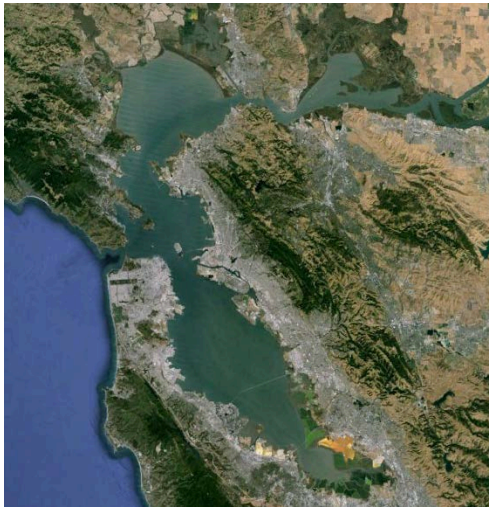
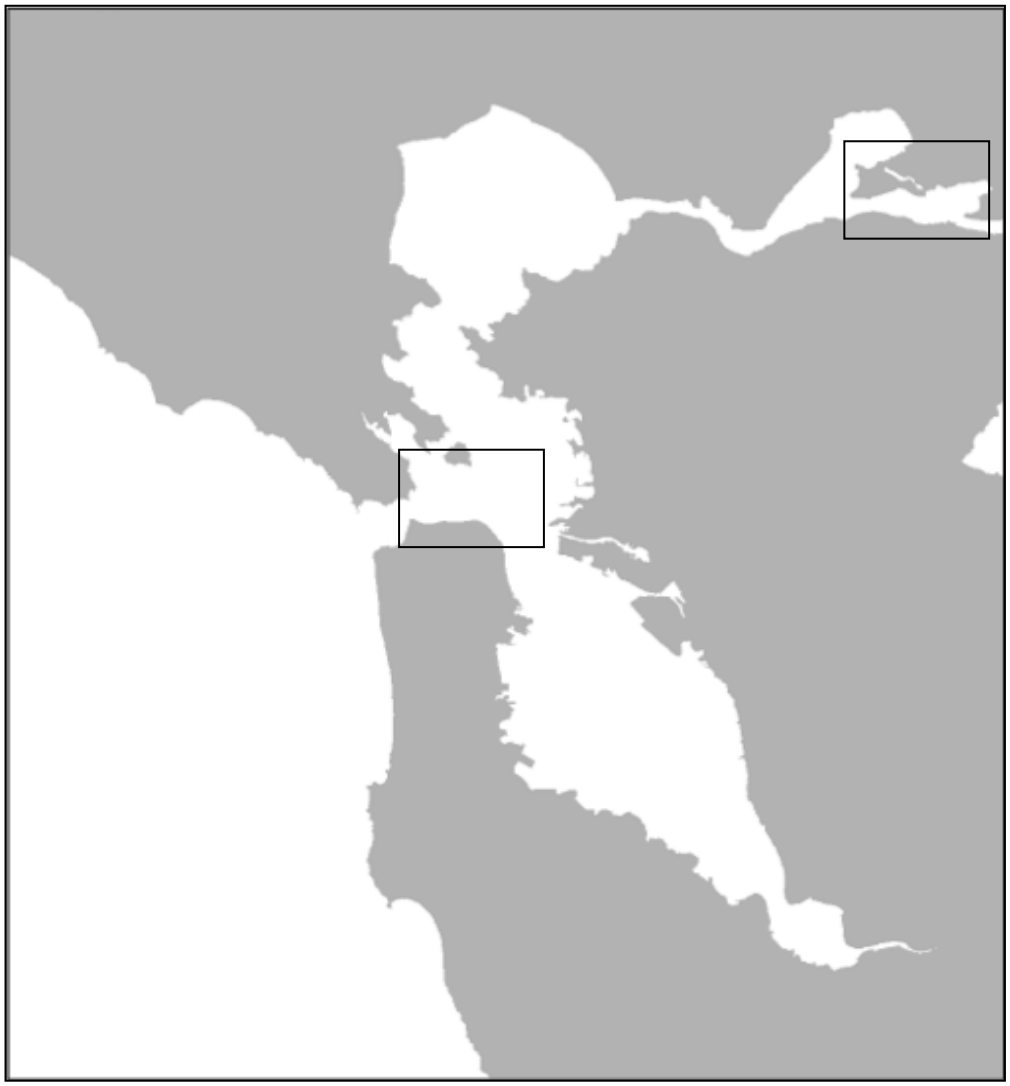


