South Bay Salt Pond Restoration Project

Restoring the Wild Heart of the South Bay

To: **South Bay Salt Pond Restoration Project Team**

From: **Center for Collaborative Policy**

Re: **Outcomes from the October 20, 2011 Stakeholder Forum Meeting**

Background: The Stakeholder Forum (Forum) met on Thursday, October 20, 2011 from 1 to 4 p.m. at Alameda County Flood Control District offices in Hayward. The Forum is convened to provide ongoing input to the South Bay Salt Pond Restoration Project Management Team (PM Team) and its technical consultants on development and implementation of the South Bay Salt Pond restoration, flood management, and public access plan.

Meeting Attendance: Attachment 1 lists meeting participants.

Meeting Materials: In advance of the meeting, Forum members were provided a meeting agenda. At the meeting, Forum members received handouts including a printout of meeting slides, a Phase 2: Preliminary Options for Future Actions document, a condensed table of Adaptive Management Plan key uncertainties, a summary of highlights from the February 2011 SBSP Science Symposium, a roster and the 2010 meeting summary. The PowerPoint presentation slides, which give more details on presentations, and handouts are available on the SBSP Project website (www.southbayrestoration.org).

Substantive Meeting Outcomes:

1. Welcome, Introductions, and Agenda Review

John Bourgeois, Executive Project Manager, welcomed Forum members and the public and led introductions. Lead facilitator Mary Selkirk reviewed the agenda, which included:

- Tracking our Progress: Highlights of 2011
- Tracking our Progress: Science in the Salt Ponds
- Phase 2: Selection of project-wide and pond-specific actions
- Phase 2 in Ravenswood
- Phase 2 in Eden Landing
- Phase 2 in Alviso
- Update on the Shoreline Study
- Looking Ahead to 2012

2. Tracking our Progress: Highlights of 2011

John Bourgeois provided a status report on South Bay Salt Ponds management, funding and construction, with the aid of PowerPoint slides. In regards to funding, he reviewed the array of federal, mitigation/penalty, local and state bond funds that have supported the Project recently. These include direct federal appropriations through the US Fish and Wildlife Service and USGS. Last year, the Project lost its USGS augmentation because of federal government budgetary issues. ARRA stimulus funding through NOAA has been very generous. However, it doesn't look as if there will be a second stimulus package, and the Project will have to look at other options. Mitigation and penalty funds have been a source, and the Project will look to localities with mitigation needs. Project managers really appreciate the local funding that has been received from the Santa Clara Valley Water District and the Alameda County Flood Control District. The State, through the Coastal Conservancy and the Wildlife Conservation Board, has made significant contributions.

In regards to construction, the Project has accomplished a great deal in the last year. Phase 1 achievements this past year include:

Alviso Pond A6 Tidal Marsh Restoration

- The 360-acre area was breached in December. Early results from scientists show good sedimentation rates – 13 centimeters of elevation in six months – and fairly good scour at the mouth.

Alviso Ponds A8, A5 & A7 Muted Tidal Restoration

- One of the tide gates was opened for the first time this June. Because of mercury contamination in the area from the Almaden Quicksilver mine, managers are not opening all of the gates immediately. Instead, scientists are examining mercury levels after the gate opening in the water column, sediments and in tissue samples of fish and bird eggs. If all goes well, managers will open three gates next year. The Santa Clara Valley Water District helped with this project.

Eden Landing E8A, E9 & E8X Tidal Marsh Restoration

- The 630-acre ponds had their first breach on September 13. Managers are still working out aspects of the project, which is projected to be complete in December.

Two Phase 1 projects remain to be completed:

Alviso Pond A16/17 Habitat Enhancement & Tidal Restoration

- The construction is ready to proceed, once two remaining permits are obtained. Construction would start in November to develop nesting islands at A16 and open A17 to tides.

Eden Landing Ponds E12/13 Pond Enhancement

- The plan to reconfigure the 230-acre area into a series of ponds with different salinities is at the 60% design stage. The goal of the project is to examine whether birds need higher salinity ponds, to determine whether such ponds in the system would need to be maintained.

Out of the 15,000 acres in the South Bay Salt Pond Restoration Project, when these Phase 1 projects are complete, there would be 3,750 acres of restored and reconfigured ponds and 7 miles of trails. This is good progress in 10 years.

