

SAN FRANCISCO ESTUARY PARTNERSHIP

Implementation Committee Meeting

Tuesday, November 17, 2015, 9:30 a.m. – 12:30 p.m.

1515 Clay Street, 2nd Floor, Room 10, Oakland, CA

AGENDA

- | | | |
|-------|--|--|
| 9:30 | 1. Welcome and Introductions | Amy Hutzel, Chair |
| 9:40 | 2. Public Comments/Meeting Summary Approval
Any member of the public may address the IC on any matter regarding implementation of the Comprehensive Conservation and Management Plan. Speaker will be limited to three minutes.
<i>Action: Approve 8/26/15 Meeting Summary (Attachment 1)</i> | Chair |
| 9:45 | 3. Director's Report (Attachment 2) | Judy Kelly |
| 10:00 | 4. Reports on SFEP Activities

2015 State of the Estuary Conference Highlights

CCMP Status and Next Steps

Summary of US EPA Program Evaluation

Nominations for Chair/Vice Chair Positions (selection in March 2016; new terms take effect May 2016)

Update on ABAG-MTC Issue (Attachment 3) | Karen McDowell

Caitlin Sweeney
Judy Kelly
Amy Hutzel, Chair

James Muller |
| 10:45 | <i>Break and Celebration of Judy's Eight Years of Service to SFEP</i> | |
| 11:15 | 5. IC Member Activities
Baylands Ecosystem Habitat Goals Project: Plan Released – On to Implementation! (Attachment 4) | Matt Gerhardt, CCC |
| 11:45 | Status of the San Francisco Bay Restoration Authority | Amy Hutzel, SCC |
| | 6. Concluding Business | |
| 12:15 | Review Road Map; Add agenda items for future meetings; Set calendar for 2016 meeting dates (Attachment 5)

Announcements | Chair, Judy Kelly |
| 12:30 | 7. Adjourn | |

**San Francisco Estuary Partnership
Implementation Committee Meeting**

August 26, 2015

Elihu M. Harris State Building
Oakland, California

DRAFT MEETING SUMMARY

Welcome and Introductions: Tom Mumley, Vice Chair of the Implementation Committee, called the meeting to order at 9:40 AM with a round of introductions.

Public Comment: None

Directors Report: Judy reported that Paula Trigueros, SFEP's Contracts Manager, will formally retire after the State of the Estuary Conference. Paula will stay at SFEP as a part time retired annuitant however so SFEP will continue to have the benefit of her help. Judy reminded the group she is also retiring at the end of December. Applications are currently being accepted for the Director position. The application period will close September 4th.

Judy reported on the upcoming EPA evaluation of SFEP. An evaluation of SFEP is required every five years under the National Estuary Program. EPA representatives and program evaluators from other NEPs will be coming to the State of the Estuary Conference as part of this year's evaluation. SFEP will also host a half day workshop for the evaluation team.

Judy noted Alex Westhoff will return in November to the IC in his new capacity with Marin County.

Karen reported that the State of Estuary Conference (SOE) program is set and abstracts will be on the website within the next week. There are 160 posters and over 80 speakers. Registrations are coming in. SFEP has done well with fundraising for conference, but can still use additional donations from partners.

Judy reported that the 2015 State of the Estuary Report (SotER) will be released at the SOE conference, as well as Regional Monitoring Program's Pulse of the Bay. The SotER will be an excellent report with many new indicators and sidebars. She also noted that many important documents are being released over next 6 months, including BEHGU in October so stay tuned.

Jennifer reported that SFEP submitted the Bay Area IRWMP Round 4 proposal to DWR for \$41 million for a variety of projects throughout region. The proposal includes two larger projects – the AQPI project to modernize precipitation forecasting systems (managed by SFEP), and one on regional sea level rise research

and adaptation responses (Coastal Conservancy is the lead agency on four innovative wetland restoration projects).

Action Items:

Harry Seraydarian moved to approve the May minutes, Carol Mahoney seconded, and all approved.

Reports on SFEP Activities

Comprehensive Conservation and Management Plan

Caitlin Sweeney provided an overview of the current status of the CCMP revision. She reviewed the process so far including: the formation of the IC/CCMP steering Committee in Jan 2014, which made critical decisions along the way, represented the IC, and helped populate subcommittees. Subcommittees were formed and met, and Caitlin briefed the IC on the status over the past year. At the last IC meeting in May, the IC reviewed action topics under new organizational structure. On July 30, there was an “all subcommittees” meeting and participants went through the entire draft document.

The next issue of Estuary News Magazine will have an insert on the CCMP including a matrix of draft goals, objectives and actions, and information from a recently developed factsheet (distributed to the group at the meeting). SFEP will release a public draft of the CCMP at the SOE on September 17th. There will also be a “CCMP Pop-Up Workshop” at the SOE-conference. The public comment period will be from Sept 17-Nov 13. The IC meets Tuesday, November 17, and will review comments and suggested revisions.

Comments

Tom Mumley pointed out that although the actions have owners, there is disparity in level of detail and/or lead agencies. Will this be tightened up?

- Caitlin responded that, yes, the owners will be tightened up.

Tom Mumley asked about the cost of the actions, how the total amount necessary will be very large. Seems like overwhelming list compared to capacity.

- Caitlin responded that we must cost out actions under EPA requirements. Judy added that at end we will map out actions over five years to be integrated into SFEP workplan, match funding sources, and conduct gap analyses.

The IC then considered the question of where there were any red flags in the draft document, anything they could not live with. Also, were any priority actions missing?

Kate Poole had no red flags and expressed that it is okay to be ambitious and that she is not concerned about the large funding needs.

Matt Fabry had no red flags.

Jessica Davenport has been working closely with staff and will supply additional feedback offline.

Tom Mumley had no red flags, just minor concerns in the details; and asked if there is a fund-raising action. Caitlin responded that there is an action focused on funding. Tom would also like to see how monitoring can be better integrated (unsilo-ed), how the RMP for the Bay and Delta could be supported. Finally, the Champion of Estuary/stewardship section could use more thought and lacks some doable connections to the SotER.

Amy Hutzel noted that for Action 36, “avoiding” impacts to wildlife is a high/impossible bar and that the action should include words like “minimize,” or “compatible with wildlife” Also would like to see specific mention of the Bay Trail and completing the spine of the trail. Amy also noted that for Action 3, there is a task that includes creation of transition zone, but “create” should be in action description.

Carol Mahoney noted that she participated in the subcommittees and steering committee and thought staff did a good job incorporating comments. Looking at the matrix, Goals 3 and 4 seem isolated from the others. Perhaps we could indicate which are primary and secondary goals/objectives met.

Harry Seraydarian said he was happy from watershed and from the water supply perspectives. He pointed out the mention of flood management within the task level but that the term was not used in any action titles and should be (13 & 15 may be best opportunities).

Luisa Valiela had no red flags, and supports incorporation of “flood management” into action language. She noted that Action 37 is not ready to go as a draft.