San Francisco Bay Sand Mining Staff Summary

March 19, 2015

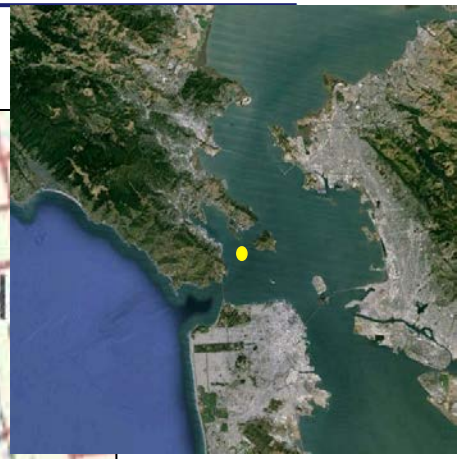
Bay Sand Mining Areas

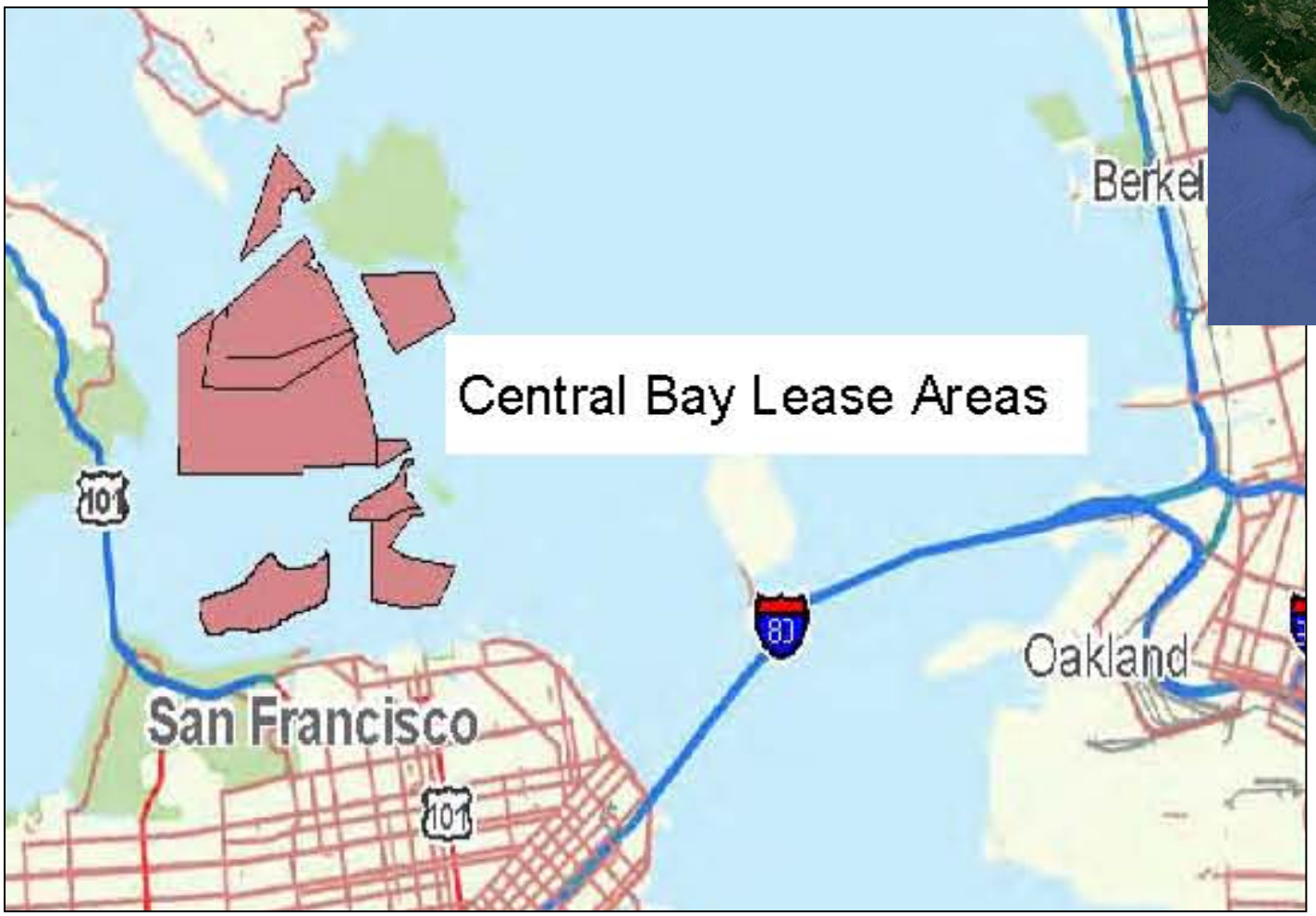


Four Mining Applications

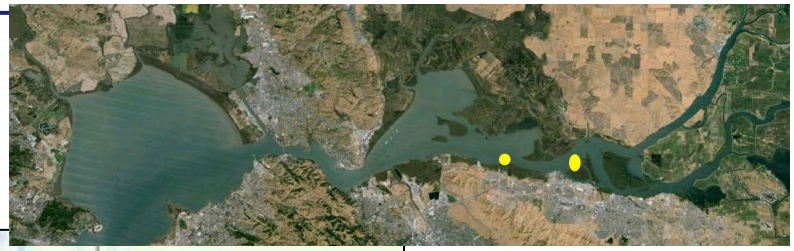
- Hanson Marine Operations – Central Bay (75 %)
- Hanson Marine Operations – Middle Ground Shoal (2 %)
- Lind Marine – Middle Ground Shoal (8 %)
- Suisun Associations – Suisun Channel (15 %)

Bay Sand Mining Areas: Central Bay





Bay Sand Mining Areas: Suisun Bay



Total Mining Proposed Over Ten Years

- Total acres: 3,900
- Total proposed annual mining: 1.613 mcy
- Proposed “peak” mining: 1.95 mcy
- Total proposed mining: 16.13 mcy over 10 years

Proposed Project

Applicant	Location	Area (Acres)	Proposed Annual Volume	Peak Years	Total Over Ten Years
Hanson	Central Bay	2,601	1.2 mcy	1.45 mcy	12 mcy
Hanson	Middle Ground Shoal	367	40,000 cy	50,000 cy	400,000 cy
Lind Marine	Middle Ground Shoal	367	125,000 cy	150,000 cy	1.25 mcy
Suisun Associates	Suisun Channel	936	245,000 cy	300,000 cy	2.45 mcy

WHAT IS BCDC'S AUTHORITY?

- Activities within BCDC's jurisdiction
  - Mining on leases
- Impacts within BCDC's jurisdiction
  - Sediment transport, bay bathymetry, fish and wildlife, water quality
- Impacts outside of BCDC's jurisdiction
  - Sediment transport, beach and coastal erosion, fish and wildlife

How Does CEQA Apply?

- State Lands Commission - CEQA review and EIR development
- EIR certified in late 2012
- BCDC has authority and the responsibility to do additional analysis as needed
- BCDC's review is based on the McAteer Petris Act, the Bay Plan, the Suisun Marsh Act, and the Suisun Marsh Protection Plan and the Solano County Suisun Marsh Policies
- Use of additional information – scientific information, science panel, applicant-provided information, comment letters

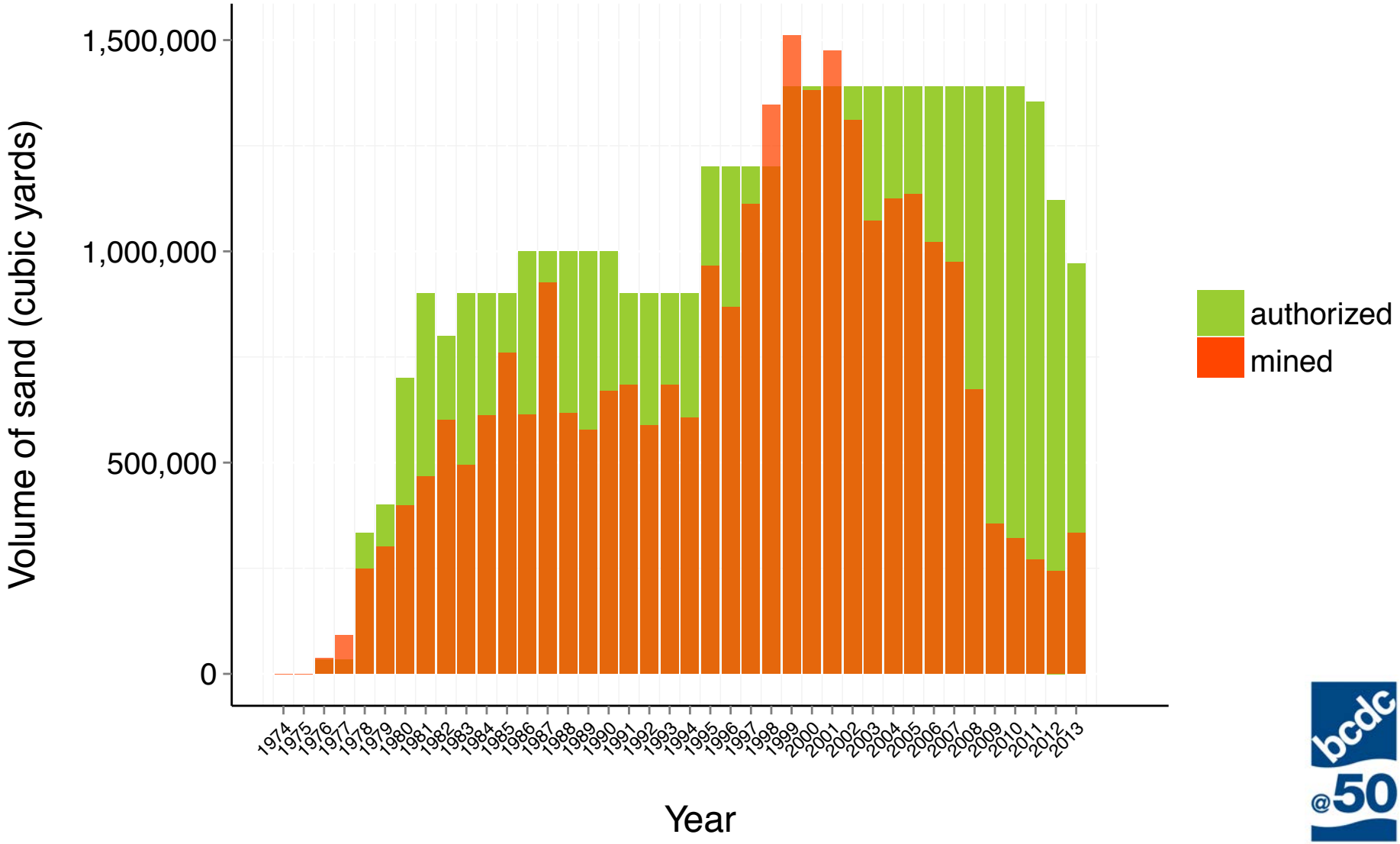
How Do Greenhouse Gas Emissions Fit In?

