

Napa Sonoma Marsh Restoration Group Meeting
USGS San Pablo Field Station Offices, Building 505, Mare Island
Tuesday August 21, 2007
Meeting Notes

Monitoring Programs in the Napa-Sonoma Marshes

USGS Monitoring in the Napa Marshes (Nicole Athearn, USGS)

Note: see presentation materials in meetings folder on project website (napa-sonoma-marsh.org). The values of percent of birds/pond are not normalized for pond area.

USGS is continuing to monitor water quality in the ponds. They are also doing one annual vegetation survey to track vegetation establishment and ecological development.

Bird monitoring is continuing at the Napa Sonoma Marsh project and at the Napa Plant site. Some of the changes noted by USGS are:

- Fewer birds are presents on Ponds 3, 4, and 5 relative to the unbreached ponds
- There are more birds present overall
- There is increased bird use at the Napa Plant Site
- The change from the 2005-2006 monitoring year to the 2006-2007 monitoring is more dramatic than the level of changes seen prior to the habitat shifts
- The increased number of breaches in Pond 3 has led to faster water movement through the pond, so the time that the mudflat is exposed has decreased

It is likely that the birds are roosting at the Napa Plant Site during high tide – the bird counts are done at high tide. USGS has tried to do a low tide survey, but it is difficult and dangerous to get into the ponds and onto the levees at low tide. It is also very difficult to time the low tide counts to make sure they always occur at the same tide stage. Day-to-day change(s) would be difficult to measure in a meaningful way due to the on-going water level changes for each tide.

Water Quality Monitoring Results for the Napa Marshes (Tim Stephens, DFG)

Note: see presentation materials in meetings folder on project website (napa-sonoma-marsh.org)

DFG has been conducting water quality monitoring (salinity, dissolved oxygen, temperature, pH, turbidity, and ammonia) in the breached ponds (Ponds 3, 4, and 5), several reference locations in Napa River and a reference location in San Pablo Bay. Methyl mercury monitoring was conducted in Ponds 1, 2A, 3, 4, and 5 as well as several reference sites. Continuous (hourly) dissolved oxygen levels were obtained from fixed probes installed in Ponds 1 and 3.

Overall compliance with permit conditions was good. Ammonia exhibited several exceedances in the ponds and reference sites. The higher ammonia concentrations in winter are probably due to increased bird use and/or higher discharges from Napa Sanitation District due to higher winter flows. The permit target for ammonia seems to be quite low, and needs to be checked.

Turbidity levels occasionally exceeded permit limits, primarily at the monitoring sites immediately upstream and downstream of the breach, but there was no consistent pattern to the occasional exceedances. It is likely that the specific conditions at the upstream and downstream sampling location caused the turbidity exceedances. At these sampling stations, water levels were typically less than 3 feet, and the process of sampling and boating to the sample locations likely stirred up the shallow sediment. In addition, in shallow water wind-driven circulation can significantly affect turbidity. Additional upstream and downstream sample sites would be required to fully understand the significance of the turbidity results, but that would greatly increase costs and staff needs.

In hindsight, it seems that it was unlikely that there would be dissolved oxygen, salinity, or pH concerns in a tidal pond. In the future, we may want to reconsider the sampling frequency/needs for these parameters after an area has been breached to tidal action (and any required salinity reduction is complete).

There was no correlation between methyl mercury and mercury concentrations in sediment. There are no known criteria for evaluating mercury concentrations in water and sediment relative to the potential biological threat. DFG would prefer to switch to biological (plant or animal tissue) monitoring when feasible.

The on-going DO measurements in Ponds 1 and 3 showed the expected seasonal and daily trends. Maintaining the probes, downloading the data, and evaluating the data are all time-consuming tasks that no longer seem warranted given the value of the information derived from the work.

Update on Napa Plant Site Project

Phase-Out Process Update (Susanne von Rosenberg, GAIA)

Salt removal from the North and Central Units has been completed. Cargill has determined that further salt harvest from the South Unit is not feasible, and has notified DFG of this fact. This means that an alternate means for removing the remaining salt from the South Unit is required. Cargill will now evaluate other potential options for salinity reduction, and present a proposed plan to DFG once they have determined a feasible approach. Cost associated with any changes to permits and/or the project design for the South Unit resulting from the alternative salt removal process will be the responsibility of Cargill. Cargill and DGF will work together closely to ensure that the alternative salt removal process can be integrated with the project design.