Michael Vasey noted that staff had done a great job so far and that he would like to have SFBNERR as owner of some specific items. He also suggested adding something about the work is going on to develop tools to inform decision-makers (example: Coastal Intelligence—data gathering & analyses). He also suggested using more active language in objectives, specifically under Goal 4 (i.e. looking for “action” instead of “support” for CCMP objectives from local elected officials).

Bill Brostoff noted that USACE has not participated much due to resource constraints but could be owner of some more items. He suggested using the term “flood risk management” instead of just “flood management.”

Tom Mumley added we look to manage floods not control them and that we also need to acknowledge where flooding can be beneficial.

Luisa Valiela expressed appreciation for the consultant's work on the fact sheet.

Michael Vasey brought up how at the recent Climate Change symposium issues (wildfires, sea level rise, flooding) are being looked at on a broad scale which may be useful for our water-related work. He also suggested we could look at vulnerable communities with respect to climate change (environmental justice).

Jessica Davenport asked how the IC members felt about inclusion of Delta issues in the CCMP. Does it make sense? Does it seem to fit?

- Luisa Valiela responded that, yes, it makes sense, but identifying leads and other issues may seem disjointed and that would reflect the reality on the ground.

Tom Mumley pointed out there is very little engagement on the CCMP at local governmental level.

- Matt Fabry agreed and thinks many don't know CCMP exists. Policy level work will need elected officials to understand and act.
- Judy noted that the CCMP is not mandatory for locals, it is a collaborative vision and that our tools are the bully pulpit and directing funding to local initiatives.
- Kate Poole noted that Action 37 is important for Bay Area officials as well as Delta.
- Amy Hutzler expressed that we want elected officials to be champions.
- Group concluded that more outreach to entities like ABAG Executive Committee and local forums is needed in this next phase.

Break and Celebration of Paula's Years of Service to SFEP: Judy noted that Paula is retiring after 14 years at SFEP. She will remain available as a part-time retired annuitant for one year. Judy Kelly thanked Paula for her contributions to SFEP with a speech and the IC celebrated Paula with applause and cake.

Reports on SFEP Activities. Cont.

GreenPlan Bay Area

Jennifer Krebs provided an overview of the project and the team members: SFEP, SFEI, San Mateo, and San Jose for the State Board grant. The new EPA grant funds, covering phase 2, includes the partners above plus BASMAA, Oakland, Richmond, Contra Costa County, and the ABAG East Bay Corridor.

Jing Wu from SFEI presented the GreenPlan IT tool. GreenPlan IT is a watershed-scale planning tool for municipalities to identify suitable locations and determine cost effective implementation scenarios for various GI/LID types. This tool can be used for GI Master Planning and reasonable assurance analyses in meeting target goals. The modeling tool establishes baseline conditions, the locator tool identifies

feasible sites, and then the optimization tool uses a learning algorithm to determine the most cost-effective combinations of GI/LID types among those sites. In addition to assisting in the development of GI Master Plans, the tool can be also used to evaluate phased implementation and track progress (reduction of contaminants over time, etc.). Under Phase 2, SFEI will convene a TAC to identify and prioritize recommended GreenPlan-IT enhancements, which will likely include added Water Quality functionality, flexibility, and a LID tracker tool.

SFEI took about two years to build the Green Plan-IT tool. They had a budget of \$315k to develop the tool and \$135K to trial it with partnering municipalities. The Toolkit and user guides are available for download at <http://greenplanit.sfei.org/>.

Josh Bradt provided an overview of the next steps under the EPA grant (\$1.7M over 3 ½ years). The work plan components include:

- Planning—Municipal Green Infrastructure Master Plans; GreenPlan IT 2.0; and a Regional Roundtable to develop a road map for expanding Greenhouse Gas Reduction and transportation funding policies to include GI;
- Implementation—creation of standard GI designs for typical intersections, and construction projects in San Mateo, Sunnyvale, and San Jose;
- GI Tracking—development of GIS database and map of projects in the ground.

Comments

Amy Hutzel asked if she could we use this tool to evaluate proposals for Prop 1?

- Josh replied that local governments are now doing “random acts of greening” and additional GI planning analysis to support a proposed project could be helpful in making funding selections

Mike Vasey stated it is important to think about linking floodplains and marsh plains. How can we take this kind of approach and think about how to apply to tidal wetlands?

- Josh responded that would essentially be a watershed management plan that links resources, stormwater mgmt., etc. The “green infrastructure” in this plan is really about retrofitting hardscape in public right of ways.

Harry Seraydarian asked about where wastewater and stormwater management intersect? How can we integrate? What is the relationship between GI and inflow and infiltration?

- IC members briefly discussed this without resolution. It was noted that promoting stormwater infiltration may exacerbate Infiltration/Inflow into vulnerable sanitary sewer lines.

Carol Mahoney added that since wastewater has a way to raise money and stormwater doesn't, emphasizing maintenance cost savings, reduction of need for additional infrastructure will be important. She also brought up the issue of water

rights pertaining to storm flow into creeks – Tom responded that his issue is on the SWRCB's radar and should be tracked but may not be a big issue in the 9 county region.

Concluding Business

Review the Roadmap:

The IC agreed to add a briefing on BEHGU to the November IC meeting. Additional ideas for future agenda items included: a speaker on the cap and trade program and use of funds for adaptation in addition to mitigation; blue carbon/wetlands storage capacity; and the Delta Plan performance measures report.

Announcements:

Erin Chappell announced that at the climate symposium in Sacramento, DWR spoke about their recently published report with 10 climate assessment models that perform the best for California. The CEC is now using those 10 models for the upcoming 4th California Climate Assessment and providing them for CalAdapt.

The meeting was adjourned, and the next meeting is Tuesday, November 17th.

Meeting Attendees:

IC Members

Erin Chappell, DWR
 Jessica Davenport, Delta Stewardship Council
 Matt Fabry, San Mateo Countywide Water Pollution Prevention Program
 John Klochak, USFWS
 Jane Lavelle, SFPUC
 Carol Mahoney, Zone 7 Water Agency
 Jessica Martini-Lamb, Sonoma County Water Agency
 Tom Mumley, SF Bay RWQCB
 Kate Poole, NRDC
 Harry Seraydarian, NBWA
 Luisa Valiela, EPA
 Mike Vasey, SFBNERR
 Amy Hutzell, SCC
 Bill Brostoff, USACE

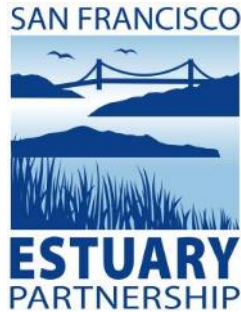
Presenters

Jing Wu, SFEI

SFEP Staff

Judy Kelly
 Athena Honore
 James Muller
 Caitlin Sweeney

Paula Trigueros
Jennifer Krebs
Adrien Baudrimont
Karen McDowell



DIRECTOR'S REPORT

November 17, 2015

SFEP Program Management

Director Retires in December; Caitlin Sweeney Selected New Director

As you know, I will retire as Director of the Partnership at the end of December. I will then transition to be the part time Executive Director of the North Bay Watershed Association in January and look forward to working with many of my SFEP colleagues in this new capacity. After a national search, SFEP's own Caitlin Sweeney was selected to replace me and will lead the Partnership starting on December 26th. I know you are in great hands with Caitlin and the terrific SFEP staff, so welcome Caitlin and thank you all for a rewarding eight years as Director of the Partnership.