3. Tracking our Progress: Science in the Salt Ponds

Cheryl Strong, senior biologist with the US Fish and Wildlife Service, gave an update on the science program. The Project's goal is to restore at least 50% of its 15,000 acres to tidal marsh and as much as 90%. Where the project stops between those two bookends depends on its Adaptive Management Plan and its science program. Project managers are weighing many trade-offs as they examine some key uncertainties, including:

Wildlife use of changing habitats

- One trade-off is whether to keep the ponds for migrating waterfowl and shorebirds, and how many ponds to restore to tidal action for wetlands species. A key question here is how many birds can be supported in the remaining ponds.
- Since 2003, when they took over management of the salt ponds and began managing for wildlife, the Fish and Wildlife Service and the State Department of Fish and Game have seen increases in shorebird and dabbling duck populations, but no change in diving duck numbers. The first nesting season at Pond SF2, where 30 nesting islands were constructed, supported 17 snowy plover nests and nearly 200 American avocet nests.
- California gull populations, which had increased to 46,000 in 2010, decreased in 2011 to 38,000. In December 2010, Pond A6, home of the largest gull colony in the salt ponds, was breached. Scientists know that some of those gulls are no longer within the Project, but do not know where they went.
- Another aspect of wildlife use of habitats is proximity to humans. San Jose State University is looking at trail use near habitat, and is still collecting data. It appears from the data that trails will need to be 150 meters from snowy plover nests.
- Scientists are also looking at how fish respond to increased tidal habitat. They have found 31 species of fish, most native, within the Project and adjacent areas.

Habitat evolution and sediment dynamics

- The Project needs enough mud to grow plants. So far, there does appear to be sufficient sediment. For example, Pond A21 was a white, dry salt pond with a layer of gypsum in 2006. Now it hosts two types of native pickleweed and native cordgrass.

Questions/Comments:

Q: If there appears to be sufficient sediment, how does this tie into the uncertainties?
A: It looks so far as if the system is sediment rich, especially near the Dumbarton Bridge. The uncertainty relates to sea level rise, and whether a less sediment-rich system might occur in the next few years.

Mercury methylation and scour in Alviso Slough

- The USGS has just finished a couple years of mercury sampling in Alviso. Scientists will analyze fish, bird eggs, sediment and water samples for mercury.
- The final report is expected in January 2013.

Questions/Comments:

Q: In regards to mercury, you said this is the last year you are taking samples. How do you get predictive information on how the pond is affecting the slough?
A: You can't. It is only the last year of that contract. Because we lost the USGS funding, we are scrambling to find that money. We will continue the monitoring – it needs to happen, it is a top priority. You are absolutely right.
Q: Would a blip prevent opening the tide gates further?
A: It would be against Fish and Wildlife Service policy to knowingly activate a toxic substance and introduce it into the system. That was the reason for the series of tide gates, to protect the system and test our impact.
Q: What about the billions of dollars that DWR has available?
A: The problem is getting funding for monitoring and research. It's easier to get funding to implement a project, not to monitor the project.
Comment: Build a monitoring station!

Looking Ahead to Phase 2

The science program is looking at a reduced budget in upcoming years. Studies would include topics such as use of dredge materials, subtidal habitat enhancement, surveying members of the public to see what public access they would like, and looking at what endangered species needs are for upland areas for use during high tides. Other studies would include mercury monitoring, looking at trails and upland transition zones, the benefits of salt panne habitats, the Eden Landing tidal prism, and monitoring of California gulls. All of the scientific reports are posted on the website, although reports completed so far are very preliminary.

John Bourgeois emphasized that the Project needs science in order to make decisions on how to move forward. The loss of USGS funding is painful, because the Project needs to move forward in a scientific manner.

4. Phase 2: Selection of project-wide and pond-specific actions

John Bourgeois said that, at this point, there have been no results through the adaptive management process that would make Project managers deviate from their goals. The Project has recently released a request for services for a consultant team to undertake planning, analysis and design to evaluate a set of possible Phase 2 projects. The projects identified for Phase 2 were described.

