A Rising Bay, Wet Shorelines, and Increasing Expectations: BCDC's Response to Rising Sea Level in the Bay Area

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San Francisco Bay Today

Critical Infrastructure

A Sustainable Natural Resource

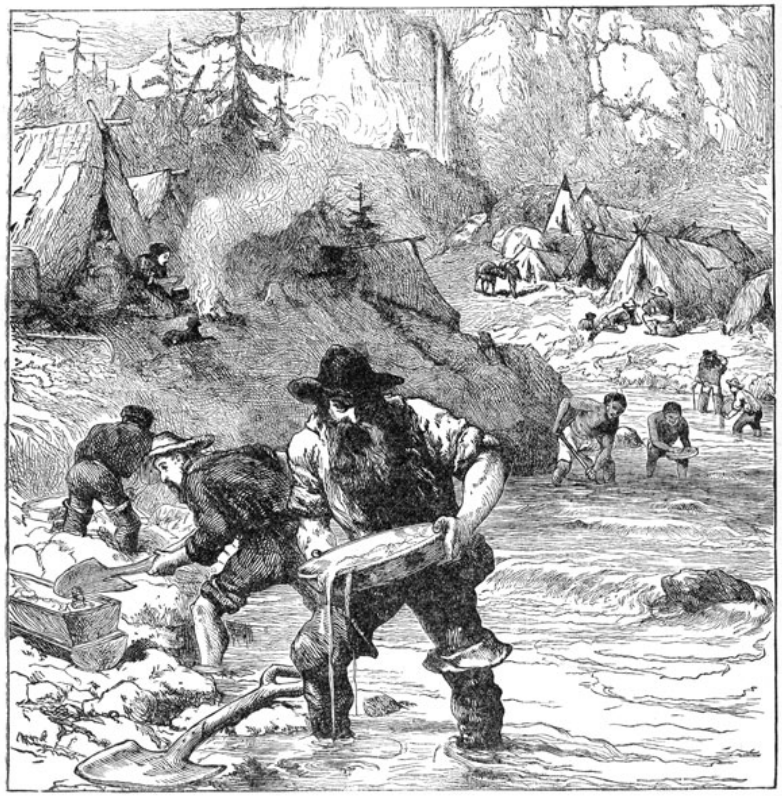
The Importance of San Francisco Bay

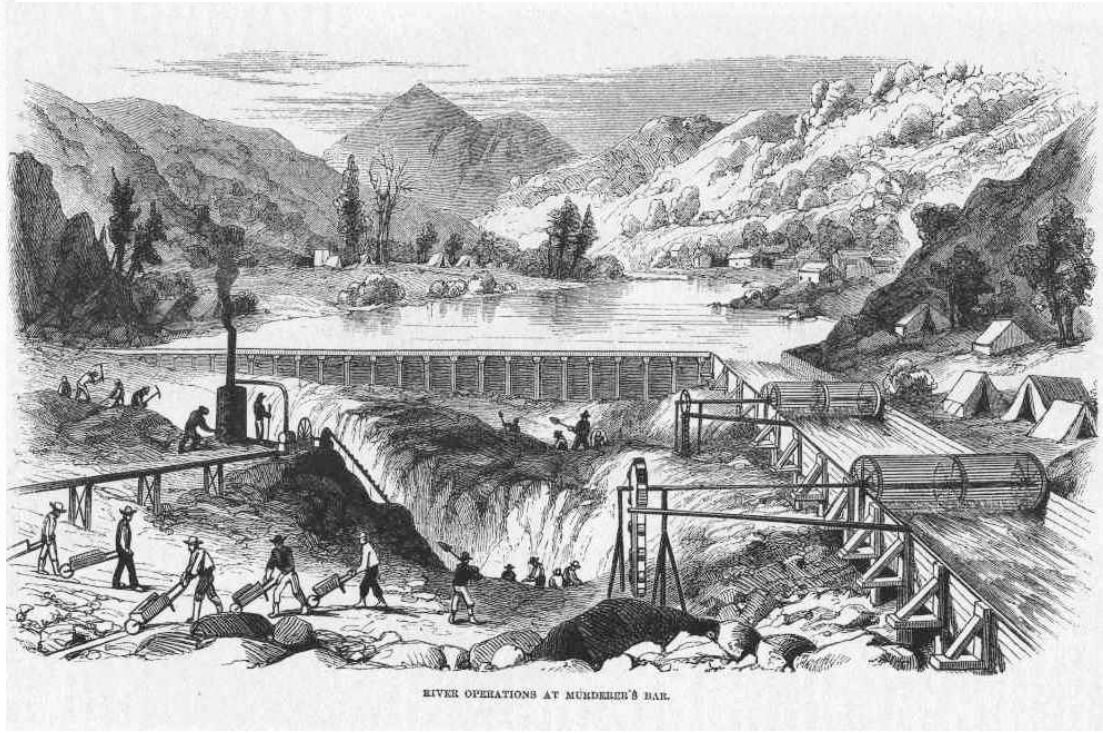
- *Largest West Coast estuary*
- *Pacific Flyway*
- *Habitat for more than 500 species*
- *Incomparable recreational and scenic resource*