NEP Program Review Completed

We completed our 5-year program review by National Estuaries Program EPA staff the week of the State of the Estuary Conference. Program Evaluation team Dolores Wesson and Bernice Smith from US EPA, along with Curtis Bohlen (Casco Bay NEP) and Javier Laureano (San Juan Bay NEP) attended the conference and spent the following Monday at SFEP offices being briefed on the Program details and meeting with several IC members who provided their perspective on the Partnership. We expect to receive our final evaluation letter detailing strengths and needed improvements from EPA sometime this winter.

New Funding

Just in: on October 29th, SFEP was awarded on behalf of the regional IRWMP Partners a third round of IRWMP funding. SFEP is now managing Round 2, Round 3, and Round 4. The Round 4 funding is \$41 million for 10 projects, making a total of \$93 million across 41 projects that SFEP is managing. This very significant work load is being managed by Jennifer Krebs and a team of several SFEP staff. A list of the new Round 4 IRWMP projects includes:

Primary Benefit	Proponent	Title	Abstract	Cost
Water Supply – Drought Preparedness	San Francisco Estuary Partnership	Bay Area Advanced Quantitative Precipitation Information (AQPI) System	The AQPI system uses radars and improved modeling to provide increased lead times for government decision-makers to prepare for flooding and water supply management decisions.	\$19,000,000
	Santa Clara Valley Water District	Anderson Dam Seismic Retrofit Project	This project will make improvements required for Anderson Dam and its appurtenances to withstand a maximum credible earthquake and probable maximum flood event.	\$4,090,000
	Marin Municipal Water District	Marin 2020 Turf Replacement Project	This project will remove up to 443,000 square feet of non-functional turfgrass from commercial, institutional, and industrial properties and replace it with environmentally beneficial landscapes.	\$781,563
Human Right to Water	City of East Palo Alto	East Palo Alto Groundwater Supply Project	This project includes development and use of groundwater as a new source of water supply for the City of East Palo Alto and its DACs.	\$1,506,050
	San Mateo County Resource Conservation District	Coastal San Mateo County Drought Relief Phase II	This project continues ongoing efforts with local communities and agricultural stakeholders to balance beneficial uses of water resources in San Mateo County.	\$1,400,000
Shoreline Resilience – Sea Level Rise Preparedness	State Coastal Conservancy	San Francisquito Creek Flood Protection and Ecosystem Restoration Project	The project goals are to protect against concurrent 100-year riverine floods, 100-year high-tides, and sea-level rise while restoring 18 acres of tidal marsh.	\$1,044,351
	State Coastal Conservancy	Mountain View Shoreline Portion of SBSPR Project	This project in Mountain View includes 710 acres of tidal marsh and upland habitat restoration and critical flood risk management infrastructure for residences and businesses.	\$4,807,998
	State Coastal Conservancy	Eden Landing Portion of SBSPR Project	The Eden Landing project involves restoration of over 1,300 acres of tidal marsh, levee improvements to decrease flood risk, and new public access trails.	\$3,265,121
	State Coastal Conservancy	Novato Creek Flood Protection and Habitat Enhancement Project	The Novato Creek Flood Protection and Habitat Enhancement Project will provide flood protection for 870 acres of land and restore 30 acres of wetland habitat.	\$3,551,607

Primary Benefit	Proponent	Title	Abstract	Cost
Administration	Association of Bay Area Governments /SFEP	Grant Administration	This task ensures that IRWM grant funds for the nine projects are properly managed, that projects are completed, and that schedules are met within budget.	\$1,858,745
Total				\$41,305,435

Additional new funding received includes an \$851,000 award from the Delta Stewardship Council for Delta Science support including the biannual Delta Science Conference.

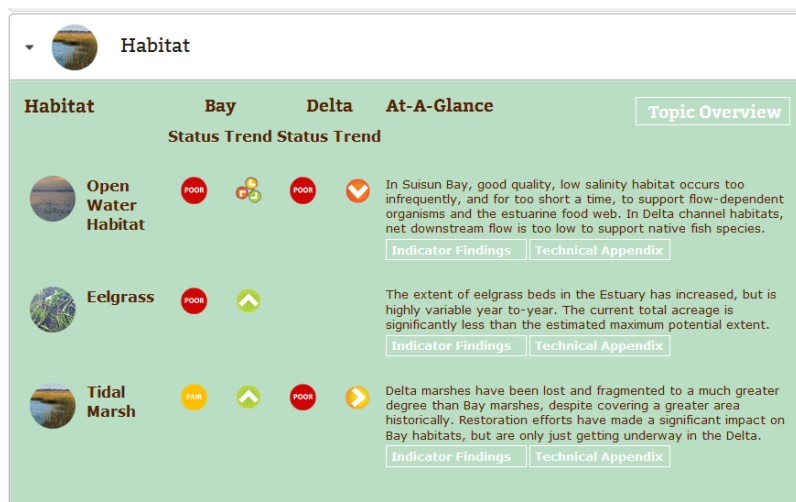
State of the Estuary Conference and State of the Estuary Report



A very successful 2015 State of the Estuary Conference was held in September once again in conjunction with the Regional Monitoring Program on Day 2. Over 800 attendees enjoyed talks and plenary sessions – many of which are highlighted in the twitter log now available on the SFEP website. The events made a very big splash in 2015 with over 500 tweets, 86 active users, and 414,000 appearances in news feeds; check out the conversation here:

<http://www.sfestuary.org/soe/>

Many of the conference sessions focused on the 2015 State of the Estuary Report, which