Permit Process, Public Access, and Design Update (Francesca Demgen, URS)

Note: see presentation materials in meetings folder on project website (napa-sonoma-marsh.org)
Public access for the project has evolved. The initial trail alignment has been modified twice: once at the request of USFWS (to remove the trail between the Napa River and the ponds) and Napa County Airport (to remove the trail on the east side of Ponds 9 & 10). The second change was to reinstate the trail segment on the east side of Ponds 9 and 10 after public access proponents obtained concurrence from Napa County Airport and USFWS to make sure that the presence of this part of the trail is acceptable to both organizations. In addition, a trail has been added on the south side of Ponds 9 and 10. Access to the trails along Ponds 9 and 10 will require

crossing over or under railroad tracks. Napa County will be responsible for obtaining permission from the railroad to install a crossing.

RWQCB has issued the permit for the project (an amendment of the existing permit for the Napa Sonoma Marsh Project), and USFWS has issued a biological opinion. The BCDC permit is in progress. It was slowed down because BCDC staff determined that the Design Review Board needed to assess the project, in part to prepare for the upcoming permit efforts for the South Bay Salt Pond Preparation Project. At the DRB meeting in June, a very short trail spur leading to a lookout partway up on Green Island was added to the recreational features of the project, and concerns and preferences regarding trails were discussed at length. BCDC is currently working on finalizing the permit, and intends to have the permit hearing in September.

The final plans and specifications for the North and Central Units are in progress, and should be completed by the end of August. Currently, there is no funding to conduct the design for the South Unit. Work on the South Unit is on hold until Cargill determines the best alternative salt removal process and funding for the South Unit design effort has been obtained.

Bidding and Construction Process Update (Steve Carroll, DU)

The engineer's estimate for construction of Ponds 9 and 10 (the North Unit) and Ponds W-1, W-2, and W-3 (the Central Unit) is much higher than the funding WCB had set aside for the work. WCB has asked DU to obtain actual bids to ensure that the grant funding request is accurate. The current uncertainties in the cost would require WCB to divert funding from other projects. DU is working on pulling together the bid package, and hopes to have the revised grant proposal to WCB in time for the November Board meeting. WCB also now requires that all CEQA activities be complete, and that all permits be included with the grant application.

Update on Napa River Salt Marsh Project

Ponds 1, 1A, and 2 Construction Update (Steve Carroll, Ducks Unlimited)

Note: see construction photos in meetings folder on project website (napa-sonoma-marsh.org) Construction is moving ahead, and should be completed by October. Most of the work on Ponds 1 and 1A has been completed, however, the levee on Pond 2 was in much worse condition than anyone had anticipated, so a change order had to be written for the contractor. While Ponds 3, 4, and 5 came in significantly under budget; Ponds 1, 1A, and 2 will come in quite a bit over budget (the overall project budget for Ponds 1 – 5 will be close to the original project estimate).

Ponds 6 – 8 Design Status (Seth Gentzler, URS)

Note: see presentation materials in meetings folder on project website (napa-sonoma-marsh.org) URS has been working on the design for Ponds 6/6A, 7/7A, and 8. The approach is to split the ponds into 2 groups: Ponds 6 and 6A, and Ponds 7, 7A, and 8. Ponds 6 and 6A are south of Napa Slough and independent of the water management approach for Ponds 7, 7A, and 8. In addition, Ponds 6 and 6A may be breached to tidal action in the future, if habitat evolution at Ponds 3 – 5 suggests that there is enough sediment in the system, experience with the increased tidal prism associated with opening Ponds 3-5 shows that further increases in tidal demand would not result in excess scour of the sloughs, and wildlife monitoring indicates that there would not be a significant adverse effect on birds. The goals for Ponds 6 and 6A are to improve habitat for shorebirds and waterfowl and improve water quality by improving the ability to

manage water levels in the ponds. As with the other ponds in the system, all water circulation will be tidally driven.