- *Bay Area GDP 19th largest*
- *Tourism!*
- *Bay Area attracts workers to Silicon Valley*
- *Port of Oakland 5th busiest*
- *42% of CA refinery capacity within BCDC jurisdiction*

What Changed San Francisco Bay… and When?

The California Gold Rush





RIVER OPERATIONS AT MURDERER'S BAR.

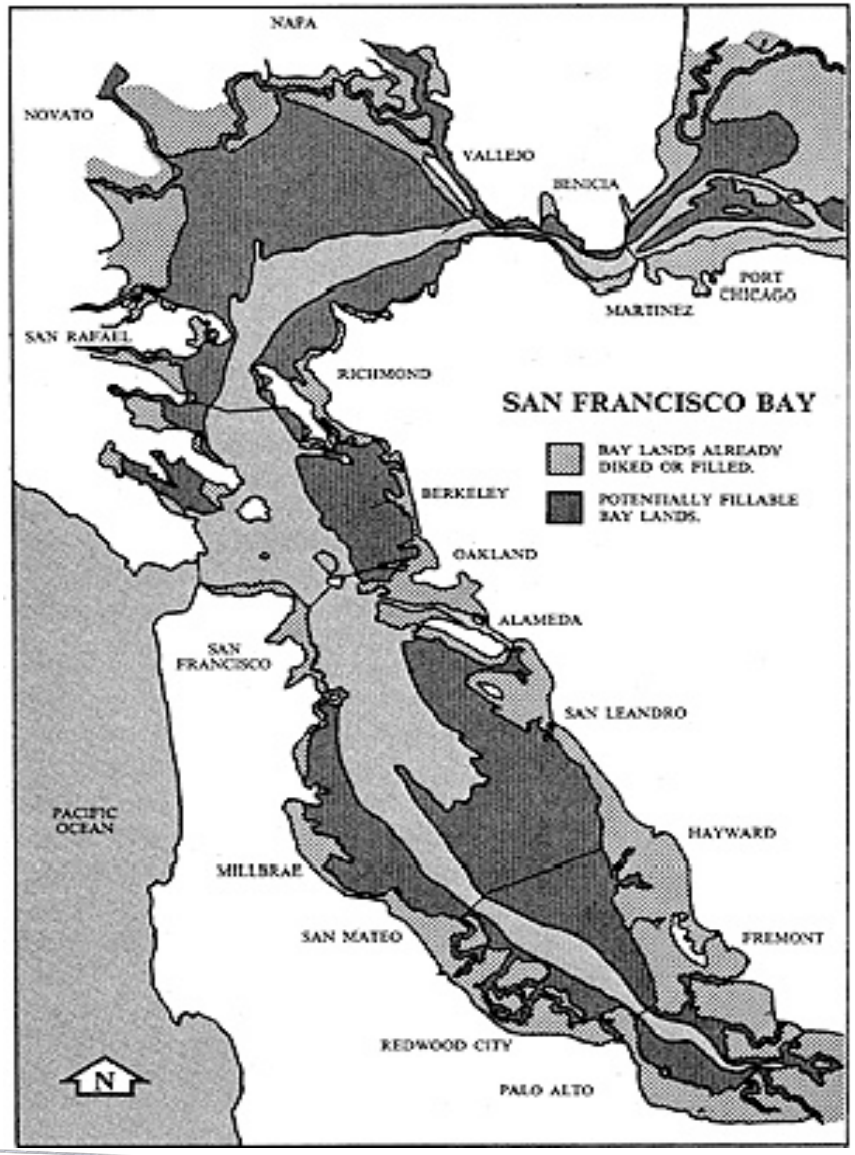
Unbridled Postwar Growth…

More and More Fill… a Shallower Bay

1850-2000:
1/3 of San Francisco Bay lost to fill

Limited Public Access…

The Apex: U.S. Army Corps of Engineers, 1959



The Challenge

- *9 Counties*
- *41 Cities*
- *Scores of special districts*
- *Over 150 public agencies with some kind of authority*
- *How to escape the "Tragedy of the Commons?"*

Who Saved the Bay?

