

June 20, 2019

Zachary Wasserman, Chair
San Francisco Bay Conservation and Development Commission
455 Golden Gate Avenue, Suite 10600
San Francisco, CA 94102

Dear Mr. Chairman and Commissioners:

On behalf of the Audubon California, a state office of the National Audubon Society and our 300,000 members and supporters, I thank you for the opportunity to provide comments on the proposed Bay Plan Amendment No. 1-17 Concerning the Update of the Bay Plan Fill for Habitat Policies.

Audubon California's Richardson Bay Audubon Center and Sanctuary in Tiburon, CA, was established in 1957 specifically to prevent the inappropriate filling of Richardson's Bay to create the Reed Port housing development, which would have destroyed nearly 900 acres of crucial subtidal and intertidal habitat. Since that time, Audubon staff has worked to protect the sanctuary waters, and the tens of thousands of birds that rely on it, for the benefit of wildlife and our community. Given this history, **we are keenly aware of the important role BCDC plays in stopping the indiscriminate diking and filling of the Bay.** In the intervening half century, however, Audubon California and our environmental partners in the Bay (including BCDC, as described in the Staff report "Bay Fill for Habitat Restoration, Enhancement, and Creation in a Changing Bay"), have found that **filling bay waters and baylands for the purposes of habitat restoration is often needed.**

Historically, fill for habitat has been needed in order to undo the impacts of previous development actions in the Bay (e.g., raising elevations at subsided diked baylands, such as Montezuma and Hamilton wetlands). This need will continue as additional North Bay diked baylands are restored and as the South Bay Salt Ponds Project continues. More recently, however, **fill for habitat has become a crucial strategy in our region (and our state's) fight against the impacts of climate change,** including sea level rise, disruptions in sediment supply, and increases in erosion due to changes in the frequency and intensity of storms.

In response to this need, **Audubon California lead the implementation of key pilot projects that used fill to restore habitats and increase climate change resiliency at Aramburu Island (in collaboration with the County of Marin) and through the Sonoma Creek Enhancement Project (in collaboration with the US Fish and Wildlife Service,** among others). The latter of these projects was identified in the Fill for Habitat staff report as the "primary example" of the challenge posed by "Bay Plan policies [that] do not allow more than a 'minor' amount of fill and/or dredged sediment for habitat projects in tidal waters". The design of this project was significantly altered to meet Bay Plan limits for a "minor amount of fill".

Vegetation and shorebird monitoring of the site highlight many project successes at Sonoma Creek, including improvements to marsh drainage and vector control issues, both of which improve habitat for wildlife. However, the limitations of the "minor amount of fill" language potentially limits the functional benefits provided by project's the transitional ecotone (by creating a steeper slope). Additionally, project partners are currently implementing Phase 2 of the Sonoma Creek project to address ongoing drainage issues at the project site, which may have been prevented if the project

was able to implement the full scale marsh channel excavation during original construction. This would have limited potential impacts to the site from repeated intrusions, which (though necessary to address other ongoing threats on the site) simply extend the period of reduced marsh function and increases overall project cost.

We included this background information here to: 1) highlight how existing Bay Plan policies have hindered habitat restoration efforts in the past, 2) to underscore the importance of moving forward with expediency, and 3) to emphasize the need to “get it right” in regards to policy verbiage, as these words will be the standards against which permit applicants are judged for years to come.

In regards to the proposed changes to existing bay plan findings and policies, please accept the following overarching comments:

- We support staff’s recommendation to remove language that limits projects to a “minor amount of fill”, which serves to limit fill placed in subtidal, intertidal, or upland areas for the purposes of habitat restoration and improved resiliency.
- We caution staff on the inclusion of references to increased or enhanced monitoring and adaptive management requirements (including funding plans) as conditions for fill for habitat projects. Existing requirements can already create undue burdens on projects and is being addressed on a region-wide scale through efforts including the Wetlands Regional Monitoring Program (WRMP) and San Francisco Bay Restoration Regulatory Integration Team (BRRIT). Rather than increasing these burdens, we encourage BCDC to coordinate with regional efforts to streamline project monitoring and adaptive management.
- We caution staff against prioritizing smaller, repetitive sediment additions over larger, one-time placements. The impacts of these actions (and its cost) will vary by site and strategies should be considered on a site-by-site basis.
- We agree with concerns raised about public access requirements associated with fill for habitat projects whose sole purpose is to restore or enhance existing Bay habitats, particularly in sensitive wildlife areas.

For more specific, in-line comments, we encourage you to look closely at comments provided by several of our Bay Area partners, particularly comments submitted by the California State Coastal Conservancy, the US Fish and Wildlife Service, Ducks Unlimited, Marin Audubon Society, and the South Bay Salt Ponds Project. In general (except as noted below), we agree with these groups’ specific recommendations, which speak to ways to address our overarching comments above.

The exception to our concurrence with these partner’s comments concerns Dredge Policy 11b, and we encourage you to look closely at concerns raised by Save the Bay (STB) in this regard. Specifically, we share STB’s concerns about the original intent of the policy and the consequences of moving this language to a Plan Map. Along with many other stakeholders, we are concerned about the delays of the Middle Harbor Enhancement Project (MHEP) in achieving its project goals and believe that the proposed Plan Map change would decrease BCDC’s ability to enforce Consistency Determination C2000.014.

While we agree that some verbiage changes to Dredge Policy 11b may be needed in order to advance other Fill for Habitat projects, we do not support simply removing the policy. We encourage BCDC staff to work with stakeholder to identify appropriate language amendments. We do not completely agree with STB that Dredge Policy 11b should be updated to restrict *all* non-minor subtidal fill for habitat projects pending the completion of the MHEP. However, we do support amended language that would limit projects whose primary driver is the disposal of dredge material rather than habitat restoration and we support language that continues to hold MHEP accountable for its required benefits. We offer our services as a collaborator in this effort to identify and craft

suitable language that will encourage the completion of MHEP while not restricting forward momentum on other subtidal fill for habitat projects.

Again, thank you for the opportunity to provide these comments on the proposed Fill for Habitat changes to the San Francisco Bay Plan. **We applaud BCDC in working proactively to update Bay Plan policies to ease the regulatory burden placed on projects proposing fill for habitat** (including permitting and monitoring requirements). We are likewise hopeful that other state and federal agencies (e.g., California Coastal Commission, U.S. Army Corps of Engineers, etc.) will look to this update process as an example of how to amend regulatory policies for the current era of habitat restoration and improvements in coastal habitat resiliency.

If you have any questions on these proposed comments, please do not hesitate to contact me at rschwartz@audubon.org or 310-433-8410.

Sincerely,

A handwritten signature in black ink, appearing to read 'Rebecca Schwartz Lesberg', written in a cursive style.

Rebecca Schwartz Lesberg
San Francisco Bay Program Director
Audubon California



*inspiring people to protect
Bay Area birds since 1917*

Ms. Megan Hall
San Francisco Bay Conservation and Development Commission
455 Golden Gate Avenue, Suite 10600
San Francisco, CA 94102-7019
megan.hall@bcdca.gov

20June2019

re: Bay Plan Amendment No. 1-17 to Update of the Bay Plan Fill for Habitat Policies

Dear Ms. Hall,

On behalf of the Golden Gate Audubon Society (GGAS), please accept comments on the **Bay Plan Amendment No. 1-17 to Update of the Bay Plan Fill for Habitat Policies**.

GGAS is a 102 year old non-profit organization with over 7,000 members who are dedicated to protecting native bird populations and their habitats. GGAS generally supports the Bay plan to revise the policy in support of the use of fill for habitat restoration. Further, GGAS urges the project proponents to undertake all reasonable efforts to avoid the unintended consequence of fill activities that may significantly alter or damage sensitive habitat or cause significant impacts to special-status and listed species. Overall, the proposed fill for habitat amendment to the Bay Plan is consistent with the mission of GGAS to protect native birds and their habitats.

The following comments address specific elements of the proposed update of the Bay plan:

1. Removing the "minor fill" requirement for habitat projects

Recognizing the urgency needed to address the threat of sea level rise with many tens of thousands of more acres of habitat needing to be restored by 2030 as recommended in the Baylands Ecosystem Habitat Goals 2015 update, the "minor fill" language is too restrictive for meeting this restoration goal. The McAteer-Petris Act still requires a "minimum amount of fill" be used. Therefore, the "minor fill" language of the Bay Plan is unnecessary for avoiding excess fill beyond the required objective to achieve project success.

2. Removing dredging policy 11b

Currently, this policy requires the successful completion of the Middle Harbor Enhancement Area Project before other habitat projects involving the beneficial reuse of dredged material are authorized. Due to this project's protracted timeline and questionable applicability of its success to the fate of other beneficial reuse projects around the bay, removal of this policy seems warranted given the urgency of creating additional habitat in the coming decade.

GOLDEN GATE AUDUBON SOCIETY

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3. Encouraging projects to contribute to regional goals and the restoration of complete ecosystems

Although GGAS supports regional goals and the restoration of complete ecosystems, these objectives may not be compatible with the needs of certain special status species. There may be instances where project proponents should forego contributing to regional habitat goals because more local opportunities exist to create specific habitat for select species. Therefore, GGAS recommends that adaptive management measures be permitted or possibly encouraged for the purpose of restoring or protecting specific habitat for select species.

In general, GGAS urges the project proponents to limit activities and measure impacts so that a reliable basis for determining the scope of allowable fill will derive from the best available science. The Plan should seek to avoid cumulative and significant impacts to sensitive habitat, nesting birds, rare sensitive plants and other wildlife by restricting excessive fill and identifying and enhancing resiliency in sensitive habitats.

Thank you for this opportunity to comment on the Bay Plan Amendment No. 1-17 to Update of the Bay Plan Fill for Habitat Policies.

Please keep GGAS informed about all activities and reports relating to this matter.

Respectfully,

Pam Young

Pam Young
Member, GGAS Board of Directors
Chair, GGAS East Bay Conservation Committee
pamyoung2@mac.com



United States Department of the Interior
FISH AND WILDLIFE SERVICE

San Francisco Bay National Wildlife Refuge Complex
1 Marshlands Road
Fremont, California 94555



June 20, 2019

Mr. Zachary Wasserman, Chair
San Francisco Bay Conservation and Development Commission
455 Golden Gate Avenue, Suite 10600
San Francisco, CA 94102

Re: *Staff Report and Preliminary Recommendations for Proposed Bay Plan Amendment No. 1-17 Concerning the Update of the Bay Plan Fill for Habitat Policies*

Dear Chair Wasserman and Commissioners,

Thank you for this opportunity to speak on behalf of the U.S. Fish and Wildlife Service's (Service) San Francisco Bay National Wildlife Refuge Complex (Refuge Complex), in regards to the draft findings and policy changes outlined in the *Staff Report and Preliminary Recommendations for Proposed Bay Plan Amendment No. 1-17 Concerning the Update of the Bay Plan Fill for Habitat Policies* (May 21, 2019).

The Service is the primary Federal agency responsible for conserving, protecting, and enhancing the Nation's fish, wildlife, and plant populations and their habitats for the continuing benefit of the American people. The National Wildlife Refuge System, unlike other Federal lands that are managed under a multiple-use mandate (e.g., National Forests and Bureau of Land Management lands), is managed first and foremost for the conservation, management and restoration of the fish, wildlife, and plant resources and their habitats. We also support six priority wildlife-dependent public uses of refuges where compatible: hunting, fishing, wildlife observation and photography, and environmental education and interpretation.

Our local refuges – the Don Edwards San Francisco Bay National Wildlife Refuge and the San Pablo Bay National Wildlife Refuge - protect a large majority of remaining tidal marsh in the San Francisco Estuary. They also provide outstanding opportunities to further the Baylands Ecosystem Habitat Goals through voluntarily restoring historic tidal marsh that had been converted to hay fields, pasture, and salt production ponds during the late 19th and through the mid-20th centuries. Significant progress has been made in this endeavor on multiple projects that have come before the Commission, including the South Bay Salt Pond Restoration Project, Bair Island Restoration Project, Cullinan Ranch Restoration Project, and Sonoma Creek Enhancement Project. I would be greatly remiss if I did not acknowledge that all of these efforts have been accomplished in large part thanks to our many partners, most notably the State Coastal Conservancy, California Department of Fish and Wildlife, Ducks Unlimited, California Wildlife Foundation, and Audubon California (among others).

While all of our projects have ultimately been found to be consistent with the Bay Plan and approved by the Commission, there have been many challenges in navigating the consistency determination process and negotiating with permit staff around both real and perceived policy conflicts, often resulting in changes to project scale and design, time delays, and additional burdens on the projects. Therefore, we applaud the Commission's recognition of these challenges and subsequent processes to amend the Bay Plan in a manner that acknowledges the benefits of fill for voluntary habitat projects, including as a means to facilitate sea level rise adaptation. I was a member of the Policies for a Rising Bay Steering Committee and attended many of the BCDC workshops and presentations on this topic, and I'm pleased to see many of the proposed changes. I have a few general comments for your consideration today:

- **We fully support the draft policy changes that eliminate the language of “minor amount of” fill in reference to habitat projects in the Bay and its tidal water.** That in and of itself is a seemingly simple but singularly significant and positive change that will advance the restoration community's efforts to restore tidal marsh habitat in a timely manner. Defining what a “minor amount” of fill is and reconciling that with the “minimum amount necessary to achieve the purpose of the fill” (per Section 66605 of the McAteer Petris Act) has been regularly problematic. It was a major factor that resulted in the reduced size and scope of our Sonoma Creek Enhancement Project, as an example mentioned in the staff report. As acknowledged by staff, the Act's language of “minimum amount necessary...” will still maintain an important protection to ensure there is not an excessive amount of fill beyond what is necessary.
- **We recommend that voluntary fill projects that are solely focused on enhancing or restoring existing tidal marsh habitat should be *exempt* from the requirement to increase public access to the Bay.** Fill for habitat is intertwined with the public use policy as prescribed by the McAteer Petris Act and therefore it is reasonable and logical to consider it in the context of the proposed Bay Plan amendments under consideration today. The use of fill in existing tidal marsh is primarily for creating high tide refugia for sensitive species, improving tidal exchange, and assisting the marsh in maintaining elevation to sustain vegetation and keep up with sea level rise. Increasing public access in these sensitive wildlife areas is not compatible with those primary purposes. There has been substantial progress in providing public access to the Bay since passage of the McAteer Petris Act, and there are other opportunities for increasing public access in more appropriate and less sensitive areas as part of the larger multi-benefit restoration projects occurring in salt ponds and managed wetlands. We should not be adding more stressors to our already stressed marsh-dependent wildlife in this highly urbanized region on a project-by-project basis. Instead, we request that the Commission expedite a comprehensive assessment of the current status and gaps in public access across the entire region and revisit its public use policies as they relate to voluntary tidal marsh habitat projects.
- **We recommend that the new policy 6 under Fish, Other Aquatic Organisms and Wildlife (page 15) that projects “should plan for repeated placements of fill over time to allow habitat to adapt incrementally...unless the Commission finds that fewer, larger placements of fill minimize impacts to**

Bay organisms or that small, repeated fills are not feasible” be revised to emphasize the latter - allowing for fewer, large placements of fill as the minimum amount necessary - while considering the former - small, repeated fills - as part of an adaptive management strategy as needed and covered under the main project permit. While this is an important topic for the restoration community to deliberate, study, and develop best management practices around, it should not be a stated policy as written. Short-term impacts are usually greater than long-term impacts, so we would be seeking to complete a project at one time - when funding and resources like sediment are available - and not return repeatedly to re-disturb the wildlife and their habitat. This is an inherent component of adaptive management such that if monitoring indicates that additional placements are necessary to meet project goals, then it should be allowed under the main project permit in that context. We are also concerned how this change as written may conflict with other regulatory agencies’ authorities.

- **We share many of the same concerns and agree with the specific comments expressed by our restoration partners, including the San Francisco Bay Joint Venture, State Coastal Conservancy, South Bay Salt Pond Restoration Project, San Francisco Estuary Partnership, and Ducks Unlimited, and reiterate by reference here.** We are concerned that some of the proposed findings and policy changes are too prescriptive, and in some cases appear to increase requirements - such as monitoring, research, and funding plans - for project proponents. We ask the Commission and staff to fully consider the suggested edits and continue working with the restoration community to refine the wording of many of the proposed findings and policy changes. These refinements should aim to maximize the Bay Plan’s flexibility in facilitating voluntary habitat restoration and enhancement projects in the Bay and its tidal waters, but in turn minimize the regulatory burden and associated costs and time delays.

Thank you for the opportunity to share our comments and concerns.

Sincerely,



Anne Morkill
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GAVIN NEWSOM
GOVERNOR



JARED BLUMENFELD
SECRETARY FOR
ENVIRONMENTAL PROTECTION

San Francisco Bay Regional Water Quality Control Board

Sent via electronic mail: No hard copy to follow

June 19, 2019

Bay Conservation and Development Commission
Attn. Megan Hall, Ph.D., Coastal Scientist
455 Golden Gate Ave., Ste. 10600
San Francisco, CA 94102

Subject: Comments on BCDC's Proposed Bay Plan Amendment No. 1-17 to Address Bay Fill in Habitat Projects

Dear Dr. Hall:

Thank you for the opportunity to comment on the Bay Conservation and Development Commission's (BCDC's) proposed Bay Plan Amendment No. 1-17 (Amendment) to address Bay Fill in Habitat Projects. The San Francisco Bay Regional Water Quality Control Board (Water Board) appreciates the time, thought, and effort that you and your colleagues have invested in updating the Bay Plan to reflect both the threats that climate change and sea level rise pose to the resilience of the San Francisco estuary's varied habitats, and the strategies that can help support healthy, diverse, and functional habitats now and into the future. As mentioned in the Staff Report that accompanies the Amendment, Water Board staff are implementing a parallel policy review effort that may result in an amendment to the San Francisco Bay Basin Water Quality Control Plan (Basin Plan). This Basin Plan amendment would likely address many of the same issues as the Amendment, including the development of an updated regulatory framework that would identify the circumstances under which fill in wetlands and waters could benefit estuarine habitats. We appreciate BCDC's efforts to coordinate your Amendment with our potential Basin Plan amendment, and look forward to further engagement.

We broadly agree with the Amendment's goals, the proposed revisions to the findings and policies in the Bay Plan described in the May 21, 2019, BCDC staff recommendation, and the justification for the revisions provided in the May 24, 2019, staff report. This letter proposes specific edits to the revised findings and policies to

DR. TERRY F. YOUNG, CHAIR | MICHAEL MONTGOMERY, EXECUTIVE OFFICER

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improve their clarity and highlight opportunities for improved consistency between the Amendment and a future Basin Plan amendment.

Fish, Other Aquatic Organisms, and Wildlife

Findings

(i) Here and throughout the Amendment, we appreciate the inclusion of the San Francisco Shoreline Adaptation Atlas, produced by the San Francisco Estuary Institute (SFEI) and funded by the Water Board.

(j) Policies that govern fill placement in baylands must ultimately balance near-term certainties about the impacts of fill placement with long-term uncertainties of its potential benefits, while also considering the potential long-term impacts of taking no action. The proposed language in elements (k) and (l) specifically references the potential future losses of tidal marshes and flats due to sea level rise, as well as the potential role of strategic sediment placement in sustaining these habitats. Please consider editing the language in element (j) to state explicitly that some near-term habitat conversions due to fill may be offset over the long-term by habitat conversions driven by sea level rise. Therefore, the net loss of habitat types and associated ecosystem functions due to fill may be temporary, and may lead to a long-term net gain.

(k) The proposed language states that “... *many marshes and mudflats may not be able to adapt to these changes, and may be inundated by the end of the century if they are not able to accrete sediment and/or migrate to higher elevations.*” We suggest using the phrase “drown (e.g., low marsh to mudflat), downshift (e.g., high marsh to low marsh), or erode” instead of “be inundated by” to more accurately reflect the processes that lead to habitat loss. It is not inundation *per se* that impacts marsh and mudflat habitats, rather the frequency, depth, and duration of inundation that can lead to drowning and downshifting.

