



CSAMP ORGANIZATIONAL FRAMEWORK FOR DELTA SMELT

Final Draft - July 20, 2021

This document was prepared by Compass Resource Management for CSAMP through a consensus-seeking process that involved CAMT and the Policy Group.

This version was finalized after the July 20, 2021 CAMT meeting and will be updated periodically on an as-needed basis.

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1 INTRODUCTION

The Collaborative Science and Adaptive Management Program (CSAMP) is a collaborative body with membership that represents environmental non-governmental organizations (NGOs), public water agencies (PWAs), state and federal resource agencies and Delta science organizations. CSAMP is composed of a Policy Group, a Collaborative Adaptive Management Team (CAMT), and technical scoping teams.

CSAMP was formed in 2013 with a founding vision that it is better for groups with an interest in Delta Smelt and salmonids to collaborate on urgent and contentious issues rather than to advance their interests independently. This vision emerged from years of repeated legal challenges to the Biological Opinions for the Long-term Coordinated Operations of the State Water Project (SWP) and Central Valley Water Project (CVP).

In 2017, CSAMP members developed a *CSAMP Purpose Document* that outlines CSAMP's purpose, approach and scope. This document was sufficient for several years in providing CSAMP members a vision of shared purpose and direction, which focused on science and adaptive management issues related to current and future biological opinions for State Water Project (SWP) and Central Valley Project (CVP) operations.

In recent years, CSAMP's aspirations for what can be achieved through its collaborative efforts have grown. In 2019, CSAMP's Policy Group endorsed a CSAMP management goal for Delta Smelt, which established a shared interest of all CSAMP members in the recovery of Delta Smelt. To support CSAMP's contributions in advancing this goal, CSAMP recognized the need to develop a *CSAMP Organizational Framework for Delta Smelt*. The *Organizational Framework* is intended to be a strategic document that articulates the shared vision of how CSAMP members will work together and with others to advance CSAMP's management goal for Delta Smelt. This *Organizational Framework* builds on the *CSAMP Purpose Document* and will likely be expanded in the future to address CSAMP goals and collaborative efforts for salmonids and potentially other threatened species.

Table 1 demonstrates the shared interests of CSAMP members in Delta Smelt recovery and documents the range of perspectives and roles that each CSAMP member group contributes to advancing that shared goal.

CSAMP MANAGEMENT GOAL FOR DELTA SMELT

Reverse the trajectory of the Delta Smelt population from one in decline to one experiencing overall increases within 5-10 generations with the long-term aim of establishing a self-sustaining population.

To achieve this goal, CSAMP members will work collaboratively, and with urgency, to prioritize and implement management actions that are targeted at known or hypothesized stressors, habitat needs or other critical factors affecting the Delta Smelt population, and to learn through implementation.

Endorsed by Policy Group, Oct. 30, 2019.

Table 1: CSAMP Interests & Contributions for Delta Smelt

CSAMP Member Group	Interest and Role in Delta Smelt Recovery
NGOs	The environmental NGOs in CSAMP are broadly interested in maintaining native species in the Delta and see the decline of the Delta Smelt population as a harbinger of what's to come for other native species unless natural habitats are restored and human impact on the environment is reduced. They specifically are interested in a self-sustaining Delta Smelt population that is not reliant on long-term supplementation. They work to hold governments accountable for their responsibilities to protect Delta Smelt and they advocate for science and management actions that will advance Delta Smelt recovery.
Public Water Agencies	The PWAs in CSAMP and their customers want water supply to be delivered in a cost-efficient and environmentally responsible manner. In addition, PWAs are interested in the recovery of Delta Smelt (and other endangered native fish) because current listings and associated protection measures directly affect water supply reliability. PWAs fund mitigation and restoration costs for the water they receive and are interested in the application of rigorous science to ensure actions are effective and efficient to improve conditions for endangered species.
State and Federal Fish and wildlife Agencies (CDFW, FWS)	<p>The fish and wildlife agencies in CSAMP are interested in the protection and recovery of Delta Smelt as part of their overall public responsibility and mandate to be stewards of fish, wildlife and natural ecosystems. They have four main roles with respect to Delta Smelt:</p> <ul style="list-style-type: none"> • Regulatory role: responsible for protecting endangered fish (such as Delta Smelt) as per respective state and federal legislation. • Science role: responsible for providing data and analysis that informs government decisions on Delta Smelt. • Management role: design, fund, and/or implement recovery actions for Delta Smelt. • Policy role: responsible for deciding how to direct public resources toward recovering Delta Smelt.
State and Federal Water Agencies (DWR, BOR)	The Bureau and DWR respectively manage the CVP and SWP to deliver water that supports California's farms, cities, wildlife refuges, and fish and wildlife. They serve these water supply needs through the balancing of competing statutory responsibilities. Under the federal Endangered Species Act (ESA), they are required to mitigate the effects of the CVP and SWP to a standard of 'avoiding jeopardy' of the species. Under the California Endangered Species Act (CESA), the CVP and SWP need to be operated to a no net loss standard with impacts to a listed species fully mitigated. Both the Bureau and DWR have an interest in identifying and implementing the most effective and efficient management actions to benefit Delta Smelt to fulfill the requirements of the ESA and the CESA. These management actions are an important contribution toward the recovery of the species.
Delta Science Organizations (DSP, IEP)	The Delta science organizations in CSAMP play an important role in providing data, synthesis and analysis and independent review to inform the design and implementation of management actions for Delta Smelt. They have an interest in collaborating with CSAMP members to get feedback on their science activities, including those activities to support the recovery of Delta Smelt.

