

BRIEFING ON EELGRASS HABITAT RESTORATION

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JUNE 24, 2020 BCDC ENFORCEMENT COMMITTEE MEETING

ITEM 7

OUTLINE

- Purpose for today's briefing
- Review relevant policies of the SF Bay Plan and Richardson's Bay Special Area Plan
- Presentation by Dr. Katharyn Boyer
- Enforcement Committee Questions and Discussion

SF BAY PLAN

- Part I - Summary
- Part II - Objectives
- **Part III - The Bay as a Resource: Findings and Policies**
- Part IV - Development of the bay and Shoreline: Findings and Policies
- Part V - The Plan Maps

PART III OF THE SF BAY PLAN

THE BAY AS A RESOURCE: FINDINGS AND POLICIES

- **Fish, Other Aquatic Organisms and Wildlife**
- Water Quality
- Water Surface Area and Volume
- Tidal Marshes and Tidal Flats
- Smog and Weather
- Shell Deposits
- Fresh Water Inflow
- **Subtidal Areas**

RELEVANT SF BAY PLAN POLICIES:

FISH, OTHER AQUATIC ORGANISMS AND WILDLIFE 1 OF 2

- **Policy 1.** ... aquatic organisms and wildlife for future generations, **to the greatest extent feasible**, the Bay's tidal marshes, tidal flats, and **subtidal habitat should be conserved, restored and increased.**
- **Policy 2. Native species**, including candidate, threatened, and endangered species; species that the [agencies] ... have listed under the California or Federal Endangered Species Act; and any species that provides substantial public benefits, **as well as specific habitats that are needed to conserve, increase, or prevent the extinction of these species, should be protected**, whether in the Bay or behind dikes.

RELEVANT SF BAY PLAN POLICIES:

FISH, OTHER AQUATIC ORGANISMS AND WILDLIFE 2 OF 2

- **Policy 3.** In reviewing or approving habitat restoration projects or programs the Commission should be **guided by the best available science**, including regional goals, and should, where appropriate, **provide for a diversity of habitats for associated native aquatic and terrestrial plant and animal species.**
- **Policy 6.** Allowable fill for habitat projects in the Bay should (a) **minimize near term adverse impacts to and loss of existing Bay habitat** and native species; (b) **provide substantial net benefits for Bay habitats** and native species; and (c) be **scaled appropriately for the project and necessary sea level rise adaptation measures** in accordance with the best available science.

RELEVANT SF BAY PLAN POLICIES:

SUBTIDAL AREAS 1 OF 3

- **Policy 1.** Any proposed filling or dredging project in a subtidal area should be thoroughly **evaluated to determine the local and Bay-wide effects of the project on: ... (d) aquatic plants...**
- **Policy 2.** Subtidal areas that are scarce in the Bay or have an abundance and diversity of fish, other aquatic organisms and wildlife (**e.g., eelgrass beds, sandy deep water or underwater pinnacles**) **should be conserved**
- **Policy 3.** ... **Design and evaluation** of [projects] should **include an analysis** of: (a) the **ecological need for the project**; (b) the **effects of relative sea level rise**; ...(g) **rates of colonization by vegetation**, where applicable; (h) the **expected use of the site by fish, other aquatic organisms and wildlife**;

RELEVANT SF BAY PLAN POLICIES:

SUBTIDAL AREAS 2 OF 3

- **Policy 4....** If substantial adverse impacts to the Bay or native or commercially important species have occurred, the project should be further modified to reduce its impacts.
- **Policy 6.** The Commission should encourage and support regional efforts to collect, analyze, share, and learn from habitat monitoring data. Where feasible and appropriate, the Commission should encourage monitoring for habitat restoration projects that coordinates with regional efforts and improves the value and usefulness of data.
- **Policy 7.** Subtidal restoration projects should be designed to: (a) promote an abundance and diversity of fish, other aquatic organisms and wildlife; (b) restore rare subtidal areas; ...

RELEVANT SF BAY PLAN POLICIES:

SUBTIDAL AREAS 3 OF 3

- **Policy 8.** 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 of habitat ...**
- **Policy 9.** The **Commission** should **encourage and authorize pilot and demonstration projects** that **address sea level rise adaptation of Bay habitats.**
- **Policy 10.** The **Commission** should **continue to support and encourage expansion of scientific information on the Bay's subtidal areas**, including:
...(e) areas of the Bay used for ... aquatic organisms and wildlife; (f) **where and how habitat restoration, enhancement, and creation should occur ...**
(g) **if, where, and what type of habitat type conversion** may be acceptable.

