LONG TERM MANAGEMENT STRATEGY

MANAGEMENT COMMITTEE MEETING

Building Capacity for Offloading Dredged Sediment in the Bay Area

U.S. Environmental Protection Agency Office
Combined Mariana and Palau Room, Ground Floor
75 Hawthorne Street, San Francisco

Thursday, January 13, 2011
1:00 PM – 4:00 PM

NOTES

Meeting Attendees

Please email Katie Chamberlin for a scanned copy of the meeting sign-in sheet.

Introductions and Review of the Agenda

Alexis Strauss (U.S. Environmental Protection Agency [USEPA]) provided an introduction to the meeting and an overview of the meeting agenda.

Offloader Presentations and Discussion

Liberty Hydraulic Offloader – Presented by Doug Lipton, Lipton Environmental Group

The Montezuma Wetlands Project (Montezuma) has not received dredged sediment since December 2006. The Liberty Offloader, which is currently at Hamilton, could return to Montezuma in June. The cost to rent the Liberty Offloader is about $175,000/month. The operational cost to use the offloader is dependent on the site and the dredging project, ranging from a few dollars per cubic yard (cy) to over $10 per cy depending on the volume of sediment offloaded per day. At Montezuma, the total "tipping" fee for using the Liberty to offload and place cover sediment ranges from $9 to $12 per cy. The tipping fee is a total unit cost for offloading and placement that includes all Montezuma costs, including: land, engineering design, permitting, construction, monitoring and reporting, and financial assurances that allow Montezuma to release the dredging sponsor of all liability once their sediment is placed at the site). The total dredging, transport, and placement costs (including the tipping fee) for projects using Montezuma based on the volumes that have come from dredging at the Ports of Oakland and Richmond ranged from $21 to $29 per cy. These numbers indicate that Montezuma and other beneficial reuse sites can be cost competitive with ocean disposal, when they are well managed and planned. Len Cardoza (Weston Solutions) noted that offloaders in general have the capability to be modified and improved to fit a variety of projects. Doug noted that there will naturally be a cost differential between beneficially reusing dredged sediment and in-Bay disposal. They key is to find a way to reuse the sediment so it can restore wetlands and benefit wildlife without financially damaging water-dependent industries.

Jerico Products/Dixon Marine Offloader – Presented by Mark Sutton, Dixon Marine

Dixon Marine formed a partnership with Chris Lind (Jerico Products, Inc.) to build a small, cost-effective offloader. The offloader has two elements: (1) a fully automated hydraulically mounted pump equipped with floats to prevent damage to scows, and (2) a booster pump with telemetry. The entire system is completely automated, runs by remote control, is self-contained and mounts onto the arm of an excavator. The offloader is well-suited for a 10-inch pipe, has about 4 miles of pumping capability, monitors slurry

velocity, and can accurately regulate suspended solids. It is mobile and does not require shoreside infrastructure or deep water; however, it requires a source of make-up water. It can use electrical power and can be transported over land by truck without a special permit. The offloader uses fish screens that are adequate for both salmonids and smelt. Costs for this equipment are not yet available.

Carneros River Ranch Offloader – Presented by Brian Swedberg, Berg Holdings

The Carneros River Ranch is a 525-acre agricultural ranch that beneficially reuses dredged sediment from small to medium sized barges in Sonoma County. An easement covering the whole property requires it to remain in agricultural use. The Ranch is in the process of permitting its own offloader and is able to accept up to 6 million cy over the planned 20-year build out. It has accepted approximately 700,000 cy of dredged sediment to date – 50,000 cy of which came from Bel Marin Keyes and the rest of which came from Port Sonoma. The elevation of the ranch is currently at between -1 to -2 feet North American Vertical Datum (NAVD 88) ; the site is permitted to be filled to +7 feet NAVD 88, and up to 900,000 cy wet and 200,000 cy trucked in may be accepted annually, over a total period of 20 years. To use the Ranch for dredged sediment placement, scows need to enter the Port Sonoma Marina (minimum depth is 6 feet during low tide), where the offloader will be located. The marina entrance is 190 feet wide, limiting the size of the scow that can use this site. The largest scow to have used the Ranch for dredged sediment placement was a 2,000 cy barge. Due to the need to "work the tides", large scows offloading for any more than about 3 hours could risk getting stuck. Salt management is one of the largest issues for the Ranch. Existing permits for the Ranch allow the placement of dredged sediment in December and January, which lowers the salt margin and helps produce better quality crops. Soil fertility management also helps to minimize salinity. The Ranch's process for soil management involves the following steps:

- Placing the dredged sediment
- Drying the soil
- Preparing the soil for farming
- Harvesting crops; first crop is harvested 18 months after initial placement on site
- Excavating and removing approximately 1.5 feet of the top of the soil and use it to create a new raised farming area; any required amendments are added to the soil during this step

The Ranch accepts all types of clean soils, does not add biosolids and has plans to transition to an organic farm. It produces grapes, olives, tomatoes, flowers, and oak trees (which are mostly sold to Caltrans). The Ranch is expecting to accept dredged sediment from others this dredging season (2011) and is awaiting a permit for the offloader from Sonoma County.

Rental Equipment – Presented by Jim Haussener, California Marine Affairs and Navigation Conference (CMANC)

Over the past several decades, dredging costs have increased 1,000 percent in San Francisco Bay. While the costs are increasing, the federal funding is not, which means fewer projects are completed each year overall. It also means that there are fewer contractors, and thereby less equipment at work in the Bay. The U.S. Army Corps of Engineers (USACE) has been renting dredges for over 20 years in other areas of the country and this may become more common in the Bay in the future. Costs of a project are based on the time for rental equipment and workers rather than dredging volume or barge size. When a dredger is working, contractors receive full pay; when contractors are moving equipment, they receive 70% pay; and when contractors are on-site but not actively working, they receive 40% pay. Incentives are often introduced to maximize production rates. Within the San Francisco Bay, there are hydraulic dredges that could be available for rent, there is also an electric dredge in Santa Barbara. Adding these pieces of equipment to the mix of current options could increase competition as well as capacity. The standardization of pipe sizes to 12-inches, for example, should be addressed to increase the viability of renting equipment.

J.C. Krause (Dutra Group) noted that coordination between dredging project proponents can save as much money as alternative disposal methods and equipment. He added that many times, savings can be better

realized with large projects. For example, with Ports of Richmond and Oakland sediment both going to Hamilton at the same time, the operating costs for using the site are cut in half. Jim McNally (Manson Construction) noted that dredging costs are per day, not per cy, and that ultimately, the contractors, not the LTMS, will find the most effective equipment to use for a given job. The unpredictability of the dredging needs due to the availability of federal funding in the Bay is one reason why there are few competitors in the market. Jim McGrath noted that LTMS should think separately about larger versus smaller dredging projects in the Bay. Jim Haussener (CMANC) noted that large federal projects should be timed to maximize offloader productivity.

Alexis Strauss (USEPA) asked the meeting participants how, as we look forward over the next three years, we can take advantage of the geographic setup of the San Francisco Bay. Responses included:

- Advanced maintenance increases the duration between dredging episodes, resulting in fewer emissions, reduced frequency of impact and lower overall unit costs. Jim McGrath added that in between dredging episodes, beam dragging could be used for minor sedimentation.
- Hanson Aggregates generally does sand mining but has 2 pieces of hydraulic equipment that are hugely underutilized due to the economic and construction industry down turn. Between the two, there is a capacity of between 5 and 6 million cy per year.

Corps Offloader Feasibility Study and Discussion– Presented by Dave Doak, USACE

In-Bay disposal is currently limited to no more than 40 percent of all sediment within the LTMS's boundaries, which will remain the case until the end of 2012. At that point, no more than 20 percent of dredged sediment will be allowed in-Bay. The remaining 80 percent would be placed at upland sites and ocean disposal. Currently, USACE maintenance dredging projects are funded separately. While USACE receives an average of 45 million dollars per year for maintenance dredging, the USACE has been told that funding will likely be reduced in the future. The impact of this could be minimized if USACE was able to move funding between projects without requiring Congressional authorization. Another way to reduce the impact would be through conducting advanced dredging in the Ports of Oakland and Richmond, so that maintenance dredging would not need to be completed as frequently. While this would result in more sediment being dredged during certain years, smaller projects would be guaranteed funding to dredge every couple of years. Comments from meeting participants included:

