Dutch Slough Adaptive Management Working Group
Meeting Agenda –
April 8, 2004, 9:00 to 5:00

Meeting Goals: The goals of the meeting are to discuss and, if possible, to agree upon the restoration conceptual model and basic experimental design approach for Dutch Slough.

1. (9:00 A.M.) Introduction – John Cain / Mary Small (15 mins)
    a. Introduce new members.
    b. Brief overview of the planning process.
    c. Brief review of products from the previous meeting (summary, minutes, goals and objectives, and data gaps memo).

2. (9:15 A.M) PWA work plan and schedule – Michelle Orr (10 mins)

3. (9:25 A.M.) Recap of Adaptive Management Experiment Recommended by the CALFED Adaptive Management Workshop, Delta Habitats Group (included in read-ahead materials) – Michelle Orr, Phil Williams, Si Simenstad (25 mins)

    a) Tidal Marshes with Dendritic Channels
    b) Conceptual Model
    c) Experimental design

4. (9:50 A.M.) Question and answer on subject of dendritic channels in freshwater tidal marshes and the conceptual model (PWA team fielding questions from the AMWG) (20 mins)

*** Short Break (10 minutes) ***

5. (10:20 A.M.) Schedule next AMWG meeting(s) – Mary Small / John Cain (10 mins)

6. (10:30 A.M.) Discussion of the Conceptual Model (see PWA memo with questions) (1.5 hr)

    a. Develop consensus on the key uncertainties of the model and its application to Dutch Slough.
        i. What will dendritic channels and marshes look like in a freshwater environment? Will tidal action alone maintain dendritic channels or will tules be prone to colonize the low order channels?
        ii. What are the important characteristics of dendritic channels and adjacent marsh that benefit native fishes.

iii. What mechanisms, besides in channel velocities, inhibit SAV in tidal marshes with dendritic channels.
iv. Can we cost effectively design and construct tidal marsh plain and dendridic channel systems across most of the Dutch Slough site that are stable and sustainable in the long-term? Will we need to import large amounts of dredged spoils or other fill materials? Is tule cultivation prior to inundation the best way to jump start marsh plain accretion?
v. What is the relationship between marsh channel pattern, hydrodynamics, and marsh plain vegetation characteristics.

b. Does the dendritic channel tidal model adequately cover the full range of assumptions about how potential restorations of the Dutch Slough site will benefit native species, preclude SAV, and minimize water quality impacts?
i. How will the dendritic channel model apply in the sub-tidal and super-tidal wetlands of the Dutch Slough site?
ii. Should the dendritic tidal marsh model be integrated with additional models that apply to sub-tidal and super-tidal wetlands?
iii. Should we attempt to integrate conceptual models for mercury methylation, DOC, and delta water quality into a larger conceptual model or should we develop separate models that describe the relationship between tidal marsh and these water quality parameters.
iv. If we augment the dendritic tidal marsh model with other models, what are some of the key uncertainties associated with the other models.

7. (12:00 P.M.) Working Lunch (1 hr)
   a. Break, get lunch, sit down (20 minutes)
   b. Presentation by John Cain on the varying modes of adaptive management experiments that could be employed at Dutch Slough (10 minutes)
   c. Presentation by Michelle Orr on guiding principals for experimental design (10minutes)
   d. Free time, discussion (20 minutes)

8. (1:00 P.M.) Discussion on guiding principals (15 minutes)
   a. Revise and add to preliminary list of guiding principals.

9. (1:15 P.M.) Experimental Design Proposed by the CBDA Adaptive Management Workshop (1 hour)
   a. Is the experimental design consistent with the guiding principals?
   b. Does this experimental design adequately test the key uncertainties that the AMWG identified with regard to the application of the dendritic tidal marsh conceptual model at Dutch Slough?
   c. Does the experimental design preclude testing key uncertainties associated with other conceptual models relevant to Dutch Slough?

d. Does the design maximize ecological benefits as well as research benefits based on our existing state of knowledge regarding conditions that enhance native fish populations and inhibit SAV?

10. (2:15 P.M.) Short Break

11. (2:30 P.M.) Discussion of the experimental design (1.5 hour)

    a. Assuming that the experimental design should be developed to test the key uncertainties in our model, what kind of experimental approach should be employed at Dutch Slough? Will a comparative/replicate experimental design work at Dutch Slough from a scientific or management perspective?
    b. How many conceptual models can we test at the Dutch Slough site? Is it possible to design multiple experiments into a single design that will allow us to test multiple hypothesis associated with more than one conceptual model? Are there some types of experimental approaches that will be suitable for addressing multiple questions?
    c. Should the overall experimental approach depend on comparison of replicates, sequential implementation, or iterative manipulations? What are some of the scientific, financial, management, and political limitations of these various approaches? Can we rule out one or more of these approaches? Does a comparative replicate approach require simultaneous implementation on all 3 parcels?

12. (3:30 P.M.) Refinement of Implementation Commitments, Goals and Objectives – Mary Small / John Cain (0.5 hr)

13. (4:30 P.M.) Meeting Wrap Up

    a. Where to we have consensus?
    b. What issues do we need to resolve to move forward on experimental design?
    c. Next Steps?

***** 5:00 P.M. ADJOURN PROMPTLY *****