(l) We appreciate the language that references natural disturbance events (e.g., sediment deposition during floods) as potential analogues for gradual fill placement that can maximize benefits to habitats while minimizing impacts. The development and use of such techniques (e.g., thin-lift sediment placement) in the Bay is in the early stages, and would be improved by increased research and development as well as the implementation of experimental pilot projects (addressed in Finding (r) and Policy (10) under “Tidal Marshes and Flats” and elsewhere in the Amendment).

Policy Changes

(2) Staff may want to consider amending the statement “*Protection of habitats may entail placement of fill to ensure that they persist into the future with sea level rise*” to mention that placement of fill can also improve ecological functions in the near-term. For example, in the near term, the construction of marsh mounds can improve the

provision of high tide refugia in marsh interiors near the home ranges of listed species such as Ridgway's rail and salt marsh harvest mouse. However, marsh mounds may not be an effective strategy to ensure the long-term resilience of extensive tidal marsh plains.

(6) Same comment as (l), above.

(7) Consistent with our comments on (j), above, we suggest amending "*Allowable fill for habitat projects in the Bay should (a) not cause substantial negative impacts to existing habitats...*" to state "should (a) not cause substantial long-term negative impacts to existing habitats..." as in some limited cases, near-term impacts from fill placement may be offset by long-term benefits, and those impacts may be less severe than the long-term consequences of no action.

(8) Consistent with our comments on (k), above, staff should consider revising language about habitat "*inundation and loss*" to more specifically reference drowning and downshifting (vertical processes), and erosion (lateral process). Staff might also consider including beaches and other coarse shoreforms in this language, as they currently protect marshes in multiple locations (e.g., Bair Island, Point Pinole, and Robert's Landing) and may be an effective strategy to protect marshes in other Bay regions (see the Adaptation Atlas for more information).

Tidal Marshes and Tidal Flats

Findings

(l) The text in this finding states that "*...the volume of sediment entering the Bay annually from the Sacramento and San Joaquin Delta is declining.*" The 2018 SF Bay sediment synthesis report from SFEI and the U.S. Geological Survey (USGS) states that "*Since the step decrease in suspended sediment concentrations in WY 1999 (Schoellhamer et al. 2011), there has been no statistically significant trend in sediment supply from the Delta to the Bay.*" It therefore may be more accurate to describe the decline in sediment supply from the Delta to the Bay as a step decrease, and not a decline that is current or constant. Staff may also want to reference the sediment synthesis report to include language that states that trends in future sediment supply to the Bay are uncertain, largely due to the influence of large floods on sediment delivery (and the influence of climate change on the potential frequency, duration, and severity of future flood events).

(q) This is a helpful finding that is consistent with many of the principles articulated in the Adaptation Atlas. Staff may want to consider including language that acknowledges that some existing tidal marshes throughout the estuary will likely not be sustained into the future solely through natural processes (for example, isolated urban marshes that cannot be feasibly connected to watershed sediment supplies and have limited opportunities for landward transgression). Because some of these marshes sustain regionally important populations of special-status species, however,

they may justify consistent intervention over time to support regional ecological services.

(s) The staff analysis should note that the proposed Wetland Regional Monitoring Program (WRMP) is being developed by multiple entities, including SFEI, the San Francisco Estuary Partnership (SFEP), the SF Bay National Estuarine Research Reserve (NERR), the U.S. Environmental Protection Agency, and the Water Board, with input from a broad Steering Committee that includes BCDC.

Policy Changes

(4) Staff should consider expanding “*local government land use and tax policies*” to “*state, regional, and local government land use, tax, and funding policies*” to include the often-considerable roles of Caltrans, the Metropolitan Transportation Commission and county transportation agencies, and related agencies in land use planning and in setting conditions for project funding that can lead to adverse impacts.

(5) Same comment as (q), above.

(7) Same comment as (s), above.

Subtidal Areas

Policy Changes

(9) We suggest amending subsection (c) to state “sediment dynamics, including sand and oyster shell transport, and wind and wave effects on sediment movement” to highlight the importance of oyster shell features in the Bay, and how little is currently known about the processes and conditions that support these features.

Shoreline Protection

Findings

(i) We agree that natural and nature-based approaches to shoreline protection are preferable due to the many co-benefits they can provide to habitats, water quality, carbon sequestration, recreation, and more, and therefore should in many cases be subject to reduced mitigation requirements, including being considered “self-mitigating.” Given that different types of natural and nature-based approaches would be appropriate in different portions of the shoreline (see the Adaptation Atlas), staff may want to consider developing a framework for evaluating mitigation needs for these types of projects on a regional or sub-regional basis, and clarify expectations for the role regional mitigation banks may play in addressing these needs.

Policy Changes

General comment: Given the highly modified nature of most of the SF Bay shoreline and the exceptionally high value of Bay Area real estate, there is a risk that future efforts to protect shoreline communities and facilities from rising seas and coastal flooding will in some locations attempt to place protective infrastructure as bayward as possible, which would maximize the amount of baylands protected behind (landward of) the infrastructure. This approach has many potential risks, including, but not limited to: (1) reducing tidal accommodation space within the Bay and therefore increasing the risk of exacerbating sea level rise and tidal flooding hydrodynamics throughout the Bay, (2) isolating tidal and non-tidal bayland wetlands and waters landward of the protective infrastructure, separating them from natural hydrologic processes and accelerating their deterioration, and (3) increasing the likelihood that protective infrastructure will be located on top of deeper Bay Muds, increasing the long-term risks of settlement and the need for continuous maintenance. We therefore recommend that staff include a policy in this section that encourages applicants to “hold the line” as far landward as possible, and minimize the amount of baylands that are isolated behind protective infrastructure. This policy should highlight the role that phased, place-based adaptation pathways can play in identifying opportunities for the long-term landward transgression of defenses from tidal flooding (managed retreat), which can over time create space for the restoration of complete tidal wetland systems and other nature-based adaptation measures. Phased adaptation pathways, which are described in greater detail in the Adaptation Atlas, provide a framework for identifying appropriate suites of action at different SLR thresholds, and create a mechanism for addressing uncertainty and allowing for flexibility over time. Such a policy could be linked to Policy (4) under Tidal Marshes and Tidal Flats, which encourages the public acquisition and restoration of “restorable lands.”

Again, we appreciate the opportunity to comment on the Amendment, and look forward to continuing to coordinate with the Commission and staff on this and related initiatives. If you have any questions, please do not hesitate to contact Christina Toms at christina.toms@waterboards.ca.gov or 510-622-2506.

Sincerely,

Keith H. Lichten, Chief
Watershed Management Division



DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, U.S. ARMY CORPS OF ENGINEERS
450 GOLDEN GATE AVE.
SAN FRANCISCO, CA 94102

June 18, 2019

R. Zachary Wasserman
Commission Chair
Bay Conservation and Development Commission
455 Golden Gate Avenue, Suite 10600
San Francisco, California 94102

Dear Chair Wasserman,

Thank you for the opportunity to comment on the Bay Conservation and Development Commission's (BCDC) proposal for the Bay Plan amendments, No. 1-17 Concerning the Update of the Bay Plan Fill for Habitat Policies. First of all, we understand that BCDC, much like the United States Army Corps of Engineers (Corps), has had a legal duty to carry out the mandates of the Coastal Zone Management Act (CZMA). Our respective legal duties include, inter alia, the need to take into consideration the direct and indirect physical effects of projected future sea-level change on projects. Engineering Regulation (ER), 1100-2-8162, 31 Dec 2013, instructs the Corps to consider the potential relative sea-level change in every USACE coastal activity as far inland as the extent of estimated tidal influence. We applaud your efforts to take on the difficult task of amending the Bay Plan to better accommodate the need for Bay fill to combat sea-level rise. We are supportive of some of the changes being made to Dredging Policy 11a and b and other policies that support in-Bay strategic placement of dredged material. However, we are not supportive of the recommendation adding a new policy note to the Bay Plan Map 4 regarding the Middle Harbor Enhancement Area (MHEA).

There are a few provisions that we believe could be improved to provide clarity, flexibility, and to acknowledge the utilization of clean dredged material to benefit the public. Those changes are provided in the table below.

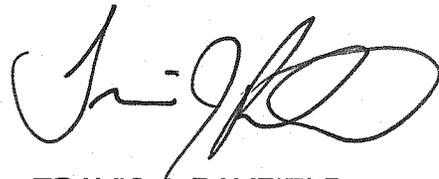
Major Conclusions and Policies	
Section	Proposed Changes or Comments
4g.	"Restoring, enhancing, or creating <u>coastal ecosystems</u> that provide habitat for native fish, other aquatic organisms, or wildlife; enhance coastal resilience; and provide services such as water filtration and carbon sequestration. <u>Sourcing clean fill, i.e. dredged material</u> , for these purposes will be especially important to <u>replenish wetlands to facilitate the adaptation of habitats and provide a natural buffer to alleviate the sediment deficit due to rising sea level.</u> "

5b.	"Filling almost-always <u>can</u> increase the danger of water pollution . "
Fish, Other Aquatic Organisms, and Wildlife	
Section	Proposed Changes or Comments
i.	These frameworks are based on the best available science at <u>this the time of publication</u> , and as our knowledge evolves to reflect new data and understanding, new frameworks or updated frameworks may be developed to replace or supplement this work.
j.	"Current models indicate that as sea level rise progresses, many Bay habitats will be degraded or convert to other Bay habitat types. <u>However, projects that place fill to ensure that important fish, other aquatic organisms, wildlife, and plants have habitat into the future may also result in the conversion of one type of habitat into another and thus may result in a net loss of some habitat types and associated ecosystem functions. Habitat type conversion could alter the balance of species or habitats locally, within an embayment, or on a regional scale. Large-scale habitat type conversion could reduce the amount of habitat available to certain species, and the impacts of large-scale habitat type conversion are not well-understood. Therefore, fill must be placed strategically to minimize short-term habitat loss while protecting Bay habitats over the long-term from the impacts of sea level rise.</u> "
l.	Placement of large volumes fill to assist habitats in adapting to long-term sea level rise projections may not be immediately necessary and may result in unnecessary habitat type conversion and other impacts to the Bay.
5.	The Commission may permit fill or a minimum <u>justified</u> amount of dredging necessary to enhance or restore fish, other aquatic organisms and wildlife habitat; or a minor <u>justified</u> amount of fill to provide public facilities for wildlife observation, interpretation and education.
7.	Suggest removal of "not significantly alter the balance of species" because the balance of species can be difficult to measure and changes difficult to predict.
8.	"A minor <u>justified</u> amount of sediment placement for any habitat project in deep subtidal areas may be authorized if sediment placement will maximize the habitat restoration or enhancement benefits provided by the project."
Tidal Marshes and Tidal Flats	
Section	Proposed Changes or Comments
q.	Siting a project in a location where the appropriate natural processes do not exist to sustain it could result in negative impacts on the Bay, project failure, and wasted resources.

	Replace with: "Projects shall be appropriately sited at suitable elevations where natural processes exist to sustain it."
4.	Local government land use and tax policies should not lead to the conversion of restorable lands to uses that would preclude or deter potential restoration. The public should make every effort to acquire these lands for the purpose of habitat restoration and wetland migration. Move this paragraph into the "Finding" column rather than the "Policy" column.
Subtidal Areas	
Section	Proposed Changes or Comments
5.	The Commission should encourage and support regional efforts to collect, analyze, share, and learn from habitat monitoring data. Move this paragraph into the "Finding" column rather than the "Policy" column
7.	"Based on scientific ecological analysis and consultation with the relevant federal and state resource agencies, fill may be authorized for habitat enhancement, restoration, or sea level rise adaptation if the Commission finds that no other method of enhancement or restoration except filling is feasible. "
Dredging	
11b. Staff Analysis	When the Middle Harbor Enhancement Project was proposed, there was concern that in-Bay disposal of large columns of dredged sediment purportedly for restoration would become a common occurrence. The word purportedly is unnecessary and does not improve the message.
p. 35	The policy is well-justified in this goal, but some of its language and conditions limit projects that genuinely need sediment to restore habitat as their primary goal. The word genuinely is unnecessary and does not improve the message.
p.36	2) Dredging Policy 11b indirectly encourages the completion of the Middle Harbor Enhancement Project. However, area specific policies and goals are addressed as policy notes in the Bay Plan Maps. Thus, staff recommends adding a new policy note to Bay Plan Map 4 to require that the Middle Harbor Enhancement Area provide the habitat benefits that were intended. . . .etc. This language is unnecessary as the Corps has committed to complete the project, through the existing CZMA process.
Bay Plan Map 4	
Section	Proposed Changes or Comments
21 & Staff Analysis	Addressed in separate correspondence. The Corps does not support this amendment. The Corps plans to submit a detailed comment letter specific to this amendment prior to the July 18, 2019 BCDC Commission Meeting. The staff analysis omits that this policy appears to establish new precedent that would require restoration projects to provide mitigation for schedule delays.

We appreciate your efforts to amend the Bay Plan and look forward to continuing our partnership of responsible Bay stewardship into the future. If you have any questions please contact Tom Kendall at (415) 503-6822 or Thomas.R.Kendall@usace.army.mil.

Sincerely,

A handwritten signature in black ink, appearing to read "Travis J. Rayfield". The signature is fluid and cursive, with the first name "Travis" being more prominent than the last name "Rayfield".

TRAVIS J. RAYFIELD
Lieutenant Colonel, U.S. Army
Commanding



June 14, 2019

Zachary Wasserman
Chair, Bay Conservation and Development Commission
455 Golden Gate Avenue, Suite 10600
San Francisco, CA 94102

RE: Support for Bay Plan Amendment No. 1-17

Dear Chair Wasserman and Commissioners,

On behalf of the Bay Area Council, I am writing to express our support for proposed Bay Plan Amendment No. 1-17, "Bay Fill for Habitat."

Existing language in the Bay Plan is designed to restrict all fill in the San Francisco Bay irrespective of impacts and reflects an outdated perspective that does not capture today's context of climate change and rising seas. The proposed Bay Plan Amendment No. 1-17 would add to the Bay Plan language that reflects the value of bay fill for habitat restoration purposes.

The Ocean Protection Council estimates that sea levels at the Golden Gate will likely rise as much as 13 inches by 2050, and by as much as 40 inches by 2100. Rising seas threaten \$46.2 billion in assets located in the Bay Area's 100-year floodplain, which encompasses the entire bay shoreline. Restored wetland habitat can play an important role in defending these assets, as well as providing important benefits for ecosystems and public access to the bay shoreline.

While the Bay Area Council is pleased to support the proposed amendments, habitat alone cannot adequately defend the Bay Area shoreline from rising sea levels. The Council therefore respectfully requests BCDC to also consider amendments to the Bay Plan which similarly recognizes the value of fill in defending existing development and critical infrastructure from rising sea levels.

Thank you for your leadership, and for considering our views.

Sincerely,

A handwritten signature in black ink that reads 'Jim Wunderman'.

Jim Wunderman
President & CEO
Bay Area Council

SFEP

SAN FRANCISCO



ESTUARY
PARTNERSHIP

Caitlin Sweeney

375 Beale Street
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June 14, 2019

Zachary Wasserman

Chair

SF Bay Conservation and Development Commission

455 Golden Gate Avenue, Suite 10600

San Francisco, CA 94102-7019

ATTN: Megan Hall

RE: Bay Plan Amendment No. 1-17 to address Bay Fill in Habitat Projects

Dear Chair Wasserman:

Thank you for the opportunity to comment on the proposed Bay Plan Amendment No. 1-17 to address fill in habitat projects. I support BCDC's effort to revise the Bay Plan to allow the use of fill for habitat projects and commend your staff for their excellent work in preparing the draft findings and policies for review.

The San Francisco Estuary Partnership (Partnership) led more than 70 organizations to collaborative agreement on long term goals and a suite of actions to be taken over the next five years to protect, restore, and sustain the San Francisco Estuary. The resulting 2016 *Estuary Blueprint* reflects the changing context of Estuary management over the last few decades, focusing on the need to plan and adapt to climate change.

In general, the proposed Bay Plan amendment is consistent with the goals, objectives and actions in the *Blueprint*. In addition to advancing the restoration and enhancement of tidal habitats as well as transition zones, the *Blueprint* supports sediment management on a watershed and regional scale to enhance Estuary habitats and shoreline flood protection efforts. The *Blueprint* also promotes projects that demonstrate how natural habitats and nature-based shoreline infrastructure can provide increased resiliency to changes in the Estuary environment. Finally, the *Blueprint* calls for establishing a regional wetland monitoring program (recognizing the need to evaluate effectiveness on a regional scale and acknowledging the potential to reduce monitoring costs and requirements for individual projects), and the Partnership is currently leading the collaborative development of a Wetlands Regional Monitoring Program, as acknowledged in the staff report.

The Partnership works in close collaboration with myriad organizations to advance a healthy and sustainable Estuary and I encourage the Commission to carefully consider the more detailed comments of our partners on the proposed Bay Plan amendment.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Caitlin Sweeney'.

Caitlin Sweeney, Director

June 14, 2019

Zachary Wasserman

Chair

SF Bay Conservation and Development Commission
455 Golden Gate Avenue, Suite 10600
San Francisco, CA 94102-7019
ATTN: Megan Hall

Re: *Staff Report and Preliminary Recommendation for Proposed Bay Plan Amendment No. 1-17 Concerning the Update of the Bay Plan Fill for Habitat Policies*

Dear Chair Wasserman,

The Wetland Regional Monitoring Program Core Team commends BCDC's effort to amend the Bay Plan with the updated Bay Plan Fill for Habitat Policies. The Wetlands Regional Monitoring Program (WRMP), as recently funded by an EPA Region 9 Wetland Program Development Grant, is engaging stakeholders from a broad range of restoration-related backgrounds and expertise to inform a regional monitoring program plan for tidal wetlands in the San Francisco Bay Area. This program plan will initiate implementation of Action 2 in the Estuary Blueprint, and will help local, regional, state, and federal agencies evaluate the effectiveness of efforts to sustain healthy aquatic habitats and resources. The project will be producing a Program Plan by the end of 2019 with close engagement of regulators, land managers and science institutions. The comments below come from our Core Project Team tasked with implementation of the grant deliverables – from chairing our Steering Committee and Science Advisory Team to leading science content and program development.

Key components of the WRMP development process include a collaborative process for development of program and science priorities, and recommendations for funding, governance, and a phased approach to program implementation including the establishment of a benchmark network of monitoring sites across the SF Bay that can reduce the burden on project-specific compliance monitoring. Your recommendations document refers to "surrogate" monitoring locations multiple times – and we assume that may be similar to this benchmark network. We suggest that this term be explicitly defined, or changed to more typical vernacular such as benchmark or reference site.

During the process of the Fill for Habitat Amendment, the WRMP Core Team were in close coordination with BCDC staff. Our discussions focused on how best to coordinate our efforts, and to share information about the development of both efforts. This engagement is well reflected in the Preliminary Recommendations and Staff Report, and we greatly appreciate the efforts of BCDC staff in this regard.

A few specific comments are noted below:

- Section 8S -- In the staff analysis please revise the sentence to state "The San Francisco Estuary Partnership, San Francisco Estuary Institute, San Francisco Bay National Estuarine Research Reserve, State Coastal Conservancy, Environmental Protection Agency and SF Bay Regional Water Quality Control Board, in partnership with various local, state, and federal agencies, are developing the Wetland Regional Monitoring Program." We also encourage the

recommendation to more specifically call out the Wetland Regional Monitoring Program as an effort to advance coordinated regional monitoring. This statement is repeated on pg. 23.

- Section 11L – We suggest that the staff analysis include the addition of the following statement: “...regional monitoring can provide benefits that are different from and complementary to project-based monitoring and may provide opportunities for uses of surrogate monitoring especially when these efforts are linked to management questions.

We appreciate the opportunity for ongoing coordination and look forward to working with BCDC to ensuring the success of the WRMP going forward. Thank you for your consideration of these comments.

