

# **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 July 10-11, 2003**

### **Summary of Recommendations**

#### **1.0 INTRODUCTION**

This report summarizes recommendations made by the National Science Panel (NSP) resulting from the first NSP meeting held on July 10-11, 2003. All members of the NSP (see Appendix) were present with the exception of Jorg Imberger, who could not attend because of previous scheduling conflicts. The primary purpose of this meeting was to formulate NSP recommendations in establishing a framework for incorporation of a scientific process into the long-term restoration planning for the South Bay Salt Pond Restoration Project.

The recommendations focus on the role of science in the organizational structure supporting the planning effort and feedback on specific project documents provided to the NSP prior to the meeting. In addition, NSP feedback on other relevant items is summarized. The Project Management Team (PMT) had also requested that the NSP provide input on identification of critical data needs. However, the NSP agreed that it is premature for them to comment on specific data needs and emphasized the need for development of a comprehensive Science Strategy for ensuring that restoration goals are achieved.

#### **2.0 ROLE OF SCIENCE IN THE RESTORATION PLANNING PROCESS**

The NSP, in response to the PMT, considered the role of science in the current organization chart for the restoration planning process and provides here specific recommendations concerning the role of the NSP, the PMT, and other elements necessary to ensure timely science support for restoration plan development. The PMT is currently in the process of refining the organizational chart and determining the roles and functions of each entity and the NSP is optimistic that our comments will be incorporated.

##### **National Science Panel**

Members of the NSP agreed that the most appropriate role for this group would be an advisory role at a strategic level, not in conducting detailed review of documents. The

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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.

NSP should report to the Executive Leadership Group. This will ensure that decision-makers at all levels are aware of NSP recommendations and comments concerning the role of science in the planning process. Interaction between the NSP and the Executive Leadership Group could occur via a combination of written reports from the NSP and periodic short briefings (either as part of the NSP meetings if possible for Executive Leadership Group members to attend, or in separate meetings set up with the NSP chair). The NSP believes that such a reporting structure elevates the role of science in the planning process, and empowers the use of science at all levels within the organizational structure while recognizing that the NSP will interact with PMT and other science advisors during meetings to keep informed of planning and implementation progress.

The NSP makes the following recommendations regarding the role and function of the NSP:

1. The role of the NSP should be to ensure that science is used appropriately in restoration planning, that scientific study and planning activities are responsive to project goals, and to recommend course corrections as necessary. Detailed review of technical documents is not a function of the NSP.
2. The NSP should meet approximately twice a year, on a schedule that corresponds with project milestones. The NSP would review materials provided in advance of these meetings, and submit written recommendations following the meetings (in addition to informal comments made during the meetings).
3. The NSP would make recommendations directly to the Executive Leadership Group, in writing and in the form of presentations.
4. In the case that the Executive Leadership Group does not follow NSP recommendations, a response and rationale should be provided, with further opportunity for discussion and clarification. A good paper trail is important.
5. The Lead Scientist (see description under Science Team) should brief the NSP at each meeting, and the Lead Scientist and NSP Chair should coordinate in advance of meetings.
6. At each NSP meeting, it would be useful to include a scientific presentation on some relevant research topic involving the South Bay. These presentations could be made either by individuals on the Science Team, or by outside researchers and scientists not directly involved with the restoration project.
7. Members of the NSP may undertake individual research, advisory or review contributions to overall South Bay restoration efforts, provided that such efforts are funded independently of the South Bay Salt Pond Restoration Project.
8. Individual members of the NSP should be free to assist the South Bay Salt Pond Restoration Project by providing more detailed review of technical documents or

specific technical support in their areas of expertise, as their time permits and independent of NSP activities. Such tasks would not be conducted in conjunction with NSP meetings, and any resulting technical reports would be submitted by individuals, and not endorsed by the NSP as a group.

## **Science Team**

In the absence of a clearly defined role for the Technical Committee and recognizing the need to provide a sound scientific basis for restoration decision-making at all stages in the process, the NSP recommends reformulating the committee structure for science. The aim is to ensure appropriate skills in key roles to assist in developing the technical approach and provide scientific guidance. The expanded Science Team described here replaces and encompasses the role of the Technical Committee in previous organizational structures. The NSP recommends the following structure for the Science Team:

- A Lead Scientist should be recruited to guide formulation of the Science Strategy and provide ongoing leadership to the science efforts. This individual should be actively recruited based on qualifications as a research scientist and effectiveness in leading a team. The NSP envisions this position as being a substantial time commitment initially, with a decreasing time commitment after initial steps are completed (see below). The Lead Scientist should be provided with staff support.
- A Strategic Thinking Group should consist of three to five scientists who are “big picture” thinkers. The Lead Scientist would convene this group, and the first task would be to develop a comprehensive Science Strategy for the project (see later section). This group would also be responsible for development of other key strategy documents such as the conceptual model, and for identification of uncertainties and data needs.
- The Science Board should consist of approximately 12-15 scientists who meet quarterly, and could be chaired by the Lead Scientist. This Board would likely function both as a Board and through sub-committees, and should include those with expertise in social science and engineering aspects of flood management in addition to ecological, biological, chemical, physical, sedimentological, and engineering aspects of restoration. These sub-committees would be assigned specific tasks depending on the needs laid out in the Science Strategy.
- A standing pool of individuals with specific fields of expertise could be kept on call to serve in a peer review and QA/QC function, participate in subcommittees on an ad hoc basis, and prepare specific deliverables as needed. These individuals would not necessarily attend meetings on a regular basis but would increase the scientific foundation of the planning effort.
- Steve Ritchie and URS Corporation (or equivalent entity) would provide communication and interface between the Science Team, the NSP, and the PMT, as well as provide technical and administrative staff support to the Science Team.

