective and efficient compliance method to meet CEQA requirements for large scale restoration projects by utilizing the analyses completed and information contained in the SRGO PEIR and if needed, by doing only supplemental analysis for impacts that are not covered by the PEIR. Actions or supplemental analyses such as completing a memo to file/ findings, addendum, or supplemental EIR could be performed.</p>

Appendix D. Comparison of CEQA Approaches for Restoration Projects

CEQA Approach	Advantage(s)	Disadvantage(s)	Time to complete	Other Considerations
Standard CEQA Categorical Exemptions (from Article 19 of the CEQA Guidelines, e.g., 15333, 15304)	<ul style="list-style-type: none"> Eligible projects can be completed quickly 	<ul style="list-style-type: none"> Project size limitations Project cannot include mitigation to reduce potentially significant impacts. 	~2 weeks to 1 month	<ul style="list-style-type: none"> May be combined with other efficient permitting pathways.
Statutory Exemption for Restoration Projects (SERP) Administered by CDFW	<ul style="list-style-type: none"> Can be completed quickly (assuming project is eligible) 	<ul style="list-style-type: none"> Multi-benefit projects are unlikely to qualify, unless “incidental”. Set to sunset on January 1, 2030. 	~3-6 months	<ul style="list-style-type: none"> CDFW Director must concur that a project qualifies under SERP. May be combined with other efficient permitting pathways.
Supplemental Document from SRGO Program EIR	<ul style="list-style-type: none"> Was specifically developed to accelerate restoration projects. Contains significant and unavoidable impact conclusions for many resource areas, which would provide coverage for such impacts of a Project, if needed. 	<ul style="list-style-type: none"> May require a lead agency to certify the sufficiency of a CEQA document generated by a different lead agency (i.e., State Water Board). 	~1-3 months - NOD or Addendum ~3-9 months - Supplemental or Subsequent EIR	<ul style="list-style-type: none"> Water Quality Certification (401 or WDR) process is streamlined through SRGO. May be combined with other efficient permitting pathways. Several multi-benefit restoration projects have successfully used the SRGO Program EIR for CEQA compliance (e.g., all impacts covered under the SRGO

CEQA Approach	Advantage(s)	Disadvantage(s)	Time to complete	Other Considerations
Supplemental Document from SRGO Program EIR (cont'd)	<ul style="list-style-type: none"> As with any supplemental to an EIR (CEQA Guidelines Section 15163), project-specific documentation must contain only information necessary to analyze new information requiring additional environmental review. 			<p>Program EIR and submittal of an NOD).</p> <ul style="list-style-type: none"> Restoration projects proposed as biological mitigation are typically implemented to offset an impact, so additional restoration would be needed to achieve a net benefit to qualify under the SRGO.
Standalone IS/MND or EIR	<ul style="list-style-type: none"> Entire IS/MND is specifically written for the project. Project lead agency does not need to rely upon another agency's CEQA document. 	<ul style="list-style-type: none"> Requires developing information on existing conditions, impacts, alternatives (EIR), cumulative, etc., since not relying on another document. 	<p>~6-10 months for IS/MND</p> <p>~12-24 months for EIR</p>	<ul style="list-style-type: none"> May be combined with other efficient permitting pathways.



Table provided by [Environmental Science Associate \(ESA\)](#).

This table is provided for informational purposes only and does not attempt to offer legal advice.