Sincerely,

The WRMP Core Team

Heidi Nutters, San Francisco Estuary Partnership (co-PI)

Dr. Joshua Collins, San Francisco Estuary Institute (co-PI)

Jillian Burns, San Francisco Estuary Partnership

Xavier Fernandez, SF Bay Regional Water Quality Control Board

Christina Toms, SF Bay Regional Water Quality Control Board

Jennifer Siu, US Environmental Protection Agency

Luisa Valiela, US Environmental Protection Agency

Dr. Michael Vasey, SF Bay National Estuarine Research Reserve

Aimee Good, SF Bay National Estuarine Research Reserve



June 14, 2019

The Honorable Zachary Wasserman, Chair
Bay Conservation and Development Commission
455 Golden Gate Avenue, Suite 10600
San Francisco, CA 94102

RE: Proposed Bay Plan Amendment No. 1-17 Concerning the Update of the Bay Plan Fill for Habitat Policies

Dear Chair Wasserman and Commissioners:

The State Coastal Conservancy (the Conservancy) supports the amendment of the San Francisco Bay Plan to allow fill for habitat projects.

The Conservancy is a leader in habitat restoration and enhancement and the development of grey-green shoreline protection techniques in San Francisco Bay. In addition to funding dozens of partners to plan, design and implement habitat projects and leading pilot projects to test living shorelines, we have coordinated regional habitat goal-setting efforts, such as the Bayland Goals Science Update and Subtidal Goals Report. We have also coordinated and provided financial support for sea level rise vulnerability assessments and adaptation strategies. Through this experience, we have repeatedly encountered the need for regulatory changes to allow the use of large volumes of beneficial fill that enable tidal restoration or enhancement projects to be constructed while allowing for habitat migration as sea level rises, for high tide refugia for marsh species, for restoration of eroding tidal marshes, and for grey-green shoreline protection.

The Conservancy has worked closely with Commission staff and the Commission's Bay Fill for Habitat Working Group, and we are pleased to see that the changes we have most strongly supported are included in the staff recommendation. These include the following:

- 1. Adding acknowledgment of the benefits of fill for habitat projects** to the Major Conclusions and Policies section, and to the introduction, of the Bay Plan. We encourage use of the term "beneficial fill" to differentiate it from traditional fill for development purposes. We agree with adding language that describes the substantial benefits provided by using fill for ecosystem restoration, enhancement, creation projects, especially in light of the need for adaptation to sea level rise.
- 2. Removing language that allows only a "minor amount of fill" for habitat projects** from Fish, Other Aquatic Organisms, and Wildlife Policy 5. Due to past subsidence and future sea level rise, creating and maintaining a mosaic of valuable bay habitats will potentially require substantial volumes of fill placement. Since the McAteer-Petris Act safeguards against the use of more than the minimum amount of

fill necessary for the successful completion of a project, we believe that the proposed policy changes will result in the appropriate amount of fill.

3. **Removing Dredging Policy 11b** that requires the Middle Harbor Enhancement Area project to be completed successfully before the Commission authorizes additional projects that involve placement of dredged material in the bay for habitat creation, enhancement or restoration. We agree with staff that “the success of Middle Harbor is not an accurate proxy for the potential success of every other habitat project in the Bay that uses dredged sediment. Thus, it is imprudent to limit the options of all other projects based on this one very specific type of project.” Recognizing the need to carry forward the spirit of this policy, we support the staff recommendation to add a new policy note to Bay Plan Map 4 to require that Middle Harbor provide the habitat benefits that were intended.
4. **Amending Shoreline Protection Findings and Policies to describe the benefits of living/natural shorelines and incentivize their use.** We support staff’s proposed changes, as described below.

Additional detailed comments are provided below.

Finding or Policy	BCDC Staff Report Text	Coastal Conservancy Comments
Major Conclusions and Policies		
4g (p 6)	<u>Restoring, enhancing, or creating ecosystems that provide habitat for native fish, other aquatic organisms, or wildlife; enhance coastal resilience; and provide services such as water filtration and carbon sequestration. Fill for these purposes will be especially important to facilitate the adaptation of habitats to rising sea level.</u>	As indicated in the first part of this letter, we strongly agree with this addition.
5b (p 7)	Filling <u>almost</u> always increases the danger of water pollution by reducing the ability of the Bay to assimilate the increasing quantity of liquid wastes being <u>that is discharged</u> into it....	In addition to acknowledging benefits of fill for habitat projects in Policy 4, we recommend adding a letter under Section 5 (maybe new letter c after current b) noting that habitat restoration projects use beneficial fill to achieve positive environmental effects, including habitat creation and improved water quality, and, in multi-benefit wetland restoration projects, can include other benefits, such as protection of the

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		shoreline from erosion through wave attenuation, flood protection, and sea level rise adaptation. It is not just an ancillary effect, but the main goal of the beneficial fill in the project.
Fish, Other Aquatic Organisms, and Wildlife		
a (p. 8)	Over the past 200 years, human actions have had a major effect on the form and natural functions of San Francisco Bay, resulting in a significant decrease in the size of the open waters of the Bay—from about 516,000 acres to 327,000 acres, an approximately 40 percent reduction—and notable changes in populations <u>the types, locations, quality, and quantity of habitat for</u> of fish, other aquatic organisms (e.g., crabs, shrimp, zooplankton, and oysters, <u>plants and seaweed</u>) and wildlife habitat types, locations, quality and quantity.	Add “native” before “fish”.
i (p. 10)	<u>i. Regional frameworks, such as the 2015 Baylands Ecosystem Habitat Goals Update Report, the 2010 Subtidal Habitat Goals Report, and the 2019 Adaptation Atlas, detail wetlands habitat restoration goals, subtidal habitat restoration goals, and shoreline adaptation strategies throughout Bay. These frameworks are based on the best available science at this time, and as our knowledge evolves to reflect new data and understanding, new frameworks or updated frameworks may be developed to replace or supplement this work.</u>	We generally support this new finding. However, please clarify that the Subtidal and Baylands Goals also include recommendations for intertidal habitats (intertidal shellfish, intertidal aquatic vegetation, rocky intertidal, intertidal beaches, etc.) The language currently makes many references to intertidal as always wetland/mud, and subtidal as always submerged oyster and eelgrass, but these habitats are intertidal as well. Also, please include USFWS Tidal Marsh Recovery Plan (2013) in the list of regional frameworks.
j (p 11)	<u>Current models indicate that as sea level rise progresses, many Bay habitats will be degraded or convert to other habitat types. Projects that place fill to ensure that fish, other aquatic organisms, wildlife, and plants have habitat into the future may also result</u>	As noted in the staff report, “Many habitat restoration, enhancement, or creation projects authorized by BCDC have been considered self-mitigating because they provide greater benefits to the Bay ecosystem overall than detriment by impacting habitat or

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	<p><u>in the conversion of one type of habitat into another and thus may result in a net loss of some habitat types and associated ecosystem functions. Habitat type conversion could alter the balance of species or habitats locally, within an embayment, or on a regional scale. Large-scale habitat type conversion could reduce the amount of habitat available to certain species, and the impacts of large-scale habitat type conversion are not well-understood.</u></p>	<p>habitat type conversion.” Habitat restoration projects intended to convert more common and lower-value habitats to scarcer and higher-value habitats should be easier to permit than ones that do the opposite. We suggest adding the following sentence to this finding: “However, habitat projects intended to convert an area from a plentiful habitat type to a scarcer one with higher ecological value or to habitats that will be more critical as sea level rises should be encouraged and should be considered self-mitigating.”</p>
<p>k (pp. 11-12)</p>	<p><u>k. Tidal marshes and tidal flats are particularly vulnerable to inundation from sea level rise, reductions in sediment supply, and lack of migration space. Current scientific predictions of sea level rise and declining sediment supply support the likelihood that many marshes and mudflats may not be able to adapt to these changes, and may be inundated by the end of the century if they are not able to accrete sediment and/or migrate to higher elevations. Placing sediment in appropriate locations will be needed to ensure that Bay species have sufficient habitat into the future. Placement of significant volumes of sediment will be particularly important in tidal marshes to build transition zones, increase marsh plain elevation, and create high tide refugia for species. Placement of sediment may also be necessary in shallow intertidal or subtidal areas to increase mudflat elevation or to increase the sediment that can be transported by natural processes to adjacent marshes to increase marsh plain elevation. Little is known about</u></p>	<p>In addition to sediment placement to benefit tidal marsh and tidal flats, other types of fill placement, including shell and hybrid grey-green structures may be needed for habitat enhancement in intertidal, as well as subtidal areas.</p> <p>After the sentence “Placing sediment in appropriate locations will be needed to ensure that Bay species have sufficient habitat into the future,” please add the following sentence: “In addition, placement of oyster reefs or other beneficial fill in intertidal and subtidal areas will also be needed to enhance habitat, and can help with sea level rise adaptation through wave attenuation.”</p>

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	<u>how subtidal areas will adapt to sea level rise or the need for sediment in these areas. Limited knowledge about deep water habitats makes it difficult to predict how major changes, including sediment placement, in these areas may adversely affect fish, other aquatic organisms, and wildlife.</u>	
1 (p 12)	<u>...Placing smaller volumes of fill incrementally could serve the function of facilitating habitat adaptation to sea level rise while also minimizing impacts of fill to fish, other aquatic organisms, and wildlife.</u>	We suggest using the term “beneficial fill” to differentiate it from traditional fill. Placing fill incrementally is not always feasible and will have a higher cost.
5 (p 14)	The Commission may permit a minor amount of fill or <u>a minimum amount of dredging in wildlife refuges, shown on the Plan Maps, necessary to enhance or restore</u> fish, other aquatic organisms and wildlife habitat; or a minor amount of fill or to provide public facilities for wildlife observation, interpretation and education.	We recommend removing “minor amount of fill” to provide public facilities for wildlife observation, interpretation, and education. Please make it consistent with other language allowing the placement of fill that is necessary to achieve the objectives of the project.
6 (p 15)	<u>Habitat restoration or enhancement projects in the Bay that need fill to adapt to rising seas should plan for repeated placements of fill over time to allow habitat to adapt incrementally to sea level rise</u> projections, reducing the need for large scale habitat loss and conversion prior to the onset of future conditions, unless the Commission finds that fewer, larger placements of fill minimize impacts to Bay organisms or that small, repeated fills are not feasible.	We recommend adding the following sentence: “The Commission will cover smaller repeat placements under a single permit rather than requiring a new permit process for each placement.”
Tidal Marshes and Tidal Flats		
r (p. 19)	<u>Pilot and demonstration projects provide an opportunity for research and</u>	Please add the sentence “Some pilot demonstration projects may need to

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	<u>testing concepts and techniques before implementing experimental projects on a large scale.</u>	move forward with careful implementation and monitoring, even with data gaps or no information.” The purpose of the pilots is to gather this information for the first time.
u (p. 20)	<u>The extent of uncertainty about appropriate habitat project design (including likelihood of success and risk of impacts) varies depending on the project’s goals (e.g. whether the project has a research component), lifespan (e.g. whether the habitat is intended to adapt to sea level rise or not), and scale. Smaller projects and projects constructed using well-vetted techniques will likely involve less uncertainty and/or risk than larger habitat projects anticipated to need adaptation over time, or projects testing new approaches. Projects with higher levels of uncertainty or risk may require more intensive monitoring and adaptive management.</u>	Consider the appropriate use of the term “monitoring” versus the term “research.” They should not be used interchangeably. Monitoring is the functional assessment of the methods and goals of a specific project or projects, whereas scientific research is intended to test a hypothesis. Research may be more long term and its ability to be conclusive depends on project size, number of design replicates, and variability of conditions affecting the outcome. We recommend using the term “monitoring” in the regulatory context, as research should not be required for permitting.
6 (p. 22)	Design and evaluation of the project should include an analysis of: <u>...(k) how the project adheres to regional restoration goals; (l) whether the project would be sustained by natural processes; and (m) how the project restores, enhances, or creates connectivity across Bay habitats at a local, sub-regional, and/or regional scale.</u>	Please separate out these requirements in a new sentence that states, “If appropriate to the scale and scope of the project, design and evaluation of the project should also include...” These new analysis requirements should not necessarily be required of projects that may require periodic maintenance, such as protection and enhancement of small eroding tidal marshes in urban areas that provide educational and recreational benefits.
7 (p 23)	<u>Habitat projects should have a funding plan for monitoring and adaptive management of the project, commensurate with the level of monitoring and adaptive management that the required for the project.</u>	Delete requirement to “have a funding plan” and replace with “Habitat project proponents should determine the cost of monitoring and adaptive management, commensurate with the size and complexity of the project, and incorporate the cost into the project budget.”

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Subtidal Areas		
j (p. 26)	Fill material, such as rock, oyster shells and sediments dredged from the Bay, <u>or hybrid materials that integrate these materials, can enhance or beneficially contribute to the restoration of subtidal habitat...</u>	Change to "...hybrid materials that integrate <u>native shell, native sand, and concrete, for example,...</u> " We suggest using the term "grey-green" or otherwise make sure to define hybrid.
o (p. 28)	<u>...Projects with higher levels of uncertainty or risk may require more intensive monitoring and adaptive management.</u>	Some well-vetted techniques like seawalls have major impacts and no monitoring requirements. Improve language so there isn't an undue burden on innovative new projects seeking nature-based solutions.
3 (p. 29)	<u>3. 4. Any subtidal habitat restoration project should include clear and specific long-term and short-term biological and physical goals, and success criteria, and a monitoring program, and as appropriate, an adaptive management plan to assess the likelihood of success, benefits, impacts, and sustainability of the project. Design and evaluation of the project should include an analysis of: (a) the scientific need for the project; (b) the effects of relative sea level rise; (c) the impact of the project on the Bay's sediment budget; (d) localized sediment erosion and accretion; ...</u>	Many pilot projects are small and testing concepts that can be scaled up and applied in future. Therefore, they often don't have long-term goals for the project itself. Regarding 3(c), add "if appropriate to scale of project"; for 3(d), info is not always available.
4 (p 29)	<u>Habitat projects should have a funding plan to monitor and adaptively manage the project, commensurate with the level of monitoring and adaptive management that the project will require</u>	Same comment as for Tidal Marshes and Tidal Flats Policy 7.
5 (p 30)	<u>The Commission should encourage and support regional efforts to collect, analyze, share, and learn from habitat monitoring data.</u>	We support this policy change so long as it doesn't <i>require</i> these regional efforts of all individual project applicants. That would be too much of a burden in some cases.

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Dredging		
n (p 32)	...The Commission has approved a pilot project, the Oakland Middle Harbor enhancement project, that could help to determine the feasibility of eelgrass or other shallow water habitat enhancement or restoration in the Bay	We support this removal of a finding related to a specific individual project from the Bay Plan.
11a (p 32)	A project that uses dredged <u>sediment material</u> to create, restore, or enhance Bay or certain waterway natural resources...	We support this change, if sediment includes all grain sizes from clay to boulders.
11(a)(1)(c) (p 33)	the amount of dredged <u>sediment material</u> to be used would be the minimum amount necessary to achieve the purpose of the project;	We suggest rephrasing as follows "...the minimum necessary to achieve the purpose of the project, <u>considering the project purposes may include the creation of high-value habitat, enhancement of ecological functions, and sea-level rise adaptation that require large amounts of fill.</u> "
11(b)(3) (p 35)	The Oakland Middle Harbor enhancement project, if undertaken, is completed successfully.	We support the removal of Dredging Policy 11(b) in full for the reasons given in your document. We strongly support the removal of this section of the policy.

Overarching comments: The language throughout multiple sections (Fish. i, Tidal Marsh l, Subtidal j) makes an artificial separation implying that eelgrass and oyster-related work is always located in the subtidal zone (mostly submerged below mean lower low water (MLLW)), and the majority of references to intertidal habitats are restricted to vegetated wetland or mudflat (above MLLW), but it is key to note most of these habitats have both subtidal and intertidal ranges.

Thank you for your consideration of our comments, as well as your extensive engagement with stakeholders during the development of the proposed amendment. We are hopeful that these changes will help the entire conservation community advance habitat restoration and related shoreline protection and sea level rise adaptation in San Francisco Bay.

Sincerely,



Amy Hutzl, Deputy Executive Officer

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MANAGEMENT BOARD:

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Citizens Committee to
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Ducks Unlimited
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Protection Agency
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U.S. Geological Survey
Wildlife Conservation Board*

June 14, 2019

BCDC Commissioners
455 Golden Gate Avenue, Suite 10600
San Francisco, CA 94102

SUBJECT: Proposed San Francisco Bay Plan Amendment No. 1-17 Concerning Amendment of Various Sections of the Bay Plan to Address Bay Fill in Habitat Projects, Associated Natural Resource and Dredging Policies, Protection of Shorelines and, Potentially, the Public Access Policies

Dear BCDC Commissioners:

The SFBJV is a partnership of non-governmental organizations, landowners, businesses, and non-voting agencies with a goal to acquire, restore and enhance all types of wetlands, which provide benefits to birds, fish, and other wildlife in the San Francisco Bay Area. The SFBJV is one of the eighteen federally-sponsored habitat Joint Ventures to implement the North American Wetlands Conservation Act and federal bird conservation plans. The SFBJV Management Board consists of 25 agencies and private organizations whose members agree to promote the goals and objectives of SFBJV and who represent the diversity of wetland interests found in the San Francisco Bay region. BCDC was one of our initial members when we were founded 23 years ago, and is still an active and valued SFBJV partner.

The SFBJV Implementation Plan, *Restoring the Estuary*, targets nearly 200,000 acres of wetlands, sub-tidal habitats, seasonal wetlands, and riparian habitats for protection, restoration, or enhancement through our partners' funding and expertise. The tidal wetlands goals with a 2030 timeline are adopted from the 1999 Baylands Habitat Goals, the 2015 Baylands Goals Science update (*Baylands and Climate Change: What We Can Do*), and the Subtidal Goals, all of which BCDC contributed to and concurred with.

The SFBJV supports the overall effort to revise the policy to support the use of fill for restoration. As BCDC amends its Bay Plan, we encourage consistency with these adopted regional plans in recognition of the positive nature and multiple benefits provided by habitat restoration projects. The 2015 update to the Baylands Goals identifies the need to restore complete ecosystems and to accelerate restoration to complete as many projects as possible over the next 15 years for marshes to keep pace with sea level rise.

We are fortunate in the Bay Area to have a conservation community that has been working collaboratively towards these shared goals for two decades, supported by strong and ongoing scientific research and monitoring, with project managers and land managers dedicated to implementing quality habitat that benefit the wildlife and people of the region. We encourage BCDC to tap into this wealth of expertise and we offer assistance from the SFBJV and its forums within the revision process and with implementation under the revised policy.

While the SFBJV comments within this letter will be broad in nature, we strongly encourage close consideration of comments from SFBJV implementing partners. These experts are outlining in detail how BCDC can best help the conservation community overcome the obstacles to bay habitat conservation implementation and increase the

pace and scale of these efforts. We encourage stronger acknowledgement of the need to respond to increasingly dynamic conditions.

We are at a critical time for wetland restoration, and BCDC has a tremendous opportunity to facilitate and encourage the implementation of our multiple regional conservation plans. To expedite wetland restoration in pursuit of the 2030 timeline, our partnership needs reduced financial and regulatory burdens. We strongly encourage BCDC to use this amendment for this end. We encourage BCDC to avoid any changes to the Bay Plan that are overly prescriptive or that have the potential to add financial or regulatory complexity, increasing timelines, and slowing progress on implementation of habitat projects. We encourage changes that exempt permitting costs, streamline application processes, and ease post project obligations for those projects that are vetted by a regional process such as the SFBJV project adoption process, implement the goals of the regional conservation plans, and are consistent with current scientific understanding and recommendations.

Here are a few areas we would like to highlight:

- We are in an increasingly dynamic environment impacted by a combination of accelerating processes and impacts. The amendment should acknowledge the need to be adaptive and responsive to these changes, and recognize the need to keep up with current scientific understanding and recommendations from regional experts and collaboratives. Proposed policy revisions that add new requirements of permittees (such as preparation of adaptive management plans) should carefully consider potential resulting burdens on permittees such as increases in project costs and delivery times. Again, we recommend attention and response to detailed comments from our partner organizations and agencies for further detail.
- We support the acknowledgement that restoration and enhancement to enable marshes to keep pace with sea level rise often requires beneficial fill to occur. We encourage the Commission to promote policy or regulatory changes that will make beneficial use of sediment available in multiple ways for restoration while still precluding fill that would cause detriment to natural habitats where they don't provide net habitat benefits.
- Required monitoring should be minimized to be efficient, cost effective, and contribute to or be replaced by regional monitoring efforts as feasible to better inform our collective understanding and ability to adapt. The SFBJV supports and participates in the current effort to establish a regional monitoring program for tidal marsh, with the expectation that this will result in a decrease in agency-specific monitoring requirements. We would like to see the acknowledgement that regional monitoring efforts should result in minimizing the need for agency-specific monitoring requirements.
- Public access should take place in appropriate locations. Human impacts to sensitive habitat should be avoided. Public access may need to be re-located as sea levels rise.
- Wetland restoration and enhancement projects should be clearly recognized for the multiple benefits they provide, should be considered for their net benefits, and should not have mitigation requirements when net benefits are positive.