5. Phase 2 in Ravenswood

Eric Mruz, Manager of the Don Edwards San Francisco Bay National Wildlife Refuge, reviewed the identified projects for the Ravenswood ponds. They include:

- Restoring Pond R4 to tidal marsh
- Enhancing ponds R5 and S5, possibly improving the tidal prism

- Building a levee between Pond R4 and the other ponds
- For public access, possibly installing a viewing platform at Bedwell Bayfront Park in Menlo Park, or other enhancements

Questions/Comments:
Q: Isn't birding rich at Pond R2?
A: The Moseley Tract owned by the City of San Jose has good birding. There is also some property along Bedwell Bayfront Park, near R5 and S5, by a small mitigation lagoon, that has good birding.

6. Phase 2 in Alviso
Eric Mruz reviewed Phase 2 projects for the Alviso area. Project managers cannot undertake tidal restoration at many of the Alviso ponds until flood protection is accomplished. The projects include:

- The Island Ponds were breached in 2006. One pond, Pond A19, has not received as much inundation on its north side as it should. A new breach would help the pond and adjoining Mud Slough.
- Restoring ponds A1 and A2W and City of Mountain View-owned Charleston Slough to tidal influence. The City has had plans to restore the Slough that it has not yet been able to accomplish. To accomplish the restoration, levees would have to be raised. The public trail would be enhanced.
- Protect Shoreline Park, an old landfill, from erosion. One possibility would be to bring in up to 1 million cubic yards of fill to create an upland area for species to migrate to in the face of sea level rise.

John Marchant from the City of Mountain View said the City is required to increase tidal wetlands by 53 acres at Charleston Slough. It has installed two tidal gates and tried other management measures. The City will need to work with neighboring Palo Alto on a levee that lies along the cities' border.

Questions/Comments:
Comment: There could be good discussions with the City of San Jose on managing Pond A18 decades out in the future.
Comment: The City plant master plan project has identified environmental flood control issues there. The project is in the EIR stage of analysis.

Q: Are you looking to enhance snowy plover habitat in Phase 2?
A: It is an option at ponds R5, S5 and R3. At the other ponds, we are continually working to enhance them for habitat. Another reason we want to do tidal marsh restoration is that the Project has restored 10% of its acres and the goal it to get to 50%. Early establishment of marshes would help their resilience to sea level rise.

Comment: That would also work in protecting the old landfill at Bedwell Bayfront Park.

7. Phase 2 in Eden Landing

John Krause, manager of the State Department of Fish and Game's Eden Landing Ecological Reserve, reviewed Phase 2 projects there. They include:

- Work would look at how to phase tidal marsh restoration at the 2,400 acres of ponds that would need to be restored to achieve the 50/50 plan. For example, an intake system might need to be re-plumbed if certain ponds are restored first. Project managers are working closely with Alameda County, as one question is whether flood protection would occur on the back or front side of the ponds, or some combination of both. Trail alignments would also be identified. It may be feasible to restore a couple of ponds every two years or so. An aggressive early completion date would be in the next 5-10 years.
- The C ponds on the southeast corner would also be looked at for restoration. The assumption is that they would not be breached on the bayfront, but instead off of the Alameda County Flood Control Channel or Old Alameda Creek.
- The Union Sanitary District has a wastewater treatment plant in the area, so one possibility might be to incorporate flood storage in winter in a brackish marsh. This would take place in cooperation with adjacent landowners.
- Another goal might be establishing an upland ecotone, as there may be broad levees with a 10-to-1 slope. This would require import of fill. These areas would be very important refugia for clapper rails and salt marsh harvest mice.

Questions/Comments:

Q: In Phase 1, was there snowy plover nesting success? Would there be protection in Phase 2?
A: We continue to manage in the transitions between seasons for snowy plovers. Pond E4 continues to be dry in summer for them.

Q: In Phase 1, you didn't finish documenting cultural resources. This could take place in Phase 2. The Alvarado Saltworks is one site that needs more documentation.
A: The map shows a trail terminating at that saltworks with interpretive features.

Q: What about non-Project marshes that could be put into tidal restoration, such as the J ponds – the Union City marsh north of Alameda Creek? This is of interest to us because it is a mosquito source. Restoration there would be okay with us.
A: There is a very large slough there that could probably be incorporated into tidal restoration. We would need to look at the detention ponds.
Q: Using existing channels?
A: To the extent we can.