- Purview of the BAAQMD
- How much Bay sand should be mined compared to local quarries, and imports to the Bay Area?
- CEQA analysis maximized the Bay mining volumes and analyzed GHG/emissions impacts of 100% imports
- Trade off between mining impacts to the Bay and coast vs. air quality, congestion, and emissions

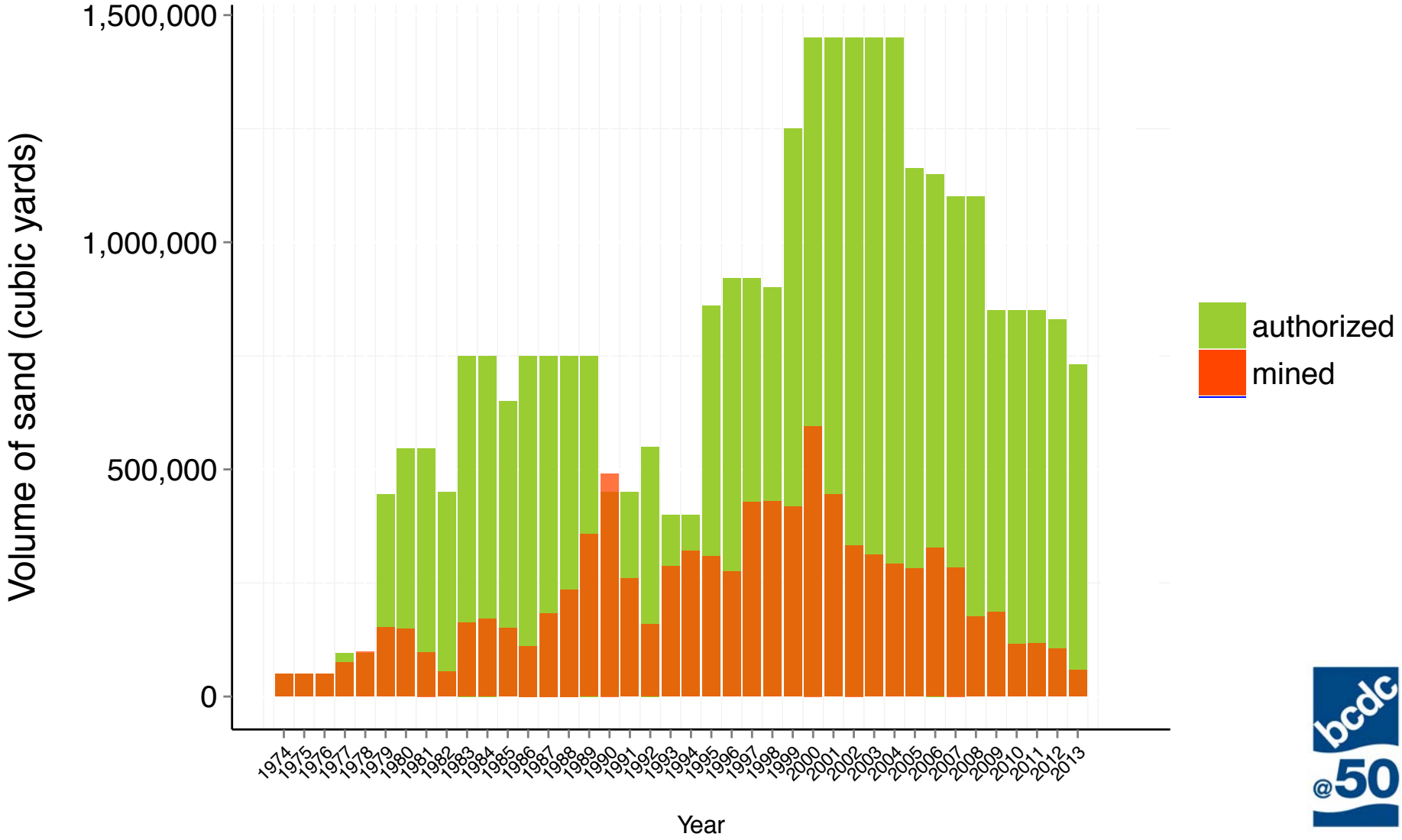
How Much Sand is There?

- Sand is a limited resource
- Actual stationary "relic or bedded" volume is unknown
- Total "transport" sand is unknown, but estimates indicate less than 500,000 cy annually from the Delta and local tributaries
- 5% to 15% of sand mined is being replenished

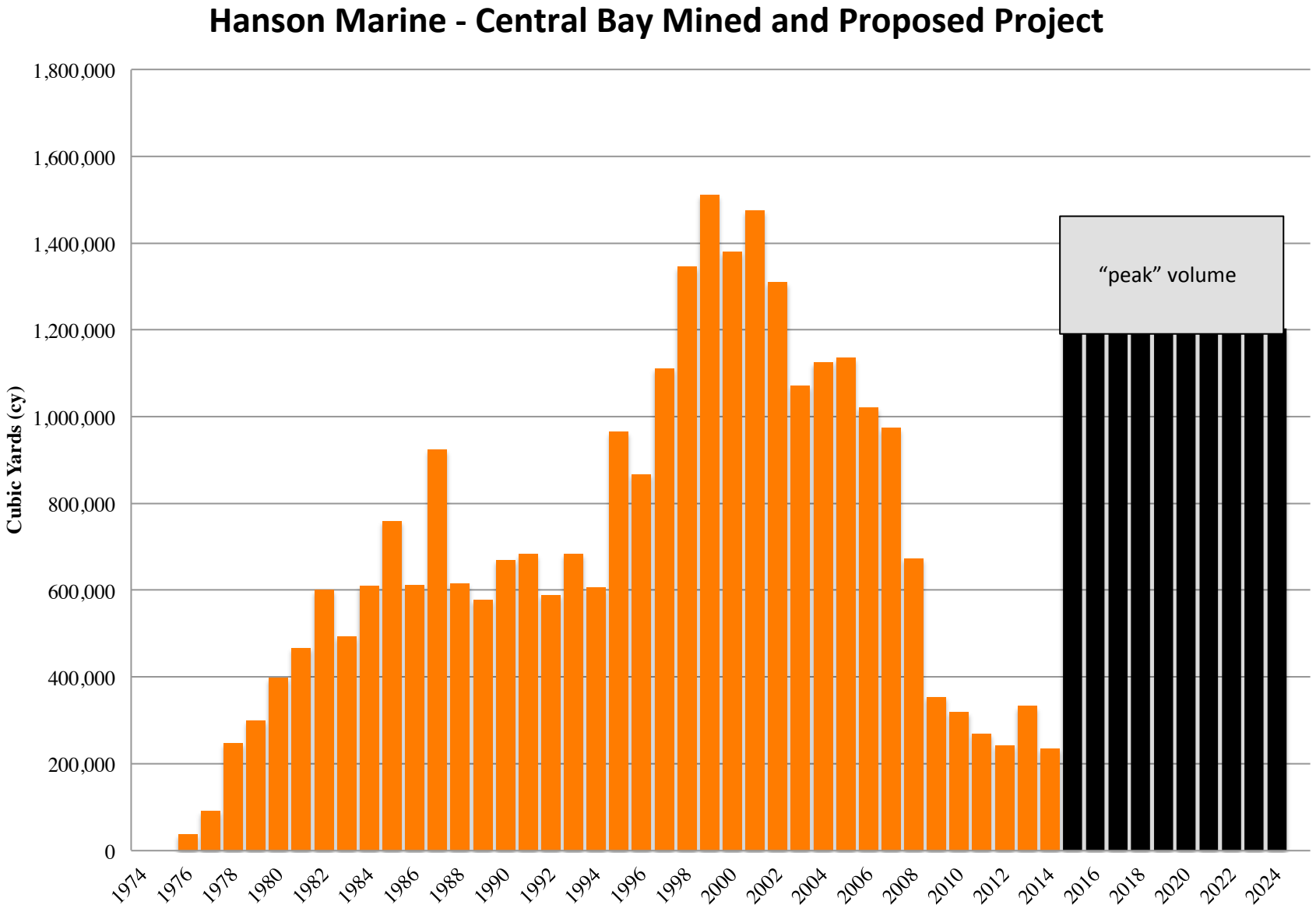
Sand Mining in Central Bay 1974 through 2013