We encourage BCDC staff and the Commission to think critically about how to help the restoration community achieve the greatest possible acreage of restoration by 2030.

If you have any questions please contact our Coordinator, Sandra Scoggin.

Sincerely,



Jeff McCreary
Chair



June 17, 2019

The Honorable Zack Wasserman, Chair
SF Bay Conservation & Development Commission
455 Golden Gate Ave., Suite 10600
San Francisco, CA 94102

RE: Public Comments - Background Report: Bay Fill Habitat Restoration, Enhancement, and Creation in a Changing Bay; and Staff Report and Preliminary Recommendation for Proposed Bay Plan Amendment No. 1-17 Concerning the Update of the Bay Plan Fill for Habitat Policies.

Dear Chair Wasserman and Commissioners,

On behalf of the Santa Clara Valley Water District (Valley Water), I am pleased to express our support for the San Francisco Bay Conservation and Development Commission (BCDC) amendment to the Bay Plan to accommodate the use of fill for habitat restoration and sea-level rise adaptation projects, as well as for most of the specifics of the proposed policy changes.

Valley Water is a special district with jurisdiction throughout Santa Clara County. Our agency is the county's primary water resources agency and acts as the steward for its watersheds, streams, and creeks. We are also the groundwater management agency for Santa Clara County and actively manage two groundwater basins, replenishing them with local and imported water through our percolation ponds and stream beds. Valley Water is a partner in the South San Francisco Bay Shoreline Project (Shoreline Project), a joint effort with the State Coastal Conservancy, and the U.S. Army Corps of Engineers, that aims to restore up to 15,100 acres of former salt ponds, creating tidal marshes and wetlands that will provide protection from a 100-year coastal storm event and sea level rise through natural barriers.

As an agency with interest in permitting of public infrastructure projects, and the environmental improvement and protection of the Bay, we offer the following comments to both the Background Report: Bay Fill Habitat Restoration, Enhancement, and Creation in a Changing Bay; and the Staff Report and Preliminary Recommendation for Proposed Bay Plan Amendment No. 1-17 Concerning the Update of the Bay Plan fill for Habitat Policies for your consideration.

- **Draft Policy Changes, Major Conclusions and Policies Part 4.g.** – We agree with BCDC language that indicates "Restoring, enhancing, or creating ecosystems that provide habitat for native fish, other aquatic organisms, or wildlife; enhance coastal resilience; and provide services such as water filtration and carbon sequestration. Fill for these purposes will be especially important to facilitate the adaptation of habitats to rising sea level." As we have found with the restoration of the former Cargill saltponds, fill for habitat restoration is imperative, without such, the type of restoration being conducted would be impossible.



- Draft Policy Changes, Fish, Other Aquatic Organisms, and Wildlife Part 6 (Background Report Sections 4. Challenges for Restoration Implementation and 5. “Bay Fill” and BCDC’s Associated Policies) – Placing smaller volumes incrementally could indeed reduce temporal impact while eventually providing the sought valuable functions; however, it would likely significantly add cost, delay the beneficial results of full implementation, and could require permits for each repeated placement of fill.

One of the major challenges for projects that was not mentioned in Background Report Section 4, but is briefly mentioned in Section 5 (bottom of page 20), is finding, acquiring, transporting, and offloading an adequate amount of clean fill for restoration project use. This currently is a major challenge for existing restoration projects throughout the Bay. Adding limits to the volume of fill placed at one time in any one area will add to the challenges of completing restoration projects and may prove to be cost preventative. This speaks to the lack of sediment available in the region.

- Draft Policy Changes, Fish, Other Aquatic Organisms, and Wildlife Part 5; Draft Policy Changes, Tidal Marshes and Tidal Flats Part 9 – Removing limits to “minor amount of fill” is necessary for large restoration/horizontal levee projects. Fill should be limited depending on local appropriateness, likely function, and restoration value, rather than strict volume. As an example, the immense fill volumes required to restore historic South Bay saltwater marshes (especially under sea level rise conditions) to historic function should not be equated and subject to the same rules as fill for development or to create non-historic habitat areas.
- Draft Policy Changes, Dredging, Policy 11.a. – The bar set for determining how and when a study is complete and conclusive is not clear. It should be clarified what types of studies would the Commission consider necessary and conclusive in deciding the advisability of disposal for beneficial purposes.
- Draft Policy Changes, Major Conclusions and Policies Part 4.g.; Draft Policy Changes, Shoreline Protection Part 4; Draft Policy Changes, Shoreline Protection Parts 4 and 5; Draft Findings Changes, Shoreline Protection Part f. (Background Report Sections 6.B. A Landscape-Scale Approach/7.D. What’s the Alternative?) – The Background Report mentions that completion of vulnerability assessments will highlight areas that are most important for focused sea level rise efforts. Understanding that different parts of the Bay have different habitat needs and that projects will need to be assessed in a regional context, some shoreline areas will require tidal flood protection to increase shoreline resiliency, but conditions in these areas may not support habitat restoration. We suggest that the new Draft Policy Changes address how mitigation would be assigned to these projects. We also suggest that the Draft Policy Changes be clarified to demonstrate that fill for necessary shoreline protection projects to protect public health and safety is important to facilitate the adaptation of Bay area communities to rising sea level, including in areas where there are no or very limited opportunities for restoration.

The Honorable Zack Wasserman, Chair

Page 3

June 17, 2019

- Draft Policy Changes, Shoreline Protection Part 1; Draft Policy Changes, Fish, Other Aquatic Organisms, and Wildlife Part 5 (Background Report Sections 6.C. Recreation/8.A Design) – Sometimes fill that is necessary for shoreline protection, ecotones, and transitional habitat creation could obstruct existing public views, despite potential creation of new public access trails. We suggest that the new Draft Policy Changes address conflicts with other Bay Plan policies regarding existing Bay views.
- Draft Policy Changes, Tidal Marshes and Tidal Flats Part 7; Draft Policy Changes, Subtidal Areas Part 4 (Background Report Sections 8.B Monitoring/8.C Adaptive Management) – Depending on the project sponsors and project length, providing a detailed funding plan for future monitoring and adaptive management may be difficult or impossible during the permit application process. For government agencies, uncertainty can exist with regards to the future amounts of funding available from grants, taxes/bond measures, etc. We suggest providing an exemption to this requirement for government agencies.
- Background Report Section 9.A Future BCDC Actions – Since BCDC's future guidance documents (i.e. those addressing "minimum" fill, monitoring, use of best available science in assessments of a project's regional context, etc.) will impact permit applicants, we request a public process that includes a sufficient comment period.
- Background Report Section 9.A Future BCDC Actions – In order to streamline the permitting process, we suggest expert design review be achieved through BCDC's participation in the Bay Restoration Regulatory Integration Team (BRRIT) as suggested in Section 9.B External Improvements to Restoration Project Permitting.

Again, Valley Water supports BCDC's amendment to the Bay Plan to accommodate the use of fill for habitat restoration and sea-level rise adaptation projects. Thank you for your consideration of the above comments. Please feel free to contact me at (408) 630-2804, should you have any questions.

Sincerely,



Norma J. Camacho
Chief Executive Officer
Santa Clara Valley Water District



South Bay Salt Pond Restoration Project

Restoring the Wild Heart of the South Bay

June 14, 2019

The Honorable Zachary Wasserman, Chair
SF Bay Conservation & Development Commission
455 Golden Gate Ave., Suite 10600
San Francisco, CA 94102

Dear Chair Wasserman and Commissioners,

On behalf of the South Bay Salt Pond (SBSP) Restoration Project, I am pleased to express my support for the BCDC's proposed Bay Plan Amendment Number 1-17 to accommodate the use of fill for habitat restoration and sea-level rise adaptation projects, as well as for most of the specifics of the proposed policy changes.

As the Commission is aware, the SBSP Restoration Project is a multi-agency effort involving the California State Coastal Conservancy, the U.S. Fish and Wildlife Service, the California Department of Fish and Wildlife, and other city and county partner agencies and special districts. My comments on the draft *Staff Report and Preliminary Recommendation for Proposed Bay Plan Amendment No. 1-17 Concerning the Update of the Bay Plan Fill for Habitat Policies* are not intended to speak to the larger interests or comments these entities may have on the proposed Bay Fill policies, but are instead reflect our Restoration Project's view of the proposed changes as well as my own professional perspective on them, as someone who has worked on environmental planning and permitting projects in and around San Francisco Bay since 2007.

Along with my colleagues at the State Coastal Conservancy, I have attended some of the Commission's Bay Fill for Habitat Working Group sessions, and I share the general aspects of the support expressed in the Conservancy's comment letter, including these:

- 1. Acknowledging the benefits of fill for habitat projects** to the Major Conclusions and Policies section of the Bay Plan. It is important to provide the added description of the substantial benefits of fill for habitat/ecosystem restoration and enhancement, especially in terms of adapting to future sea level rise.

2. **Removing the limits on allowing only a “minor amount of fill” for habitat projects** from Fish, Other Aquatic Organisms, and Wildlife Policy 5. To meet our project’s goals of restoring a mix of tidal marsh wetlands and other important habitats, while maintaining or improving flood protection, we expect that substantial volumes of fill will be necessary to keep pace with sea-level rise and offset past subsidence. Because the McAteer-Petris Act will still limit fill to the minimum amount necessary for the successful completion of a project, the removal of language about a “minor amount to” fill can be safely removed from the policies.

3. **Removing Dredging Policy 11b**, which requires the Middle Harbor Enhancement Area Project be completed successfully before the Commission authorizes additional projects that involve the beneficial reuse of dredged material for habitat creation, enhancement or restoration. I concur that “the success of Middle Harbor is not an accurate proxy for the potential success of every other habitat project in the Bay that uses dredged sediment. Thus, it is imprudent to limit the options of all other projects based on this one very specific type of project.” More generally, even if Middle Harbor were an appropriate proxy, I would support the removal of successful completion of *any* specific individual project as a prerequisite for beneficial reuse of dredged material in other restoration projects.

In addition to those points, which I share with the Coastal Conservancy, the table below conveys my comments, suggestions, or questions on several specific proposed policy changes, organized by section.

Section	Policy/ Staff Report Text	Response
Major Conclusions and Policies		
4g (p 6)	<u>Restoring, enhancing, or creating ecosystems that provide habitat for native fish, other aquatic organisms, or wildlife; enhance coastal resilience; and provide services such as water filtration and carbon sequestration. Fill for these purposes will be especially important to facilitate the adaptation of habitats to rising sea level.</u>	As indicated in the first part of this letter, I strongly agree with this addition.
5b (p 7)	Filling <u>almost</u> always increases the danger of water pollution by reducing the ability of the Bay to assimilate the increasing quantity of liquid wastes being <u>that is discharged</u> into it....	This wording is too strong. I agree that <i>artificial</i> fill generally does this, but many restoration projects can help decrease water pollution by leading to marsh development, establishment of oysters and other filter feeders, or adding more substrate for submerged aquatic vegetation to grow. This beneficial effect of some forms of fill should be acknowledged by adding language to that effect to the policies.
Fish, Other Aquatic Organisms, and Wildlife		

Section	Policy/ Staff Report Text	Response
c (p 9)	The wildlife refuges, <u>some of which are shown on the Bay Plan Maps</u> , include national wildlife refuges, state wildlife areas and ecological reserves, as well as other shoreline sites around the Bay whose primary purpose is: (1) the protection of threatened or endangered native plants, wildlife, and aquatic organisms; (2) the preservation and enhancement of unique habitat types or highly significant wildlife habitat; or (3) the propagation and feeding	Is the implication of the word "primary" here that restoration projects can be permitted without necessarily providing ongoing public access features that will exist in perpetuity or be resilient to long-term sea-level rise? If the "primary purpose" is for wildlife, then I would assert that the standard requirements for requiring trails, etc. in these areas should be lower, even if added fill is necessary for a restoration project. Is that made clear somewhere in these proposed policy changes?
j (p 11)	<u>Current models indicate that as sea level rise progresses, many Bay habitats will be degraded or convert to other habitat types. Projects that place fill to ensure that fish, other aquatic organisms, wildlife, and plants have habitat into the future may also result in the conversion of one type of habitat into another and thus may result in a net loss of some habitat types and associated ecosystem functions. Habitat type conversion could alter the balance of species or habitats locally, within an embayment, or on a regional scale. Large-scale habitat type conversion could reduce the amount of habitat available to certain species, and the impacts of large-scale habitat type conversion are not well-understood.</u>	It seems important to make a distinction between conversions from a plentiful habitat type to a scarcer one and ones that go the other way. Or between conversions that would add higher ecological value habitats or ones that will be more critical in the post-SLR world. These types of conversions should be easier to permit than ones that would convert scarce and/or higher ecological value habitats to more common and/or less valuable habitats. I suggest that wording to that effect be added to this policy.

Section	Policy/ Staff Report Text	Response
k (pp. 11-12)	<p><u>Tidal marshes and tidal flats are particularly vulnerable to inundation from sea level rise, reductions in sediment supply, and lack of migration space. Current scientific predictions of sea level rise and declining sediment supply support the likelihood that many marshes and mudflats may not be able to adapt to these changes, and may be inundated by the end of the century if they are not able to accrete sediment and/or migrate to higher elevations. Placing sediment in appropriate locations will be needed to ensure that Bay species have sufficient habitat into the future. Placement of significant volumes of sediment will be particularly important in tidal marshes to build transition zones, increase marsh plain elevation, and create high tide refugia for species. Placement of sediment may also be necessary in shallow intertidal or subtidal areas to increase mudflat elevation or to increase the sediment that can be transported by natural processes to adjacent marshes to increase marsh plain elevation. Little is known about how subtidal areas will adapt to sea level rise or the need for sediment in these areas. Limited knowledge about deep water habitats makes it difficult to predict how major changes, including sediment placement, in these areas may adversely affect fish, other aquatic organisms, and wildlife.</u></p>	<p>I support the addition of this policy; however, it would be better if it were extended to include other types of fill placement for habitat purposes. Shells, gravel beaches, oyster reefs, and hybrid grey-green structures are important and worthy habitat enhancements in intertidal and subtidal areas. Please consider adding text to that effect.</p>
l (p 12)	<p><u>...Placing smaller volumes of fill incrementally could serve the function of facilitating habitat adaptation to sea level rise while also minimizing impacts of fill to fish, other aquatic organisms, and wildlife.</u></p>	<p>I concur that the dynamic described in this policy <i>could</i> take place, but it may do so at added cost to the project proponent. Also, would the Commission require repeated permitting processes for this smaller repeat placements? Or could they be covered under the initial permitting process? Also, adding the word “beneficial” before “fill” would align this policy item with the rest of these changes by differentiating it from traditional fill types.</p>

Section	Policy/ Staff Report Text	Response
5 (p 14)	The Commission may permit a minor amount of fill or a <u>minimum amount of dredging in wildlife refuges, shown on the Plan Maps</u> , necessary to enhance <u>or restore</u> fish, other aquatic organisms and wildlife habitat; or a minor amount of fill or to provide public facilities for wildlife observation, interpretation and education.	I support this proposed policy change. But I also encourage its expansion to include a minor amount of fill for improvements to existing levees and berms that would allow associated wetland or other habitat restoration projects to proceed. As the Commission likely knows, the existing salt pond berms do provide some of that current protection but are inadequate to allow restoration to proceed now or to resist impacts associated with sea-level rise.
6 (p 15)	<u>Habitat restoration or enhancement projects in the Bay that need fill to adapt to rising seas should plan for repeated placements of fill over time to allow habitat to adapt incrementally to sea level rise projections, reducing the need for large scale habitat loss and conversion prior to the onset of future conditions, unless the Commission finds that fewer, larger placements of fill minimize impacts to Bay organisms or that small, repeated fills are not feasible</u>	We recommend adding the following sentence: “The Commission will cover smaller repeat placements under a single permit rather than requiring a new permit process for each placement.”
Tidal Marshes and Tidal Flats		
r (p 19)	Staff analysis comment: While these projects can be permitted under BCDC’s current policies, their importance as a research and learning mechanism are not acknowledged in the Bay Plan.	Will these projects be made somewhat easier to permit by the current updates and policy changes?
6 (p. 22)	Design and evaluation of the project should include an analysis of: <u>...(k) how the project adheres to regional restoration goals; (l) whether the project would be sustained by natural processes; and (m) how the project restores, enhances, or creates connectivity across Bay habitats at a local, sub-regional, and/or regional scale.</u>	Please add a new sentence that states, “If appropriate to the scale and scope of the project, design and evaluation of the project should also include...” This addition would reduce the undue burden on smaller projects that may occasionally need maintenance or other adaptive management actions.

Section	Policy/ Staff Report Text	Response
7 (p. 23)	<u>Habitat projects should have a funding plan for monitoring and adaptive management of the project, commensurate with the level of monitoring and adaptive management that the required for the project.</u>	This is a lot to ask of agencies that are implementing large, long-term habitat restoration or enhancement projects. They generally do not have total control over their own budgets, and their ability to get grant funded is strong but not complete. How certain is this "funding plan" expected to be? What happens if there is a good plan that doesn't get fully realized over the longer term? Please consider eliminating this requirement or adding a definition limiting the “ funding plan” to a demonstration that cost estimates for monitoring and management were included in the project budget and that the project proponent has a reasonable expectation (and not a guarantee) of obtaining that level of funding over time.
Subtidal Areas		
4 (p 29)	<u>Habitat projects should have a funding plan to monitor and adaptively manage the project, commensurate with the level of monitoring and adaptive management that the project will require</u>	Please consider changes similar to those I proposed for “Tidal Marshes and Tidal Flats, Policy 7”.
5 (p 30)	<u>The Commission should encourage and support regional efforts to collect, analyze, share, and learn from habitat monitoring data.</u>	I support this policy change so long as it doesn't actually <i>require</i> these regional efforts of all individual project applicants. That could be too much of a burden in some cases.
Dredging		
n (p 32)	...The Commission has approved a pilot project, the Oakland Middle Harbor enhancement project, that could help to determine the feasibility of eelgrass or other shallow water habitat enhancement or restoration in the Bay	I support this removal of a finding related to a specific individual project from the Bay Plan.
11(a) (p 32)	A project that uses dredged <u>sediment material</u> to create, restore, or enhance Bay or certain waterway natural resources...	The word choice in this proposed change seems unnecessarily limiting. Please clarify whether bay muds, cobbles, or other sizes of material are considered sediments. If so, then I have no objection to the terminology change.

Section	Policy/ Staff Report Text	Response
11(a)(1)(c) (p 33)	the amount of dredged <u>sediment material</u> to be used would be the minimum amount necessary to achieve the purpose of the project;	<p>This language seems overly restrictive. There's a "minimum" amount that may be necessary to achieve the very minimal amount of benefits necessary to be considered "successful".</p> <p>But there are many cases in which additional placed fill/dredged material could achieve <i>greater</i> benefits in terms of habitat value, sea-level rise resilience, establishment of healthy tidal marsh, how long a restoration project takes to succeed, etc.</p> <p>Why limit it in this way and thus reduce those environmental benefits?</p> <p>I suggest rephrasing to "the amount of dredged sediment allowed to be used would be limited to that which provides additional benefits in terms of habitat values, ecological functions, and sea-level rise adaptation;" or something similar to that.</p>
11(b)(3) (p 35)	The Oakland Middle Harbor enhancement project, if undertaken, is completed successfully.	I support the removal of this policy for the reasons given in the Staff Report. I strongly support the removal of this section of the policy, even if the rest of the policy is retained.
Shoreline Protection		
Entire section (p. 38)	<i>Suggestion for new policy.</i>	<p>I strongly suggest adding a policy that allows adding fill that is specifically for improvements to existing levees and berms associated with a habitat restoration project, in order to allow the associated wetland or other habitat restoration work to proceed without decreasing shoreline protection or increasing flood risk.</p> <p>In many places around the Bay, the existing berms of former salt ponds, grazing areas, dredge disposal sites, or other hydraulically isolated areas currently provide protection but are inadequate to allow restoration to proceed now or to resist impacts associated with sea-level rise unless they are raised or otherwise improved.</p> <p>These types of improvements should be formally permissible under the Commission's Bay Fill Policy.</p>

Thank you for your consideration of the above comments. Please feel free to call (650) 814-0588 or email me at dave.halsing@scc.ca.gov if you'd like to further discuss any of these points.