RELEVANT RICHARDSON'S BAY SPECIAL AREA PLAN POLICIES: AQUATIC AND WILDLIFE RESOURCES

- **Policy 1. ... Eelgrass beds, important to herring spawning and for production of detritus, should ... receive maximum protection.**
- **Policy 5. Any development within Richardson Bay should avoid destruction of ...eelgrass beds. If such losses are unavoidable, the project should be authorized only if the minimum amount of habitat disturbance necessary to accomplish the purpose of the project occurs and the habitat loss is mitigated to the fullest extent.**

RELEVANT RICHARDSON'S BAY SPECIAL AREA PLAN POLICIES: THE SPECIAL AREA PLAN "RESOURCE AREAS" MAP

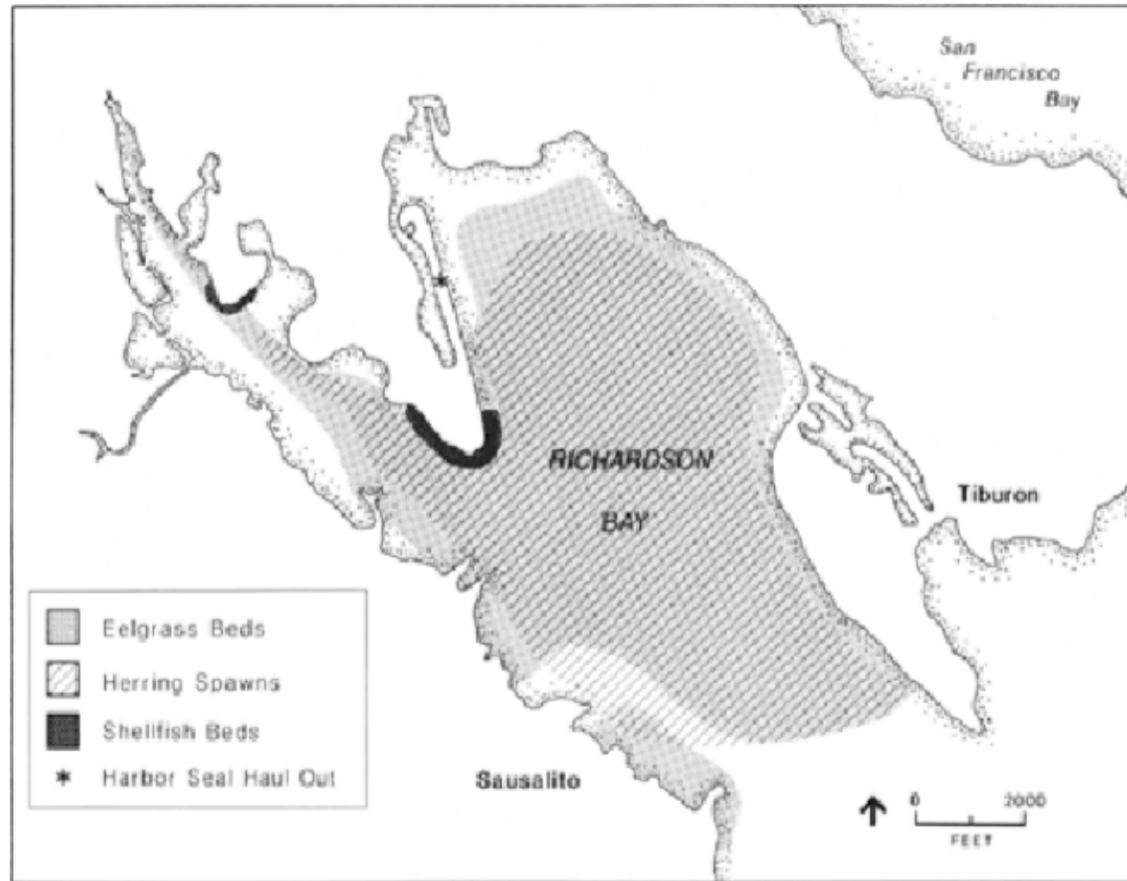


FIGURE 1

Select Resource Areas

SOURCE: Dept. Fish & Game MRA Report 82-6
Aug. 1962, S.F. Bay Shellfish, ABAQ, 1977.