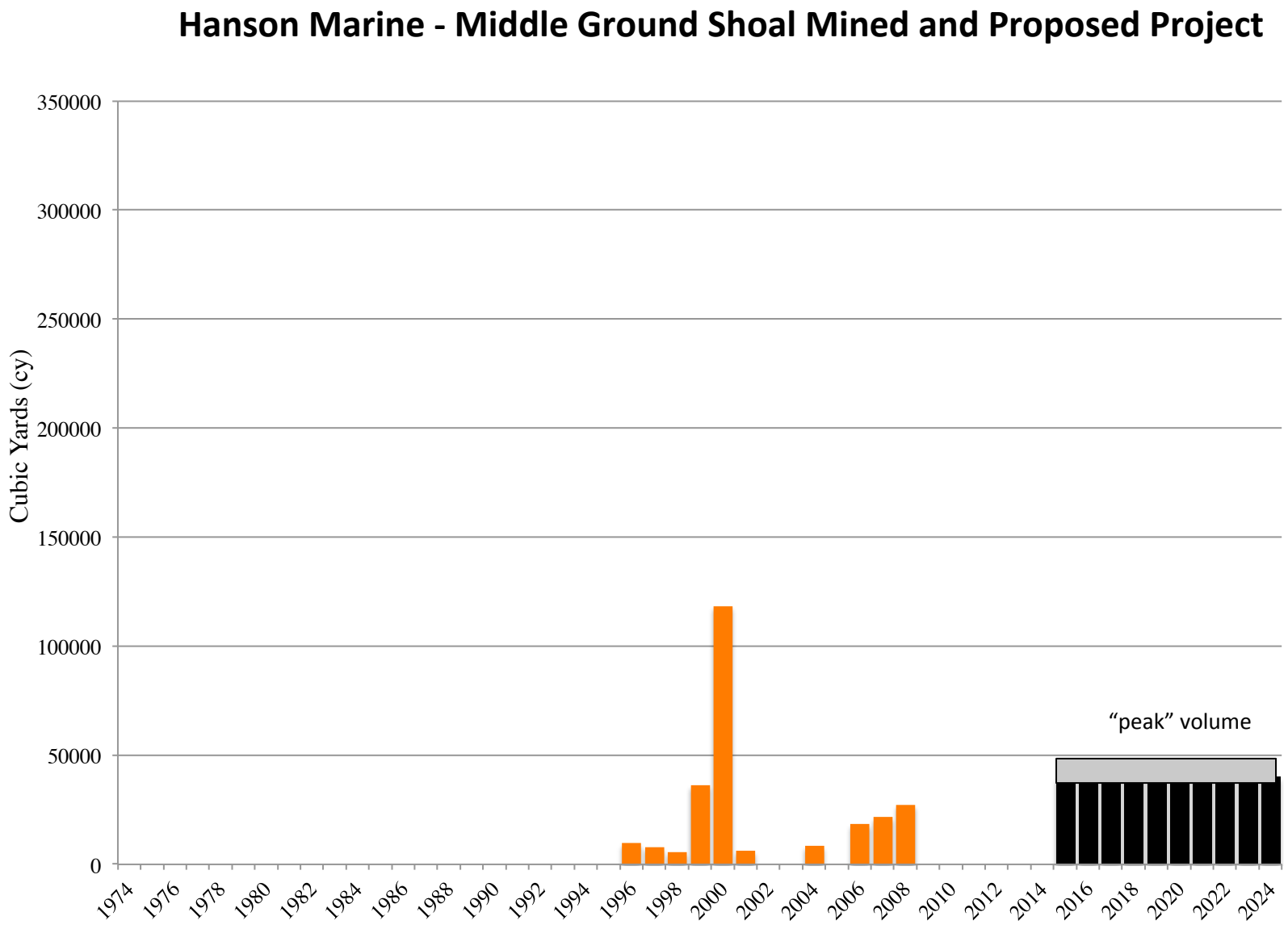
Sand mining in Suisun Bay 1970 through 2013