Sincerely,

A handwritten signature in black ink, appearing to read "Dave Halsing". The signature is fluid and cursive, with the first name "Dave" being more prominent than the last name "Halsing".

Dave Halsing, Executive Project Manager
South Bay Salt Pond Restoration Project



Western Regional Office
3074 Gold Canal Drive
Rancho Cordova, CA 95670-6116
Telephone: 916-852-2000

June 7, 2019

BCDC Commissioners
455 Golden Gate Avenue, Suite 10600
San Francisco, California 94102

RE: Support for Proposed Bay Plan Amendment No. 1-17 Concerning the Update of the Bay Plan Fill for Habitat Policies

Dear BCDC Commissioners,

Ducks Unlimited is the world's leader in wetland conservation. We are a 501(c)3 organization that specializes in the planning and implementation of wetland conservation projects throughout North America. We work closely with federal, state, local, and private entities to protect, restore, and enhance wetlands that benefit waterfowl, other wildlife, and people. The San Francisco Bay is one of our top 5 continental priority landscapes. As such, our team of conservationists stationed in our Vallejo field office provide valuable financing, planning, and implementation services to Bay Area wetland conservation partners.

Ducks Unlimited supports the Bay Conservation and Development Commission (BCDC)'s desire to update the Bay Plan to allow fill for habitat projects. Ducks Unlimited believes that an update to the Bay Plan to facilitate fill for habitat benefits has the potential to help our and our partners' ability to achieve well established objectives for the restoration and enhancement of San Francisco Bay wetlands, estuarine habitats and associated uplands, and to help make San Francisco Bay more resilient to rising seas. We believe that this potential can only be achieved if carried forward in a manner that both considers the best available science and facilitates conservation of bayland habitats. Conversely, an update to the Bay Plan that adds regulatory burden, lengthens and adds complexity of studies, increases project costs, and fails to recognize the dynamic nature of San Francisco Bay will hinder the restoration community's ability to achieve our shared restoration goals and objectives by the 2030 timeline.

As proposed, Ducks Unlimited has serious concerns that the proposed changes will increase regulatory burdens, extend timelines, and expand BCDC's jurisdictions, all of which will make the restoration of historic baylands much slower and costlier, and render achieving the 2030 timeline impossible. BCDC has a seminal opportunity to help the restoration community achieve its ambitious 2030 timeline to implement voluntary restoration projects funded by public dollars to directly benefit the public. By implementing the recommended changes below, BCDC can implement badly needed policy changes that would aid BCDC's staff and Commission

in authorizing fills that will increase restored habitat value for fish, birds, and other wildlife, and increase the resilience of our bay and by extension, the communities surrounding the bay.

Wetlands provide tremendous societal benefits through the ecosystem services they provide including flood protection, wave attenuation, water filtration, groundwater recharge, nursery grounds for fish, and habitat for endangered species, to name a few. Historically, more than 200,000 acres of tidal wetlands fringed San Francisco Bay. In 1999, the Baylands Ecosystem Habitat Goals project, a multiagency effort to identify what kinds and amounts of wetland habitats around the Bay are necessary to sustain its health, set a goal of restoring 100,000 acres. Yet since then, only 15,000 acres are now restored. The recent climate change update (2015) found that **restoring at least 50,000 is critical to protect the health of the Bay as it faces sea level rise by 2030**. Bold actions and policies promoting wetland restoration are needed to achieve this minimum acreage goal in the time remaining.

In order to meet this ambitious timeline we strongly urge the Commission to seek ways to encourage and facilitate restoration and enhancement projects; recognize that bay shoreline and wetland distribution will change through time and so implement policies that both allow for and facilitate managed retreat away from the bay shoreline as sea level rises; limit the amount of new structures at the bay edge requiring fortification, including new public access infrastructure; recognize habitats can have value now and into the future, and that those values can change through time and space; create policies that recognize the vital importance wetlands have to all of us; and create a process that facilitates voluntary wetland restoration and enhancement projects by incentivizing voluntary projects and reducing the regulatory burdens for said projects rather than subjecting conservation projects to the same or more stringent requirements as development projects that degrade, impact or eliminate habitat.

Habitat conservation projects are one of the best ways to increase the bay's resilience. BCDC must create flexibility and innovation in its approach to these projects, and incorporate the expertise of practitioners for planning, monitoring, and implementing them for the conservation community to meet regional conservation goals and timelines. As a Board Member of the San Francisco Bay Joint Venture (JV), we know firsthand the varied and extensive habitat conservation expertise of the partnership. The JV prides itself as being a strong technical and scientific resource for its partners, including BCDC. We recommend that the JV partnership is used as a resource to inform, educate, and recommend to BCDC staff of the adequacy and appropriateness of project design level, monitoring needs, and adaptive management plans as they relate to multiple findings in the draft document.

Here are a few specific recommendations that will help achieve the vision laid out in the Baylands Habitats Goals Report (1999) and Goals Report Science Update (2015):

- Reduce the financial burden put on restoration and enhancement projects by eliminating permit fees for these projects, by limiting research, studies, and monitoring efforts to the minimum amount needed to verify habitat benefits, and by limiting the BCDC compliance timeline for habitat restoration and enhancement projects.

-Develop a BCDC regional permit that is specific to restoration and enhancement projects that authorizes habitat restoration and enhancement projects that have a net benefit to the environment either through creating more waters/wetlands or improving the functions and services of waters/wetlands and their adjacent habitats, regardless of size, in accordance with the terms and conditions of a binding stream or wetland enhancement or restoration agreement, or a wetland establishment agreement, between the landowner and the U.S. Fish and Wildlife Service (FWS), the Natural Resources Conservation Service (NRCS), the Farm Service Agency (FSA), the National Marine Fisheries Service (NMFS), the National Ocean Service (NOS), U.S. Forest Service (USFS), or their designated state cooperating agencies. This will streamline permitting and encourage the restoration of historic baylands. Limitations to use of this regional permit should be based on significant impacts under CEQA or NEPA, rather than a size limitation.

- Reduce or remove the current monitoring burdens from projects with successful, proven methodologies, and shorten the time frames for monitoring to periods that are on par with requirements from other agencies.

- Add allowances for beneficially re-used dredge sediment to dry out so it can be shaped and used for upland transition zone and upland refugia construction. Defer to the agencies with the expertise to render these decisions (i.e. SWRCB or RWQCB).

DU's comments on the draft update of the Bay Plan fill for habitat policies fall into two main categories, first and most critically, categories where we feel changes need to be incorporated to benefit bay habitats, and second, to reduce implementation timeline, cost, and/or uncertainties. The second category includes draft findings that could be modified to add clarity.

1. Changes that need to be incorporated to benefit bay habitats and reduce implementation timelines and/or uncertainties
 - a. Page 11. Section J. Reframe to recognize habitat conversion will happen because of natural processes accelerated by sea level rise, and to recognize positive nature of habitat restoration projects.
 - b. Page 12. Section I. Reduce the prescriptions about fill volumes and timing. While I agree that placing small volumes of fill incrementally would result in smaller perturbations, this will be very costly, and in some cases infeasible. It is hard to know what a staff member will consider a "small amount. Relate fill quantities to habitat restoration project goals, objectives, and timelines. While placing small volumes of fill incrementally likely would result in smaller environmental perturbations, this will be far costlier, and in some cases infeasible. We recommend creating more flexibility in this finding so that sediment availability, restoration project demand, and logistics can all be considered. Current, region-specific sea level rise predictions should guide conservation planning and implementation to ensure we have ample bay habitat types, including upland transition and adjacent undeveloped uplands, into the future. Specific mixes of

habitats should be evaluated based on habitat restoration project goals and objectives, sea level rise projections, and other considerations such as feasibility of getting dredge or upland material to the site both now and in the future.

- c. Page 13. Section 2. Remove this section and defer to California Department of Fish and Wildlife, National Marine Fisheries Service, and US Fish and Wildlife Service to provide conservation measures for state and federal threatened and endangered species. There are multiple issues with the draft policy, as described below. Creating policies regarding species that overlap with the policies overseen by other agencies creates the potential for conflict where conservation measures differ between agencies. Furthermore, protecting species behind man-made structures, like dikes, both conflicts with the draft policy on siting a project in an appropriate landscape position and would result in an extremely costly and intensive management burden for the landowner. While there may be reasons a landowner would choose to do so in certain circumstances, this should not be policy. The finding as written creates a high potential for conflicts. For example, a species like red-legged frog in diked baylands could be protected under this finding in a historic bay habitat that would not have been historically suitable habitat for red-legged frog, is a population sink and will require intensive management to maintain behind dikes.
- d. Page 15. Section 6. Recommend changing text to: "Habitat restoration or enhancement projects in the bay that need fill to adapt to rising seas should use best available and regionally applicable science possible to support recommendations for fill quantities and should relate fill quantities to habitat restoration project goals, objectives, and timelines." As written, the draft text seems overly prescriptive and a one-size-fits-all approach. It is also worth thinking through project size in relation to this question, as well as habitat restoration project goals and objectives, cost, and effort - if we make repeated fills too cumbersome from a cost, permitting, time perspective, they simply won't get done as often. It may be better to allow for repeated placements of fill but also recognize where we can work with natural processes to sustain habitats, we want to do that. Also, it is possible to envision a project that builds all of this into that. Today's marsh is tomorrow's subtidal habitat, and tomorrow's wetlands are today's uplands.
- e. Page 15. Section 7. Recommend changing text to, "Allowable fill for habitat projects in the bay should be scaled appropriately for the project and necessary sea level rise adaptation measures and should not result in the loss of species within an embayment or on a regional scale". At a minimum, recraft to clarify that we are not living in a static environment and to clarify intent. We are living in a changing environment in a period of increasingly rapid change. Balances (number and relative abundance) of species and habitats within embayments or at a regional scale could change through time. Projects may well cause negative impacts to existing habitats, and these might be justifiable. Section 7(a). Amorphous and hard to achieve - recommend removing - there are numerous examples where the benefits of allowing fill for habitat projects in the Bay would

outweigh negative impacts to existing habitats. Section 7(c). There is no known way to measure this. Clarify who must measure this and when. The way this is written precludes proactive actions to prepare habitats for marsh transgression – we recommend broadening language to reflect managed retreat/moving upslope.

- f. Page 18. Section l. Recommend incorporating language that allows for multiple approaches to restore and sustain marshes. In the long term, fully connected tidal systems with intact processes are ideal, but in the short-term there may be other ways to help jump start the process, such as subsidence reversal and other actions requiring more intensive management.
- g. Page 19. Section q. Recommend reframing this finding to recognize the estuary is a very dynamic place, and to recommend that project proponents consider natural processes in siting and planning their projects. It is important to recognize even when habitat restoration and enhancement projects don't achieve their goals and objectives on the timelines we anticipate, that they are providing valuable functions and services as well as habitats for birds, fish and other wildlife. For example, creating managed wetland systems in historic baylands may provide habitats that otherwise would not exist (e.g. Haire Ranch) for the short-term until a longer-term goal is made (such as full tidal restoration option). This doesn't mean that creating hundreds of acres of wetlands from Agricultural ground shouldn't occur and isn't valuable. This practice will halt and possibly reverse subsidence as organic matter builds elevation, as seen at Viansa wetlands.
- h. Page 19. Section s. Recognize that coordinated regional monitoring will only work well if BCDC is part of the coordinated regional monitoring and does not add additional monitoring requirements. Otherwise, the applicant may choose to forego participation. The obligation to monitor projects for decades is slowly draining the available staff and resources from some of the biggest conservation organizations and agencies in the Bay, thereby slowing down restoration activities. Even with the passage of San Francisco Bay Restoration Authority Measure AA, funding need exponentially outstrips availability. Dedicating additional resources to planning, compliance, and monitoring will decrease the amount of habitat delivery on the ground.
- i. Page 20. Section u. Recommend changing to frame in term of project goals and objectives, existing condition relative to proposed restored condition, location, and surrounding infrastructure/built environment. Further, risk should not be conflated with project size, therefore we recommend using risk, alone, as the driver for intensive monitoring and adaptive management, rather than project size, lifespan, or uncertainty
- j. Page 21. Section 4. If this language is incorporated, recommend modifying either to an elevation contour measured from mean higher high water, or connecting with adjacent wetland and aquatic habitats, or consistent with San Francisco Bay Joint Venture Implementation Plan Revision recommendations, in preparation.

- k. Page 21, Section 5. Recommend reframing to recognize managed retreat, as well as short term benefits.
- l. Page 22. Section 6. This reflects a substantial number of new requirements (adaptive management plans, additional analyses during design and evaluation) that will add cost and time to project delivery. Recommend removing factors, such as additional analyses and intensive and lengthy monitoring plans, that increase cost, timeline, and complexity of conserving habitat. The more onerous requirements are, the less projects will be implemented by 2030 in accordance with the Goals Report Science Update (2015). Add language that recognizes both short term and long-term benefits of projects.
- m. Page 23. Section 7. Recommend making amount, duration, extent of monitoring and complexity of adaptive management plan consistent with risk, and inversely proportional to habitat benefits. This is another example to adding planning, design, and monitoring burden to projects that will make them take longer and cost more. Monitoring data that is collected should be limited to the minimum level needed to ascertain a project is meeting its goals and objectives. In our experience state, federal, and private restoration entities do not have a monitoring budget to guarantee funds for a twenty plus year obligation, and some of these entities must comply with legislation that limits their abilities to commit to financial obligations like these. Furthermore, to the extent monitoring data are collected, we recommend that these data are meaningful, and are analyzed to inform future actions on a regional scale.
- n. Page 25. Section 11. Recommend adding clarifying language to indicate this will be done on a regional scale, such as wetlands regional monitoring program, not individual restoration projects.
- o. Page 26. Section J. Consider including aged concrete for habitat purposes -- Oyster shells are expensive and challenging to procure. If oyster restoration efforts continue to be scaled up, it may become increasingly difficult to get 'baycrete'
- p. Page 26. Section k. Recommend BCDC be open to authorizing pilot and demonstration habitat enhancement projects where proof of concept exists from similar landscapes, such as thin layer deposition used on east and gulf coasts.
- q. Page 27. Section n. Recommend removing size as a consideration for adaptive management. Relate adaptive management to potentially significant impacts to habitats or species rather than size.
- r. Page 28. Section o. Recommend removing this finding. This is arbitrary. If finding is retained, recommend reframing to recognize beneficial nature of habitat restoration projects rather than asking project proponents to prove their projects are beneficial. See comments under Page 19. Section q.
- s. Page 29. Section 4. Recommend removing size as a monitoring trigger.
- t. Page 37. Section 11b. Create flexibility over lifetime of this plan to scale up these projects for beneficial reuse. Recommend adding", and support scaling them up when and if additional information supports doing so."

- u. Page 39. Section h, Staff Analysis. Change penultimate sentence to reflect that tidal marshes and tidal flats do not attract waterbird species of large enough size to be of concern to airports.
- v. Page 39. Section i. Beneficial projects are beneficial in nature and do not require mitigation.
- w. Page 40. Section 4. Do not require projects to evaluate things that are not feasible or appropriate. This is not a cost they should not have to bear.
- x. Page 40. Section 5. Recommend reframing to recognize natural resources as separate from public access.
- y. Page 40. Section 6. Recommend adding, "for techniques that have not been tested in similar conditions and support scaling them up when and if additional information supports doing so."

2. Changes recommended for clarity or correctness

- a. Page 6. Section 4.g. Recommend including waterfowl and other waterbirds; recommend including subsidence reversal in discussion of services provided.
- b. Page 8. Fish, Other Aquatic Organisms, and Wildlife, draft finding a. Recommend inserting 'native or commercially important' before fish, other aquatic organisms, and wildlife. Also recommend thinking about intent behind adding 'plants and seaweed' and clarifying language around that. Recommend considering habitat types other agencies protect, such as eelgrass, other native Submerged Aquatic Vegetation (SAV), and wetlands.
- c. Page 13. Section 2. Wording is unclear. Does this include any native species, and threatened and endangered species and species that the CDFW, NMFS, and USFWS have determined are candidates? Is "substantial public benefits" described somewhere? If not, recommend removing this language.
- d. Page 17. Section k. Last sentence – recommend changing to, "...these functions and services are limited in the long-term unless connected to other higher elevation areas of land."

We commend the Commission in the timely amendment of the Bay Plan. The Commission was formed at Save the Bay's urging through passage of the McAteer-Petris Act in 1965 to "prevent indiscriminate Bay fill." The voluntary, publicly-financed wetland restoration projects that come in front of the Commission are not indiscriminate. Rather, they are highly coordinated and planned for maximum societal and environmental benefits.

Page 43 references an Environmental Assessment that was prepared. Please provide us with a copy of that document. We request that an EIR/EIS be prepared for the proposed action. The lack of public outreach and involvement has substantially reduced the required transparency of a federal or state agency decision making policies and procedures. Page 43 further states that the Bay Plan amendments themselves do not have significant adverse environmental effects. We feel that as written, the new requirements in this update will significantly reduce the amount of habitat restoration that will occur due to significantly increasing project timelines,

significantly adding project planning and implementation costs, and significantly increasing post project monitoring and adaptive management costs.

Page 45 references "self-mitigating" restoration projects. By their nature, they are not mitigation. They are net beneficial projects and describing them as self-mitigating reflects a fundamental mischaracterization of these projects. Why would a beneficial project need to mitigate? How can we reasonably expect to ever get close to restoring the historic footprint of habitat in the San Francisco Bay if we further burden and restrict the voluntary wetland restoration and enhancement activities that the conservation community (including folks like CDFW, USFWS, NOAA NMFS) are trying to move forward.

We ask the Commission to continue a legacy that positioned San Francisco Bay as an innovative world leader of progressive wetland restoration techniques/projects for addressing sea level rise, and to ensure this legacy persists for future generations of Bay Area residents. We appreciate your consideration and will gladly engage further to provide clarification on any of our comments. We look forward to an updated plan that substantially supports, facilitates, and advances restoration efforts in San Francisco Bay.

Best regards,



Mark E. Biddlecomb, Director
Western Regional Office



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street

San Francisco, CA 94105-3901

JUN 13 2019

Megan Hall
San Francisco Bay Conservation and Development Commission
455 Golden Gate Avenue, Suite 10600
San Francisco, CA 94102-7019

Dear Ms. Hall:

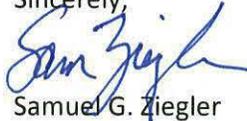
Thank you for the opportunity to comment regarding the **Preliminary Recommendation for the Proposed Plan Amendment No. 1-17 Concerning the Update of the Bay Plan Fill for Habitat Policies**. Attached please find USEPA's specific comments to assist in the development and updating of Bay Plan policies for habitat restoration and resiliency to sea level rise.

I was fortunate to work as staff from 1988 – 1992 developing the first Comprehensive Conservation and Management Plan (CCMP) for the San Francisco Estuary. The CCMP under the stewardship of the SF Estuary Partnership (SFEP) and the Regional Monitoring Program for Water Quality (RMP) under the stewardship of the San Francisco Estuary Institute have created a high level of agreement among agencies, scientists, regulated community, environmental advocates and the public for the actions necessary to protect the Bay. Science is now informing us that the appropriate use of fill for habitat is essential to the continued protection and improvement of SF Bay.

