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Tracking CEQA Projects and Habitat Outcomes: A Statewide Monitoring Framework for California Trout's Regional Program

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CEQA Project Tracking and Habitat Outcomes:

A Statewide Monitoring Framework for California Trout's Regional Program

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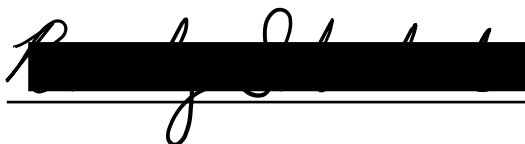
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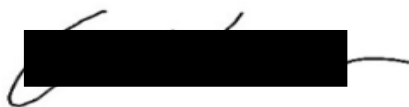
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ABSTRACT

California's aquatic ecosystems face mounting pressure from a range of sources, including development, agricultural water use, and climate change, threatening the native species that depend on them. The California Environmental Quality Act (CEQA) provides a critical mechanism for environmental transparency and public participation in project review. Yet consistent engagement with the law remains difficult for conservation organizations and the public, given the volume of listings, technical language, and limited tracking infrastructure. This project, developed in partnership with California Trout, sought to reduce those barriers by creating a statewide CEQA monitoring framework across the organization's seven regional programs. Deliverables include seven regional databases, an interactive GIS map, and a publicly accessible StoryMap designed to educate and encourage public participation in the CEQA process. Ultimately, this project was built on the belief that CEQA is strongest when more voices are included.

INTRODUCTION AND BACKGROUND

The California Environmental Quality Act

California has a long-standing commitment to protecting the state's diverse natural resources and supporting the communities that rely on them most. Established in 1970, the California Environmental Quality Act (CEQA) is one of California's foundational environmental laws. Enacted in response to growing public concern over the environmental consequences of rapid development, CEQA requires state and local agencies to identify, disclose, and consider the environmental impacts of discretionary projects before approving them.¹ Through environmental review processes such as Initial Studies, Negative Declarations, Mitigated Negative Declarations, and Environmental Impact Reports, CEQA seeks to ensure that decision-makers and the public are informed about a project's potential effects on natural resources, public health, and surrounding communities.²

While CEQA does not prohibit development, it establishes a framework for transparency and informed decision-making. The law requires agencies to evaluate alternatives and feasible mitigation measures that could reduce significant environmental impacts. Equally important, CEQA provides opportunities for public review and comment throughout the environmental review process, allowing community members, organizations, and other stakeholders to participate in decisions that may affect their local environment. For this reason, CEQA is often described as both an environmental disclosure law and a mechanism for public engagement, promoting accountability in land-use and development decisions. More than five decades after its enactment, CEQA continues to guide environmental review and public participation in state and local government decision-making processes.

California Trout

California Trout is a nonprofit (501(C)(3)) that has worked for over 50 years to protect and restore the ecosystems that trout, salmon, and other native species rely on. The organization's mission is to "revitalize waters for resilient wild fish and a better California."³ Each of its seven distinct regions reflects different priorities, projects, and challenges. Their regions include the North Coast, Mt. Shasta-Klamath, Mt. Lassen, the Sierra Headwaters, the Central Valley, the Bay Area, and the South Coast. Projects across these regions include addressing fish passage barriers in developed waterways, floodplain restoration in agricultural areas, and alpine meadow restoration, among many others. The diversity of California Trout's work is remarkable and exemplifies the reach of these species and the variety of pressures they face.

For this project, California Trout served as a partner to explore how CEQA accessibility and transparency can be improved for both organizations and the public. What began as a focused effort in the South Coast region expanded statewide as the project evolved. Despite the breadth of CEQA activity relevant to California Trout's conservation work across the state, no centralized

¹ California Natural Resources Agency. (2024). CEQA Guidelines §15002–§15003

² California Natural Resources Agency. (2024). CEQA Guidelines §§15063–15132

³ California Trout. (n.d.). *Mission & vision*. <https://caltrout.org/about-us/mission-vision/>

system existed to track or monitor these projects. As a result, this project was developed to address that gap.

Conservation and CEQA: Challenges and Opportunities

A. Environmental and Development Pressures

California is one of the most biodiverse states in the nation while also being one of the most developed, leading to increasing environmental challenges.⁴ Freshwater ecosystems in particular face mounting pressure from urban growth, agricultural water use, infrastructure development, and the compounding effects of climate change.⁵ The native species that depend on these systems, such as salmon and trout, require cold, clean, and connected waterways to survive and reproduce. These conditions are increasingly difficult to maintain across California's diverse and changing landscapes as ecological pressures persist. Habitat fragmentation, altered hydrology, degraded water quality, and blocked fish passage represent some of the most notable threats to freshwater species recovery in the state.⁶ In this context, environmental review processes like CEQA carry particular significance. When development projects are proposed in or near critical watersheds, the CEQA process represents one of the few formal mechanisms through which potential impacts to aquatic habitat can be evaluated, disclosed, and mitigated before they occur.

B. Participation and Accessibility

CEQA is a powerful tool for public engagement, providing conservation organizations and community members a formal opportunity to identify environmental impacts and shape project outcomes before they are finalized. Research on participatory environmental governance highlights the value of involvement, finding that meaningful stakeholder engagement is associated with stronger conservation outcomes.⁷ However, realizing that potential does not come without challenges. The volume of CEQA project listings across California is substantial, and the website offers limited filtering functionality, making it difficult to identify projects relevant to specific watersheds or species. Further, review documents are often highly technical and written primarily for regulatory audiences, making the content difficult to navigate for those outside of regulatory or technical fields. For organizations like California Trout, these barriers can make consistent, proactive engagement difficult without a dedicated system for identifying and tracking relevant projects.