- Jake Jacobsen (USACE) noted that in other areas of the US, dredging programs are lumped and projects are not individually funded.
- Doug Lipton (Lipton Environmental) noted that the need to coordinate amongst projects (and for lobbying purposes) is clear. It is critical that stakeholders are made aware of these issues so that they can help.
- Alexis Strauss (USEPA) asked what the non-public employees present at the meeting would use for lobbying their representatives. Jim Haussener (CMANC) noted that the Dredged Material Management Plan could be a mechanism for this.
- A meeting participant asked whether there is something preventing USACE from using Montezuma. Dave Doak (USACE) replied that there is not, but that USACE cannot specify that Montezuma be used in their contracts as it's a privately-owned site.

About 5 years ago, USACE looked at the possibility of constructing its own offloader to be operated by the government. The USACE conducted a life cycle analysis and looked at numbers based on costs only. Aside from costs, there are additional government restrictions on owning equipment that could otherwise be completed by private industry. Based on these factors, the USACE decided not to move forward with constructing a government-owned and operated offloader at that time. However, because the landscape has changed so dramatically in the past 5 years, USACE is going to revisit that subject in the near future.

Without a placement site, an offloader has no purpose. Currently, the LTMS's placement site possibilities include:

- Montezuma
- Hamilton – through spring 2011
- Bel Marin Keyes – uncertain of when this site could accept sediment
- Carneros River Ranch – available later in 2011
- Bair Island
- Cullinan Ranch

Discussion Session: How do we effectively and efficiently deliver dredged sediment to reuse/placement sites?

Other sources of funding are needed to help develop new upland sites. Dave Doak (USACE) proposed that the LTMS and stakeholders begin to examine opportunities for partnering for the purposes of investing in upland site development. The partnership could benefit both parties: stakeholders would own and operate sites and the LTMS's goals would be satisfied. Tom Gandesbery (California Coastal Conservancy [CCC]) asked how USACE would make agreements committing certain volumes of sediment annually to a site each year, assuming that a stakeholder was interested in partnering for the development of a site. Dave Doak (USACE) responded with two scenarios: (1) as with Montezuma, a Port could partner with a private site developer, or (2) as with Hamilton, USACE could partner with the state. Amy Hutzel (CCC) noted that the Coastal Conservancy has been discussing the Bel Marin Keyes cost sharing issue with the Maryland Port Authority and the concept of the Port cost sharing makes a lot of sense. Jim McNally (Manson) noted that the Maryland Port Authority purchased its own offloader but later ended up selling it. Amy Hutzel (CCC) added that the concept of a "living shoreline" and "feeding the mudflats" does not necessarily require dredged sediment to be delivered directly to each restoration site; the focus should be on keeping the sediment in the system.

Brenda Goeden (Bay Conservation and Development Commission [BCDC]) noted that, in terms of other project sponsors, federal refuges also need sediment. For example, Bair Island and Cullinen Ranch are projects that need sediment to keep up with sea level rise rates. Another meeting participant asked whether there is some way to indemnify local sponsors/land owners from the potential for methylmercury generation. Doug Lipton (Lipton Environmental) noted that Montezuma takes all responsibility and is insured for all sediment placed on the site.

Doug Lipton (Lipton Environmental) asked how this region can affect the decisions that are made in Washington D.C. Meeting participants responded that continued coordination with the Bay Planning Coalition would be one way of increasing the region's involvement. Jim Haussener (CMANC) noted the importance of reminding people throughout the country that California is a large donor state to the construction general fund. He added that users of each channel pay for its maintenance and use but few of the funds are returned to the state to support maintenance dredging. Len Cardoza (Weston Solutions) added that the ports contribute to maintenance dredging through an ad valorem tax that finances the Harbor Maintenance Trust Fund. This is one reason that advanced maintenance dredging is attractive. Advanced maintenance dredging is not simply digging a channel deeper; it is dredging to deeper depths in certain areas that are most subject to accretion/sedimentation.