EPA is committed to working collaboratively to continue this progress. In addition to supporting SFEP and the *Baylands Ecosystem Goals Project*, we are supporting other activities that are consistent with the purpose of the proposed Bay Plan revisions. We are providing financial and technical support to develop a regional wetland monitoring program. Like the highly successful RMP, we envision a regional approach for wetlands monitoring that will provide high quality information to advance restoration and resiliency. EPA's SF Water Quality Improvement Program has invested over \$50 million to restore wetlands, restore water quality, and implement green development practices that use natural hydrologic processes to treat polluted runoff. We remain active partners in the Long-Term Management Strategy for the Placement of Dredged Material (LTMS) and want to see continued progress on the LTMS goal to maximize the use of dredged material as a resource. Dredged material will be an important source for the fill necessary for successful habitat restoration. Finally, we are excited to be assisting the Bay Restoration Regulatory Integration Team (BRRIT) to improve the permitting process for the many habitat restoration projects that are anticipated in the coming years. Related to BRRIT, we are supporting a study to develop an analysis framework to evaluate the conversion between differing wetland habitats, which among other uses could aid the permitting process.

As a BCDC Commissioner on behalf of USEPA and a member of the Bay Fill Policies Working Group, I commend you and your colleagues for preparing these recommendations for public review and subsequent consideration by the Commission. If you have any questions concerning these comments, please contact me (ziegler.sam@epa.gov) or our technical experts Jennifer Siu (siu.jennifer@epa.gov) and Luisa Valiela (valiela.luisa@epa.gov).

Sincerely,

A handwritten signature in blue ink that reads "Sam Ziegler". The signature is written in a cursive style with a large, stylized "S" and "Z".

Samuel G. Ziegler
Chief, Wetlands Section

Attachment

**EPA Comments on BCDC Proposed Bay Plan Amendment No.1-17 Concerning the Update of the Bay
Plan Fill for Habitat Policies (as dated May 21, 2019)**

Major Conclusions and Policies

P.6 item 4g.

Suggest adding following as last sentence:

“There is broad agreement and recognition, including among scientists and resource agencies, that fill will be essential to the successful restoration and expansion of tidal marsh and other aquatic habitat in SF Bay.”

Ensure that language added here is consistent, if not the same, as language for draft policy change #9 under Tidal marshes and tidal flats on page 24. This should be a statement that clearly explains that adding fill to tidal marshes and other aquatic habitats is justifiable fill for successful restoration in the long term.

P.6 item 5a.

After “Filling...” insert the following before “...can negatively affect...”

“not for the purpose of well-designed habitat restoration”

Add “for development” after “Future filling” (2nd sentence)

Replace “..delicate balance created by nature, and..” with “..highly modified and urbanized setting..” (3rd sentence)

Add “non-maintenance” before “dredging project” (3rd sentence)

P.7 item 5b.

This section does not reflect current science; suggest deleting. At least change “almost always increases” in first sentence to “may increase”.

Fish, Other Organisms, and Wildlife

P.8 item b.

Add “suspended” before “sediment concentration”. Water clarity, as a function of suspended sediment concentration and total suspended solids, is assumed to be covered under the “water quality” term. We are unclear of the intent of adding sediment concentration in this section, as it seems to be mixing concepts of turbidity and sediment availability.

P.9 item e.

Change “or” to “and” as follows” essential fish habitat and critical habitat”

P.11 item j.

In first sentence delete “convert” and substitute “changed”. In addition, delete last two sentence and insert the following:

“The best available science will need to guide decisions that will cause habitat type conversion to ensure the viability of species or habitats locally, within an embayment, or on a regional scale. A Wetlands Regional Monitoring Program would be an appropriate approach to determine the best available science to inform agencies, landowners and interested stakeholders on rates and distribution of change of wetland types so that ecologically appropriate decisions and/or interventions/actions can be made.”

P.11-12 item k.

In second sentence delete “declining sediment supply”. Replace with “changing” sediment supply.

Suggest better reflection of current scientific understanding of the Bay’s sediment supply in the Staff analysis section and by extension in the Findings, which has summarized the issue as “declining sediment supply”. That statement fails to provide the necessary understanding that suspended sediment rates are not expected to decline indefinitely, that the step change being experienced currently is a function of reduced delivery from the Delta (and other factors if more detail is warranted), that a new equilibrium is likely, and that in some sub-embayments, such as the lower south bay, there is still sufficient suspended sediment supply to support tidal wetlands restoration.

P.12 item l.

This section appears to be establishing a “Finding” that multiple applications of small amounts of fill will always be preferred over placing a large amount of fill based on an assumption of impacts to fish and organisms and type conversion. The assumptions made on impacts should be analyzed on a case by case basis using best available science, especially since it is likely that some places in the Bay will experience impacts from sea level rise more rapidly than others and designs to implement projects should be in response to site specific conditions that may include proposals for placement of large volumes of fill to achieve the project purpose which is long term success of restoration projects.

P.15 item 6

Current proposed language may over emphasize the use and applicability of thin-layer placement, rather than providing for its use when appropriate for achieving the goals of specific restoration project.

Change “should” to “may” and revise as follows:

Habitat restoration or enhancement projects in the Bay that need fill to adapt to rising seas may plan for repeated placements of fill over time to allow habitat to adapt incrementally to sea level rise projections unless small, repeated fills are not feasible or larger placements of fill achieve more significant habitat and related project goals while minimizing negative impacts to Bay habitats and species.

See comments on item l.

P.15 item 7

Revise as follows:

Allowable fill for habitat projects in the Bay should (a) maximize net habitat benefits within an embayment or on a regional scale consistent with regional goals; (b) avoid and minimize to the extent practicable negative impacts to existing habitats and species; (c) be scaled appropriately for the project and necessary sea level rise adaptation measures.

Tidal Marshes and Tidal Flats

P.19 item r.

For clarity it would be helpful to know the distinction between pilot and demonstration projects in this context or if assumed to be used as synonymous.

P.20 item t.

Adaptive management can be used for restoration projects because they are complex systems and because there is uncertainty, not necessarily due to “high levels of uncertainty.”

P.22 item 6

In first sentence, change “program” to “plan” before “a monitoring” and delete “to assess benefits, impacts, the likelihood of success, and sustainability of the project.” As an alternative, end the first sentence after “...monitoring plan.” And begin next sentence with “To assess benefits, impacts, the likelihood of success, and sustainability of the project, design and evaluation of the project should include...”

P.23 item 7

Revise second sentence as follows:

“Monitoring and adaptive management plans should have a funding component, commensurate with the level of monitoring and adaptive management required for the project.”

P.23 item 8

Add the following:

“Monitoring required for habitat restoration projects should be coordinated with regional efforts and other monitoring to improve the value and usefulness of data, and if possible reduce the cost of project-based monitoring.”

P.25 item 10

In first sentence, delete “should encourage and” and insert “may”.

Delete “when the potential benefits are greater than the potential risks. These projects should...”

Combine first and second sentences then to read as follows: "The Commission may authorize pilot and demonstration projects that include appropriately detailed..."

Delete third sentence "Project outcomes should be analyzed and reported expeditiously, so that findings can be applied to future projects." Replace with "Pilot project outcomes and lessons learned should be analyzed and reported expeditiously and shared widely but are not intended to preclude permitting of other pilots projects."

P.25 item 11

In first sentence, delete "and action" and insert "which may include pilot and demonstration projects"

P.25 item 11a.

Insert after "...investigate fill placement approaches" and insert "and the beneficial reuse of dredged sediment"

P.29 item 3(c)

Delete "Bay's" and insert "local"

p. 30 item 7

Insert "subtidal" after "authorized for"

At end of sentence delete "that no other method of enhancement or restoration except filling is feasible." and replace with "filling is the best available method of enhancement, restoration or sea level rise adaptation."

p.31 item 8

Revise, similarly as suggested revision to p.25 item 10, as follows:

Delete "should encourage and" and insert "may".

Delete "when the potential benefits are greater than the potential risks. These projects should..."

Combine sentences then to read as follows: "The Commission may authorize pilot and demonstration projects that include appropriately detailed..."

Dredging

The draft Findings and Policy Changes should be revised to more accurately represent the broad consensus that significant volumes of dredged sediment will be needed at habitat sites in tidal waters to maximize habitat restoration and sea level resiliency. The current understanding regarding the need for reuse of dredged sediment and where such use is most appropriate is described in the staff analysis but has not been sufficiently incorporated into the draft findings and policies. We agree with the BCDC staff analysis that "The level of detail in this policy may be better accomplished through a guidance document rather than the Bay Plan, or could be captured by simply by referring to the use of the best available science on these matters."

P.32 item n.

We already are building scientific and technical knowledge that supports the “need for” and “potential effects of” using suitable dredged material for habitat restoration. More studies are certainly warranted to iteratively refine the science. Perhaps modify language to generally state “Continuation of Baywide studies to support the use of dredged sediment for eelgrass or other shallow water habitat enhancement or restoration.”

P.32 item 11.a(1)b

Suggest deleting this sentence as it no longer reflects our current critical need to maximize use of suitable dredged sediment for restoration actions.

P.33 item 11.a(1)d

Suggest deleting this sentence; water quality may be temporarily impacted from dredged material disposal, but the restoration will have long-term positive impacts on beneficial uses and water quality.

P.33 item 11.a(4)

Suggest deleting this sentence as it no longer reflects our current critical need to maximize use of suitable dredged sediment for restoration actions and requires mitigation if have net loss of area or volume. Restoration projects, if designed according to all the other policies, will result in net ecological and societal gain, so focusing on volume and area seems short-sighted. Suggest instead focusing on best available science.

General comment on this section: Changing dredged “material” to “sediment” throughout this section may unnecessarily limit the use of upland soils as potential suitable fill in certain appropriate scenarios.



June 6, 2019

Larry Goldzband, Executive Director
Brad McCrea, Regulatory Director
Shannon Fiala, Planning Director
San Francisco Bay Conservation and Development Commission
455 Golden Gate Avenue, Suite 10600
San Francisco, CA 94102-7019

TRANSMITTED VIA EMAIL

Subject: Staff Report and Preliminary Recommendation for Proposed Bay Plan Amendment No. 1-17 Concerning the Update of the Bay Plan Policies
(For Commission Consideration on June 20, 2019)

Dear Mr. Goldzband, Mr. McCrea and Ms. Fiala:

The San Francisco International Airport is pleased to comment on the proposed Bay Plan Amendment No. 1-17 before the Bay Conservation and Development Commission (BCDC). BCDC proposes adding finding (h) to its Shoreline Protection Policy to acknowledge that “[i]n some cases, natural solutions that support wildlife may conflict with adjacent land uses, such as aviation operations.” BCDC further proposes amending Shoreline Protection Policy No. 4 to read as follows:

All shoreline protection projects should evaluate the use of natural and nature-based features, such as marsh vegetation, levees with transitional ecotone habitat, mudflats, beaches, and oyster reefs, and should incorporate these features to the greatest extent practicable. Ecosystem benefits, including habitat and water quality improvement, should be considered in determining the amount of fill necessary for the project purpose. Suitability and sustainability of proposed shoreline protection and restoration strategies at the project site should be determined using the best available science on shoreline adaptation and restoration. *Airports may be exempt from incorporating certain natural and nature-based features.*

The Airport appreciates BCDC’s inclusion of an exemption for airports and its acknowledgment of the “high risks to human life and property posed by potential collision of airplanes with birds (which are attracted by certain natural and nature-based features).” Because of the potentially significant public safety hazard posed by placing wildlife attractants near airports, the exemption should be mandatory where natural and nature-based features might attract wildlife. The Airport proposes updating the exemption language slightly to state:

Airports shall be exempt from incorporating natural and nature-based features that could endanger public safety, such as by attracting potentially hazardous wildlife.

AIRPORT COMMISSION CITY AND COUNTY OF SAN FRANCISCO

LONDON N. BREED MAYOR LARRY MAZZOLA PRESIDENT LINDA S. CRAYTON VICE PRESIDENT ELEANOR JOHNS RICHARD J. GUGGENHIME MALCOLM YEUNG IVAR C. SATERO AIRPORT DIRECTOR

Mr. Goldzband, Mr. McCrea and Ms. Fiala
San Francisco Bay Conservation and Development Commission
Page 2
June 6, 2019

If you have any questions or would like to discuss this matter further, please feel free to contact me at Martha.Whetstone@flysfo.com or (650) 821-5032. Thank you for the opportunity to comment and for your consideration.

Sincerely,

A handwritten signature in cursive script that reads "Martha Whetstone". The signature is written in black ink and is positioned above the printed name and title.

Martha Whetstone
Government Affairs Manager

cc: Dave Pine, San Mateo Board of Supervisors
John Ballesteros, SFO External Affairs Director
Cathy Widener, SFO External Affairs
Joe Birrer, SFO Director of Engineering and Construction Services
Nixon Lam, SFO Environmental Affairs Manager



Marin Audubon Society

P.O. Box 599 | MILL VALLEY, CA 94942-0599 | MARINAUDUBON.ORG

June 13, 2019

Zack Wasserman, Chair
Bay Conservation and Development Commission
455 Golden Gate Avenue, Suite 10600
San Francisco, CA 94102

RE: COMMENTS ON AMENDMENTS TO BAY FILL POLICIES

ATT: MEGAN HALL

Dear Chair Wasserman and Commissioners:

This is to convey Marin Audubon Society's strong support for the proposed Bay Plan amendments to the *Fish, Other Aquatic Organisms and Wildlife, Tidal Marshes and Tidal Flats, Subtidal Areas, Dredging, Shoreline Protection* policies of the Bay Plan. Our comments are based on more than 40 years of advocacy work on behalf of Bay habitats, and also our experience restoring marshes over the last 25 years. During that time, we have obtained many permits from BCDC and other regulatory agencies. To ensure the Bay resources are not lost, it is essential that the Commission move forward quickly to approve the changes that will adapt BCDC to sea level rise and allow permits to be issued that will encourage nature based adaptations.

We are particularly pleased with the emphasis on wildlife habitats, and the recognition of the value of natural habitat systems to protect the bay shoreline. It is essential that the permitting process for the amendments encourage projects by moving them forward expeditiously. We have a few specific recommendations to strengthen the Policies:

FISH AND OTHER AQUATIC ORGANISMS Policy 6 – Repeated applications of fill have the potential to benefit habitats but also could have negative impacts as stated. Other issues could include availability of sediments on ongoing basis, a lack of storage areas where sediments can be stockpiled as necessary to allow repeated applications, or incompatibility with the project design. Instead of "should plan for repeated placement" change to something like "consider repeated placement if it would reduce resource impacts, is compatible with the project design and is feasible."

DREDGING - A policy to ensure dredgers direct dredged sediments for reuse in marsh restoration projects is critical. It will do no good to encourage beneficial reuse if the reuse material is not available.

TIDAL MARSHES AND TIDAL FLATS Policy 4 - This policy alerts local governments that their land use and tax policies should not lead to conversion of restorable lands. As BCDC does not have the authority to require local jurisdictions to change their policies or ordinances, it might send a stronger message to change Policy 4 to alert local governments and developers that BCDC will require applicants to demonstrate why their project should take precedent over restoration and/or will not impede future nature based SLR efforts. We agree the public should be purchasing restorable lands.

TIDAL MARSHES AND TIDAL FLATS Policy 10 - We suggest encouraging both demonstration projects and projects based on proven techniques. While demonstration projects are certainly to be encouraged, giving preference to them could, over time, mean delays for projects based on proven methods. Projects that are using well-vetted methods should also be encouraged, along with demonstration projects. This could be done in Policy 10 or in a separate policy.

Policies under various headings call for a funding plan for monitoring and adaptive management. It should be clarified that a requirement for a funding plan does not mean funding must be confirmed, but could consist of possible sources that would be approached and confirmed at a later time. Otherwise, permits for applicants such as Marin Audubon, that are not able have immediately available funding, would have to be denied.

In conclusion, we emphasize the importance of approving these amendments, with our recommended changes, and establishing an expeditious permitting process in keeping with the urgent need to further nature based adaptations to sea level rise.

Thank you for considering our comments.

Sincerely,


Barbara Salzman, Co-chair
Conservation Committee


Phil Peterson, Co-chair
Conservation Committee

2001 Gateway Place, Suite 101E
San Jose, California 95110
(408)501-7864 svlg.org

June 10th, 2019

Bay Conservation and Development Commission
455 Golden Gate Avenue, Suite 10600
San Francisco, CA 94102

Re: Support for Bay Plan Amendment No. 1-17

Dear BCDC Commissioners,

On behalf of the more than 330 members of the Silicon Valley Leadership Group, I am writing to express our support for the policy changes titled "Bay Fill for Habitat", [Bay Plan Amendment No. 1-17](#), amending BCDC's *San Francisco Bay Plan*.

With sea levels expected to rise by an additional foot or more in the San Francisco Bay area by 2050 putting \$100 billion worth of infrastructure, or more at risk, there is a need to expedite policies that promote adaptation to rising waters. We believe that the Commission should direct staff to produce a draft Bay Plan Amendment on Fill for Wildlife Policies as quickly as possible, especially after the years of effort that has gone into this process.

The Silicon Valley Leadership Group has helped foster sustainable solutions across different areas benefiting the region and is actively involved in climate adaptation and mitigation efforts for many years. The Leadership Group has advocated for swift and coordinated action in tackling sea level rise across the Bay Area and this proposal by the Commission resonates with this vision of a unified Bay Area rapidly acting to adapt to sea level rise. In short, we believe it is critical that the proposed changes to the San Francisco Bay Plan will help reduce project timelines and costs, and fully support this outcome.

Founded in 1978 by David Packard of Hewlett Packard, The Silicon Valley Leadership Group represents over 325 of Silicon Valley's most respected employers on issues, programs, and campaigns that affect the economic health and quality of life in Silicon Valley and California. Leadership Group members collectively provide nearly one in every three private sector jobs in Silicon Valley and generate more than \$3 trillion in annual worldwide revenue.

If you have any questions on this issue, please do not hesitate to contact Mike Mielke, Sr. Vice President of Environment & Energy at 408-501-7858 or mmielke@svlg.org.

Respectfully,



Mike Mielke
Senior Vice President, Environment & Energy
Silicon Valley Leadership Group

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President & CEO

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June 12, 2019

San Francisco Bay Conservation and Development Commission
455 Golden Gate Avenue, Suite 10600
San Francisco, CA 94102

RE: Staff Report and Preliminary Recommendation for Proposed Bay Plan
Amendment Concerning the Update of the Bay Plan Fill for Habitat Policies

Dear Chair Wasserman and Commissioners:

On behalf of the Bay Planning Coalition, a membership-based, public policy organization that advocates for strong economic growth while protecting the environmental sustainability of the San Francisco Bay, I'm pleased to provide input on the proposed amendments to the Bay Plan Fill for Habitat Policies. We applaud the Commission's work to amend the Bay Plan to incorporate the latest science and recognize the importance of fill for restoration and shoreline protection projects throughout the region.

Sea level rise poses a severe threat to the Bay Area and its economy, as a significant portion of the region's housing, jobs, and public infrastructure are currently at risk of flooding. A 1.0m sea level rise is estimated to flood up to 1,460 miles of roadways and 140 miles of railways around the San Francisco Bay, which would effectively grind the region to a halt. The estimated cost of replacing structures in the Bay Area ranges from \$50-100 billion, and this cost will only rise as the waterfront continues to attract new housing and commercial development. Some of the largest companies in the world are located on the bayshore in Silicon Valley.

We propose that the Bay Plan amendments emphasize the opportunity to use Bay fill to protect critical public infrastructure and other existing and planning shoreline assets around the Bay Area. To this end, we suggest incorporating an additional justifiable use of fill in the *Major Conclusions and Policies* section to include: *h. Protecting existing or planned public infrastructure or shoreline assets*. The existing "justifiable filling" scenarios do not adequately consider the economic impact of fill placement and we urge you to incorporate this consideration. Similarly, we propose adding these economic considerations of fill placement to protect shoreline assets in the *Shoreline Protection* section, as well.

As sea level rise poses a severe threat to both the built environment and natural habitats in the Bay Area, it is critical that we work quickly and efficiently to restore Bay habitats and protect the array of shoreline assets across our region. Thank you for the opportunity to comment on the proposed amendments and we

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John A. Coleman
Chief Executive Officer

look forward to continuing to work with you to strengthen the resiliency of the Bay Area.