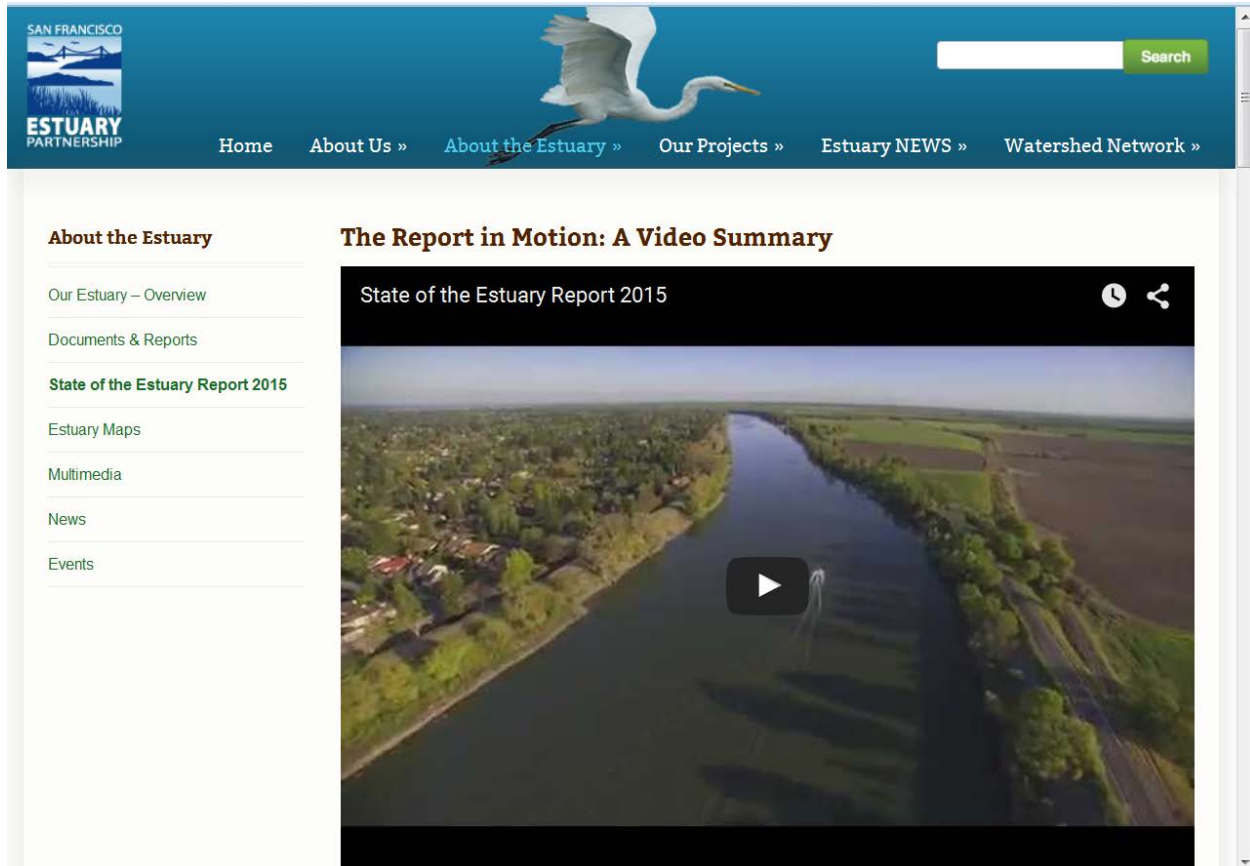


provided an overview of the health of the Water, Habitat, Wildlife, Processes, and People of the San Francisco Estuary. Distinctive interactive elements are available at

<http://www.sfestuary.org/about-the-estuary/soter>,

including a summary video, a flipbook of the report, technical appendices, key messages, and more.

Habitat trends at a glance, on the SF Estuary Partnership State of the Estuary Report web page



The State of the Estuary Report five-minute video summary, narrated by Letitia Grenier

Boating Program Staff Training

San Francisco Estuary Partnership staff attended the States Organization for Boating Access (SOBA) conference in Vermont, September 21 – 24 and partnered with Connecticut state employees to organize a one-day workshop there after the conference. SOBA is a non-profit, created by a number of states, to provide a forum for the exchange of views, ideas, concepts, and experiences related to all aspects of recreational boating facilities, with a focus on Boating Infrastructure grants and Clean Vessel Act (CVA) grants. SFEP's CVA program has been working with the boating community for 22 years to provide resources and education in an effort to reduce sewage discharge into the San Francisco Bay and Sacramento Delta. At this conference, James Muller presented the CVA program's multi-pronged approach at curbing sewage discharge and focused on the sewage best management practices manual currently being developed. James also sat on a panel that discussed No Discharge Zones and the US Fish and Wildlife Service's new interpretation of a recreational vessel. James also accepted an award from SOBA on behalf of the state of California for its Clean Vessel Act Program. The one-day workshop in Connecticut was spent reviewing the publically funded mobile pumpout program there, a model for what we are hoping to replicate in the San Francisco Bay.

Estuary NEWS

The September issue is full of grand plans and big ideas. As the drought drags on, the state has revealed its new, scaled-down plans—deconstructed by writer Joe Eaton—for rehabilitating the broken Delta. The Delta and its complicated plumbing and flows are also tackled by nine Estuary experts in our “Pivot” story. We asked them to share their views about old ways of doing things that no longer work, especially with sea level rise and climate change upon us, and their ideas for change. Other stories cover new ideas and technology for monitoring Delta levees, and new methods of tracking even the smallest pollutants—both natural and not so natural—that can affect the health of the Bay and people. Read the issue at <http://www.sfestuary.org/estuary-news>.



Aquatic Invasive Species (AIS) Updates

Karen McDowell attended the Annual Western Regional Panel on Aquatic Nuisance Species (WRP) (September 1-3, 2015, South Lake Tahoe, CA) and the Fall Federal Aquatic Nuisance Species Task Force Meeting at NOAA Headquarters (November 4-5, 2015, Silver Spring, Maryland). Karen’s long-term work with the Western Regional Panel on Aquatic Nuisance Species (WRP) and the Aquatic Nuisance Species Task Force (ANSTF) assisted the following key activities and documents:

- The ANS Task Force and National Invasive Species Council finalized a paper on August 28th, 2015 to address a recommendation to set policies on movement of aquatic invasive species into and out of federal lands [see “*Federal Policy Options Addressing the Movement of Aquatic Invasive Species Onto and Off of Federal Lands and Waters*” (<http://www.anstaskforce.gov/Documents/2015-0828-Federal-Lands-Policy-Options-for-Addressing-the-Movement-of-AIS-onto-and-off-of-Federal-Lands.pdf>)] This paper provides guidance and policy options to increase coordination among the federal government and state and local partners to strengthen national efforts to prevent and contain the spread of aquatic invasive species (AIS). It also summarizes a review completed by federal agencies of their current authorities and potential opportunities to prevent and control AIS on federal lands and waters.
- The Coastal Committee for WRP, which Karen McDowell serves on, reviewed “*A Review of International, Federal, State, and Provincial Regulatory Roles and Responsibilities Relating to Aquatic Marine Invasive Species on the West Coast.*” The committee decided to move forward with developing a Regional Biofouling

Management Plan, with will include Best Management Practices for the various vectors.

- The WRP and the ANS Task Force have been working collaboratively with the marine manufacturers over the past few years to increase effectiveness of decontaminate techniques for trailered boats (including cleaning engine cooling pipes and ballast tanks on recreational boats). The boating manufacturers and aquatic invasive species specialists are moving forward with an expedited process to develop standards which will include the development of a technical information report. The ANS Task Force formed an ad hoc committee at this meeting to solidify this process.

Ballast Water Updates

On October 8, 2015, California Legislature passed and the Governor signed AB 1312 (O'Donnell, Chapter 644, Statutes of 2015). This bill will take effect on January 1, 2016. Key changes include:

- Delay Implementation of California's interim ballast water discharge performance standards to January 1, 2020 and the final standard to January 1, 2030.
- Authorize the State Lands Commission to enforce vessel biofouling management requirements and assess vessel compliance with biofouling management regulations.