2 GUIDING PRINCIPLES FOR COLLABORATION

These guiding principles represent expectations and aspirations for how CSAMP members will work together on matters with respect to Delta Smelt.

CSAMP's guiding principles for effective collaboration on Delta Smelt are:

Focus on shared interests

CSAMP member participation in and contributions to CSAMP initiatives are voluntary, which means CSAMP is a place to collaborate on shared interests. CSAMP members recognize each others' constraints and will work together in a manner that acknowledges both their shared and individual interests with respect to Delta Smelt. The CSAMP management goal for Delta Smelt is an expression of a key shared interest across CSAMP membership.

Seek shared understanding through dialogue

CSAMP is a safe place to disagree. The expression of different opinions should be encouraged. CSAMP will seek consensus where possible, and even if consensus is not reached, a valuable outcome is the opportunity for dialogue and development of a shared understanding across CSAMP membership.

Learn and adapt

CSAMP is committed to learning through science, including the explicit definition of hypotheses, the review of multiple lines of evidence, and reasoned discussion on the relative strength of supporting and refuting evidence. Adaptation based on new learnings is expected to lead to better, innovative, long-term solutions and outcomes for Delta Smelt. In cases where there are experiments and studies to reduce uncertainties that have the potential for large benefits, but may also come with risks, CSAMP members will strive to support some risk-taking.

Respect existing decision making authorities

CSAMP is a collaborative body and has no authority to direct how the science and management done by any of its individual members or others is done.

Strive for efficiency

There is an urgent need to act to recover Delta Smelt and resources are scarce. CSAMP will be strategic with its efforts – focusing on the areas where it can make the most difference and recognizing where it can build on the work of its individual members and other collaborative groups in the Delta.

Recognize multiple objectives and inform decisions that involve balancing across objectives

CSAMP recognizes that conflict over Delta Smelt science and management is often driven by the high stakes and multiple trade-offs and uncertainties associated with management actions for Delta Smelt. Preferences and choices related to Delta Smelt management actions are often balancing the desire to maximize benefits for the species while also minimizing impacts and maximizing co-benefits for other societal values. In this context, reducing conflict and promoting shared understanding and priorities is supported by collaborative planning frameworks (such as SDM) that integrate science-based and values-based inputs to inform management decisions. CSAMP's collaborative planning initiatives for Delta Smelt will promote deliberations that seek to understand the range of preferences given the performance of management actions on multiple objectives and seek to find an acceptable balance across multiple objectives.

3 CSAMP ROLES

These roles represent the functions and contributions of CSAMP in relation to Delta Smelt.

CSAMP works to advance the goal of Delta Smelt recovery by acting as:

- a **FORUM** for open communication and deliberation on topics related to Delta Smelt.
- a **CATALYST** to support coordination and implementation of shared science and management priorities to advance the CSAMP management goal for Delta Smelt.
- a **STRATEGIC ADVISOR**, providing information, analysis and advice on urgent and contentious issues with respect to Delta Smelt that represent the range of perspectives of all CSAMP members and supports decision making on Delta Smelt science and management.

