

**Long-Term Restoration Planning for Baylands  
in Alameda, Santa Clara, and San Mateo Counties, California  
South Bay Salt Pond Restoration Project<sup>1</sup>**

**National Science Panel Meeting  
October 12 - 13, 2004**

**Summary of Recommendations**

**1.0 INTRODUCTION**

This report summarizes recommendations made by the National Science Panel (NSP) resulting from the third NSP meeting held on October 12-13, 2004. All six members of the NSP (see Appendix A) were present. In addition, members of the Project Management Team (PMT), the Science Team, the consultant team, and other stakeholders were present. A complete list of attendees is provided in Appendix A.

The primary purpose of this third NSP meeting was to discuss the draft Science Plan, the Adaptive Management Outline, and an example Conceptual Model prepared by the Science Team. In addition, the meeting included a presentation on South Bay sediment dynamics by Bruce Jaffe of USGS, as well as updates on various components of the South Bay Salt Ponds restoration project and other related projects. A list of materials provided to the NSP in advance of the meeting is included in Appendix B.

The following are recommendations made by the NSP as a result of this meeting.

**2.0 SCIENCE PRODUCTS AND THEIR REVIEW**

The NSP members agreed that the Science Team is making considerable progress. At this point, the NSP recommends that the Science Team focus on completing the syntheses of existing knowledge for the technical areas that have been identified, as this is a critical step in the science process.

The NSP is encouraged to learn that recently the Science Team has been working more closely with the consultant team to develop technical approaches. For example, members of the consultant team have been actively involved in development of some of the conceptual models, and members of the Science Team have been working with the consultants on hydrodynamic modeling methods. While this integration is generally beneficial, it is also important to keep in mind that when members of the Science Team

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<sup>1</sup> The South Bay Salt Pond Restoration Project is that described in the Memorandum of Understanding of May 27, 2003 among the U.S. Fish and Wildlife Service, the California Department of Fish and Game, and the State Coastal Conservancy.

are involved in development of the consultant's approach, those members lose their ability to provide outside expert review.

Expert review of consultant's products will likely be valuable but the stand alone quality of these products is not as important as how the documents are ultimately used in the restoration process. The NSP recommends that review of the consultant's products should not be a priority for the Science Team given their need to focus on the science syntheses and other tasks. When expert review of the consultant's products is determined to be necessary, a recognized expert that has not been intimately involved should perform it. In some cases, a member of the Science Team may be the most appropriate person to conduct the review, and separate arrangements should be made for this.

The key deliverables produced by the Science Team (such as the syntheses and the conceptual models) should also be reviewed by outside experts. This review may be done by a formal peer review process, which generally requires a considerable amount of time. Due to the tight timelines for this project, an alternative review process would be to hold workshops with outside experts. Ultimately, the science syntheses and the consultant's work must be combined to guide implementation.

### **3.0 DEVELOPING A LANDSCAPE VISION**

The NSP recognizes that the Science Team is working to develop important supporting information for restoration planning and implementation. Given the level of commitment required for participation in Science Team efforts, and the need to have a team of a size that can effectively work together, considerable "expert" knowledge from within and outside of the San Francisco Bay area is not currently being incorporated into the effort. In addition, the NSP observes that despite the momentum that the planning effort has gained, a 'landscape vision' for the South Bay to guide restoration has yet to be articulated. A landscape scale strategy for restoration is extremely important to this effort because of both the opportunities presented by the salt ponds' position in a complex mosaic and the constraints imposed by environmental forcing (e.g., sediments, fresh water), stakeholder requirements (e.g., flood control levees) and other (e.g., contaminant) spatially explicit factors. All the alternative restoration scenarios will have much higher chances of achieving both scientific credence and public acceptance if framed within the context of the existing and future South Bay landscape. Such assessments are fundamental components of restoration programs such as this.

