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# Wetland Regional Monitoring Program Prospectus

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## Background

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The [Wetlands Regional Monitoring Program \(WRMP\)](#), as recently funded by an EPA R9 Wetland Program Development Grant, is engaging stakeholders from a broad range of restoration-related backgrounds and expertise to inform a regional monitoring program plan for tidal wetlands in the San Francisco Bay Area. This program plan will initiate implementation of Action 2 in the [Estuary Blueprint](#), and will help local, regional, state, and federal agencies evaluate the effectiveness of efforts to sustain healthy tidal habitats and resources.

Forecasts of accelerated sea level rise give new urgency for faster and more certain tidal marsh restoration in the Bay Area. Regional scientific synthesis ([BEHGU](#)), environmental plans ([ART](#), [Estuary Blueprint](#), [Tidal Marsh Recovery Plan](#)), new public funding for restoration ([SFBRA](#)), and efforts to coordinate environmental review and permitting (USEPA 2017) recognize this urgency. They also recognize the need for a Wetland Regional Monitoring Program (WRMP) to improve the design and assess the effectiveness of publicly funded tidal marsh restoration projects.

## Mission Statement

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The primary goal of the Steering Committee is to develop a program plan for the San Francisco Bay Area Wetlands Regional Monitoring Program (WRMP). The Steering Committee will ensure that the WRMP Plan identifies the science and technology, institutional relations and governance structure, and budget necessary to address key questions shared by the environmental regulatory and management community about tidal marsh protection and restoration.

## Timeline

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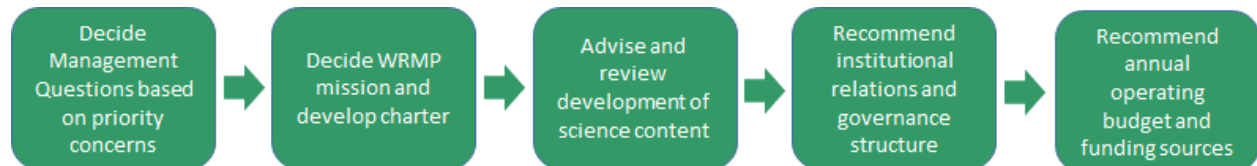
The grant funded work runs through 2019, and the Steering Committee will meet no more than ten times during the course of the grant. As envisioned at this time, the Steering Committee will meet every other month. A meeting roadmap is included below, and a detailed meeting schedule is forthcoming, subject to Steering Committee review. Meetings will take place in San Francisco at 375 Beale Street, with a call-in option, unless the Steering Committee elects to meet elsewhere. In addition, a number of decision-making workshops will be organized by the San Francisco Estuary Institute (SFEI) and the San Francisco Bay National Estuarine Research Reserve (SF NERR) to develop scientific and technical guidance for the program

plan on priority wetland monitoring topics. Steering Committee members are welcome to attend the workshops.