A workshop on the Feasibility Study of Shore-Based Ballast Water Reception and Treatment Facilities in California was held on October 6, 2015 in Sacramento, CA. At this workshop, the Science Advisory Panel included a literature review and a review of the in the scope of the proposed feasibility study. Karen McDowell attended and provided some critical input on this important study, which will help determine the path forward for California's Ballast Water Management Program.

Media Coverage

Marin's bay shores in better health, more work to be done, report finds

marinij.com

By [Mark Prado](#), Marin Independent Journal

Posted: 09/18/15, 4:57 PM PDT

San Pablo and San Francisco bays off Marin's shores are in better health than in prior years, but are jeopardized by the effects of climate change, according to a new report released this week.

The 96-page "State of the Estuary 2015," a comprehensive health report for the San Francisco Bay-Delta Estuary by the San Francisco Estuary Partnership, uses data contributed by more than 30 scientists to assess the status of various parts of the ecosystem.



Boaters row near Rat Rock Island in the waters off China Camp State Park in San Rafael. Alan Dep — Marin Independent Journal

The verdict?

“In many regards the bay is as healthy as it has been in a long time,” said San Anselmo native Josh Collins, chief scientist with the San Francisco Estuary Institute, an environmental research and policy group.

He spoke from an estuary conference this week in Oakland where the report was released.

“But some aspects of the bay are slower to heal,” he added. “There are still longer-lasting pollutants in the bay, but they are not being put in the system anymore.”

Collins said it is important for agencies that manage watersheds to do their part in terms of water quality and sediment release.

Creeks, streams and rivers used to carry the silt and dirt naturally into the bay and Delta. Construction of dams, levees and shoreline developments, however, have largely cut off those flows in the past 160 years. That effect combined with rising seas, could damage wetlands and bay health.

Predicted sea level rises of 3 feet or more by the year 2100 resulting from climate change could wash out and cover shallow tidal wetlands that act as important nurseries and habitat for wild fish, birds and other aquatic sea life, according to the report.

To keep the wetlands from sinking under water, the scientists called for a major, sustained public campaign to build up and replenish those marshy areas with sediment.



People watch as bay water flows through an intentionally breached levee at the former Hamilton Air Force Base in Novato. Alan Dep — Marin Independent Journal

“We face a lot of problems if we lose our wetlands, and rising sea levels are making this an increasing challenge,” said Letitia Grenier, scientist at the San Francisco Estuary Institute. Some progress has been made in restoring previously diked wetlands to tidal action.

In Marin, the former Hamilton Airfield, Bel Marin Keys, Bahia and other nearby areas have been acquired and have moved forward with restoration planning and actual work, helping the bay’s health. At Hamilton, dredge spoils from the Port of Oakland were used to build marsh and wetlands.

“The Hamilton project is a good model,” Collins said. “That took sediment from within the bay, and instead of dumping it out on the ocean, it was used in a beneficial way.”

But in other parts of the bay sea levels threaten the shoreline marshes and the results could be “catastrophic” if action is not taken, scientists warned.

Karina Nielsen, director of San Francisco State University’s Romberg Tiburon Center for Environmental Studies, who has attended the conference, said the bay needs support.

“The bay has come along,” she said. “The water quality is good enough to swim in and that is saying something. But there is still a lot to do. Bay warming and sea-level rise and sediment management are issues. There are solutions, but it takes an investment to actually restore the bay.”

The state-created San Francisco Bay Restoration Authority is looking to put a \$12-per-parcel regional tax measure on the ballot next year to raise \$500 million over 20 years to fund sea-level rise work and wetland restoration projects.

Some of the report's findings for the North Bay:

- Populations of medium and small shorebirds are stable or increasing
- Endangered Ridgway's rail populations have rebounded since a 2007-2009 decline
- Native fish populations are generally healthy, although non-native species are increasing in the bay
- Dabbling ducks are increasing, while diving ducks are declining significantly
- Nesting sites of herons and egrets are stable or increasing, but brood size is showing a slight annual decline

"We are making progress, but the bay is nowhere near where it should be," Romberg's Nielson said.

The Bay Area News Group contributed to this report.

Reach the author at mprado@marinij.com or follow Mark on Twitter: [@MarkPradoIJ](https://twitter.com/MarkPradoIJ).

From <http://www.marinij.com/environment-and-nature/20150918/marins-bay-shores-in-better-health-more-work-to-be-done-report-finds>

San Jose Mercury News

Rising seas threaten San Francisco Bay and Delta wetlands and land

By Denis Cuff

dcuff@bayareanewsgroup.com

Posted: 09/17/2015 12:30:00 AM PDT [23 Comments](#) | Updated: 13 days ago



Canada geese take off from a detention basin and seasonal wetland at the Ohlone College Newark Center on Jan. 3, 2012, in Newark. (Aric Crabb/Bay Area News Group)

OAKLAND -- Rising sea levels threaten not only structures around San Francisco Bay and the Delta but the shoreline marshes critical to the environmental health of the estuary, and the results could be "catastrophic" if action is not taken, scientists warned Thursday.

Predicted sea level rises of 3 feet or more by 2100 resulting from climate change could wash out and cover shallow tidal wetlands that act as important nurseries and habitat for wild fish, birds and other aquatic sea life, according to the scientific report on the state of the bay-Delta estuary.

To keep the wetlands from sinking under water, the scientists called for a major, sustained public campaign to build up and replenish those marshy areas with sediment.



Water collects in a detention basin and seasonal wetland at the Ohlone College Newark Center on Jan. 3, 2012, in Newark. (Aric Crabb/Bay Area News Group)

Creeks, streams and rivers used to carry the silt and dirt naturally into the bay and Delta. Construction of dams, levees and shoreline developments, however, has largely cut off those flows in the past 160 years and also filled in most of the wetlands.

"We face a lot of problems if we lose our wetlands, and rising sea levels are making this an increasing challenge," said Letitia Grenier, scientist at the San Francisco Estuary Institute, an environmental research and policy group.

The 100-page report by dozens of scientists in the San Francisco Estuary Partnership provides a comprehensive look at the environmental health of the estuary, the mixing zone for Pacific Ocean seawater and fresh water from California's biggest rivers.

The document gave a mixed report card to the environmental condition of the bay and Delta.

Progress has been made in reducing San Francisco Bay water pollution and in restoring previously diked off wetlands to tidal action.

But rising sea levels, reduced freshwater flows from water diversions, declining wild fish populations and an invasion of non-native species like nutrient-gulping Asian clams have put the environment at risk, the report says.

San Francisco Bay is in "fair" condition overall, and the Sacramento San Joaquin River Delta and Suisun Bay are in "poor" condition because of many man-made changes, the report says.

"Bay wetlands are starved of sediment needed to sustain their growth, placing them in jeopardy from sea level rise," the scientists wrote.

The threat to wetlands is manageable if the region can come up with a bold plan to replenish marsh areas with sediment, and designate some areas for wetlands to expand inland, said Josh

Collins, chief scientist with the San Francisco Estuary Institute.