Sincerely,



John A. Coleman
Chief Executive Officer



June 6, 2019

Larry Goldzband
Executive Director
Bay Conservation and Development Commission
455 Golden Gate Avenue, Suite 10600
San Francisco, CA 94102

Dear Mr. Goldzband,

Please find below the statement I plan on reading at the BCDC commission hearing today regarding the Middle Harbor Enhancement Area.

Sincerely,

A handwritten signature in black ink that reads "Jan Novak".



Jan Novak, PWS
Environmental Scientist and Planner
Port of Oakland



PORT OF OAKLAND

Item #8 - [Public Hearing and Possible Vote to Initiate Bay Plan Amendment 3-19 Regarding Plan Map 4](#)

Hello BCDC Commissioners and Staff,

My name is Jan Novak. I'm a member of the Port of Oakland's (Port) Environmental Programs and Planning Department and am the Port's project manager for the Middle Harbor Enhancement Area. The Port of Oakland is the local sponsor for this project, working in conjunction with the United States Army Corps of Engineers (Army Corps). My role is to ensure that the monitoring and adaptive management programs are fully implemented.

I wanted to start by updating the Board on one of the primary habitat goals of the Middle Harbor Enhancement Area (MHEA) project. I am happy to report that eelgrass is being planted in the MHEA as we speak. By the end of tomorrow, we'll have between 76 and 80 planting plots within the MHEA. Our model projections for eelgrass habitat suitability, based on three years of data collection, are very encouraging for us meeting our eelgrass habitat goals.

Since joining the Port in October 2017, I have organized four meetings of the Technical Advisory Committee, of which BCDC is a member, and have familiarized myself extensively with the applicable permits for this area. As you may or may not know, **the project's overall goals were to create subtidal habitat that provided foraging opportunities for birds and create habitat for a wider diversity, and larger populations, of prey-based fish. I'm pleased to report that these goals have unequivocally been accomplished.** This is well documented in our comparative surveys of 1997 pre-project and 2004-5 post-project conditions, which show significant increases in the presence of prey-based fish species and least terns foraging in the MHEA.

We look forward to initiating the monitoring period surveys, that now commence after the planting of the eelgrass. For the period since our last surveys were performed, we can utilize citizen science as a proxy for the MHEA's habitat values. This is data collected by the general public, such as the avid Bay Area birding community. From 2010 through the present, 850 bird checklists have been created for the MHEA on the eBird website, which identify 172 species of birds. Many lists show hundreds or thousands of birds present. For comparison's sake, the 2004 surveys of the Deepwater Middle Harbor Naval base performed before the MHEA restoration found only 38 species of birds, with a few hundred birds present (mostly less desirable gulls and regionally common cormorants). Most excitingly, the Federally Endangered California Least Tern and the Brown Pelican, which was a Federally threatened species during the planning stages of this project, are now regular visitors and foragers in the MHEA, just as this restoration project intended. It should come as no surprise then, that the Golden Gate Audubon Society lists the MHEA as a local birding hot spot on their website.



Regarding the ancillary project features which BCDC Staff is currently very focused on, we are talking about a 3-5-acre educational marsh, an approximately 3-acre area of submerged land seaward of the beach, and 4,500 square feet of avian island roosting habitat. For context, the MHEA area is 189 acres, of which 181 acres are functioning well and meeting all permit conditions by any standard.

We acknowledge that much of the planned marsh is currently a mudflat as it was underfilled during design and construction. What makes marsh creation challenging, is that eelgrass and marshes are competing environments. Eelgrass beds, the primary habitat goal in the MHEA, exist in areas with low sediment loads in the water columns, as the eelgrass needs clear water in order to photosynthesize. Marshes exist in areas with high sediment content in the water column. Restored marshes are typically underfilled with the goal of sediment accreting over time. For the MHEA educational marsh, as it was originally planned, to be developed to fruition in a sustainable manner, it will need to be designed in a way that reconciles these naturally competing and mutually incompatible forces.

We are also aware of BCDC Staff's complaints that the submerged land seaward of the beach area is muddy and is apparently less attractive to swimmers than Staff would like. Indeed, BCDC staff has described this natural condition as impeding public access to the Bay. Based on the plain reading of the applicable permit and a detailed review by the Port's special counsel, the Port simply cannot agree to this characterization. This is the San Francisco Bay and it will never look like San Francisco's Ocean Beach. Nothing in the applicable permit conditions ever contemplated that kind of beach for this area. The reality for this area, similar to the marsh, is that sandy beaches simply do not occur naturally in low energy environments, such as the MHEA. As every scientist will concur, sandy beaches require significant wave energy to sort material. As with the marsh, a sustainable beach area would need to be designed to be self-sustaining with no possibility of natural recharge. While the Army Corps and Port have absolutely committed to reviewing and evaluating this issue further, we don't believe the type of beach now being envisioned by BCDC Staff is feasible, without regular massive and extremely costly artificial sand recharges in the beach area. This is in direct conflict the one of the MHEA plan goals, which is for the site to be self-sustaining. It is also anathema to the natural habitat of the Bay.

The avian islands were designed primarily to ensure the MHEA hydrology for subtidal habitat functioned properly. The goal was to make them as small as possible to reduce the amount of fill in the Bay. Ironically, now they are being criticized for being too small and providing insufficient high water refugia. Again, the Army Corps and Port have committed to further evaluating these areas. We will specifically be reviewing the feasibility of adaptive management to provide high water refugia within the MHEA in other locations that would be easier to reach with mechanical equipment, thus reducing impacts to current MHEA habitats.



PORT OF OAKLAND

In closing, as the local sponsor, it is our goal to make this project as successful as possible. We welcome working collaboratively with BCDC on accomplishing project goals through sound science and adaptive management. However, the USACE and the Port have been spending a little too much of our bandwidth responding to aggressive BCDC enforcement threats. We would prefer to focus our time on collaborating with BCDC Staff to develop practical, feasible, and deliverable project solutions. Thank you for your time.



DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, U.S. ARMY CORPS OF ENGINEERS
450 GOLDEN GATE AVE.
SAN FRANCISCO, CA 94102

June 6, 2019

R. Zachary Wasserman
Commission Chair
Bay Conservation and Development Commission
455 Golden Gate Avenue, Suite 10600
San Francisco, California 94102

Dear Mr. Wasserman,

Thank you for the opportunity to comment on the Bay Conservation and Development Commission's (BCDC) proposal to add an amendment to the Bay Plan Dredging policies, Bay Plan Map 4 regarding the Middle Harbor Enhancement Area (MHEA). The United States Army Corps of Engineers (Corps) cannot support the amendment as it arbitrarily singles out the MHEA, retroactively applying new rules to a project that BCDC has already deemed consistent in its 2001 Letter of Agreement, Consistency Determination No. C2000.014 (LOA).

The Corps has been working diligently with the Technical Advisory Committee (TAC) and BCDC to meet the original intent and performance criteria for the MHEA, as outlined in the "Middle Harbor Enhancement Area Construction Period and Long-term Monitoring, Maintenance and Adaptive Management Program" (3M Program). Specifically, the Corps is currently executing its eelgrass planting plan, which will plant over 100 acres, the maximum area allowed, of eelgrass at a greater density than previously designed. The Corps hopes that this aggressive planting program will result in approximately 50 acres of eelgrass establishment, well over the 18.4 acres requested in BCDC's November 6, 2018 letter and the 15 acres originally committed to in the 3M Program. The Corps made BCDC aware of this fact in our March 13, 2019 letter and in numerous conversations with BCDC staff. It is unclear what BCDC hopes to gain from this amendment, when the MHEA is executing plans that are already expected to exceed the Project's original goals.

The Coastal Zone Management Act (CZMA) requires the Corps to be consistent with the Bay Plan as it exists at the time of its concurrence. The Corps has abided with that requirement and is committed to honoring the LOA. However, this amendment seeks to apply an entirely new standard solely on an already approved project, which amounts to an impermissible second bite at the consistency apple. Neither the CZMA nor its regulations endorse this type of action. The result would be that project proponents could not rely on BCDC's decisions and therefore, would never be able to appropriately plan.

The Corps strongly urges BCDC to reject this amendment. Implementation would do nothing to improve the status of the MHEA and the precedent set by this amendment would only endanger support for future federal projects, by penalizing any project that might fall behind schedule and exponentially increasing project costs. This amendment would tip the balance too far against worthy environmental restoration projects that due to unforeseen circumstances might slip their schedule.

Sincerely,

RAYFIELD.TRAVIS Digitally signed by
.JAY.1161002867 RAYFIELD.TRAVIS.JAY.1161002867
Date: 2019.06.06 09:15:16 -07'00'

TRAVIS J. RAYFIELD
Lieutenant Colonel, U.S. Army
Commanding



May 31, 2019

Zachary Wasserman, Chair
San Francisco Bay Conservation and Development Commission
455 Golden Gate Avenue, Suite 10600
San Francisco, CA 94102

Dear Mr. Chairman and Commissioners:

We write with objections to language in the preliminary recommendation for Bay Plan Amendment No. 1-17 concerning the use of fill for creation of habitat in the Bay. As the organization that led the creation of BCDC and the Bay Plan decades ago, Save The Bay strongly supports Plan amendments that strengthen protection and enhance restoration of the Bay's natural resources, that improve protection of the public's right to access the Bay shoreline, and that protect water-dependent uses of the shoreline for commerce and recreation.

Save The Bay has for many years encouraged BCDC to recognize the urgency of adapting to climate change by updating Bay Plan policies, including to facilitate accelerated permitting and implementation of tidal marsh habitat restoration projects that require placement of fill. Most of the language recommended by staff this month does advance the goal of increasing habitat restoration using placement of appropriate fill material.

However, the suggested changes to dredging policy 11b undercut the original purpose and intent of that policy, which has still not achieved its goal. While few commissioners may know the history of dredging policy 11b, it was itself an amendment to the Bay Plan two decades ago whose sole purpose was to permit the Port of Oakland to place more than 5 million cubic yards of dredged material from its 50-foot channel deepening project as "fill" in the Port's decommissioned Middle Harbor. The Port aimed to reduce the cost of channel deepening by slurring the dredged material to this adjacent Middle Harbor site, instead of transporting it by barge to a more distant reuse or ocean disposal site. Without the then-new policy 11b, BCDC could not legally approve the Port's project to change a deep hole to a shallow hole and establish eelgrass habitat on top of it. This unprecedented effort was dubbed a "pilot project" that could not be repeated unless and until it was successful, per policy 11b. As the current BCDC staff acknowledges:

"the Commission amended the Bay Plan in 2000 to ensure that additional large projects using dredged sediment for Bay restoration could not occur until the Middle Harbor project was successfully completed (BPA 3-00.) The Middle Harbor project is currently about 14 years behind schedule in completing the habitat features"¹

Save The Bay and other stakeholders negotiated that agreement with the Port of Oakland, U.S. Army Corps of Engineers and BCDC. Unfortunately, despite many years of effort and millions of

¹ BCDC Staff Report: "Bay Fill for Habitat Restoration, Enhancement, and Creation in a Changing Bay," May 24, 2019, p.11

dollars, the Middle Harbor Enhancement Area has not yielded successful creation of promised habitat. While the fish and wildlife did endure environmental harm from turbidity and other impacts during the channel's dredging, the Bay has not yet received the required environmental benefits that are now many years overdue. As the staff report underscores:

While the project has progressed since its initial construction, it is still significantly behind schedule and the regulatory agencies, Save the Bay, the Sierra Club, Audubon Society, and others are concerned that it will not meet its proposed habitat enhancement goals.²

BCDC's efforts to secure full achievement of the Middle Harbor Enhancement Area's benefits from the Port of Oakland and the U.S. Army Corps of Engineers have continued without success for many years, and the federal consistency determination used to enable the project (Consistency Determination No. C2000.014.01) has proven challenging to enforce. BCDC continues to seek remedial action from the Corps of Engineers, to make the project consistent with original USACE commitments and to compensate for the temporal loss of habitat benefits during substantial project delays. [See BCDC's detailed letter of November 6, 2018, attached]

The incomplete status of the Middle Harbor Enhancement Area and the Commission's continuing efforts to secure the project's promised habitat benefits for the Bay make staff's recommendation to eliminate all of Dredging Policy 11b, and to instead relegate this important requirement to a note on Plan Map 4, inappropriate and counterproductive.

It is disappointing that the staff report, "Bay Fill for Habitat Restoration, Enhancement, and Creation in a Changing Bay," does not even mention Consistency Determination C2000.014, when BCDC efforts to secure required habitat benefits from the USACE and Port of Oakland are still in process. The staff's proposed draft of a Plan map note would weaken those efforts, suggesting merely that the USACE and Port "should provide habitat benefits ...[and] complete work as quickly as possible," when in fact those habitat benefits are legally required by C2000.014.01 and are long overdue, as the Commission's November 6, 2018 letter to USACE emphasizes.

Bay Plan Amendment No. 1-17 should allow for and encourage the appropriate use of fill material – including dredged material from the Bay and material from upland – for habitat restoration, without eliminating Dredging Policy 11b. Instead, that policy should be updated to reflect the original purpose and intent of the Bay Plan Amendment that created it, and should be strengthened to emphasize that the Middle Harbor Enhancement Project must be completed successfully to provide required benefits. This should be a pre-requisite to the Commission approving any fill project similar to the Middle Harbor Enhancement Project's particular scale, bathymetric modification, and type of habitat creation. It should not remain a pre-requisite to approval of fill for tidal marsh or similar habitat.

This outcome can best be accomplished by modifying Dredging Policy 11b to require that "the Commission should not authorize dredged sediment disposal projects in the Bay and certain waterways to create, enhance or restore sub-aquatic habitat in shallow water, except for projects using a minor amount of dredged sediment, until the Oakland Middle Harbor Enhancement project authorized by the Commission is completed successfully and provides the required benefits, including remedial action for temporal loss of benefits.

² Ibid., p. 19.

We have made these suggestions to staff and now make them directly to the Commission in support of the goal Save The Bay has long championed – accelerating Bay habitat restoration to keep pace with rapid climate change and rising sea levels. That goal can and must be accomplished without relieving already-authorized projects and the agencies responsible for them from obligations in BCDC permits and Consistency Determinations, especially projects whose authorization required unprecedented amendment of the Bay Plan itself. The Commission should zealously protect and reinforce those obligations, especially at a time when the integrity of its enforcement regime and the fairness of its enforcement practices is under intense scrutiny in the wake of the State of California’s recent audit of the Commission.

We offer our continued assistance to you and your staff on this issue, and look forward to a resolution of this matter that Save The Bay can fully support.

Thank you for your consideration.

Sincerely,

A handwritten signature in black ink that reads "David Lewis". The signature is written in a cursive, flowing style.

David Lewis
Executive Director

Attachment

San Francisco Bay Conservation and Development Commission

455 Golden Gate Avenue, Suite 10600, San Francisco, California 94102 tel 415 352 3600 fax 415 352 3606

Via US Mail

November 06, 2018

Lieutenant Colonel Travis Rayfield
Commander and District Engineer
United States Army Corps of Engineers
1455 Market Street
San Francisco, CA 94103

SUBJECT: Request for Remedial Action, Oakland Harbor Navigation Improvement Project, Middle Harbor Enhancement Area (BCDC Letter of Agreement for Consistency Determination No. C2000.014.01)

Dear Lt. Col. Rayfield:

Please accept this letter as a formal request for the U.S. Army Corps of Engineers (USACE) to begin remedial action to rectify the temporal loss of habitat due to delays in completing the Middle Harbor Enhancement Area (MHEA) project, a component of the Oakland Harbor Navigation Improvement Project (-50 Foot Deepening Project), authorized under San Francisco Bay Conservation and Development Commission's (Commission) Letter of Agreement for Consistency Determination No. C2000.014 (Letter of Agreement).

- 1. Legal Authority to Request Remedial Action.** As you are aware, Section 930.45(b) of Title 15 of the Code of Federal Regulations establishes the legal authority of the Commission to request remedial action to rectify issues related to a Federal consistency determination under the Coastal Zone Management Act. This section states, in part, that:

The State agency may request that the Federal agency take appropriate remedial action following a serious disagreement resulting from a Federal agency activity, including those activities where the State agency's concurrence was presumed, which was:

- a. Previously determined to be consistent to the maximum extent practicable with the management program, but which the State agency later maintains is being conducted or is having an effect on any coastal use or resource substantially different than originally described and, as a result, is no longer consistent to the maximum extent practicable with the enforceable policies of the management program.

As described below, the MHEA project is significantly behind schedule in providing several key habitat benefits to which the USACE committed in its consistency determination and, therefore, is substantially different than originally described. The Commission is requesting specific remedial actions, detailed below, to make the project



consistent with original USACE commitments and to compensate for the temporal loss of habitat benefits during substantial project delays.

2. **Brief Project Background.** In December 2000, after amending the Bay Plan through a negotiated agreement among environmental non-governmental organizations, the Port of Oakland (Port) and the USACE, the Commission authorized the minus 50 Foot Deepening Project. This decision enabled the USACE and its local project sponsor, the Port, to widen and deepen the Oakland Harbor Inner, Outer and Entrance channels to minus 50 feet Mean Lower Low Water, and to beneficially reuse the dredged sediment to construct the MHEA and the Montezuma and Hamilton Wetlands Restoration Projects. The Commission concurred that the project was consistent to the maximum extent practicable with its laws and policies in the above-mentioned Letter of Agreement, and issued a permit to the Port for MHEA monitoring and maintenance (BCDC Permit No. 2014.000.00).

Construction of the MHEA required placing and beneficially reusing 5.8 million cubic yards (cy) of dredged sediment in the Bay at the berthing area and basin formerly deepened and used by the U.S. Navy. This work was supposed to create roughly 180 acres of shallow intertidal and subtidal habitat at the western end of the Harbor Channel. The goal of the MHEA was to restore the area to its historic shallow water habitat and create new habitat features, including intertidal sandy beach and marsh habitat, shallow subtidal shoals with eelgrass beds, shallow and deep channels, subtidal basins, rocky intertidal and subtidal habitat for bird loafing and roosting, and buffers between public access and habitats.

3. **MHEA Commitments, Current Status, and Concerns.** The MHEA Construction Period and Long-term Monitoring, Maintenance, and Adaptive Management Program (3M Program) is part of the consistency determination and also is discussed in the Letter of Agreement to support the Commission's findings that the MHEA project is consistent with the San Francisco Bay Plan's dredging policies¹. The 3M Program describes the original performance criteria, acreage, and construction period to which the USACE committed when submitting the project for the Commission's concurrence. The nine performance criteria, on which the success of the project is to be evaluated, are summarized in Table 1 below, along with their associated due dates and current status²:

¹ Along with the 3M Program, the other documents comprising the complete consistency determination are the *Second Stage Consistency Determination for the Oakland Harbor Navigational Improvement (-50 Foot) Project*, the *Middle Harbor Habitat Design/65% Design Memorandum*, the *Responses to Comments 65% Design Submittal*, and *Addendum #1 to the Second Stage Consistency Determination on Middle Harbor Commitments*.

² Attached are the complete performance criteria and the Schedule of Monitoring and Management Activities from the 3M Program. Please note that while the 3M Program uses relative due dates for performance criteria (e.g. "10 years after initiation of dredging"), we have converted these into absolute years using the original construction schedule and a dredging initiation date of 2002.

Table 1. MHEA Project Performance Criteria from 3M Program

Criteria No.	Criteria, summarized for brevity (due date; current status)
1	Provide a new 3-5 acre marsh for bird foraging and educational opportunities (by 2012; partially complete)
2	Create at least 55 acres of habitat suitable for eelgrass habitat development and 110 acres of other shallow water habitat (by 2007; completed in 2016)
3	Provide a new beach for public access and bird storm refuge (by 2003; partially complete) ³
4	Provide improved bird habitat by constructing four avian islands and providing a protected area along the shoreline of the Union Pacific (UP) Mole (by 2012; partially complete)
5	Provide 4-8 acres of hard bottom habitat (by 2006; complete)
6	Create at least 15 acres of eelgrass habitat (by 2017; incomplete)
7	Provide a more productive and diverse estuarine community than existing conditions (by 2017; status not assessed)
8	Increase habitat benefits for aquatic birds, particularly the least tern colony (by 2017; status not assessed)
9	Provide a greater number of fish than existing conditions (by 2017; status not assessed)

We understand that the MHEA project has been subject to multiple federal funding delays since its authorization in 2000. These have caused the project to fall significantly behind schedule. Based on the 3M Program, MHEA was scheduled to begin in 2001, but did not start until 2002. Furthermore, according to the USACE's and Port's October 2018 Technical Advisory Committee (TAC) presentation, the project is now in the Habitat Suitability Evaluation/Warranty Period through March of 2019; this period was originally scheduled to end twelve years ago in 2006.