CSAMP's role as a forum, catalyst and strategic advisor supports adaptive management by complementing the role of individual organizations, many of which are CSAMP members. Various individual organizations act as implementing entities and/or regulatory agencies. **Implementing entities** have the authority, resources and/or responsibilities to implement specific science and management actions for Delta Smelt (e.g., BOR, FWS, DWR, and CDFW are all implementing entities for Delta Smelt management and science activities). **Regulatory agencies** are entities with the authority to limit or establish conditions on human activities, as directed by legislation. FWS, CDFW and SWRCB have regulatory authorities that authorize and/or direct Delta Smelt management actions and science related to Delta Smelt under certain circumstances as prescribed through legislation. Table 1 describes the complementary roles of CSAMP and individual organizations within the context of the adaptive management cycle.

3.1 FORUM

CSAMP provides a forum for communication among government agencies, NGOs and PWAs and across science, management and policy domains. This forum serves multiple functions that are valuable to all CSAMP members. In particular, communication in the CSAMP forum:

- helps to identify the range of perspectives on Delta Smelt science and management;
- helps to identify shared priorities and promote common understanding;
- encourages accountability and transparency; and,
- helps to avoid misunderstandings that could lead to unproductive activities.

3.2 CATALYST

Many challenges and barriers exist to implementing management and science actions that will benefit Delta Smelt. Examples include siloed and segmented authorities, limited resources, critical information gaps, trade-offs with other values (e.g., competing uses of land and water) and a lack of overall shared strategic vision for how best to recover the species. Collaboration through CSAMP provides a flexible mechanism to address these challenges and barriers. For example, CSAMP and/or individual CSAMP members can fund, trigger or advocate for specific science and management activities that have broad support across CSAMP membership.

3.3 STRATEGIC ADVISOR

CSAMP is in the unique position to provide advice on the longer-term, strategic direction of Delta Smelt management and science actions, informed by its diverse membership that includes policy, management and science representatives from government, PWAs, and NGOs. This role of strategic advisor is a value-added activity. No other organization is currently undertaking the analytical and deliberative activities required to generate such strategic advice that is informed by diverse perspectives. CSAMP's role as strategic advisor is carried out mainly through undertaking collaborative planning and/or studies (e.g., entrainment studies, Delta Smelt science planning and structured decision making (SDM) initiatives (discussed further in Section 7)).

CSAMP's role as a strategic advisor is supported through a *Federal Advisory Committee Act (FACA)* exemption in the *Water Infrastructure Improvements for the Nation Act*. This FACA exemption allows CSAMP members to provide advice and seek consensus recommendations for use by a federal agency.

Table 2: Adaptive Management, CSAMP's Role & Role of Individual Organizations

Adaptive Management Step*	Role of Individual Organizations	CSAMP Role
Plan 1. Define/redefine the problem 2. Establish goals and objectives and identify alternative actions 3. Model linkages between objectives and alternative actions 4. Select actions and develop performance measures	<ul style="list-style-type: none"> Implementing entities have the authority to decide which actions they will pursue (e.g., the Bureau and DWR decide which actions they will propose to mitigate Project effects in the Biological Assessment; CDFW/FWS may choose which conservation actions to pursue). Regulatory agencies review proposed management and science actions and decide whether the action can proceed as proposed or needs to be modified. 	<ul style="list-style-type: none"> Through CSAMP's role as a FORUM, implementing entities can bring proposals for Delta Smelt management and science to CSAMP either for information only purposes or for feedback. Through CSAMP's role as a STRATEGIC ADVISOR, CSAMP carries out scientific investigations and collaborative planning initiatives that inform the decisions of implementing entities related to what management and science should be done for Delta Smelt. For example, see CSAMP's Structured Decision Making project in Section 7. CSAMP does not advise regulatory agencies in the exercise of their regulatory authorities. While the information that is shared through CSAMP or produced through CSAMP collaborations may be used by regulators, there are separate engagement processes that regulators use to get feedback on regulations.
Do 5. Design and implement action(s) 6. Design and implement monitoring plan	<ul style="list-style-type: none"> Implementing entities are responsible for the design and implementation of Delta Smelt management and science actions. Implementing entities are encouraged to consult with CAMT and the CSAMP Delta Smelt Science Manager for advice in applying the guidance in the Delta Smelt Science Plan (2019) when developing science and monitoring plans for management actions. 	<ul style="list-style-type: none"> Through CSAMP's role as a CATALYST, CSAMP provides a coordination function to support the implementation of actions for Delta Smelt, for example, through trouble-shooting barriers to implementation, funding science activities, advocating for specific initiatives, and generating partnerships. Through CSAMP's role as a STRATEGIC ADVISOR, CSAMP funded and collaborated on the development of the Delta Smelt Science Plan (2019) and may provide advice on scientific activities for Delta Smelt. Through CSAMP's role as a STRATEGIC ADVISOR, CSAMP could engage in collaborative science investigations with the intent of generating a shared understanding across CSAMP members on the methods that will be used to understand the effectiveness of a management action for Delta Smelt.
Evaluate and Respond 7. Analyze, synthesize and evaluate 8. Communicate current understanding 9. Adapt *This table uses the Delta Stewardship Council's AM process with the addition in step 2 and 3 to be more explicit about the consideration of alternatives.	<ul style="list-style-type: none"> Implementing entities will either carry out analysis and communication activities themselves or will coordinate with other organizations to do so, such as IEP and DSP. Implementing entities have the authority to decide whether and how they will adapt their activities based on new information (as long as they have regulatory permission to do so). 	<ul style="list-style-type: none"> Through CSAMP's role as a FORUM, CSAMP can be engaged in reviewing draft analysis/synthesis done by implementing entities, providing feedback and promoting open and transparent dialogue to work toward a shared understanding of the effectiveness of management actions and/or the stressors, habitat needs and other critical factors affecting the Delta Smelt population. Through CSAMP's role as a CATALYST, CSAMP may choose to fund and oversee synthesis activities that are a shared priority to complete. Through CSAMP's role as a STRATEGIC ADVISOR, CSAMP can promote dialogue on how to adapt given new information gained through the implementation of management and science actions.