## Scope of the Work

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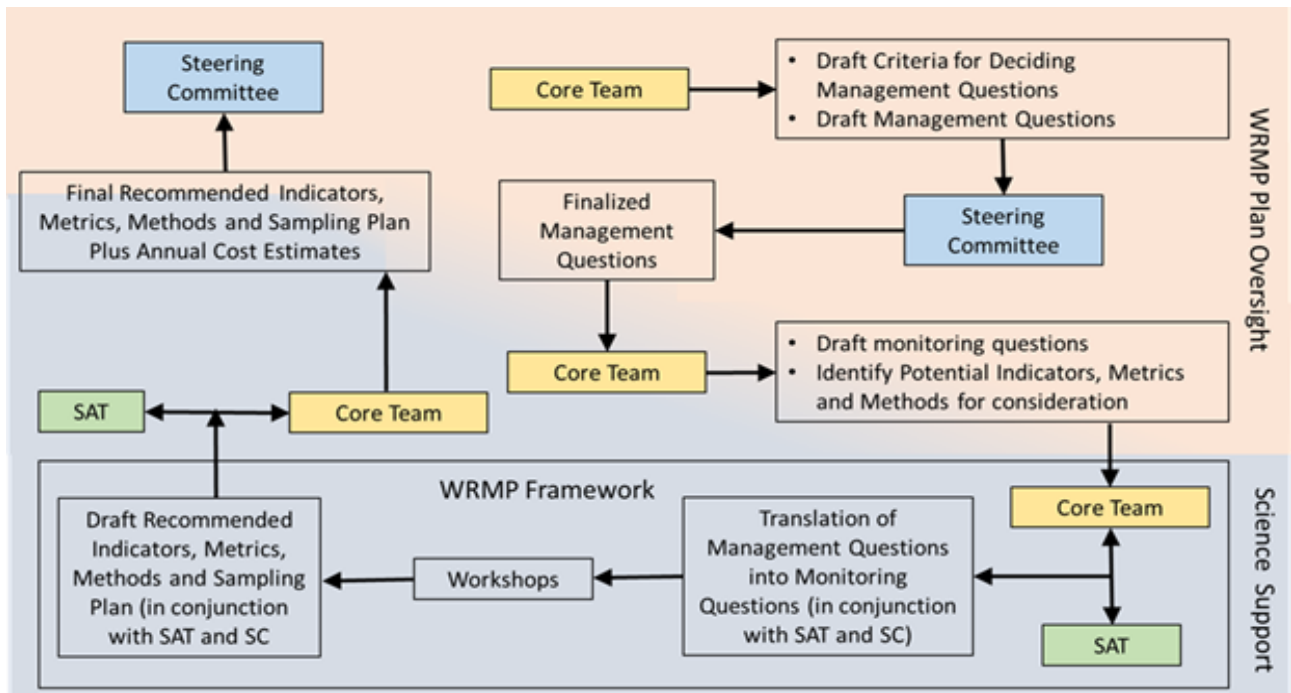
The key steps for the Steering Committee are described in the figure below, and in more detail with the following meeting roadmap.



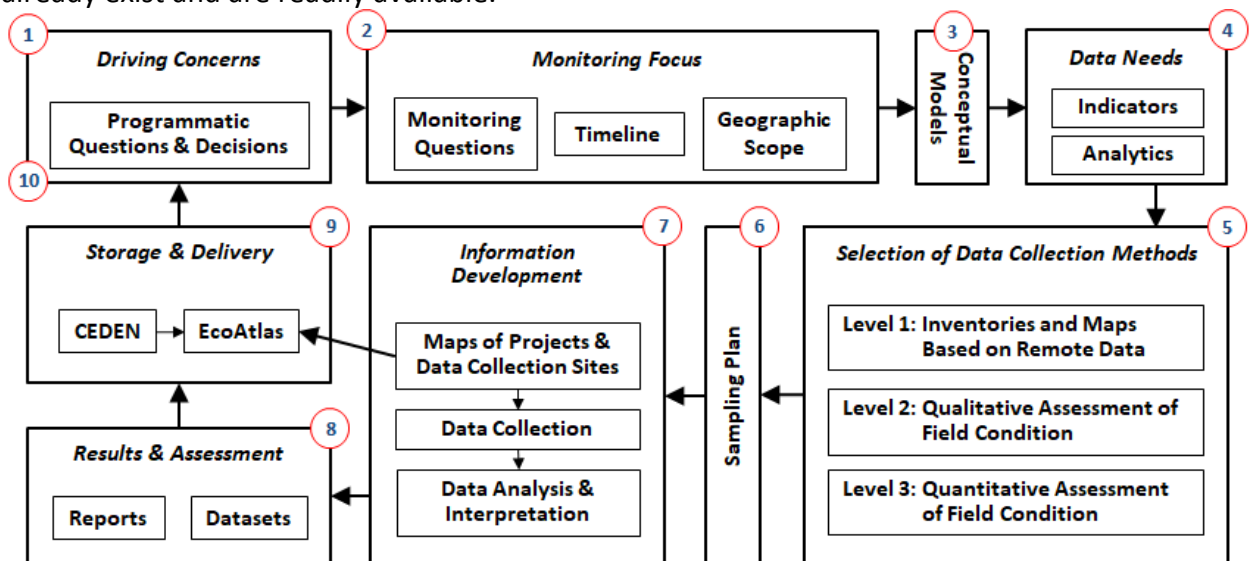
Once the Steering Committee has developed and prioritized the management questions, it will focus on advising and reviewing efforts by the Core Team and Science Advisory Team to develop the science content, institutional relations, governance structure, and operating budget for the WRMP. The emphasis will be on identifying the right science and technology to address the management questions.