Q: What steps are you taking to monitor channels outside the Project area? Are you checking to see that you "do no harm" to other habitats?
A: Through satellite imagery, we are tracking all the marshes for vegetation composition and mudflat extent. Our fisheries studies go beyond to adjacent sloughs and bays, and the mercury studies as well. We are definitely looking at the bigger picture.

Q: Are you looking at the sediment profiles of the estuaries and salinity characteristics, as species should move up further as you restore tidal marsh.
A: We are monitoring sediment flux.

Comment: During the Audubon Christmas Bird Count, at the Oliver Brothers area in the heart of the salt ponds, we found the largest assemblage in the United States of black-bellied plovers. Many changes have occurred. The population is still maintaining, which is good news. Also, the flats are useful, the old saltworks. You might want to think of reconstructing them.
Response: We are protecting them, and building berms around them. There are a lot of black-bellied plovers at the Alvarado Saltworks, and on the islands at Pond E2.

Q: Your map of public access shows orange-colored trails with a comment about regulatory agency concern that there might be the potential to disrupt habitat.
A: This is one of the issues, what the trail alignment should be, given those concerns. One concern is about having a trail through a large extent of tidal marsh, and another concern is about the issue of ponds species. These are issues we will look at and grapple with.
Q: Is it possible that the trails would be seasonal?
A: Yes.

Comment: In regards to Ponds E12 and E13 and the salinity variations, Marin and Sonoma counties are planning a desalination plant and are dealing with the issue of brine wastes, which might be informative. Delta Diablo is also looking at desalination.
Response: Desalination is decoupled from what we are doing, as we are looking at salinities that would be discharged into the Bay at ambient conditions.

Q: You said this could take a long time – how long is long?
A: In 5-10 years, we will be underway. How long it will take to complete is unknown. There are issues of infrastructure, adjacent areas, and other topics.

Q: In regards to flood control, what is on the table?
A: Everything is on the table, including a landmass feature with habitat restoration features. In addition, HASPA is undertaking a planning process to the north, and we will apply those lessons to this southern area.

Facilitator Mary Selkirk said there are many moving parts and interests in the southern Eden Landing area in regards to flood protection, species and trade-offs with different types of public access. Attendees can expect a number of public meetings in the next couple years. The East Bay Regional Park District will be participating in the discussions.

John Bourgeois said that Alameda County has done a lot of work in modeling, and managers will need to identify the appropriate time to bring that information before the public.

In regards to the entire Project area, he showed a map indicating areas with the ability to receive dredge or upland fill material. The Project could potentially opportunistically take advantage of millions of cubic feet of fill, as they are made available. This is another issue that will be looked at in Phase 2.

8. Update on the Shoreline Study

Brenda Buxton of the State Coastal Conservancy, with the aid of a PowerPoint presentation, gave an update on the Project's related effort, the South San Francisco Bay Shoreline Study, which is being undertaken with the Santa Clara Valley Water District and the Army Corps of Engineers. The scope of the study was revised to focus on Alviso-area ponds, because of the amount of economic damage identified in an Army Corps analysis, and because Alviso is so subsided that there are health and human safety issues. Lastly, providing flood protection in the Alviso area will allow the Project to proceed with tidal restoration at a number of ponds. The timeline calls for having a proposal to Congress by the end of 2013. The study includes two components, flood risk management and ecosystem restoration.

For flood risk management, structural elements would join two points, Alviso Slough and Coyote Bypass, to prevent tidal flooding of the Alviso area. Alternative alignments have been developed for two stretches, from Alviso Slough to Artesian Slough, and from Artesian Slough to Coyote Bypass. The alignments, shown on PowerPoint slides, vary from being closer in to urbanized areas or farther out. Attendees of an Alviso Working Group meeting in August were less supportive of a close-in alignment, as it would cut off views and skirt close to homes. All levies would tie into the existing flood control network and make a complete link. For the railroads, two options include installing flood gates or raising the railroad. The latter option would be expensive.

For ecosystem restoration, the goal would be to undertake tidal restoration through phases, using a robust adaptive management process to ensure that restoration is not causing problems. Adaptive management would look at mercury, bird populations and scour issues. The conceptual approach would be to first build flood protection, then take advantage of historic sloughs, lower levees, build higher features and breach internal levees. Phasing would be over 30 years.