Kay Kerr
Esther Gulick
Sylvia McLaughlin

1961: Founded "Save San Francisco Bay Association" -- $1 membership from thousands of Bay Area residents

BCDC Made Permanent

1969: McAteer-Petris Act amended to make BCDC permanent and to approve San Francisco Bay Plan (signed by Governor Ronald Reagan)

BCDC – Regional Authority and Jurisdiction

- *A State Agency with Regional Regulatory and Planning and Permitting Authority*
  - Work <u>with</u> local governments (primary land use planning authorities) based upon BCDC state laws and policies
  - … *Conservation* ***<u>and</u>*** *Development*
- *BCDC Regional Jurisdiction:*
  - All projects and activities inside the Bay waters or within 100’ feet of Bay shoreline require a permit from BCDC – in addition to permit(s) from local and other authorities – whether putting in or taking out

BCDC – Regional Membership

- *Membership:*
  - ***27*** Commissioners:
    - *Gubernatorial appointees:* 5 from Bay Area (including Chair and Vice-Chair)
    - *Local/regional representatives:* 9 County Supervisors, 4 City Council members, 1 Regional Water Board member
    - *State representatives:* 3 Governor's Cabinet, 2 Senate & Assembly, 1 State Lands Commission
    - *Federal representatives:* 2 (EPA, U.S. Army Corps)
    - ***SR-37 Committee:*** **Susan Gorin, Jim Spering AND David Rabbit, Damon Connolly, and Belia Ramos (alts)**

BCDC's Two Guiding Principles

1) <u>Minimize</u> Bay Fill

2) <u>Maximize</u> Feasible Public Access

How is the Bay Different than the Land?

- *The Bay is a publicly-protected resource* whose development is limited by the State of California
- *Only water-oriented uses* can be put in the Bay
- *Anything proposed to be put into the Bay* can only be sited in the Bay if there is not an alternative site upland from the Bay on which it can be built, and only if the amount of fill required to build it is the justified (benefits > detriments) and minimum amount necessary
- *Urban development can, and should,* ***abut*** *the Bay* where appropriate, given BCDC laws and regulations

Rising Sea Level: "Slow Moving Emergency"

- *8" of Rising Sea Level in 20th Century*
- *Rising Seas in California: CA Ocean Science Trust (April 2017)*
  - Incorporates latest information on RSL, including rapid ice loss from Antarctic
  - Current guidance: 16" by 2050; 36" by 2100
  - Gary Griggs (UCSC) : "… plan for 24" by 2050 and 48" by 2100"
  - Final RSL guidance to be adopted in January 2018 by State of CA
- *The Difficulties of Scientific Uncertainty:*
  - How much?
  - How fast?

What Does BCDC Ask? (Short Form!)

- "What are you planning or designing, and does it require a risk assessment?" If so, then use and/or develop:
  - A range of sea level rise projections;
  - Inundation maps;
  - Types of potential flooding;
  - Degrees of uncertainty;
  - Consequences of defense failure; and,
  - Risks to existing habitat from utilization of flood protection devices.
- "Is the project vulnerable to flooding?" If so:
  - Design it to a mid-century sea level rise projection; and,
  - Create an adaptive management plan to address long term impacts.

Public Meetings on Rising Sea Level (2013-16)

- *Commissioner Working Group on Rising Sea Level*
  - "What can we do?"
  - "What should we do – given reasonable priorities and unforeseen consequences?"
  - "How do we fund it?
  - <u>Finance, Valuation, and Risk:</u>
    - Insurance companies and lenders
    - How can infrastructure – natural and manmade – be valued and funded?

Bay Fill Working Group

- 5 BCDC Commissioners: *Barry Nelson* (former Save the Bay E.D.); *Sean Randolph* (Bay Area Council); *Jim McGrath* (Port of Oakland, retd.); *Jason Brush* (Federal EPA); *Katerina Galacatos* (USACE)
- Examinations and discussions of laws and policies, past (and conceptual) projects, natural and built environments, multi-benefit solutions
  - How flexible is McAteer-Petris? The Bay Plan?
  - How can/should Commission interpret policies and use past practices?
  - Are policies consistent with, or can they frustrate, efforts to make Bay Area more resilient?

