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Brad Gross
Executive Director, Richardson Bay Regional Agency
3501 Civic Center Drive, Room 308
San Rafael, CA 94903

Re: Report to the RBRA Board of Directors regarding RBRA's Restoration and Adaptive Management Plan (RAMP) for eelgrass in Richardson Bay

Dear Executive Director Gross,

This memo provides context for the RBRA Board of Directors and members of the public regarding the eelgrass RAMP recently completed by Merkel & Associates and submitted by RBRA to the Bay Conservation and Development Commission (BCDC) on December 15, 2023.

Background:

The September 2021 agreement between BCDC and RBRA includes an agreement for RBRA to "develop a ten-year adaptive management plan for eelgrass restoration in Richardson Bay and submit a copy to BCDC." The agreement goes on to state that, "RBRA will begin implementing this plan by December 15, 2023." Accordingly, RBRA included RAMP development as the first deliverable in its EPA-funded Eelgrass Restoration Project, currently underway in collaboration with Coastal Policy Solutions, Merkel & Associates, Audubon California, and Dr. Kathy Boyer's lab at San Francisco State University's Estuary and Ocean Science Center. The RAMP was developed by Merkel & Associates during fall 2023 and is a technical document outlining a 10-year plan to restore, monitor, and manage eelgrass in Richardson Bay. In fulfillment of the BCDC agreement, RBRA submitted the RAMP to BCDC staff on December 15, 2023. While the BCDC agreement does not require BCDC approval of the RAMP, the RAMP is designed such that it may be amended as needed if substantive feedback is received.

RAMP Highlights:

The RBRA Board and members of the public are encouraged to read the RAMP itself, as it includes significant background, detail, and timelines for eelgrass restoration in Richardson Bay (RB). Key components of the RAMP are listed below:

- **Pilot Restoration:** Prior to 2021, eelgrass restoration in RB was concentrated within the Richardson Bay Audubon Sanctuary. Those efforts have recently expanded to testing techniques for eelgrass restoration within RB anchor scars. From 2021-2023, 6.75 acres of anchor scars have been planted within the northern portion of the Eelgrass Protection Zone (EPZ). The RAMP describes how results from these efforts will inform larger scale restoration in RB.
- **Planting methods:** Restoration efforts under the RAMP will employ two main methods for eelgrass planting: 1) Biodegradable anchored bareroot transplant units (which has been in use for over 35 years and in 23 SF Bay eelgrass planting efforts since 1998); and 2) Seed buoy restoration (which may help alleviate the problem of genetic diversity; the Boyer Lab has used

seed buoy methods successfully and unsuccessfully at several sites in San Francisco Bay and the methods are ready to be "scaled-up" to larger restoration efforts).

- **Restoration Site Selection:** Planting will continue to be responsive to opportunities created by vessel removals and relocations out of the EPZ. As the rate and locations of vessel removals are not fully predictable, the first actions undertaken each spring will be to map eelgrass and vessels to identify multiple candidate scars for the spring-summer planting period. Final sites will be selected based on a combination of factors (water depth, adjacency to historic stable eelgrass, etc.) with the goal of optimizing the probability for stable success early in the planting program.
- **Donor Site Selection:** Eelgrass donor sites are existing eelgrass beds from which plant material is harvested. The proposed planting units for this restoration effort will be drawn from four large and widely distributed beds from which eelgrass has been previously harvested for restoration purposes, including: 1) Point San Pablo/Point Pinole, 2) Point Molate, 3) Richardson Bay, and 4) Bay Farm Island. At least three donor sites will be drawn from for each season of planting. The RAMP describes why these four sites were chosen and what controls are in place to ensure no over-harvesting of donor beds will occur.
- **Non-Planting Restoration Actions:**
    - Non-vessel marine debris removal - Debris on the bay bottom can adversely affect eelgrass through both physical barriers to substrate, and by growing invasive species that compete with eelgrass for canopy space. The RAMP describes a multi-step process for removing non-vessel marine debris, including sonar surveys of the bay bottom, diving/wading by restoration crews, and how HAZMAT will be controlled.
    - Mooring scar backfill - Over time, chronic dragging of ground tackle creates depressions that can be a few inches to several feet deeper than the surrounding bay floor. Because there is an expectation of a generally rapid rate of natural sediment accretion in these depressions (given the sediment rich waters of San Francisco Bay), backfill should not be undertaken immediately. If scars fail to accrete and backfill is determined necessary, the RAMP describes how appropriate sediment should be identified and applied.
- **Monitoring:** The RAMP describes a broad suite of monitoring efforts to be undertaken at various intervals. The metrics being monitored include spatial metrics associated with the bed (e.g., acreage, percent cover) and plant metrics associated with individual plant properties (e.g., shoot density, evidence of disease or herbivory, etc.). Also included in the monitoring efforts are aerial and sonar surveys, direct field observations, and discrete investigations (i.e., scientific studies to advance restoration science).
- **Restoration Success:** Restoration will be deemed successful when damage to the eelgrass within the RBRA waters associated with moorings has been eliminated such that natural bed dynamics take over and no detectable pattern of past mooring damage remains within completed eelgrass surveys. The RAMP includes specific timelines and milestones for success criteria.

I look forward to speaking to the RBRA Board of Directors to share the RAMP and answering any questions from the Board, staff, or public.

Sincerely,

Rebecca Schwartz Lesberg
President, Coastal Policy Solutions