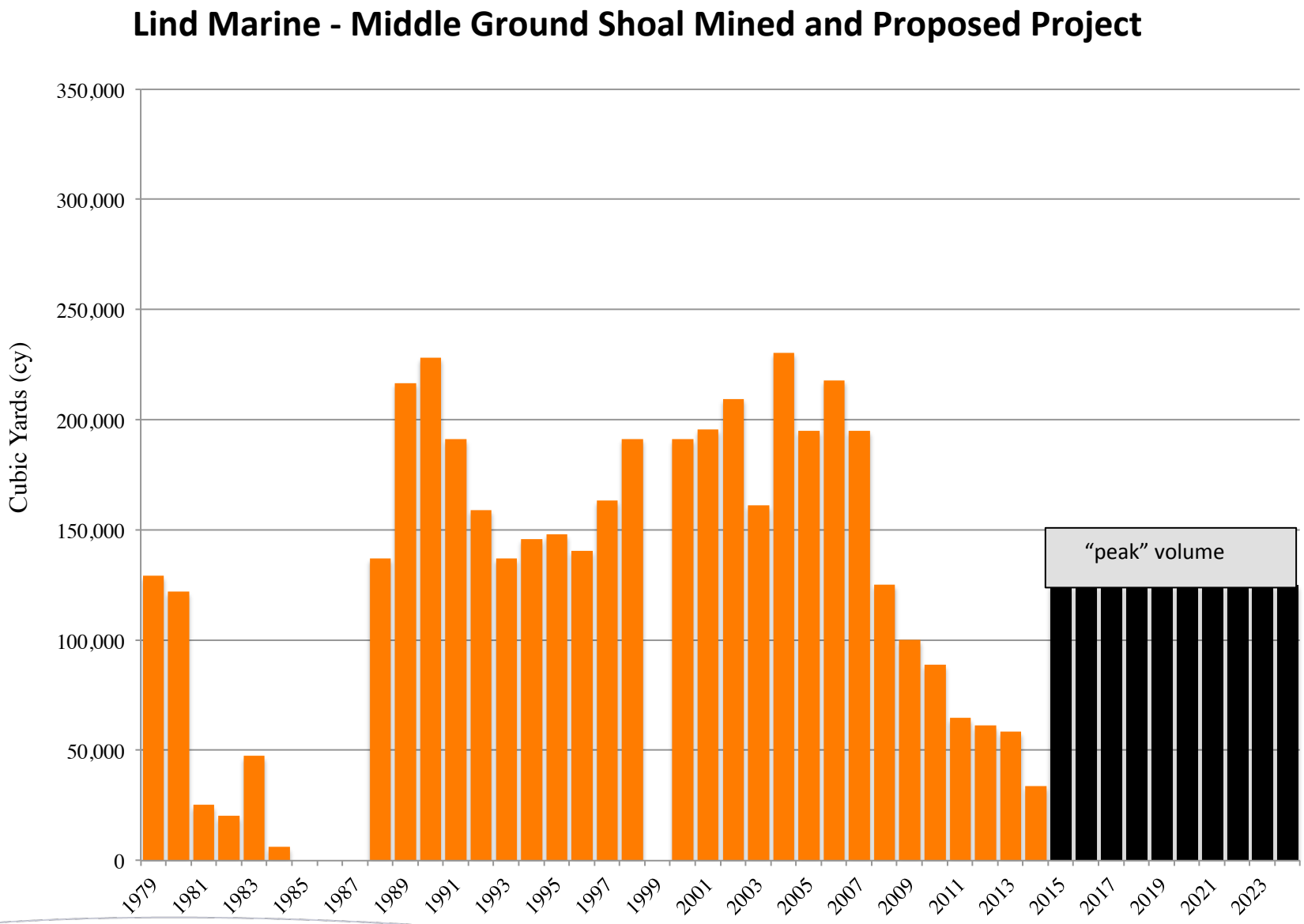
Proposed Project



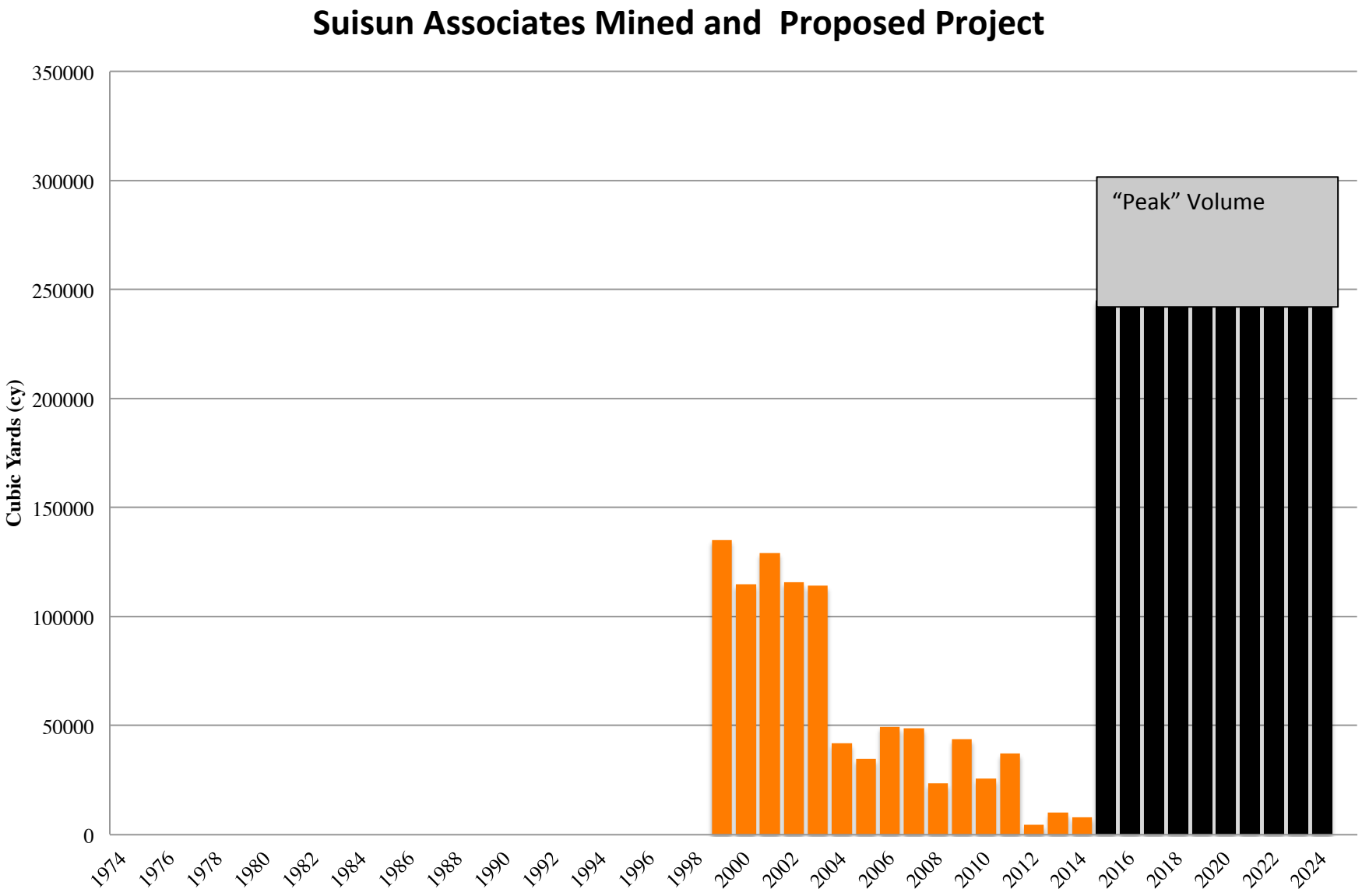
Proposed Project



Proposed Project



Proposed Project



COMMISSION POLICY QUESTIONS BASED ON THE SAN FRANCISCO BAY PLAN

(1) Are the proposed projects designed to minimize harmful effects to the sediment system?

(2) Would the projects conserve habitat and wildlife and minimize harmful effects to them?

(3) Are there feasible alternatives to mining sand from the Bay?

(4) Are additional studies needed to better understand the project and its impacts?