## **Project Management Team**

The NSP recommends that the PMT, as the body overseeing the day to day restoration planning and implementation effort, needs to include the Lead Scientist to ensure the science strategy is fully incorporated into the planning and implementation efforts. A chair (or facilitator) would help in decision-making and communication with other entities. The NSP anticipates that many important decisions regarding the restoration plan will be made in the next year and recommends that the PMT be chaired by an independent consultant during this period to ensure decisions are not seen to be influenced by any single agency position. Steve Ritchie with URS has the experience and skills to fill this role.

Members of the NSP agreed that the PMT is currently larger than would be ideal for a management team. However, it is understood that multiple agencies need to be represented, and it is probably not realistic to expect this group to be smaller. The role of the U. S. Army Corps of Engineers in the PMT needs to be determined. If the Corps takes an active role, this may also affect priorities among project objectives (such as the role of flood management). As the Lead Scientist should also be a member of the PMT, the PMT would be composed of:

- Chair (or Facilitator)
- Lead scientist
- CDFG representative
- FWS representative
- Coastal Conservancy representative
- Corps of Engineers (role to be determined)

The PMT will be responsible for developing project schedules and preparing restoration planning documents and associated permitting and environmental compliance documents (with assistance from consultants). It will be important for the PMT to interface with the Science Team and the NSP to make sure that the Science Strategy is fully integrated into the restoration program as it develops.

## **Science Strategy**

The first task of the Science Team will be to develop the Science Strategy. The purpose of this Strategy will be to establish a scientific framework and gather information that feeds into the restoration planning and execution process.

The Science Strategy will be based on the milestones in the restoration planning and execution process (e.g., development of alternatives, screening of alternatives, detailed evaluation of alternatives). The Science Strategy will identify the scientific needs of each milestone and will outline the process required to meet those needs. For example, if certain ecological or physical models will be needed during detailed evaluation of alternatives, the science strategy will include a process for the identification,

development and refinement of those models prior to the time when they are needed to assist in the restoration planning and execution. Similarly, the Science Strategy will outline processes for developing and refining conceptual models, identifying and prioritizing major uncertainties, and appropriate peer review procedures for key project documents. The Strategic Thinking Group (identified above) will develop and refine this document.

A draft Science Strategy should be developed prior to the next NSP meeting (by late 2003), and will be the primary document reviewed at the meeting. A draft Conceptual Model of the environments, habitats and process linkages to be encompassed by the restoration effort should be included in this document.

### **3.0 REVIEW OF PRINCIPLES, OBJECTIVES, AND CONCEPTUAL MODEL**

The NSP believes that public support is very important in defining the project goals. Therefore, the following suggestions are made:

- The Mission Statement be rephrased to show ‘publicly supported’ as the most important characteristic of the plan, and to include the concept of sustainability.
- Switch the order of the first two principles, so that public involvement comes first.

The current list of project objectives is too detailed and extensive. The objectives could be condensed into three main issues: habitat for fish and wildlife, flood management, and public access. Issues such as vector control are really constraints (the project should not adversely affect vector control) rather than project objectives. It still needs to be determined whether flood management is a true objective (is the intent of the project to improve current levels of flood control?) or a constraint (not to adversely affect current levels of flood control?). This may depend in part on the Corps role and funding for the project.

The Science Team needs to develop a draft Conceptual Model or series of linked Conceptual Models that will lead to formulating and guiding restoration plan, assist in identifying information needs, and lead to performance measures. The Conceptual Models should reflect the current understanding of how the system works and provide a framework for identifying system response to potential restoration measures.

### **4.0 OTHER FEEDBACK**

The NSP also has the following recommendations:

- It is important to ensure integration of existing/interim (Initial Stewardship Plan) measures into the long-term restoration plan. Because the NSP has not had the

chance to review the Initial Stewardship Plan, it currently is not clear how interim and long-term planning are being integrated.

- The PMT (or the Lead Scientist) should consider hosting a scientific forum on South Bay issues relevant to the restoration project. This forum could possibly be held in conjunction with the State of the Estuary conference in October. Such a forum would help to get scientists together to start discussing the issues, identifying important processes, determining the state of knowledge and identifying key data needs. The forum could also be a tool for developing the Science Strategy.
- The NSP recommends that the restoration planning be conducted at a regional scale and not focus specifically on individual ponds, that it consider future environmental changes as well as current system status, and that the sediment deficit issue, already raised by many scientists, be explicitly addressed. Further, the NSP sees this project as a real opportunity for the application of adaptive management and recommends that both reference sites and areas for experimentation be identified early in the planning process to improve the science base for future restoration.

**Appendix  
List of Attendees**

**National Science Panel  
July 10-11 2003  
Don Edwards San Francisco Bay National Wildlife Refuge**

**National Science Panel**

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**Project Management Team**

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