4 CSAMP RESPONSIBILITIES

These responsibilities represent the respective things that each CSAMP member, the CSAMP Program Manager and the Delta Smelt Science Manager commit to do and for which they are accountable to all CSAMP members.

4.1 CSAMP MEMBERS

The representatives of CSAMP member organizations have the following responsibilities with respect to their collaboration within CSAMP for Delta Smelt:

- Update CSAMP as necessary with new Delta Smelt science and management activities that their organization is undertaking and make clear if these activities are being brought to CSAMP for information purposes or for feedback;
- Participate in CSAMP in a manner consistent with the guiding principles for collaboration (Section 2);
- To the extent possible, provide CSAMP with the reasons for their organization's decisions and how they considered any feedback or information received through CSAMP and other forums.

4.2 CSAMP PROGRAM MANAGER

The CSAMP Program Manager has the following responsibilities to support collaboration across CSAMP:

- Support CSAMP members in carrying out the roles, responsibilities and initiatives identified in this Organizational Framework, through facilitation, coordination, documentation and outreach;
- Support CSAMP members in collaborating according to the Guiding Principles identified in this Organizational Framework;
- Ensure all perspectives have the opportunity to weigh in on questions under discussion and synthesize the range of perspectives across CSAMP membership;
- Document CSAMP initiatives on Delta Smelt in the CSAMP Tri-Annual Report.

The Program Manager position is 0.8 FTE.

4.3 CSAMP DELTA SMELT SCIENCE MANAGER

The CSAMP Delta Smelt Science Manager is a position that was first identified in the DSPP as a person that would work at the interface between those who generate Delta Smelt science and those who use it. The position was filled on a part-time basis by a CDFW staff person from 2020 to May 2021. At this time (July 2021), CAMT is considering options to fill this position, which includes a review of the position's specific responsibilities. The possible responsibilities for this position that were identified in this Organizational Framework process are:

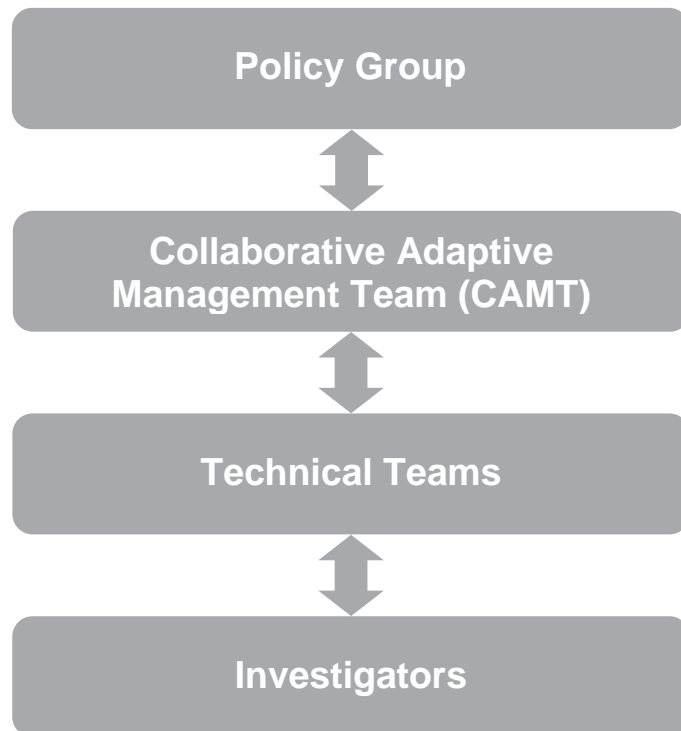
- Support CSAMP's role as a FORUM and ensure CSAMP members are kept up to date on Delta Smelt science activities:
 - Help the CSAMP Program Manager in coordinating presentations to CSAMP on Delta Smelt science;
 - Direct CAMT and Policy Group attention to situations where constraints (e.g., funding, or logistical) on specific science activities inhibit effective adaptive management of actions.
 - Summarize current science activities for Delta Smelt relevant to CSAMP (what, why, who) in the *CSAMP Delta Smelt Science Report*.
- Support CSAMP's role as a CATALYST and STRATEGIC ADVISOR and advance management-relevant knowledge on how to recover Delta Smelt:
 - Support identification of Delta Smelt science needs and support meeting those needs through CSAMP's direct efforts and/or through coordination with other entities;
 - Document Delta Smelt science needs and progress towards meeting those needs in the *CSAMP Delta Smelt Science Report*;
 - Support SDM efforts of CSAMP and implementing entities by helping to apply existing science and advance new science to develop management actions for Delta Smelt and predict their effects;
 - Liaise with implementing entities that are designing science and monitoring plans for management actions and advise them on applying the guidance in the Delta Smelt Science Plan to advance understanding on the effectiveness of management actions.

5 CSAMP STRUCTURE

CSAMP's structure aims to create more interaction between people working in policy, management and science domains.

CSAMP is structured as a four-tiered organization comprised of:

1. A **Policy Group** consisting of agency directors and top-level executives from the entities that created CSAMP;
2. The **CAMT** made up of managers and senior level scientists that serve at the direction of the Policy Group;
3. **Technical Teams** created on an as-needed basis to direct technical analyses; and
4. **Investigators** contracted to conduct studies.



5.1 POLICY GROUP

The role of the Policy Group is to provide leadership and direction to CSAMP by identifying key issues, prioritizing work efforts, providing necessary resources and ensuring work products are responsive and management-relevant.

5.2 CAMT

The CAMT is the managing entity of CSAMP and is the interface between policy, management and science. The CAMT role is to establish the framework in which science is conducted, issues are addressed, and work products are developed through CSAMP. The CAMT manages the Technical Teams and ensures that legitimate, credible and relevant science is produced.

5.3 TECHNICAL TEAMS

Technical teams are typically composed of a technical representative of each CAMT member organization. The purpose of Technical Teams is to collaborate on scientific work, as directed by CAMT. CSAMP currently has two technical teams focused on Delta Smelt - the Delta Smelt Scoping Team (DSST) is focused on specific studies and the Delta Smelt SDM Technical Working Group is supporting the CSAMP Delta Smelt SDM process (discussed more in Section 7).

5.4 INVESTIGATORS

Investigators design and perform the investigations to address the key questions and critical uncertainties identified by the Policy Group, CAMT and/or the Technical Teams. Investigations are performed by qualified technical experts, identified and recommended by the Technical Teams, and approved by CAMT. Investigations may be performed by individuals or teams of individuals.

6 DELTA SMELT DECISION MAKING

6.1 DECISION MAKING AT CSAMP

CSAMP's area of decision-making authority is generally limited to how its own collaborative efforts are carried out. Examples of decisions made by the Policy Group, CAMT and technical teams are provided in the text box below.

All decisions at CSAMP are made by consensus. Consensus means that when a proposal is being considered for decision by a CSAMP group (such as the Policy Group, CAMT or technical team), if one or more members oppose that proposal, it will not go forward and further discussion will be organized to resolve the question at hand in a manner that all CSAMP members can agree to. While resolution often involves finding a solution that everyone can agree to, sometimes the solution is to agree to disagree and document the difference of opinion.

EXAMPLE CSAMP DECISIONS

Policy Group:

- Approve the initiation of any new major projects that are carried out under the CSAMP banner (e.g., development of Delta Smelt Science Plan, initiation of CSAMP Delta Smelt SDM process)
- Provide direction on any strategic questions related to CSAMP's work (e.g. CSAMP priority setting, commitment of resources, implementation of CSAMP projects)

CAMT:

- Establish the mandate/charge of technical teams
- Set CAMT and Policy Group agendas
- Approve presentations to the Policy Group

Technical Teams:

- Make technical judgements related to carrying out their particular project scope (e.g., how to present technical work, methods for carrying out analysis, who should carry out technical work).