Despite these delays, we recognize the progress the USACE has made on the project, including placing and consolidating 5.8 million cy of dredged material to create shallow water habitat, final sculpting of 400,000 cy of sediment, initial construction of two avian islands and the educational marsh, creating 5.1 acres of hard bottom habitat and 101 acres of habitat suitable for eelgrass, opening the project site to full tidal circulation, and exploratory planting of eelgrass.

³ As described below, this criterion is not the direct responsibility of the USACE, but was to be completed by the Port under a separate authorization, BCDC Permit No. 1999.007.

Through this work, as indicated in Table 1 above, the USACE has fully met Criteria Nos. 2 and 5, and has partially met Criteria Nos. 1 and 4. However, we are concerned that the project remains significantly behind schedule in fully meeting Criteria Nos. 1, 3, 4, and 6 as described below (Please note that Criteria Nos. 7, 8, 9, while behind schedule, are not addressed here because the verification of these criteria is not due to occur until after the ten-year post-construction monitoring period; this period was originally planned for 2007 to 2017, but has not yet started):

- a. **Eelgrass habitat (Criteria No. 6).** As stated in the Letter of Agreement (Page 6), eelgrass is the primary target habitat for the MHEA project. Criteria No. 6 of the 3M Program requires the USACE to establish at least 15 acres of eelgrass habitat within ten years of commencing dredging (i.e., by 2012). This criterion was also included as a required condition in the U.S. Fish and Wildlife Service's Endangered Species Formal Consultation, issued in 1999, to offset for impacts to listed species (including the California Least Tern). However, according to the USACE and Port's October 2018 TAC presentation, only pilot eelgrass plantings have occurred to date, creating a total of 0.45 acres of habitat. Full plantings are not scheduled to occur until Spring 2019 (Phase 1) and 2020-2021 (Phase 2), meaning the 15 acres of eelgrass habitat is at least nine years behind schedule, assuming no further delays occur.
- b. **Marsh (Criteria No. 1).** Criteria No. 1 requires the USACE to provide a new three-to-five acre marsh for bird foraging and educational/interpretive benefits within ten years of commencing dredging (i.e. by 2012). According to the USACE's and Port's May 2018 TAC presentation, the USACE has established a 4.7-acre marsh, and there is at least some shorebird use of the marsh. However, we understand that the construction of the marsh did not reach the necessary elevations for plant colonization, and that the area is unlikely to accrete the sediment necessary to meet the project's stated goals through natural processes. Therefore, the marsh is not providing the intended bird foraging and educational benefits and likely will be unable to do so without further intervention. The USACE has not provided an expected date of completion for the marsh and associated benefits, but it is currently at least six years behind schedule.
- c. **Improved Bird Habitat (Criteria No. 4).** Criteria No. 4 requires the USACE to provide improved bird habitat by constructing four avian islands and providing a protected area along the shoreline of the UP Mole within ten years of commencing dredging (i.e. by 2012). The project design specified that each island should be no larger than 5,000 sq. ft., and that the four islands combined should be no smaller than 5,000 sq. ft. ⁴ We understand that the protected area along the shoreline has been created. However, according to the USACE and Port's May 2018 and October 2018 TAC presentations, the USACE created only two avian islands (the Western and Eastern Avian Islands, near the southern border of the project site), totaling just 630 sq. ft.

⁴ We understand the original project goals did not specify the tidal elevation at which the area of the islands should be measured. This point is addressed in section IV below.

above Mean High Water, both of which were sinking between 2016 and 2018. Similar to the marsh, the required improved bird habitat is currently at least six years behind schedule.

- d. **Public Access Beach (Criteria No. 3).** Criteria No. 3 required creating a new beach for public access and bird storm refuge. It is critical to note that this beach, while listed as a key performance criterion of the MHEA project, is part of a separate Commission authorization for the Port of Oakland to construct Middle Harbor Shoreline Park (among other activities). As such, beach construction and maintenance is the Port's responsibility, and not the USACE's. Nevertheless, due to the ecological connectivity between the beach and other key habitats of the MHEA, the USACE must coordinate with the Port to address these habitats in an integrated fashion. (A separate letter is also being sent to the Port regarding this requirement.)

Based on the USACE and Port's May 2018 TAC Presentation, while the beach has been constructed, the public is prohibited from entering the water for swimming or recreation due to safety concerns. We understand this is due to an insufficient beach slope resulting in a lack of subtidal water and a substrate of deep, soft mud.

Furthermore, we understand that a sandbar has developed off the beach, which was not part of project design and is currently used by birds.

4. **Decisions Taken at the October 3, 2018 TAC Meeting.** At the October 3, 2018 TAC meeting, the TAC made the following important decisions that relate to the four concerns described above:
 - a. **Regarding Eelgrass Habitat:** The TAC agreed that the USACE and Port would use an L-scheme planting design for planting eelgrass, and that, because this L-scheme was more efficient than a previously proposed planting method, they would plant an unspecified greater number of L plots in order to reach the required 15 acres as quickly as possible.
 - b. **Regarding the Marsh:** The TAC agreed that the USACE and Port would conduct a study to determine the most appropriate method to build the marsh to an elevation high enough for plant colonization, including analyzing various sources of sediment and proposing the best alternative. The TAC also agreed that the USACE and Port would determine how to fund this effort.
 - c. **Regarding the Improved Bird Habitat:** The TAC agreed that the USACE and Port would consult with relevant literature and avian experts to determine actions needed on the avian islands, but no specific actions were agreed upon.
 - d. **Regarding the Beach:** No decisions were made about the beach, and very little was discussed on this topic.

Finally, while not a formal decision, the TAC also discussed that, due to the interconnected nature of the habitat features that require attention, it would be beneficial to address these features in an integrated manner. We agree and believe this

approach will be more ecologically appropriate than addressing the habitats individually, and will also ensure the greatest efficiency for all parties involved.

5. **Request for Remedial Action.** To resolve the issues described above and provide compensation for the temporal loss of habitat benefits resulting from significant project delays (at least nine years for eelgrass, and at least six years for the marsh and improved bird habitat), we request that the USACE work with the Port to prepare and submit to the Commission a joint project proposal (Proposal). The Proposal should address each of the habitat features discussed below in an integrated manner. Our requested actions are generally in line with the TAC's decisions taken on October 3, but in certain cases go beyond the original project requirements to compensate for temporal loss of habitat benefits. We request that the Proposal be submitted to the Commission no later than February 28, 2019, and that it incorporate the following elements:
 - a. **Additional Planting of Eelgrass.** To determine the value of eelgrass habitat benefits that would have been provided from 2012 to 2021 had the eelgrass been established by 2012 per the Letter of Agreement, BCDC staff examined recent expansion rates of existing eelgrass beds at the nearby sites of Emeryville Shoal and Berkeley Shoal. Using the Merkel and Associates Inc. October 2014 Baywide Eelgrass Inventory, we found that the average compound annual growth rate in these areas was 2.3% from 2003 to 2014. Assuming a similar growth rate at MHEA, we estimate that the 15 acres of eelgrass would have expanded by at least 3.4 ac. from 2012 to 2021. Therefore, to compensate for the lack of planting and subsequent expansion during this period, we request that the USACE's Proposal include planting at least an additional 3.4 ac. of eelgrass in an appropriate location at the MHEA project site, bringing the total minimum eelgrass acreage to 18.4 acres. If USACE disagrees with our estimate for expected expansion during that timeframe, or believes that an alternate means of compensation is more appropriate, please provide and justify an alternate proposal. Please note that we have not attempted to calculate the value of all eelgrass ecosystem services that were absent from 2012 to 2021 (e.g., wave attenuation, carbon sequestration, fish habitat provision), and are not asking for compensation for these lost benefits.
 - b. **Elevating and Planting the Marsh.** As described above, the TAC agreed that the USACE and Port would conduct a study to determine the best method for raising the existing marsh area to an elevation suitable for establishment of vegetation. In addition to raising the marsh elevation, we request that the Proposal include planting appropriate vegetation to expedite the establishment of marsh habitat and compensate for the temporal loss of benefits.

- c. **Assessing and Enhancing the Improved Bird Habitat.** Based on the information shared with the TAC to date, there are several gaps in our knowledge concerning the past, current status, and expected future of the improved bird habitat. As such, we request that the Proposal include the following:
- (1) **Eastern and Western Avian Islands.** A detailed statement on how and when the existing islands were originally built (including the method(s) of construction and the source and volume of material used); data and information on the islands' current bird habitat value as compared to the project's original goals; the originally designed and current surface area of the islands as measured at an appropriate tidal elevation; and, how the islands are expected to evolve in the future if left alone, based on the site's characteristics and coastal processes.
 - (2) **Protected Area.** A written statement describing the protected area along the shoreline of the UP mole, including its size, location, features, and the extent to which it is providing the originally intended bird habitat.
 - (3) **Missing Two Avian Islands.** An explanation for why only two of the four avian islands are complete, and when the USACE plans to build the remaining two islands.
 - (4) **Proposal.** Based on the site characteristics, a proposal that identifies and recommends alternatives to increase the extent and value of improved bird habitat to meet the original project goals, without negatively impacting other parts of the MHEA project site or surrounding habitats. If the proposal does not include building the missing two avian islands, please provide a justification and describe how the USACE plans to compensate for those missing islands. Because, as discussed at the October 2018 TAC meeting, the original project design provided neither specific criteria for evaluating bird habitat value, nor a tidal elevation at which to measure the islands' total area, we recommend the Proposal include defined criteria and elevations for assessing the bird habitat in consultation with appropriate experts, such as Golden Gate Audubon, which appears to have recommendations for creating additional roosting habitat.
- d. **Ensuring Safety and Accessibility of the Public Access Beach.** As mentioned above, the Commission staff recognizes that beach construction and maintenance is the Port's responsibility, and not the USACE's. However, we request that the USACE work closely with the Port to propose an approach to address the currently unsafe beach, ensuring any actions are coordinated with those taken on other habitats. As mentioned above, we are also writing separately to the Port to ensure it works closely with you.

Lieutenant Colonel Travis Rayfield
November 06, 2018
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Thank you in advance for your cooperation in addressing these issues. Please understand that any proposed actions which differ substantially from what was originally proposed will require the Commission's concurrence, and an amendment to the Consistency Determination or Letter of Agreement may be required. Please contact Schuyler Olsson at (415) 352-3668 or at schuyler.olsson@bcdcc.ca.gov with any questions or concerns. We look forward to hearing from the USACE and the Port soon.

Sincerely,



ADRIENNE KLEIN
Chief of Enforcement

For Schuyler Olsson
Coastal Program Analyst

Enc.

SO/jk

cc - Richard Sinkoff, Port of Oakland
Jan Novak, Port of Oakland
Thomas Kendall, U.S. Army Corps of Engineers
Eric Joliffe, U.S. Army Corps of Engineers
Brian Haines, U.S. Army Corps of Engineers
Tessa Beach, U.S. Army Corps of Engineers
Thomas Williams, U.S. Army Corps of Engineers
Beth Christian Regional Water Quality Control Board
David Lewis, Save the Bay

1. Performance goals, criteria for success in achieving the goal, methods to assess the parameter are summarized within Table 1-1. While multiple success thresholds have been established for some project goals, Table 1-1 only addresses the highest threshold for any project element. All of the lower thresholds are identified in Appendix 1 and would only become important in determining the degree to which project commitments have been achieved if project success falls short of the highest objective. A summary of all standards that are lower than the highest imposed by any approvals or commitments is provided in Appendix 1.

To evaluate success, it is essential that both the timeframe(s) of the evaluation and method(s) used be established. In some instances, clear direction has been provided with regards to success assessment. Where these exist, they have been adopted in this program. However, in other instances these have not been specified and appropriate evaluation methods and periods have been selected by the design team.

Table 1-1. Performance standards and commitments for the MHEA.

NO	PERFORMANCE STANDARDS AND COMMITMENTS	WHEN AND HOW DETERMINED
1	Provide a new 3-5 acre marsh to provide bird foraging opportunities and educational/interpretive benefits.	<p><i>When:</i></p> <ul style="list-style-type: none"> 1) completion of final construction; 2) 10 years after initiation of dredging. <p><i>How:</i></p> <ul style="list-style-type: none"> 1) topographic survey (at construction); 2) assessment of vegetation and avian use (over 10 year)
2	Create a minimum of 55 acres of habitat suitable for eelgrass habitat development, 110 acres of other shallow water,	<p><i>When:</i></p> <ul style="list-style-type: none"> 1) completion of final construction 2) completion of site suitability evaluation and warranty period <p><i>How:</i></p> <ul style="list-style-type: none"> 1) <u>hydrographic and topographic survey (at construction);</u> 2) <u>measurement and assessment of physical conditions developed, as well as comparison to modeling results</u>
3	Provide new public access beach area that will also provide storm refuge to birds.	<p><i>When:</i></p> <ul style="list-style-type: none"> 1) To be completed as part of Berths 55-58/Middle Harbor Shoreline Park work. <p><i>How:</i></p> <ul style="list-style-type: none"> 1) <u>Confirm beach construction under Port's project by completion of topographic survey.</u>
4	Provide improved bird habitat, with reduced predators and human disturbance through construction of four avian islands, each being a maximum size 5,000 sq. ft. and by providing a protected area along the shoreline of the UP Mole.	<p><i>When:</i></p> <ul style="list-style-type: none"> 1) completion of final construction; 2) 10 years after initiation of dredging. <p><i>How:</i></p> <ul style="list-style-type: none"> 1) topographic survey (at construction); 2) assessment of vegetation and avian use (over 10 year)
5	Provide 4-8 acres of hard bottom habitat (approximately 4 acres presently exists)	<p><i>When:</i></p> <ul style="list-style-type: none"> 1) completion of final construction. <p><i>How:</i></p>

6	Create a minimum of 15 acres of eelgrass habitat within 10 years after initiation (start of dredging) of project not including that planted in the previous 3 years.	<p>1) site survey at completion.</p> <p><i>When:</i></p> <p>1) completion of 10 year post-construction monitoring program.</p> <p><i>How:</i></p> <p>1) annually evaluate eelgrass cover and density throughout site and reference areas using side-scan sonar and diver verification;</p> <p>2) compare eelgrass cover with reference areas to control for natural interannual variability in eelgrass.</p>
7	Provide an estuarine community within MHEA that is of higher productivity and greater diversity than the existing community of Middle Harbor. Provide a habitat that is more highly productive than existing conditions and provides a net increase in habitat value.	<p><i>When:</i></p> <p>1) completion of 10 year post-construction monitoring program.</p> <p><i>How:</i></p> <p>1) evaluation of plant, invertebrate, fish, and avian communities relative to baseline Middle Harbor conditions reported in prior studies.</p>
8	Increase habitat benefits for aquatic birds and most particularly the least tern colony, by increasing habitat and the productivity of fisheries. Of specific interest is the enhancement of least tern prey species which may improve foraging opportunities for terns.	<p><i>When:</i></p> <p>1) completion of 10 year post-construction monitoring program.</p> <p><i>How:</i></p> <p>1) evaluate availability of forage species and size classes consumed by avifauna, and specifically least terns.</p>
9	Provide a greater number of fish than existing conditions	<p><i>When:</i></p> <p>1) completion of 10 year post-construction monitoring program.</p> <p><i>How:</i></p> <p>1) evaluation of fish communities relative to baseline conditions reported in prior studies.</p>

1.4 ADAPTIVE MANAGEMENT

The MHEA is to be implemented and managed through the application of adaptive management principles. This approach has been dictated by the relatively unique nature of the project and limited data on projects of similar scale and complexity in San Francisco Bay from which to draw essential design and performance information. The adaptive management program includes various elements including both construction period adaptive design and implementation as well as long-term adaptive management to address habitat maintenance needs. Construction period adaptive management elements are associated with design assumption verification and design refinement during the initial construction periods that are necessary to support the development of the MHEA in accordance with the project goals as outlined in the prior section. These goals are to be achieved through development of a site for which the design and engineering has been governed by a habitat design criteria model summarized below. The adaptive management elements are further integrated into the monitoring program which measures the progress of the system against references or pre-determined expectations. Based on the outcome of the monitoring and data analysis, decisions may be made regarding the performance of the monitored element relative to expectations, and the need or desirability to alter the site conditions, conceptual model, or the performance goals. The process for adapting the project based on monitoring is addressed in this section.

TABLE 2-1. Schedule of Monitoring and Management Activities

TASK NAME	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5				YEAR 6				YEAR 7				YEAR 8				YEAR 9				YEAR 10				YEAR 11				YEAR 12				YEAR 13				YEAR 14				YEAR 15				YEAR 16				YEAR 17				YEAR 18				YEAR 19				YEAR 20				YEAR 21			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4																																																
PRE-CONSTRUCTION																																																																																				
Preliminary Tasks																																																																																				
Notice of Award																																																																																				
Bond/Insurance/Contract																																																																																				
Submittals																																																																																				
Mobilization																																																																																				
CONSTRUCTION PERIOD																																																																																				
PHASE 1: COMPLIANCE MONITORING																																																																																				
Construction Restriction Compliance																																																																																				
Water Quality																																																																																				
Biological Windows and Surveys																																																																																				
PHASE 2: DESIGN VERIFY/REFINEMENT																																																																																				
Monitoring Elements																																																																																				
Sheepcote Jetty Reflected Waves																																																																																				
Fill Stratigraphy and Material Placement																																																																																				
Bulk Fill Consolidation and Settlements																																																																																				
Hydrodynamic Model Verify and Adjustment																																																																																				
Light Sediment, Water Quality Experiments																																																																																				
Reporting and Design Modifications																																																																																				
Technical Memoranda																																																																																				
Required Plan Revisions																																																																																				
Construct Containment Structure																																																																																				
Install Sheet Pile																																																																																				
Install Rock Jetty to +6 feet																																																																																				
Bulk Fill Dredging and Material Placement																																																																																				
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Cross-Section/Settlement Assessment																																																																																				
Stability and Topographic Suitability for Habitat																																																																																				
MHEA Water Column Environmental Conditions																																																																																				
Reporting and Design Modifications																																																																																				
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Suitability for Phase I Planting Initiation																																																																																				
Required Plan Revisions																																																																																				
Pre-Planting Site Stabilization Period																																																																																				
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First Phase Planting Program																																																																																				
Marsh Planting																																																																																				
Eelgrass Transplant, Phase I																																																																																				
Second Phase Planting Program																																																																																				
Pilot Monitoring and Phase II Planning																																																																																				
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CONSTRUCTION WARRANTY PERIOD																																																																																				
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High Scour/Deposition Areas																																																																																				
Excessive Bird Island/Jetty Deformation																																																																																				
Warranty Period Certification of Completion																																																																																				
Summary Report of Work Performed																																																																																				
Acceptance of Site Work by Corps/Port																																																																																				
PHASE 4: ESTABLISHMENT MONITORING PROGRAM																																																																																				
Physical Site Conditions Development																																																																																				
Bathymetry/Avian Island Surveys																																																																																				
Biological Resources Development																																																																																				
Eelgrass Habitat Monitoring																																																																																				
Salt Marsh Habitat Monitoring																																																																																				
Benthic Invertebrate Community Monitoring																																																																																				
Fish Community Monitoring																																																																																				
Avian Community Monitoring (General Avifauna)																																																																																				
Human Use and Public Access Monitoring																																																																																				
Reporting and Success Milestone Achievement																																																																																				
Report Preparation and Success Milestone Review																																																																																				
Eelgrass Bed Recovery																																																																																				
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Establish Salt Marsh Habitat																																																																																				
Enhance the Productivity of the MHEA																																																																																				
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