Commission Policy Questions Based on the San Francisco Bay Plan

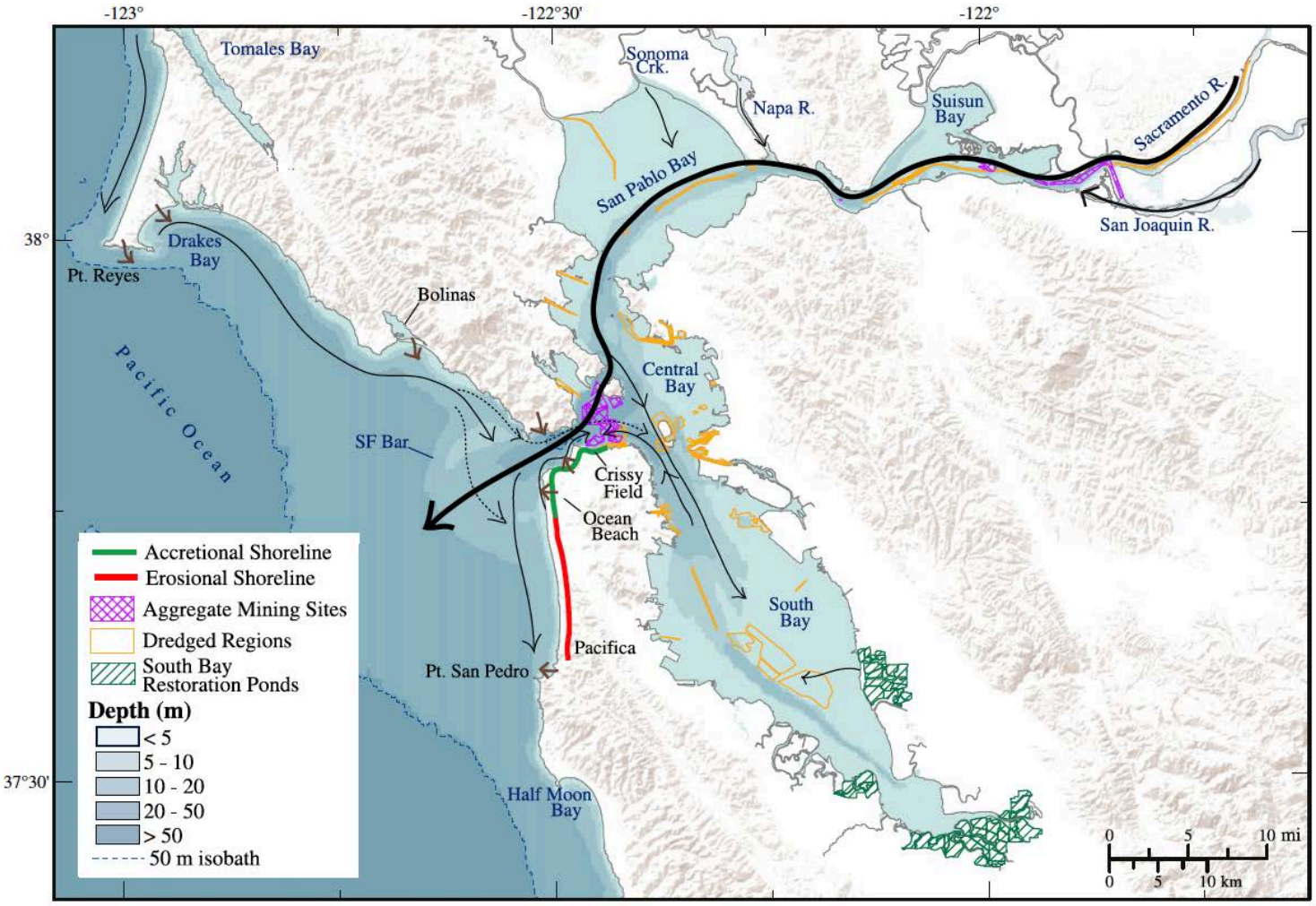
(5) Are the proposed projects designed to minimize impacts to water quality?

(6) Do the proposed projects adequately mitigate for adverse impacts?

(7) Are the proposed projects consistent with the Commission's policies regarding dredging, navigation safety and oil spill prevention, and the Public Trust needs?

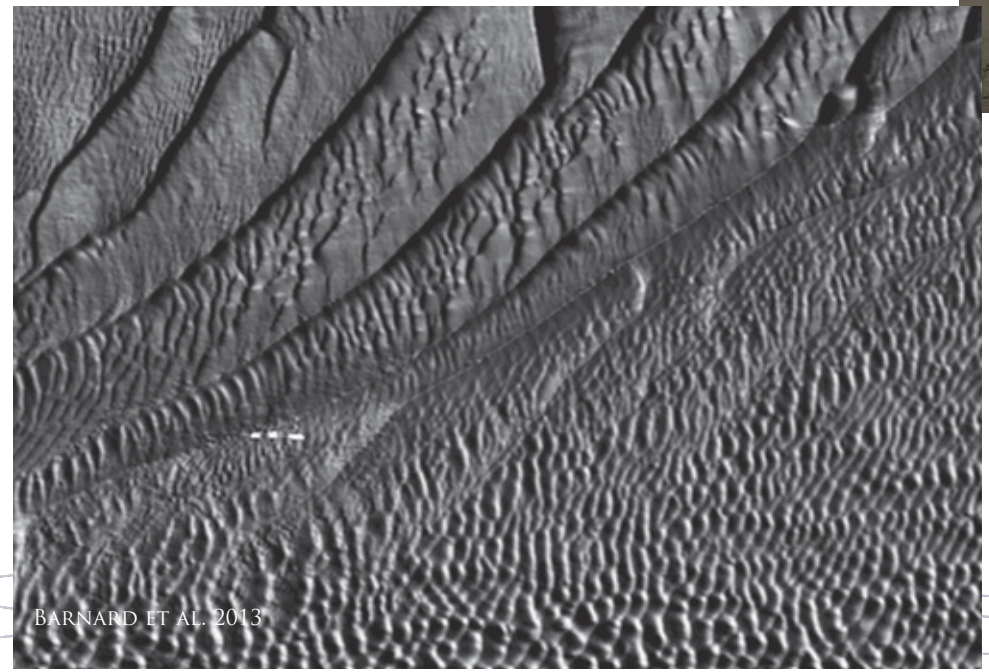
Potential Impacts to Sand Resources:

- Sand Transport



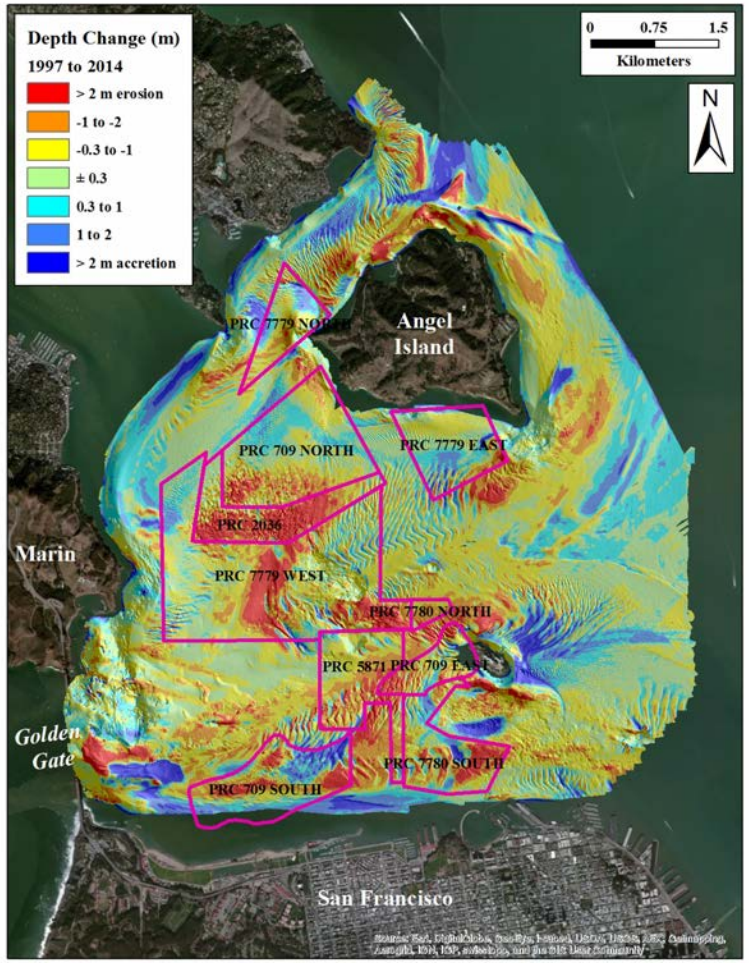
Potential Impacts to Sand Resources:

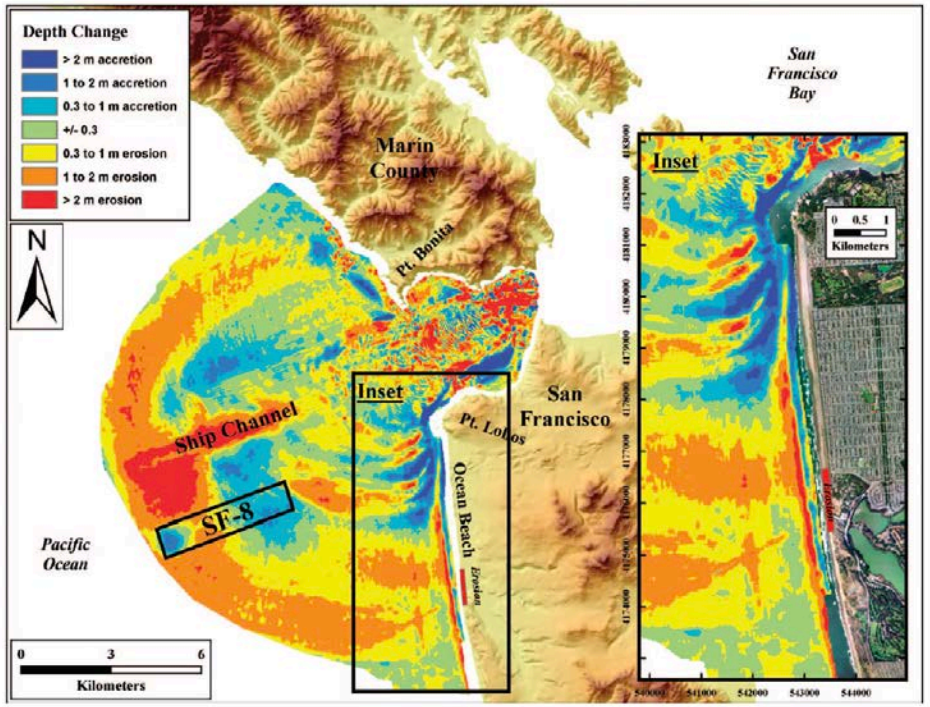
- Bathymetry and Bedforms
- Beaches and Tidal Flats



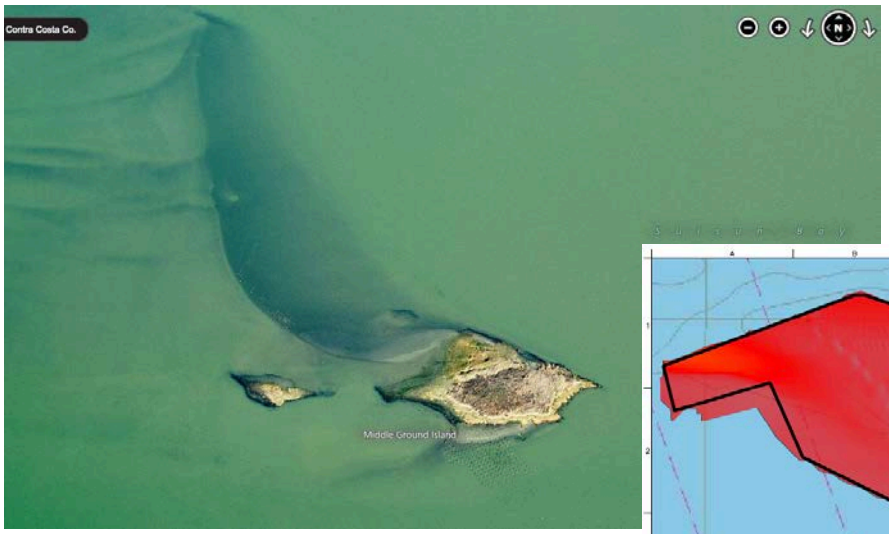
BARNARD ET AL. 2013

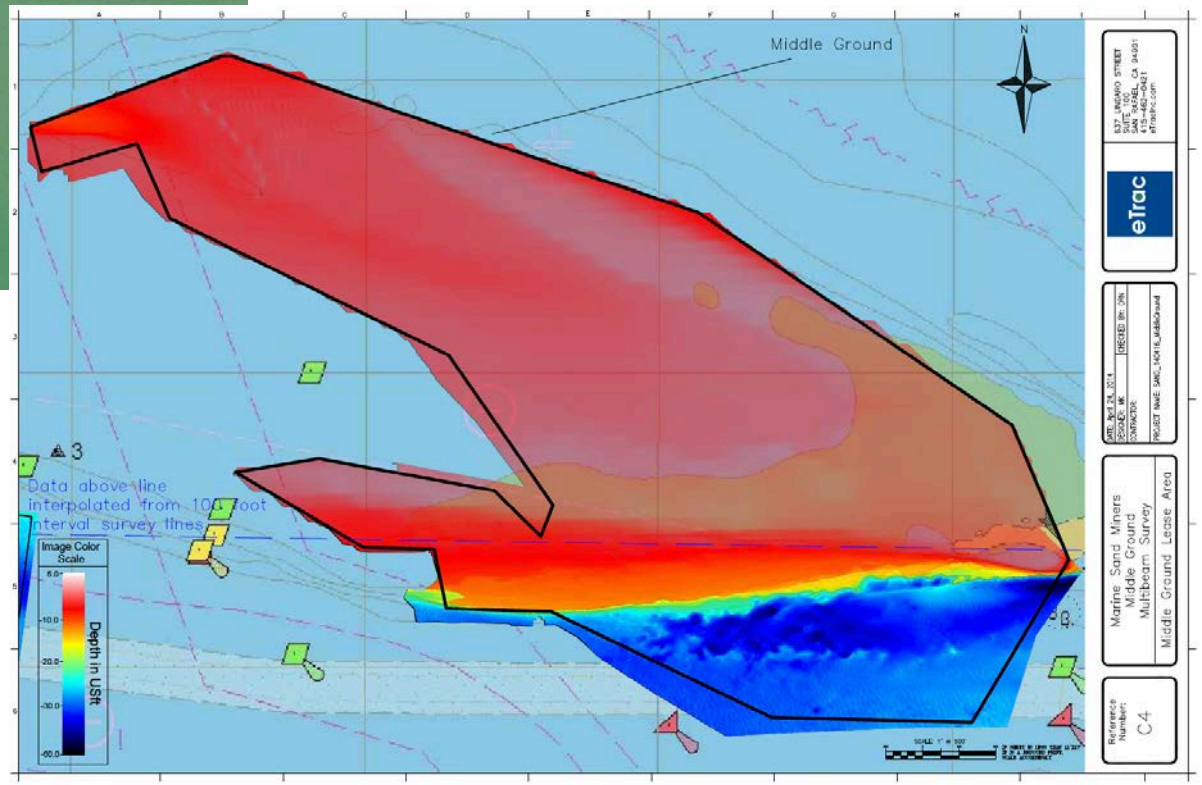
Potential Impacts to Sand Resources: Central Bay and Coast