PROJECT OBJECTIVES

CEQA is one of California's most important environmental laws, providing transparency in decision-making and creating opportunities for public participation in projects that may affect

⁴ California Biodiversity Network. (n.d.). *Biodiversity in California*. <https://cabiodiversitynetwork.org/biodiversity-in-california/>

⁵ Power, M. E., Chandra, S., Gleick, P., & Dietrich, W. E. (2024). Anticipating responses to climate change and planning for resilience in California's freshwater ecosystems. *Proceedings of the National Academy of Sciences*, 121(32).

⁶ Howard, J. K., Barnett, A. R., Fesenmyer, K. A., & Anderson, M. G. (2025). From fragmentation to resilience: Connectivity and habitat diversity as drivers of fish persistence in California watersheds. *PLOS One*.

⁷ Cattino, M., & Reckien, D. (2021). Does public participation lead to more ambitious and transformative local climate change planning? *Environmental Science & Policy*, 124, 230–241.

natural resources and communities. However, the ability to engage meaningfully in the CEQA process is often limited by practical barriers, including the volume of project listings, the technical nature of review documents, and the challenge of identifying projects relevant to a particular region or conservation interest.

The objective of this project was to reduce some of these barriers and make participation in the CEQA process more accessible for both conservation organizations and the broader public. By improving awareness of CEQA opportunities and increasing the ability of stakeholders to identify and engage with relevant projects, this effort sought to support more informed participation in environmental decision-making. Ultimately, the goal was not to change the CEQA process itself, but to help ensure that the opportunities for engagement it provides are easier to access and utilize.

METHODS & DELIVERABLES

Regional Database

CEQA project listings were identified through daily review of CEQAnet, the state's online environmental review database. Listings were searched by county and filtered for relevance to California Trout's seven regional program areas. Relevance was determined through a judgment-based review process informed by a working knowledge of California Trout's active projects and conservation priorities. When a listing appeared potentially relevant, the associated environmental review documents, including Initial Studies and Environmental Impact Reports, were reviewed in greater depth to assess the nature and scale of potential impacts.

Seven individual databases were developed, one for each California Trout region. Each database was structured identically and organized by county. In addition to county-level project listings, each database included a tab tracking open public comment periods, a tab cataloging regional California Trout projects, and a reference tab containing CEQA acronyms and supplementary information about the law to support user accessibility. For each listing, information was manually entered across a range of fields, including but not limited to lead agency, project description, coordinates, environmental impact summary, species of interest, proximity to California Trout projects, and a California Trout impact summary. Each listing was also assigned a priority ranking, with high priority indicating a meaningful likelihood of significant impact and low priority indicating a project that appeared largely negligible but warranted monitoring.

GIS Map

Project coordinates collected during the database process were compiled into a CSV file, and listings without coordinates were removed prior to upload. The remaining data was uploaded into ArcGIS Online and organized as point data, serving as a visual representation of the regional databases. Each point corresponds to an individual CEQA listing and displays the full project information recorded in the database when selected. The map allows California Trout staff to spatially explore project listings across the state and understand where CEQA activity is occurring in relation to their regional program areas. It is important to note that coordinates

reflect project location points rather than full project footprints, which can vary considerably in scale and extent.

Public Outreach: StoryMap & Written Pieces

A publicly accessible StoryMap was developed using Esri's ArcGIS StoryMaps platform. The StoryMap draws on existing California Trout materials, CEQA educational content, and input gathered through extensive consultation with California Trout's regional staff and communications team. In addition to providing an overview of California Trout's regional work and its intersection with CEQA, the StoryMap walks users through how to make a public comment, directly supporting broader public participation in the environmental review process. The StoryMap is designed as a living resource, intended to be updated as California Trout's regional structure and project portfolio evolve over time.



<https://arcg.is/1OSzzW2>

FUTURE RECOMMENDATIONS

To ensure the longevity and utility of this framework, several recommendations are proposed for California Trout and organizations undertaking similar work. First, a standard operating procedure should be developed to guide the transfer of this project to California Trout's regional staff, ensuring that the database system can be maintained and updated consistently over time without reliance on a single point of contact.

Second, as technology continues to advance, there is a significant opportunity to reduce the administrative burden associated with manual CEQA monitoring. Automated tools capable of scanning and filtering environmental review databases for relevant listings could streamline the process considerably, freeing up organizational capacity for deeper engagement and advocacy work. This project demonstrated the value of consistent CEQA monitoring, but also the substantial time investment it requires. Leveraging available technology to support that work is a natural and timely next step.

Finally, while this framework was developed in partnership with California Trout, the need it addresses is not unique to one organization. Conservation groups, tribal nations, community organizations, and public agencies across California face the same challenges in consistently engaging with CEQA. This framework offers a replicable model that others can adapt to their own geographic focus and conservation priorities, ultimately contributing to broader and more equitable participation in California's environmental review process.

CONCLUSION

CEQA continues to be a testament to California's long-standing commitment to protecting the unique environments and abundant biodiversity found across the state. The law creates real opportunities for conservation organizations and the public to shape decisions that affect the places and species they care about, but those opportunities are only meaningful when people have the tools and knowledge to engage with them. This project was built on that belief, developing resources that make CEQA more navigable and accessible with the goal of bringing more voices into a process that is stronger for having them.

Our voices are a powerful tool, and when used together, we have the opportunity to ensure that ecosystems and species persist for future generations, that economies continue to grow in ways that account for the natural systems they depend on, and that the decisions shaping California's landscapes reflect the communities and values they are meant to serve.

ACKNOWLEDGEMENTS

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