Doug Lipton (Lipton Environmental) noted that he sees environmental groups missing from the LTMS conversations. These stakeholders could bring ideas, momentum, and funding to the issues we're most concerned with. Without the public recognizing these issues, the LTMS is limiting itself. In particular, the LTMS should reach out to Save the Bay, Bay Institute, Joint Venture, Audubon Society, and San Francisco Bay Keeper.

Jim McGrath asked about the potential future use of the salt ponds for dredged sediment. Brian Ross (USEPA) responded that if the concept is to get feeder sediment to benefit the salt marshes, the placement areas would be very shallow, thereby raising concerns regarding endangered species. While it's a good concept to explore, it represents a paradigm shift from past thinking as we would need to address how to affordably get sediment to shallow areas without significant impacts. J.C. Krause (Dutra Group) asked whether hydraulic methods could be used. He added that controlled placement of sediment has recently been done in Louisiana. Brenda Goeden (BCDC) noted that most dredging projects are not close to the salt pond locations, which means the LTMS would need to think of how to absorb the cost of transporting the sediment that far, as it would significantly increase the costs. Jake Jacobson (USACE) noted that there would need to be paradigm shifts to conduct controlled placement of dredged sediment in certain areas, but other parts of the country are currently doing it. Given that the sediment will be moved around, the ideal location to place it may not even be in the salt ponds. A meeting participant noted that this issue is being examined by the Regional Sediment Management (RSM) program. What the LTMS needs is an agency with an environmental mission in the lead, such as the CCC. Amy Hutzel (CCC) noted that the CCC meets regularly with the refuge, but that this would require a meeting of several other regional regulatory agencies. Steve Goldbeck (BCDC) noted that an aquatic transfer facility (ATF) is also something that should be considered, and that RSM will address some of the identified issues and potential solutions. The issue of placing sediment in areas subject to erosion will likely be a difficult one, in that many areas subject to erosion are shallow and ecologically sensitive. He added that the Corte Madera study will look at a pilot feeder project aimed at protecting a site from erosion.

Amy Hutzel (CCC) agreed with Doug Lipton's (Lipton Environmental) point on the need for better coordination between the LTMS and restoration groups. This is the ideal time to unify dredging and restoration goals as Senator Diane Feinstein is moving to the Energy and Water Appropriations Committee. Steve Goldbeck (BCDC) noted that the LTMS would benefit from a regional authority coordinating opportunities for collaboration so that economies of scale could be maximized. Jim McGrath asked how the USACE procurement process can maximize economies of scale given all of the current barriers. He suggested the issues be brought to a smaller group of people who know the issues better, and that small dredging projects may need to be a separate area of discussion altogether.

Summation and Action Items

Alexis Strauss (USEPA) noted that the meeting's presentations were very helpful and asked whether the meeting participants saw it as helpful for the Management Committee meetings to focus on specific topics. She also asked for suggestions for topics, which included:

- Opportunities for placement of dredged sediment in the salt ponds and discussion of the issue with the refuge representatives
- How to optimize advanced maintenance dredging at the major ports in the region

The following action items were identified:

1. The agenda for the next meeting (Monday, February 28) will focus on advanced maintenance dredging.
2. The LTMS Program Managers will present on where and how much sediment has been placed over the past several years in the Bay at the next meeting.
3. Len Cardoza (Weston Solutions) and Rick Rhoads (Moffatt & Nichol) will work together to develop a presentation on advanced maintenance dredging for the next meeting (including discussions of tolerances, impediments, and regulatory implications).
4. Amy Hutzel (CCC) and Tom Gandesbery (CCC) agreed to present on the issues complicating moving forward with the Bel Marin Keyes site at an upcoming meeting next meeting (presentation date to be determined ASAP by the Program Managers).

5. The USACE agreed to present on FY 2011 federal navigational dredging contracting process at the next meeting.
6. LTMS staff will invite regulatory and resource agency staff to the next meeting, including U.S. Fish and Wildlife Service and National Marine Fisheries Service staff. In addition, representatives from Senator Feinstein's staff, Save the Bay, Bay Institute, Joint Venture, Audubon Society, San Francisco Bay Keeper, the ports of Oakland, San Francisco, and Richmond, as well as Beth Hunning, Barry Nelson, Cynthia Koehler, Arthur Feinstein, Barbara Salzman, and Erik Hurtz will be invited to the next meeting.