6.2 DECISION MAKING BY INDIVIDUAL CSAMP MEMBERS

A key principle of this Organizational Framework is that CSAMP respects existing decision making authorities. In particular, CSAMP respects the authority of regulatory agencies to carry out their legislative mandates and the authority of all individual CSAMP members to decide how their own resources are expended in relation to Delta Smelt.

Key decisions made by individual CSAMP members related to Delta Smelt can be grouped into three general categories:

1. Decisions related to what management actions to take, including regulatory actions, to mitigate the effects of projects (in particular the CVP and SWP);
2. Decisions related to how to recover the species (i.e., what management actions should be done over and above what is required for regulatory compliance); and,
3. Decisions related to how to advance knowledge on Delta Smelt (e.g., Delta Smelt monitoring and research and other related environmental monitoring and research).

The information and perspectives shared through CSAMP may inform the above decisions made by individual CSAMP members. For example, in its role as strategic advisor, CSAMP is proactively anticipating the decision making needs related to Delta Smelt and initiating collaborative planning and/or studies to support these needs. Informed by collaborative planning and/or studies, CSAMP members will share their perspectives on Delta Smelt management and science and courses of action that have broad support across CSAMP membership may be documented.

7 CSAMP INITIATIVES FOR DELTA SMELT

7.1 DELTA SMELT SCIENCE PLAN / PLANNING

The Delta Smelt Science Plan (DSSP), completed in 2019, was sponsored by CSAMP. It was produced by a lead investigator, Denise Reed, in close collaboration with CSAMP's DSST and CAMT. The Plan provides a framework for ongoing assessment and evaluation of data and research findings to increase mechanistic understanding of how Delta Smelt respond to changing environmental conditions. While the DSSP focuses on understanding the response of Delta Smelt to flow-management actions, the framework and principles within the Plan are applicable to all types of management actions.

The DSSP provides foundational guidance on how to advance Delta Smelt knowledge, especially in an adaptive management context. Implementing entities are encouraged to consult the CSAMP Delta Smelt Science Manager for advice in applying the guidance of the Delta Smelt Science Plan (2019) when developing science and monitoring plans for management actions.

Building on the DSSP, CSAMP aims to be a catalyst and strategic advisor to advance knowledge that could benefit the goal of Delta Smelt recovery. In its role as strategic advisor, CSAMP will periodically (e.g. every 2-3 years) undertake planning initiatives to identify Delta Smelt science and/or management activities that have broad support across CSAMP membership. These planning initiatives would be informed by CSAMP's Structured Decision Making process and engagement with Delta Smelt scientists and managers. Once identified, CSAMP would act in its catalyst role to support the implementation of those activities.

Note that such planning initiatives are not intended to preclude flexibility. Changing circumstances often result in the emergence of issues that need a quick response.

CSAMP's Program Manager and Delta Smelt Science Manager will support CSAMP's planning activities.

7.2 STRUCTURED DECISION MAKING

Structured Decision Making (SDM) provides a process, tools and methods that supports collaborative planning initiatives. SDM is a collection of practices rooted in decision theory that provides a rational, organized framework for exploring solutions and supporting decisions on tough problems. SDM can take many forms, but typically involves a core group that works together to identify objectives, develop creative alternatives and evaluate alternatives to support co-learning. SDM can be used to help build consensus if the SDM process includes a thorough exploration of alternatives, deliberation about trade-offs and this deliberation informs the development of new alternatives that better address the range of interests affected by the decision.

CSAMP is currently sponsoring a SDM project with the following goals:

1. Build a portfolio of recommended management and science actions to advance CSAMP's Delta Smelt management goal that has broad support across CSAMP membership; and,
2. Support coordinated management of Delta Smelt, where possible, to integrate science, decision making, and implementation of management actions.

The project is focused on providing analysis and opportunities to deliberate across CSAMP membership on the following question:

What are the best management and science actions to advance CSAMP's Delta Smelt management goal, in consideration of uncertainties and trade-offs with other socio-economic and environmental objectives?

The information produced through this CSAMP SDM project is intended to inform future decisions on management and science actions for Delta Smelt. For more information, see the *Process Guidelines: CSAMP Delta Smelt Structured Decision Making Project*.

For questions on CSAMP's Organizational Framework for Delta Smelt contact:

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