The NSP recommends that a charette style workshop be held in February 2005 to engage an array of experts in the development of a landscape vision. By that time, some of the key science elements will be drafted, including the syntheses and the conceptual models. The consultant team will also have developed draft implementation alternatives. The charette will build on these products and provide a foundation for the evaluation of the final alternatives. The specific outcomes of the charette would be to:

- Formulate a landscape vision for the restoration project, including the spatial allocation of ecological qualities, societal values and uses, and socio-economic and ecosystem constraints necessary to meet project objectives
- Identification of priority information and analytical approaches necessary for restoration to achieve the vision.
- Identification of potential adaptive management experiments

The charette should be held for two full days, at a relatively isolated location with no outside distractions. Invited participants would be drawn from the PMT, the Executive Leadership Group, the NSP, the Science Team, the consultant team, as well as outside experts, stakeholders, and agencies. The group should also consider including a key stakeholder to present the project objectives. Some parts of the workshop could be open to public observation. The ground rules for participation and observation should be laid out in advance of the meeting.

The NSP volunteer to work with the Lead Scientist and the Executive Project Manager to plan the workshop, provided the project could cover travel expenses and some staff support. Jerry Schubel and Denise Reed will be the points of contact for the NSP in the first instance.

#### **4.0 PROJECT LEADERSHIP**

The current project objective seems to be the successful and timely completion of the EIS. However, it is not apparent to the NSP how the efforts of the Science Team are integrated into that process (other than through the review of consultant products – see earlier recommendation). The lack of ability to incorporate understanding of system dynamics into the plan is a potentially fatal flaw for project implementation. It is critical that the Executive Project Manager ensure that these processes merge by creating links between the planning process and the science process. In addition, the link between the outreach/education component of the program and the Science Team is currently not apparent to the NSP.

The NSP supports the idea of developing pilot or “demonstration” projects, which could be implemented prior to the Record of Decision and used as an opportunity to learn. These could be important as a community education and public involvement tool, as well as adaptive management experiments. However, it is imperative that sufficient resources be devoted to monitoring or studying such projects so they can fulfill their potential to be adaptive, learning experiments. It is essential that the leadership structure can be proactive regarding opportunities for both implementation and learning in the context of a well-defined landscape vision.

The NSP believes that strong, proactive leadership is essential for project success and recommends that individuals charged with leading the planning effort are empowered to take ideas and run with them, and make the most of opportunities for early restoration.

## **5.0 INTERIM STEWARDSHIP PROGRAM**

The interim stewardship program can provide early opportunities for restoration, learning through adaptive management, and linking science to implementation of the long-term plan. The South Bay Salt Ponds Restoration Project should take advantage of this excellent opportunity for scientific study, experimentation and learning about responses to both passive and active ecological engineering. Some of the important questions that could be addressed include

- How to best manage pond hydrology for fish and wildlife?
- What are the consequences of levee breaks or failures for water quality and fish and wildlife?
- How are mercury dynamics altered under high salinities?
- How do different types of water control structures affect nekton access compared to open levee breaches?

The knowledge gained from the ISP investigations should be utilized to refine the plan for long-term restoration. For example, experiments conducted under the ISP could yield important information obviating the need for more elaborate research projects to address critical needs that could otherwise delay implementation. However, and as expressed above, a solid commitment for monitoring, either from existing resources or by seeking external resources, is essential to achieving these benefits and should be a SBSRP priority.

## **6.0 ADDITIONAL RECOMMENDATIONS**

The NSP reiterates its previous recommendation that some social scientists should be added to the Science Team, including a cultural anthropologist and a resource economist. The NSP stresses that these need to be relatively senior scientists who have broad-based experience and can come up to speed quickly with the project.

## **7.0 NEXT MEETING**

The next NSP meeting has been scheduled for May 31 – June 2, 2005.