URS has developed an estimate of the optimal number of water control structure (balancing cost and desired drainage/filling times). Work on Ponds 6 and 6A will be limited to installation and replacement of water control structures. No other work is needed.

The goals for Ponds 7, 7A, and 8 are to safely discharge the bittern from Pond 7 over a period of several years and to ensure that each pond has adequate water circulation to support high water quality and provide high quality habitat for shorebirds and waterfowl. Ponds 7, 7A, and 8 are linked, in that Ponds 7A and 8 will provide dilution water for the bittern in Pond 7. Water from all three ponds will be discharged to the donut adjacent to the east sides of Ponds 7 and 7A (known as the mixing chamber). URS is working on designing the appropriate flow control processes, as well as the detailed design of the mixing chamber. The mixing chamber is also designed to accommodate recycled water once Sonoma County Water Agency has constructed the recycled water pipeline.

URS has determined that the energy available from simply discharging the water and brine from the ponds into the mixing chamber is not adequate to ensure mixing of the bittern with the dilution water. URS has developed three alternatives for the mixing chamber design and is currently evaluating them to determine the best approach. URS is also addressing two other issues pertaining to the mixing chamber: 1) at certain tide stages, there is not enough head in Pond 7 to discharge bittern to the mixing chamber, and 2) considerable flexibility is required for the Pond 7 discharge, because as the bittern becomes more dilute, a higher total quantity of brine can be discharged from Pond 7. Initially, the estimated discharge will be on the order of 140 aft/yr. Toward the end of the bittern removal period, the discharge rate of the very dilute bittern may be 10 times or more the initial rate.

Sears Point Project Update

Sears Point Project Update (John Brosnan, Sonoma Land Trust)

The planning process wrapped up in February. USFWS is the federal lead agency, and DFG is the state lead agency. Jones & Stokes and a team of subconsultants have been selected to do the EIR/EA (or EIR/EIS, if necessary) and initial permitting. The meeting notices for NEPA and CEQA should be coming out in September; the project team expects to hold 1 – 2 meetings in Petaluma.

There were 3 iterations of the restoration plan, and the planning process involved 45 stakeholders. The proposed plan calls for 970 acres of tidal marsh restoration south of the railroad tracks (which are south of Hwy 37). The area between the railroad tracks and Hwy 37 will be seasonal wetlands/oat hay fields –managed to enhance and preserve seasonal wetland habitat. The agricultural activities in this area have helped to keep out non-native species.

There will be 40 acres of seasonal wetland restoration north of Hwy 37, and 15 acres of riparian restoration to enhance red-legged frog habitat (in-stream excavation for breeding habitat).

A Bay Trail feasibility analysis has been completed. The analysis looked at many alignment sections individually. The analysis will be reviewed with USFWS shortly.

Sonoma Land Trust has applied for additional grant funding to complete the permitting and do the design, including a \$1 million for a NAWCA grant, and \$1 million in USFWS National Coastal Wetlands Conservation Funds.

Other Project Updates

Sonoma County Water Agency Recycled Water Pipeline to NSM Upper Ponds (Renee Webber, SCWA)

SCWA has applied for a Prop 50 grant to initiate design of the pipeline. SCWA is waiting on further activities pending WRDA. The House and Senate are supposed to vote on WRDA when they return from the summer recess. Bush has already indicated that he expects to veto WRDA as written. The House and Senate may have the votes to override a presidential veto.

Cullinan Ranch Restoration Project (Christy Smith, USFWS)

The project is continuing to make progress. The NOP for the NEPA/CEQA document will be sent out next week. DFG has been asked to be the state lead agency. Some work is already happening. The PG&E tower footings have already been raised and reinforced as needed. Also, construction of the boardwalk to the towers began last week – that work was permitted and funded separately.

Public Site Walks (Francesca Demgen, URS)

There will be site walks for the public at Tolay Creek and the Pond 1/Cullinan levee on September 23.

Documentation of Restoration Efforts (Mark Holmes, Bay Institute)

The Bay Institute has been doing videotaping of the restoration efforts in the area. They have interviewed restoration managers and would like to add input from researchers. SCWA provided funding to the Bay Institute for some video equipment.