San Francisco Bay Conservation and Development Commission
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TO: Bay Fill Policies Working Group Members

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SUBJECT: January 21, 2016 Commission Bay Fill Policies Working Group Meeting Summary

1. **Roll Call, Introductions and Approval of Agenda.** Working Group Chair, Barry Nelson called the meeting to order. Working Group members in attendance included Commissioners Barry Nelson, Jason Brush and Jim McGrath. Presenters included John Bourgeois (South Bay Salt Ponds) and Laura Valoppi (USGS). Also in attendance: Brenda Goeden, Steve Goldbeck and Jill Singleton (Cargill).

2. **Approval of Working Group Summary from the November 19, 2015 meeting.** The summary was approved with no changes.

3. **Brief Discussion of Meeting Format.** The Working Group discussed potential changes to future meeting formats. Suggestions included reassesing the relationship of the Bay Fill Policies Working Group (BFPWG) to the Rising Sea Level Working Group (RSLWG) as the latter migrates to a new workshop format. Work group members also agreed to: (1) staff providing briefing memos on the discussion topics that include the most relevant policies of the Bay Plan; and (2) develop a slightly more formal meeting format to allow adequate discussion time.

4. **Adaptive management in the face of uncertainty.** Laura Valoppi of the US Geological Survey and Lead Scientist for the South Bay Salt Pond Project presented to the work group on adaptive management in the South Bay. John Bourgeois, Project Manager for the South Bay Salt Ponds then provided an overview on the benefits and challenges of adaptive management from a project management and permittee perspective. The full presentation can be found at http://www.bcdc.ca.gov/bayfill/Valoppi-Jan-21-2016-presentation.pdf. Discussion highlights included:

   a. The importance of a phased process. The South Bay Salt Pond and Restoration Project (SBSPRP) is using this approach by converting sections of the salt ponds to restored habitat and then monitoring and studying what happens before moving on to the next restoration phase. The findings are then incorporated into the design of the next phase. This process is then repeated for each of the phases that follow..

b. When the pond is breached, suspended sediment and material settles out and accumulates on the top of the pond. Sediment has to accumulate to a level that plants can colonize. Sediment sources for the South Bay include tributaries such as Coyote Creek and Guadalupe River, tidal sources coming from the Dumbarton Bridge, as well as nearby intertidal flats and channels.

c. Large scale studies have been initiated to find out where sediment comes from and where it is going (tidal vs. freshwater inflows). During wet years, salinity gradients change, which drives sediment out of the South Bay. In the last couple of drought years, there have been much higher suspended sediment concentrations entering the study area from the north. Studies of suspended sediment loads from the Bay and tributaries indicate that in recent years, Bay tributaries have been minor contributors compared to tidal sources of sediment.

d. Smaller-scale (pond scale) studies, however, have shown that even when there is a significant volume of sediment leaving the study area, there is still accretion occurring within the ponds.

e. Rising sea level combined with less sediment coming into the Bay, means that many Bay marshes may not keep up with sea level rise and so could drown. Currently, Bay marshes are able to keep up with sea level rise, but as sea level rise speeds up, sediment supply likely will not be adequate to support restoration projects. Management strategies for this high sea level/low sediment scenario include:

   (1) Restoring wetlands sooner rather than later;

   (2) Using upland sourced fill to increase elevations;

   (3) Use of dredged sediment to increase elevations; and

   (4) Creating high tide refugia such as marsh mounds, and establishing transition zones.

f. One of the largest challenges of managing a project using adaptive management is the lack of certainty in providing the "when" and "how much" to the regulatory community regarding project outputs, particularly in light of sea level rise. Working at two different scales (programmatic scale and a project scale) is increasingly difficult when trying to fit certainty into a process that by nature, is not certain.

g. Project costs and associated scientific studies are incredibly hard to find funding for. Compliance monitoring in permits takes away resources that can be used for monitoring and finding answers to the key science questions necessary to ensure a project's success.

Discussion. The Commissioners raised a number of issues and questions regarding BCDC's policies on adaptive management issues, as described in the Bay Plan policies, primarily as the need for monitoring, success criteria, and plans for adapting projects if success criteria are not met. It was noted that simply meeting success criteria is different from adaptive management. Current policies, require projects to monitor for project success and prepare plans to address uncertainty using adaptive management.

Commissioners discussed the need for mitigation for proposed restoration projects. A distinction was drawn between the need for mitigation by projects that impact Bay habitat, and restoration projects whose purpose is to provide habitat. The Commissioners raised questions regarding whether it needs to intervene with restoration projects if they don't fully meet their habitat goals? Commissioners also recognized that restoration projects cannot be treated as having no risk if there were existing habitat values provided at the project site. Consideration was given to whether adaptive management policies should be different for mitigation as opposed to restoration? Don't let perfect be the enemy of the good.

Commissioners also addressed the idea of whether and to what extent should adaptive management be funded regionally. They asked what is expected for projects to do on a regional scale compared to individual project scale? The Commissioners considered whether the Commission needs to define what a robust adaptive management program is and what it looks like? At the staff level, more training may be helpful to further refine preparation of permit requirements. It was noted that adaptive management is a term that means something different to different people. Compliance monitoring and measurable monitoring issues don't overlap enough with projects facing uncertainty. The Commissioners discussed whether it would be useful to make compliance monitoring and success measures a component of adaptive management plans. Compliance monitoring should ideally be the same as the adaptive management success criteria, this would align compliance monitoring with monitoring as part of adaptive management. It was noted that the policies appear to already provide the necessary tools to implement adaptive manage through the permit requirements.

Commissioners contemplated the idea of a tiered application process and one that seeks to identify projects that provide a public benefit, have a more streamlined or preferred pathway through the permitting process. This discussion included triggers in project goals that may lead to a preferred permit status. Commissioners reflected on whether project purpose, including the purpose of fill, matters for decision-making. After much discussion, they concluded that it would be very difficult for staff and Commissioners to differentiate between projects with benefits and those without, as even large development project provide benefits. This discussion included triggers in project goals.

Discussion then turned to the size of projects and the need for adaptive management when there is risk and uncertainty in outcomes, especially over long periods of time as sea level rises. There was concern voiced over the Commission's ability to deal with uncertainty and the way the Commission deals with uncertainty should not bind or put the Commission in a box when projects come forward for approval. It was noted that mitigation requirement are a disincentive for projects. The Commissioners also talked about the value of adaptive management at a macro scale and whether an adaptive management bank should be created/established similar to the Water Board's Regional Monitoring Program.

Next Steps: The work group discussed its next steps and considered whether to move on to another topic or revisit this topic and further address the questions proposed by staff and Commissioners. The work group concluded that it would continue to investigate additional topics through March and then review findings and considerations of information presented

to date. Staff was given the task of reforming the questions based on the topics presented at the previous meetings and refining thoughts on how to address these questions in relationship to the Bay Plan.