Policies for a Rising Bay – Steering Committee

Accelerating the Process: 2015-2016

- *Public workshops (Q1 2016) w/60-80 participants:*
  - Review and discuss efficacy of 2011 climate change amendments to the Bay Plan
  - Regional approaches to resilience (scale is crucial)
  - Prioritize public recommendations and discussion
- *Recommendations adopted by Commission in October 2016 (include):*
  - Devise Regional Adaptation Plan (RAP)
  - Complete county-scale adaptation plans
  - Explore governance issues
  - Increase regional asset resilience
  - *Explore modifications to existing laws, regulations, policies*

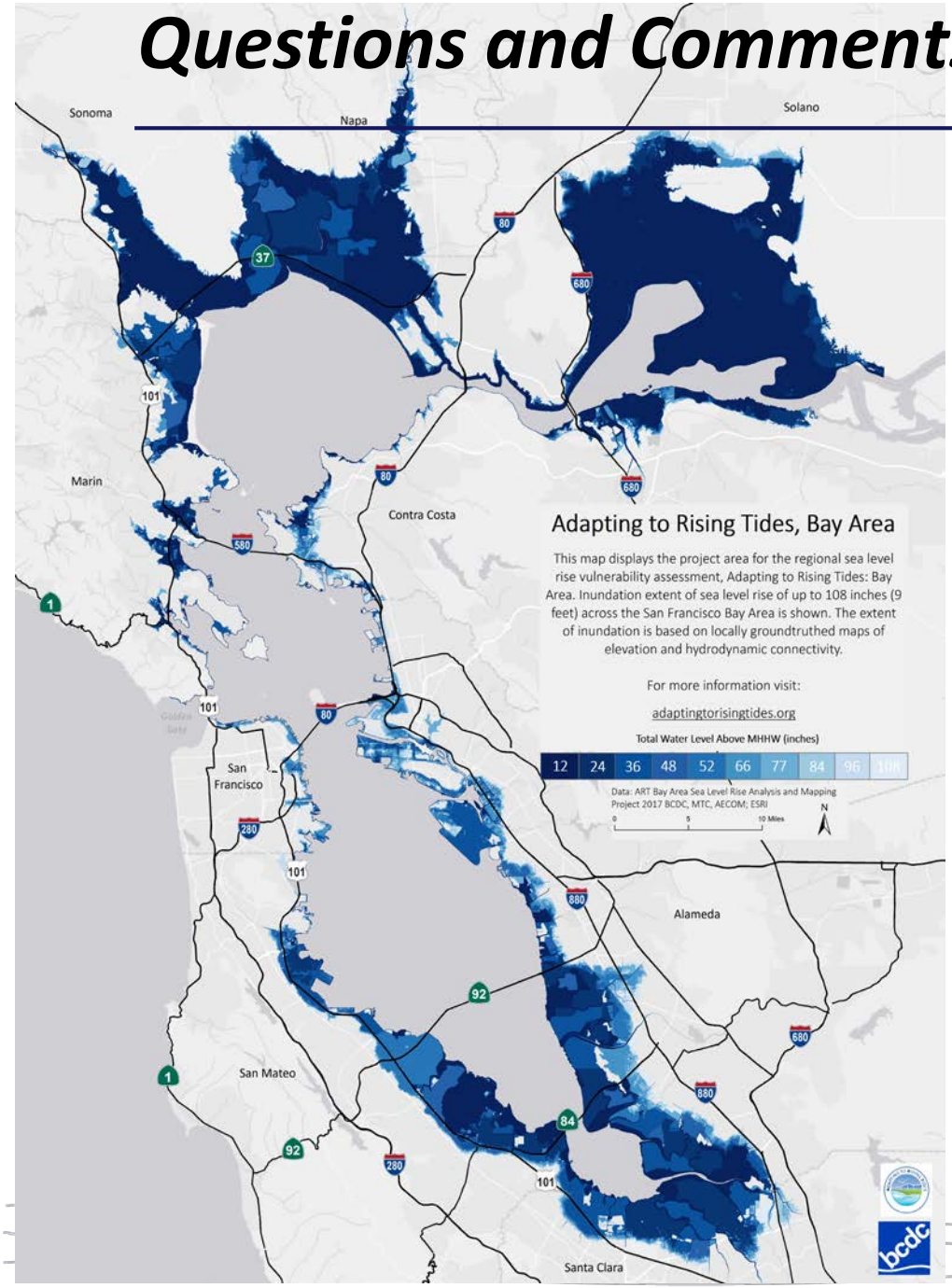
Multi-Agency Permitting

- *Regulatory agencies:*
  - Federal: USACE, EPA, NMFS, USFWS
  - State: CDFW, RWQCB, BCDC, State Lands
- *Measure AA – Bay Area Council, Silicon Valley Leadership Group*
- *Dedicated funding (SFBRA), co-location (USACE host)*
- *Pre-application/application coordination, collaboration, partnership*
- *Performance measures*
- *July 1, 2018 inauguration?*

Resilient by Design Challenge

www.resilientbayarea.org

Questions and Comments Always Welcome!



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