The study is making good progress.

Questions/Comments:

Q: Is the precise definition the area between Coyote Creek and Guadalupe River?
A: Yes.

Q: To what extent would you be going up those streams?
A: The study has a fluvial/tidal focus. There is already flood protection on Coyote Creek and Guadalupe River.
Q: But as you restore areas to tidal marsh, wouldn't you move upstream?
A: That's why we need the levee. My understanding is that the streams have a high level of protection.

Comment: The protection on the streams is under current conditions. So the shore will move upstream with sea level rise.

Al Gurevich of the Santa Clara Valley Water District said the fluvial protections have a level of protection acceptable to FEMA. Sea level rise will raise the water surface elevation. The District believes it has enough capacity to accommodate that. However, members of the public are right to raise questions about these issues. The district will keep watching these issues as it goes forward.

Q: I thought the ground had subsided 12 feet. Is there a plan to recharge the aquifer?
A: The subsided areas do not come back.

Pat Showalter of the Santa Clara Valley Water District said the District manages the area so that there is not further subsidence. The consistency of these peat areas is similar to oatmeal, and once the groundwater is removed, the fluff does not come back. The District does extensive recharge of more than 120,000 acre-feet per year as a water source and to maintain hydraulic pressure. She said members of the public are right that this is a major issue that the District continues to work on.

Q: There was flooding in Moffett Park in the 1990s. What is the relationship there? I wonder, do I need a levee?
A: The Army Corps did an economic analysis of four big drainage areas. Aside from Alviso, two were in Palo Alto and one focused on Moffett Field. The problem with that area was its federal ownership, a federal project benefiting another federal agency.
Comment: There is private land next to Moffett Field with millions of square feet of offices.
Response: The study focused specifically on Moffett Field. Just because there is a current focus on Alviso does not mean that we are going to ignore the other areas. We hope to have a success and then move on to the other areas.

9. Looking Ahead to 2012

John Bourgeois said project managers are thrilled with the success they've had in such a short period of time. That is a credit to all of the stakeholders and partners attending, and the interagency cooperation.

Immediate next steps will include hiring a consultant for Phase 2, which should occur during early 2012. Feasibility studies would take about one year. There will be more opportunities for input as project managers discover red flags and concerns that will be brought back to stakeholders. The studies would be followed by the permitting and CEQA process.

Meeting participants are invited to contact him with questions and concerns at jbourgeois@coastalconservancy.ca.gov. Lead Scientist Laura Valoppi is available at laura_valoppi@usgs.gov.

Attachment 1: October 20, 2011 Meeting Attendance

Name	Organization/Affiliation
Donna Ball	H.T. Harvey
Scott Bodensteiner	Weston Solutions
Carolynn Box	BCDC
Erika Castillo	ACMAD
John Coleman	Bay Planning Coalition
Evelyn Cormier	Ohlone Audubon, CCCR
Maureen Cruzen	NASA Ames
Cynthia Denny	Sierra Club, Loma Prieta Chapter
Ron Duke	H.T. Harvey
Jim Foran	SCCOSA
Phil Gordon	Ohlone Audubon, HASCAC
Jill Hamilton	ESA
Jim Haussener	CMANC
Diane Heinze	Port of Oakland
Melisa Helton	USFWS
Carin High	CCCR
Ellen Johnck	
Jane Lavelle	SFPUC
Jeremy Lowe	ESA PWA
Libby Lucas	California Native Plant Society
Pat Mapelli	Cargill Salt
John Marchant	City of Mountain View
Ryan Mayfield	City of San Jose
Eileen McLaughlin	CCCR
Stacy Moscal	USGS
Jane Moss	Don Edwards docent
John Murray	Sen. Feinstein's Office
Chindi Peavey	San Mateo County Mosquito Abatement
John Rusmisel	ACMAD
Rohin Saleh	Alameda County Flood Control
Rich Santos	SCVWD
Howard Shellhammer	H.T. Harvey
Pat Showalter	SCVWD
Kirsten Struve	City of San Jose
Charles Taylor	Alviso
David Thomas	PG&E
Luisa Valiela	EPA
Dave Whittum	City of Sunnyvale
Simret Yigzaw	City of San Jose
Selim Zeyrek	ACWD