## Appendix A

### List of Attendees National Science Panel Meeting October 12-13, 2004

#### National Science Panel

|                        |                                 |                           |
|------------------------|---------------------------------|---------------------------|
| Denise Reed (Chair)    | University of New Orleans       | djreed@uno.edu            |
| Charles (Si) Simenstad | University of Washington        | simenstd@u.washington.edu |
| Sam Luoma              | USGS                            | snluoma@usgs.gov          |
| Michael Erwin          | USGS & University of Virginia   | rme5g@virginia.edu        |
| Jerry Schubel          | Aquarium of the Pacific         | jschubel@lbaop.org        |
| John Teal              | WHOI & Teal Ltd.                | Teal.john@comcast.net     |
| Jorg Imberger          | University of Western Australia | ji@cwr.uwa.gov.au         |

#### Science Team

|                               |                                    |                                 |
|-------------------------------|------------------------------------|---------------------------------|
| Lynne Trulio (Lead Scientist) | San Jose State University          | ltrulio@earthlink.net           |
| Ed Gross                      | Consultant                         | Ed.gross@baymodeling.com        |
| Jessie Lacy                   | USGS                               | jlacy@usgs.gov                  |
| Fred Nichols                  | USGS (retired)                     | fnichols@pacbell.net            |
| Mark Stacey                   | University of California, Berkeley | mstacey@socrates.berkeley.edu   |
| Mark Marvin-DiPasquale        | USGS                               |                                 |
| Dave Schoellhamer             | USGS                               | dschoell@usgs.gov               |
| Dilip Trivedi                 | Moffatt & Nichol                   | dtrivedi@maffattnichol.com      |
| Nils Warnock                  | Point Reyes Bird Observatory       | nilsw@prbo.org                  |
| Josh Collins                  | San Francisco Estuary Institute    | josh@sfei.org                   |
| Kate Schafer                  | Aquamarine Research                | <u>kateshafer@earthlink.net</u> |

**Project Management Team**

|                  |                                 |                       |
|------------------|---------------------------------|-----------------------|
| Steve Ritchie    | Executive Project Manager       | sritchie@scc.ca.gov   |
| Amy Hutzel       | Coastal Conservancy             | Ahutzel@scc.ca.gov    |
| Carl Wilcox      | California Dept. of Fish & Game | Cwilcox@dfg.ca.gov    |
| John Krause      | California Dept. of Fish & Game | Jkrause@cdfg.ca.gov   |
| Clyde Morris     | USFWS/Refuge                    | clyde_morris@fws.gov  |
| Nadine Hitchcock | Coastal Conservancy             | nhitchcock@scc.ca.gov |

**Consultants**

|               |                                 |                        |
|---------------|---------------------------------|------------------------|
| Mary Selkirk  | Center for Collaborative Policy |                        |
| Deborah Clark | Center for Collaborative Policy |                        |
| Don Dahmeier  | Phil Williams Associates        | d.dahmeier@pwa-ltd.com |
| Ron Duke      | HT Harvey and Associates        |                        |
| Lisa Hunt     | URS Corporation                 | lisa_hunt@urscorp.com  |

**Others**

|                 |                                   |                                  |
|-----------------|-----------------------------------|----------------------------------|
| Dan Bruinsma    | City of San Jose                  | dan.bruinsma@sanjose.ca.gov      |
| Beth Dyer       | Santa Clara Valley Water District | bdyer@valleywater.org            |
| John Schmidt    | Resources Legacy Fund             | jschmidt@resourceslegacyfund.org |
| Ruth Corvanis   | Interested public                 |                                  |
| Mary Schoonover | Resources Law Group               |                                  |
| Jim McGrath     | Port of Oakland                   |                                  |
| Amy Foxgrover   | USGS                              | afoxgrover@usgs.gov              |
| Theresa Fregoso | USGS                              | tfregoso@usgs.gov                |

## **Appendix B**

### **List of Review Materials National Science Panel Meeting April 20-21, 2004**

Most review materials can be found on the project website at:  
<http://www.southbayrestoration.org/Events.html#natscipanel>

1. Draft Science Plan
2. Adaptive Management Plan Outline
3. Draft Adaptive Management Process Diagram
4. Project Status Report
5. Project Schedule
6. Description of Conceptual Model for the Salt Marsh Harvest Mouse
7. Diagram of Conceptual Model for the Salt Marsh Harvest Mouse