"The balance between water and sediment has been thrown out of whack," he said. "Doing nothing is going to lead to very serious or catastrophic results. It takes a regional response."

Options for fixes include trucking or piping in sediment trapped behind dams, or diverting dredge spoils now dumped in the ocean and putting them in wetlands.

Some scientists have suggested modifying dams to flush out the sediment-rich water at the bottom of reservoirs rather than releasing the more particle-free water at the top.

Collins said state, federal and regional agencies are trying to come up with guidelines on how to deliver the sediment.

On Wednesday in San Francisco, the Bay Conservation Development Commission kicked off a long-term effort to determine how and where to protect businesses, homes and other structures from rising sea levels.

In tandem with that effort, many government agencies are trying to determine how and where to protect or restore wetlands to act as a buffer against increasing flooding risks.

"Some of these marshes will serve as sponges," said Zach Wasserman, the chairman of the Bay Conservation and Development Commission, "and there are other urbanized areas we will need to build up barriers to protect from rising waters."

Wasserman said a public-private partnership called the San Francisco Bay Restoration Authority is considering sponsoring a Bay Area-wide ballot measure seeking a parcel tax next year to finance flood protection and wetland restoration.

Contact Denis Cuff at 925-943-8267. Follow him at [Twitter.com/deniscuff](https://twitter.com/deniscuff).



October 29, 2015

Dear Local Elected Officials,

I am pleased to report that yesterday, Wednesday October 28, 2015, our ABAG Administrative Committee and the MTC Commission voted unanimously to proceed with a study of a full comprehensive merger of our two regional agencies. The original MTC proposal has been put on hold and all energies will be dedicated to this effort. This is a major milestone in our regional planning efforts. I would like to thank Supervisor Dave Cortese, Chair of MTC and ABAG Executive Board member, for leading this effort.

Key points from the resolutions:

- MTC shall provide the remaining six months of FY 2015-16 planning fund with no strings attached.
- MTC and ABAG shall retain a consultant to conduct a merger study and a merger implementation plan of both agencies.
- The study will be directed by the Joint ABAG Administrative Committee and MTC Planning Committee.
- Original proposal to transfer ABAG planners to MTC is put on hold during the merger study.

This means that the hard work begins today, discussing and defining the relationship between the two agencies in a collaborative, positive manner. We have many issues of governance, planning tasks, and organization to define. We all need to be prepared for both challenges and opportunities that we will all face during the next eight months. This process will require not only MTC and ABAG Boards but local jurisdictions and stakeholders participation if we are to create an agency that can truly serve the Bay Area.

Thank you for your engagement and contributions that allowed us to come to this point. Your letters, statements and messages have created a strong voice on the value of local collaboration and dialogue. We are here because of your input.

Cordially,

Julie

Julie Pierce
ABAG President

Talking Points for The Baylands and Climate Change: What We Can Do



Summary:

200 Top Scientists Urge More Restored Wetlands and Nature-Based Solutions to Protect S.F. Bay shore Communities from Rising Seas and Extreme Storms

Natural Wetland and Watershed Systems, Rather than Dikes and Levees, will Better Protect Communities from Flooding and Increase Recreation and Wildlife Benefits

THE THREAT: Loss of Shoreline Wetlands Will Threaten Bay Shore Communities

- **Rising seas, extreme weather events and lowland flooding** are already altering our region's ecosystems.
- **Critical urban functions** – Highways, airports, utility services, pipelines, water treatment plants - are all threatened by rising tides.
- **These forces will accelerate** in coming decades.
- **S.F. Bay wetlands currently lack a sediment supply** needed to keep from “drowning” under with rising seas.
- **In a few decades most of the Bay Area's tidal wetlands will start to disappear if we don't act now**

THE REPORT: “The Baylands and Climate Change: What We Can Do”

- Is a science update to a 1999 ***Baylands Ecosystem Habitat Goals*** report that called for protecting 100,000 acres of SF Bay wetlands.
- Combines the advice of 200 scientists and government experts on climate change, sea level rise, watershed systems and urban engineering.
- **Synthesizes the latest climate and watershed science** and new engineering concepts.
- **Assesses the biggest threats, and suggests a science-based** roadmap to protect our communities with more resilient shorelines.
- **For more information** and to review the report, visit www.baylandsgoals.org.

- Note – For short, call it “**The Baylands Goals Science Update**” or just the “**Science Update**”.

THE SOLUTION – Work with nature; not against it to restore wetlands that will protect shoreline communities

- **Work with nature, not against it** - to protect S.F. Bay shoreline communities, homes businesses, transportation & utility facilities from sea level rise, extreme storms and flooding.
- **Instead of relying only on levees and sea walls** - use bay shore wetlands to buffer and protect the Bay Area’s seven million people from rising seas and extreme storms.
- **Wetlands knock down large waves, absorb excess water, filter pollutants, sustain fisheries, and provide beauty, wildlife habitat and places to hike, bike and enjoy nature.**

KEY FINDINGS for maintaining a healthy, resilient S.F. Bay shore:

- **Work with nature, not against it.** Protect existing wetlands and help them grow to keep pace with sea level rise. Wetlands are self-maintaining and can be a resilient buffer against sea level rise and storms, if we allow the natural processes of water and earth that nourish them to occur. The alternative is sea walls and levees that require ongoing, expensive maintenance and none of the other benefits of wetlands.
- **Sediment [earth] is essential to grow and sustain our wetlands.** A major threat to S.F. Bay wetlands is a lack of sediment in the bay for sustaining their growth. Wetlands can keep up with rising seas only if sediment builds up along the surface of a marsh over time. This needed sediment can come from dredging of shipping and flood control channels, natural flows carried by streams, and other sources. Agencies have an opportunity to bring sediment to wetlands instead of dumping it in the ocean or in landfills.
- **Remember our streams.** One solution to rising bay waters is in our own backyards—managing our land and streams to deliver sediment and clean water to nourish marsh growth. It’s time to work with the entire watershed system, from the hills to the bay.
- **Start today.** Time is a key factor. An accelerated effort could save over 80% of our existing wetlands over the next 100 years.

General Statements of Support – What others are saying:

“These updated findings provide an urgently needed roadmap to secure the future of the San Francisco Bay shore during this time of rapid change,”

“Around the world, it’s the low income and disadvantaged communities who suffer the most from climate change,” “Here, in the Bay Area, it will be the lower income communities, ‘in the flats’ who will take the biggest hit from sea level rise and shoreline flooding. As we plan for sea level rise, let’s make sure our decisions give priority to the most vulnerable and disadvantaged communities.”

“The recommendations provided by over 200 of the region’s leading scientists are invaluable to help managers, scientists and decision-makers continue to make progress in restoring and maintaining our valuable wetlands.”

ATTACHMENT 4

“We now know we must accelerate our restoration efforts, and adopt new watershed and in-bay management practices to ensure there is sufficient sediment for the Baylands to continue to provide a multitude of beneficial functions in the face of rising seas.”