The science content of WRMP will be developed based on the management questions selected by the Steering Committee. The Core Team will operate on behalf of the Steering Committee, with its advice and review, to assure that the science content is sound and able to answer the questions with as much certainty as practical. The Core Team consists of the principal investigators for the Grant, the Grant sponsor, and their key partners, namely the San Francisco Estuary Partnership (SFEP), SFEI, USEPA, Bay Area Regional Water Board, and SF NERR. The Core Team will operate at the overlap between WRMP plan management and science support. Some Steering Committee members will serve on the Core Team.

The Science Advisory Team (SAT) will consist of regional leaders in the scientific disciplines and technologies central to WRMP content. The SAT will work with the Core Team to refine the monitoring questions and identify the most appropriate monitoring indicators, metrics, and methods, based on criteria developed collaboratively by the Core Team and the SAT. Some Steering Committee members may serve on the SAT. The SAT will help the Core Team plan and conduct technical workshops to refine and vet the science content of the WRMP with the broader regional community of baylands scientists, and to finalize the recommended science content based on the workshops. The general plan for science content development is diagrammed below. The Steering Committee will set the final recommendations for WRMP science content.



Recommendations for monitoring indicators, metrics, and methods will be guided by the Wetland and Riparian Area Monitoring Plan (WRAMP). WRAMP is a living product of the Wetland Monitoring Workgroup of the CA Water Quality Monitoring Council. WRAMP is a framework and toolset to integrate cost-effective project monitoring with ambient monitoring in the watershed and regional contexts, based on prioritized management questions. According to the 10-step WRAMP framework presented below, the recommended WRMP science content will cover the details of indicators, metrics, data collection, sampling design, data management and interpretation, reporting, and operating costs. Many of the needed methods and tools already exist and are readily available.



The primary purpose of the workshops is to solicit input from the broad regional community of tidal marsh science and management professionals on the technical direction and content of the WRMP. The workshops will focus on three main subjects: *physical processes* that control the form, structure, and functions of tidal landscapes; *wildlife and vegetation response* to tidal marsh restoration, management, and sea level rise; and the relationship between tidal marsh protection, restoration, and *mosquito and disease vector control*.

# Meeting Roadmap

## Decide management questions, Mission and Charter

Meeting #1 (March 2018): Identify key outcomes, Review management questions, Review technical approach

Meeting #2 (May 2018): Establish work groups, Approve organizational chart, Discuss ideas for interfacing with related programs/efforts, Finalize technical approach, Prioritize management questions, Discuss monitoring questions

Meeting #3 (July 2018): Explore options for organizational and funding arrangements, Introduce Science Advisory Team, Prioritize monitoring questions

## Advise and review development of science content

Workshop #1 (August 2018): Physical processes (tidal regimes and sediment management)

Meeting #4 (September 2018): Review findings from physical processes sub-team, Discuss initial budgetary needs

Workshop #2 (October 2018): Tidal wetland vegetation

Meeting #5 (November 2018): Review findings from tidal wetlands vegetation sub-team, Discuss further options for institutional arrangements

Workshop #3 (January 2019): Wildlife habitats, indicators & tradeoffs

Meeting #6 (February 2019): Review findings from wildlife habitats, indicators & tradeoffs subgroup, Review data management options

Workshop #4 (March 2019): Vector control & mosquito abatement

Meeting #7 (April 2019): Review findings from vector control & mosquito abatement. Finalize data management approach

## Recommend institutional relations, budget and funding sources

Meeting #8 (June 2019): Review and discuss draft Program Plan

Meeting #9 (August 2019): Finalize Program Plan