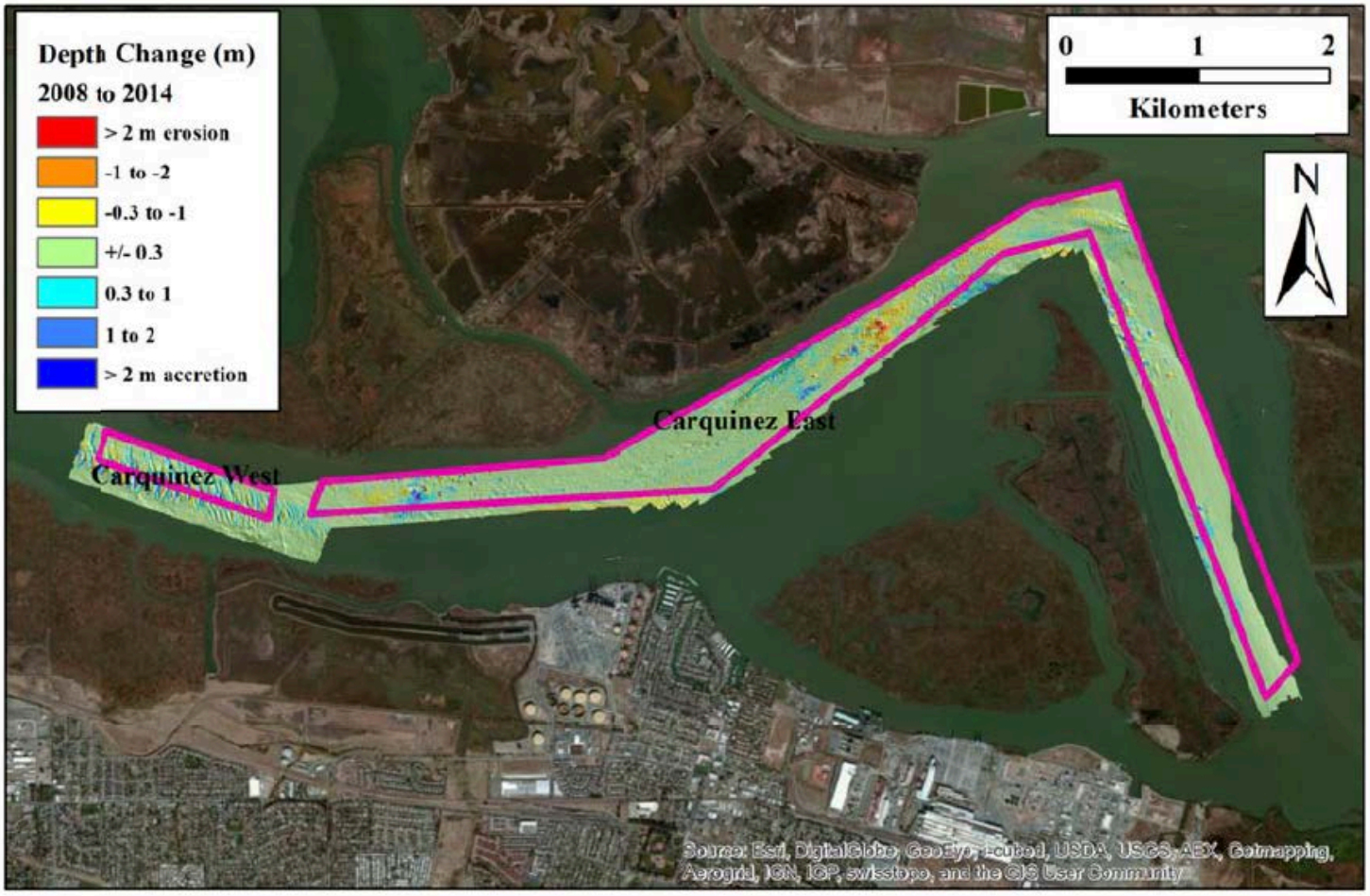


Potential Impacts to Sand Resources: Middle Ground



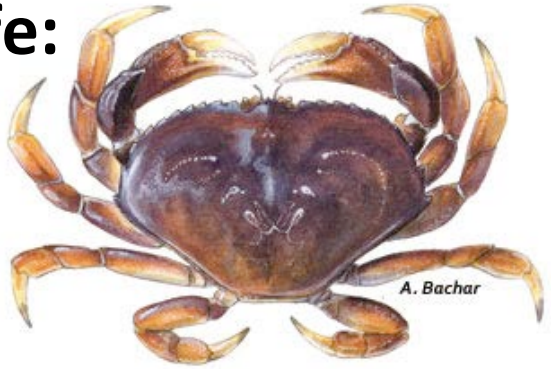


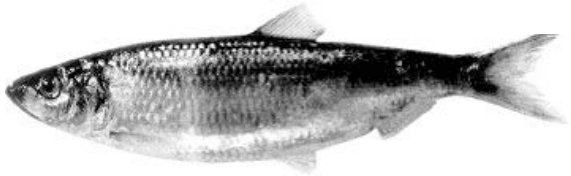
Potential Impacts to Sand Resources: Suisun Channel



Potential Impacts to Habitat and Wildlife:

- Open water habitat
- Benthic (bottom) habitat
- Water Quality
- Species





Applicants' Minimization and Mitigation Measures

- Reduced volume
- Fish screens on water intake pipes
- Lower position of drag head in water column when priming
- Purchase of mitigation credits for take of listed species
- Removal of marine debris
- Buffer zones along shorelines

Applicants' Suisun Bay Specific Minimization Measures

In addition to year round limitations, in Suisun

Seasonally Limited:

- Depths
- Volumes
- Distance from Shoreline

NEED FOR ADDITIONAL STUDIES

Proposed by Applicants:

- Benthic Study – Central Bay
- Water Quality Effluent Study

Potential Studies:

- Benthic Study in Suisun Bay
- Sand transport between Central Bay and coast (tracer)
- Sand transport from tributaries to shoals
- Cores to verify depth and quality of sand
- Others?

DREDGING, NAVIGATION & OIL SPILL SAFETY, PUBLIC TRUST

- Minimize volumes, seasonality
- Develop oil spill contingency plans in accordance with US Coast Guard
- Public trust use and public trust needs (SLC and BCDC)

ISSUES RAISED: THE COMMISSION MUST DECIDE

(1) Whether the proposed projects are designed to minimize harmful effects to the sediment system

(2) Whether the projects would conserve habitat and wildlife and minimize harmful effects.

(3) Whether there are feasible alternatives to mining sand from the Bay's sandy deep water areas

(4) Whether or what additional studies are needed

ISSUES RAISED: THE COMMISSION MUST DECIDE

(5) Whether the proposed project has been designed to minimize impacts to water quality

(6) Whether the proposed project's unavoidable adverse impacts have been adequately mitigated

(7) Whether the proposed project is consistent with the Commission's policies regarding dredging, navigation safety and oil spill prevention, and the Public Trust

Issues Raised by Public Comment

Concern for:

- Loss of jobs
- Greenhouse gas emissions
- Increased mining during period of sediment supply decline
- Eroding beaches and shorelines
- Eroding San Francisco Bar and affects to the outer coast, specifically Ocean Beach

Thank you