“If we have the courage to act now and follow these scientific recommendations, we can secure much of what is most precious about living in the Bay Area, and ensure the gratitude of future generations.”

“The report provides a vital basis to sustain the iconic beauty and valuable services of our remarkable Baylands for future Bay Area residents.”

“Using recent science knowledge about climate change and watershed systems the report provides a roadmap for visionary ecological management”

“These updated findings provide an urgently needed roadmap to secure the future of the San Francisco Bay shore during this time of rapid change,”

“Produced by leading scientists, managers, and decision makers, these practical, climate-smart recommendations will guide wetlands restoration and watershed management to sustain wildlife and people for decades to come.”

THE
Baylands
AND
Climate Change

WHAT WE CAN DO

BAYLANDS ECOSYSTEM HABITAT GOALS
SCIENCE UPDATE 2015





Ensuring a Healthier Bay Shore

RESTORE WETLANDS TODAY, FOR THE FUTURE

The wetlands at the shore of the San Francisco Bay are an integral part of the region's iconic beauty, and they provide numerous benefits for our economy and quality of life. These baylands support abundant wildlife, clean water, open space for recreation, and flood protection. More than 100 scientists who study the bay, its wetlands, and watersheds have concluded that now is the time to ensure that these ecosystems continue to provide such benefits. Sea-level rise and climatic and other changes have brought about a critical moment. The extensive bay marshes and mudflats can be sustained for decades to come, but it will require a bold approach to restoring their natural processes. Meanwhile, we must also accelerate the concerted action of the past two decades to restore tidal habitats.



This page, from top: marshland near San Pablo Bay, a young volunteer. Facing page: endangered salt marsh harvest mouse; a stream channel wall; cities around San Francisco Bay.

Much progress has been made on restoring San Francisco Bay's tidal wetlands since the *Baylands Ecosystem Habitat Goals* report was released in 1999. This science update to that report provides guidance for sustaining a healthy and vibrant shore. Carrying out its recommendations will help meet state and federal objectives for the conservation of endangered and threatened species. And it will implement federal strategies (*Tidal Marsh Ecosystem Recovery*) and state plans (*Safeguarding California*) to withstand the impacts of climate change.



A BAY SURROUNDED BY WALLS AND CONCRETE?

Projections show that if we don't act, rising seas and greater erosion will cause the baylands to shrink. We would lose the protection these wetlands provide to our shoreline by buffering storm waves, and the cost-effectiveness of a natural infrastructure that adjusts as sea levels rise. The bay would fundamentally change, with hardened edges and little vegetation.

Eventually, this damage would be irreversible. The region would be obliged to construct and maintain more sea walls and levees, and larger ones. (In places where wetlands are not naturally sustainable, other forms of sea level rise adaptation will be required in any case.) The baylands would eventually retract to narrow strips at the base of these structures or disappear altogether. Water quality could degrade as the baylands would no longer absorb excess nutrients from wastewater or filter contaminants. The diversity and abundance of native animals and plants would be drastically reduced. Several endangered species found only in San Francisco Bay could go extinct, and millions of migratory waterbirds would lose critical feeding and wintering grounds.



"This report tells us what we need to do today to ensure a healthy San Francisco Bay into our future. If we have the courage to act now and follow scientific recommendations, we can secure much of what is most precious about living in the Bay Area, and ensure the gratitude of our grandchildren."

Sam Schuchat, Executive Officer,
California Coastal Conservancy;
Chair, Baylands Ecosystem Habitat Goals
Update Steering Committee





HOW DID WE GET TO THIS POINT?

The forces that control the balance of land and water in San Francisco Bay are changing. The sea level is rising, weather patterns are shifting, and the sediment supply that has helped nourish the baylands since the Gold Rush appears to have been exhausted. Without enough sediment to sustain bay wetlands as sea levels rise—especially coupled with a greater frequency of extreme storms, flooding, droughts, and heat waves—most of the marshes are projected to be damaged or destroyed by 2100 unless we intervene now.

Our response to these events will be fundamental to the fate of wildlife populations. We will either choose to actively support population recovery after a disaster or exacerbate the harm with inappropriate responses. Higher average temperatures, a greater intrusion of seawater into the bay, and new invasions by exotic species will also affect natural communities.

This pivotal moment comes after nearly two centuries of habitat loss and degradation as well as the modification of key natural processes such as freshwater flows, tidal exchange, flood-plain productivity, and invasion by nonnative species. Our levees, flood-control channels, roads, railways, storm drains, garbage dumps, and sewage treatment systems have all been built at the edge of the bay. This alteration of the shore has left a legacy of fragmented habitats with small and stressed native wildlife populations and fixed, inflexible systems for controlling water and sediment flows. Neither our critical human-built infrastructure nor the remaining natural habitats are expected to be resilient to coming changes without significant new investment in adaptation and resilience strategies.



“Rising sea level, more extreme weather events, and other impacts of climate change are already altering our region’s ecosystems, and this will accelerate in coming decades. By using our new scientific understanding to highlight important actions for visionary management, this document provides a vital basis for sustaining the iconic beauty and valuable services of our remarkable baylands for future Bay Area residents.”

Carl Wilcox, California Department of Fish and Wildlife, project co-chair and contributing author of *Baylands Ecosystem Habitat Goals* report (1999)

This page, from top: bicyclists on a levee; assessing health of baby tern. Facing page, top: volunteers put in marsh plants.

NEW APPROACHES, NEW POLICIES

To arrive at a future with functioning, dynamic baylands, we must act immediately. Resilience to sea-level rise depends on natural processes that work over years and decades. We need to adjust our policies to encourage the rapid restoration and enhancement of the natural infrastructure that cost-effectively protects people and property while also supporting native plants and animals.

STRATEGIES FOR A HEALTHY SHORE

The scientists that developed this report suggest regional strategies to maintain healthy baylands and the benefits they provide. These strategies are summarized below and listed in full in the second chapter of the report.

Restore complete baylands systems.

To achieve and maintain the Baylands Goals (100,000 acres of tidal marsh and the targets for other habitat types), we should maximize baylands resilience. This means restoring complete wetland systems with their many interconnected habitat types, along with the physical processes that sustain them. Reconnecting the baylands to nearby open lands is also crucial to provide wildlife with refuge during high-water events and for



Below: Artist's conceptual rendering shows a future Bay Area shoreline that has successfully accommodated significant sea-level rise through the restoration of baylands and the processes that sustain them. Reconnected waterways provide adequate sediment and freshwater to sustain marshes, while diverse connected marsh habitats allow wildlife to flourish and migrate near urban areas. Gradually sloping undeveloped areas also provide space for marshes to move inland as the sea level rises. These restored baylands enhance the lives of millions of people, protect built infrastructure, return wildlife to our communities, and improve water quality.





the baylands to move landward as sea levels rise. Diverse, connected baylands habitats will foster diverse wildlife populations that can survive extreme conditions, move where they need to go, and evolve with the changing environment. Management techniques can be refined to prevent further subsidence, increase organic matter accumulation, reduce greenhouse gas emissions, and sequester more carbon. Even though they are not naturally resilient systems, artificially managed ponds are a valuable component of future baylands ecosystems to support waterbirds and compensate for the extreme loss of wetlands across California.