RELEVANT RICHARDSON'S BAY SPECIAL AREA PLAN POLICIES: THE SPECIAL AREA PLAN "WILDLIFE REFUGE AND SANCTUARY" MAP

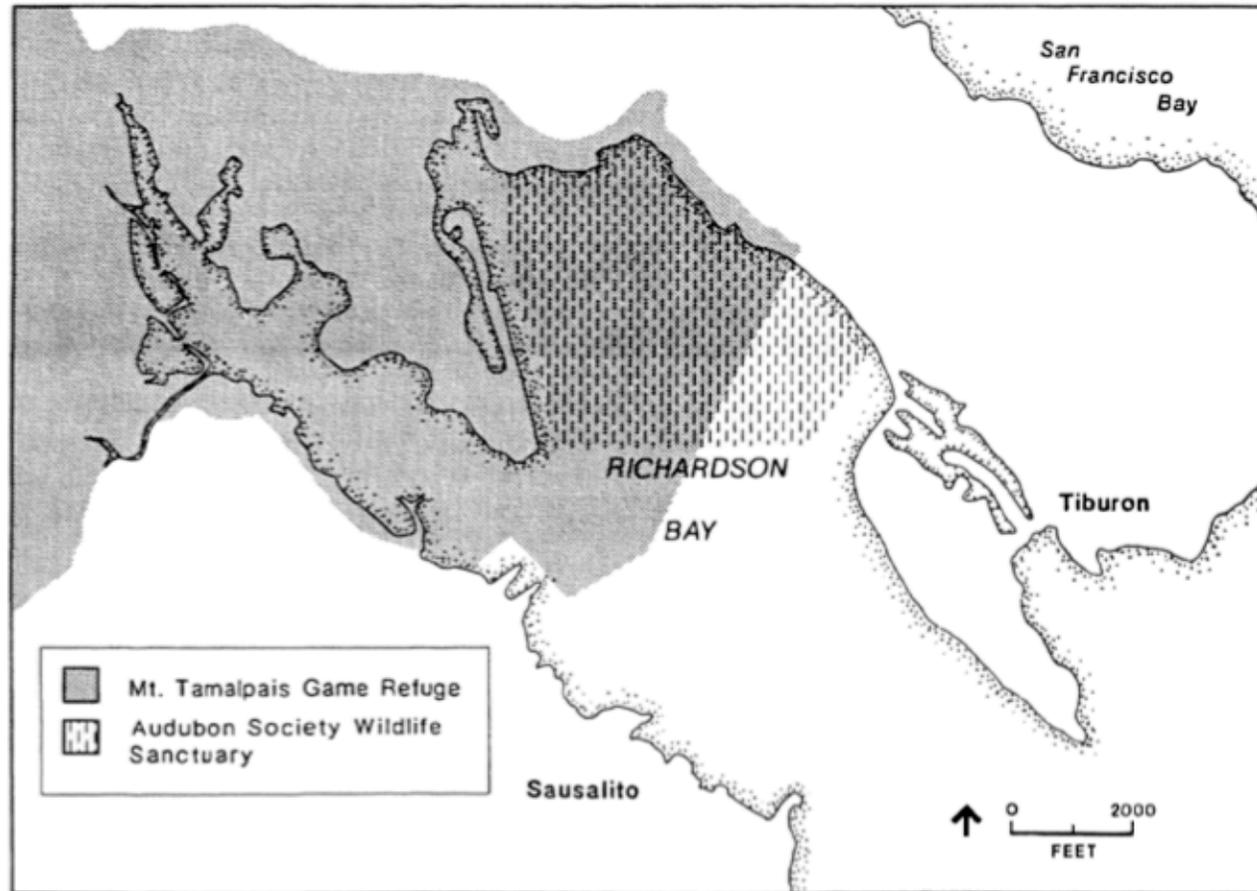


FIGURE 2
Wildlife Refuge and Sanctuary
SOURCE: Fish & Game Code and Audubon Society

PRESENTATION BY DR. KATHARYN BOYER

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RESTORATION ISSUES

- What ecological benefits does eelgrass habitat provide
- When and why are pilot eelgrass habitat test sites necessary
- Where can eelgrass restoration plot sites be located
- How is restoration done
- What funding sources are available for eelgrass restoration sites
- What defines successful eelgrass habitat restoration
- What type of monitoring is necessary

CONCLUSION