Accelerate restoration of complete baylands systems by 2030.

Restore tidal flows to strategic areas and manage sediment to establish tidal marsh ecosystems. Tidal marshes that are established by 2030 are more likely to flourish and provide ongoing benefits when the sea-level rise accelerates in the middle of this century. To achieve this goal, the planning, permitting, and construction of restoration projects on currently available lands must be accelerated.

Plan ahead for the dynamic future.

Create regional policies for the shore that anticipate change over time, using projections of sea-level rise and expected shifts in habitat types, locations, and connectivity. Baylands can better sustain themselves as sea levels rise if they can migrate landward. We should prepare for this migration by conserving the transition zone between the baylands and adjacent lands.

Develop and implement a comprehensive regional plan to reuse suitable dredged, excavated, or naturally occurring

“These updated Goals provide an urgently needed roadmap to secure the future of the San Francisco Bay region during this time of rapid change. Produced by leading scientists, managers, and decision makers, these practical, climate-smart recommendations will guide habitat restoration and management to sustain wildlife and people for decades to come.”

Ellie Cohen, President and CEO,
Point Blue Conservation Science;
co-founder, Bay Area Ecosystems
Climate Change Consortium

This page, from top: salt ponds in the south bay; scientist prepares a native oyster restoration experiment. Facing page: volunteers plant willows; children study the bay.



sediment. This sediment could come from the bay, local rivers and streams, flood control channels, reservoirs, and other sources.

Prepare for the likely increases in extreme weather events such as floods and drought. Extreme events will inevitably cause damage, but they will also provide opportunities to rebuild more-resilient shores. We can buffer wildlife populations against extreme events and prevent extinctions by monitoring them and taking protective action at strategic moments.

Increase regional coordination.

Creating a resilient and healthy shore will be more successful if the responsible agencies and interested stakeholders collaborate to build consensus, identify barriers to action, solve problems, and promote shared learning and aligned benefits from individual projects. Regionally coordinated research, monitoring, and implementation are critical for rapid innovation and large-scale, complex restoration. This approach will foster the adoption of the most promising techniques for restoration and management, build understanding for and support of necessary new policies, and establish coalitions to obtain the public funding required for a healthy future shore.

THE SUCCESS we have already achieved with baylands restoration provides us with the opportunity to continue this work. But this opportunity is available only if we act now. Restoring the baylands is a necessary part of creating a resilient and healthy shore that supports our economy and maintains the remarkable natural heritage of the Bay Area.



"The recommendations provided by over 100 of the region's leading scientists are invaluable for helping managers, scientists and decision-makers continue to make progress in restoring our valuable wetlands. We now know we must accelerate our restoration efforts, and adopt new watershed and in-bay management practices to ensure there is sufficient sediment for the baylands to continue to provide a multitude of beneficial functions with our rising seas."

Michael Monroe, lead author and project co-chair for the *Bayland Ecosystem Habitat Goals* report (1999)





ABOUT THIS SCIENCE UPDATE

This report is an update to the 1999 *Baylands Ecosystem Habitat Goals* that for the first time set comprehensive restoration goals for the San Francisco Bay estuary. It synthesizes the latest science— particularly advances in the understanding of climate change and sediment supply— and incorporates projected changes through 2100 to generate new recommendations for achieving healthy baylands ecosystems.

The habitat acreage goals set in 1999 remain the same. Recommendations have been updated—and many new restoration approaches are suggested—for the region, its major subregions, and local shorelines. These actions must be integrated with civic and economic planning to arrive at appropriate implementation strategies. This report provides technical information that policy makers and others can use in deciding how to maximize ecosystem health.

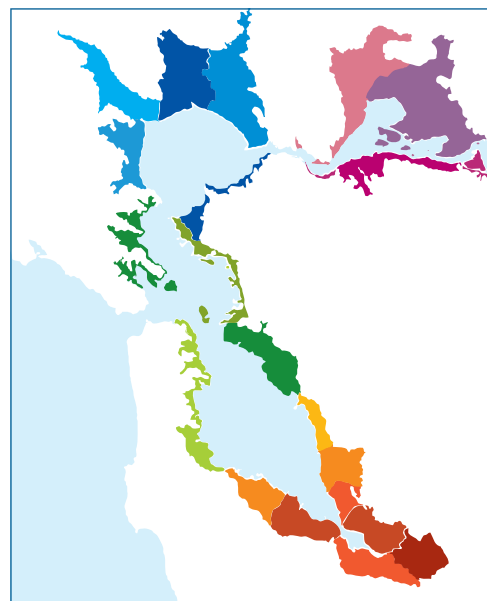
TO OBTAIN THE REPORT

Access the full Science Update at www.baylandsgoals.org.

Available on the website are PDFs of the full report, maps, and appendices, as well as Science Foundation chapters that provide the technical background to the report.

For inquiries, please contact info@baylandsgoals.org.

Cover: © Russell Lowgren, Ducks Unlimited. Page ii, top: © Russell Lowgren, Ducks Unlimited; bottom: Judy Irving © Pelican Media. Page iii, top: Judy Irving © Pelican Media; middle: Naomi Schiff; bottom: © Jitze Courperus. Page iv, top: © Ron Horii, middle: Judy Irving © Pelican Media. Page v, top: Eco-Oakland; bottom: Nate Kauffman, Landscape Architect + Founder of LEAP: Live Edge Adaptation Project, n8kauffman.com. Page vi, top: © Jitze Courperus; bottom: © Stephanie Kiriakopolos. Page vii, top: Pearson-Arastradero Preserve; bottom: © Charlotte Fiorito/CompassPhotographers.com. Page viii, top: © Russell Lowgren, Ducks Unlimited; bottom: Alan Hopkins.



The report provides updated recommendations for the region, its major subregions, and local shorelines.



Top: Mud Slough; above: endangered Ridgway's rail

**Road Map for Upcoming IC Meetings
November 17, 2015**

PROPOSED 2016 DATES

Wednesday, March 2

Confirmed

- Draft work plan
- Select Chair/Vice Chair positions for 2016-7, to take effect in May
- CCMP revision: finalizing the document

Potential

- State greenhouse gas cap and trade program update
- Prop 1 update on new funding guidelines or opportunities (Harry Seraydarian)
- Update *on Wetter or Not* water conservation recommendations
- Resilient Shoreline Planning through Bay Area Regional Collaborative
- SFEP's Clean Vessel Act Program (boating outreach)

Wednesday, May 18

Confirmed

- Approve final work plan
- Chair/Vice Chair new terms begin for 2016-17

Potential

- San Pablo Avenue Stormwater Spine project overview

Wednesday, August 24

Confirmed

-

Potential

- Update on new CCMP action implementation

Wednesday, November 16

Confirmed

- Set calendar for 2016 meeting dates