

# San Francisco Bay and Suisun Sand Mining

BCDC Commission Briefing  
October 2018

# Introduction

BCDC Permit required Commission update on:

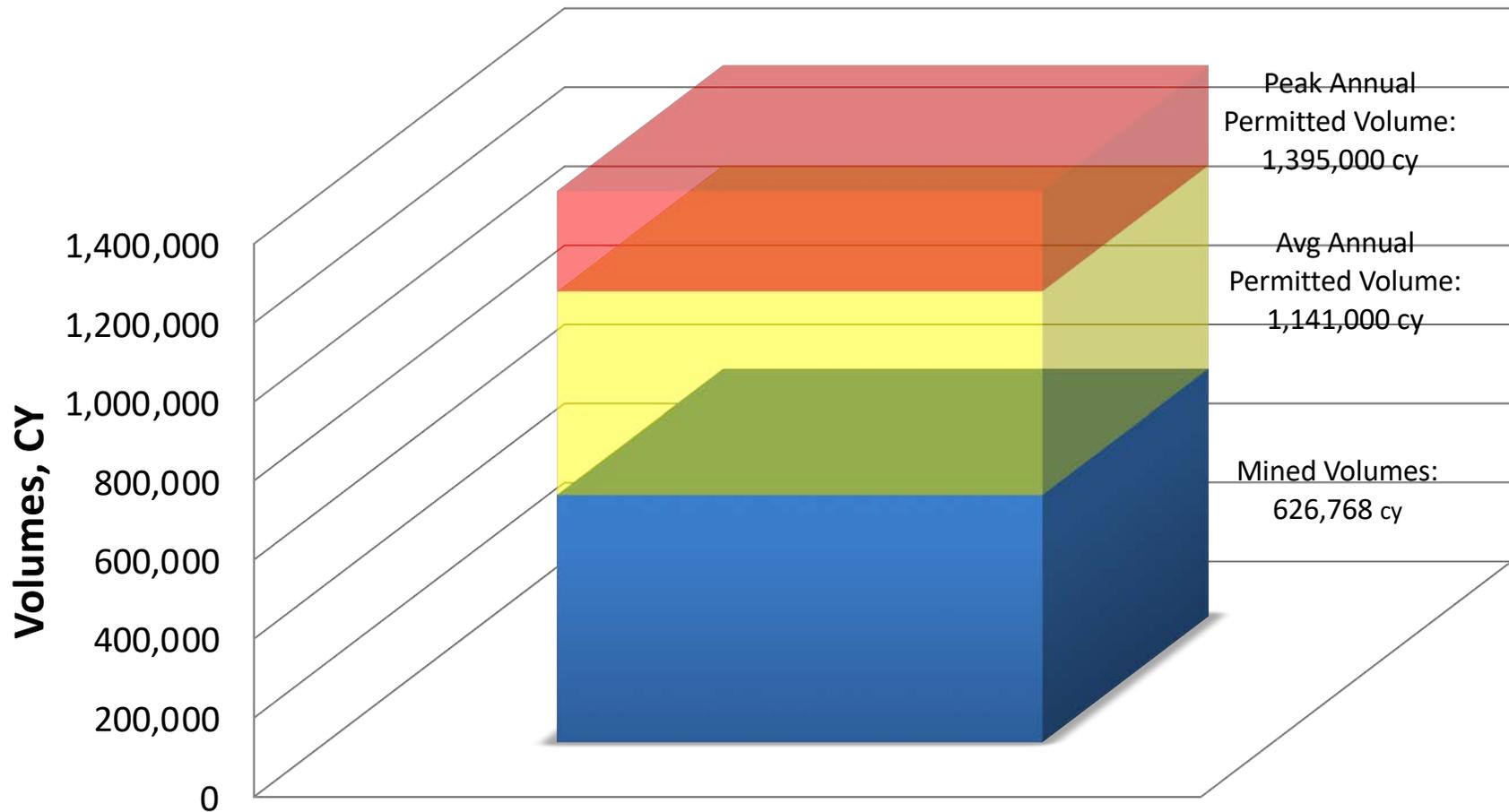
1. Mining Activity Summary
2. Bathymetric Trend Analysis
3. Benthic Study
4. Water Quality Study
5. Sediment Transport Study

# Vicinity Map of Lease locations



# # 1 - Mining Activity Summary

Annual Sand Mining Volumes: 2017  
Hanson, Central Bay Leases

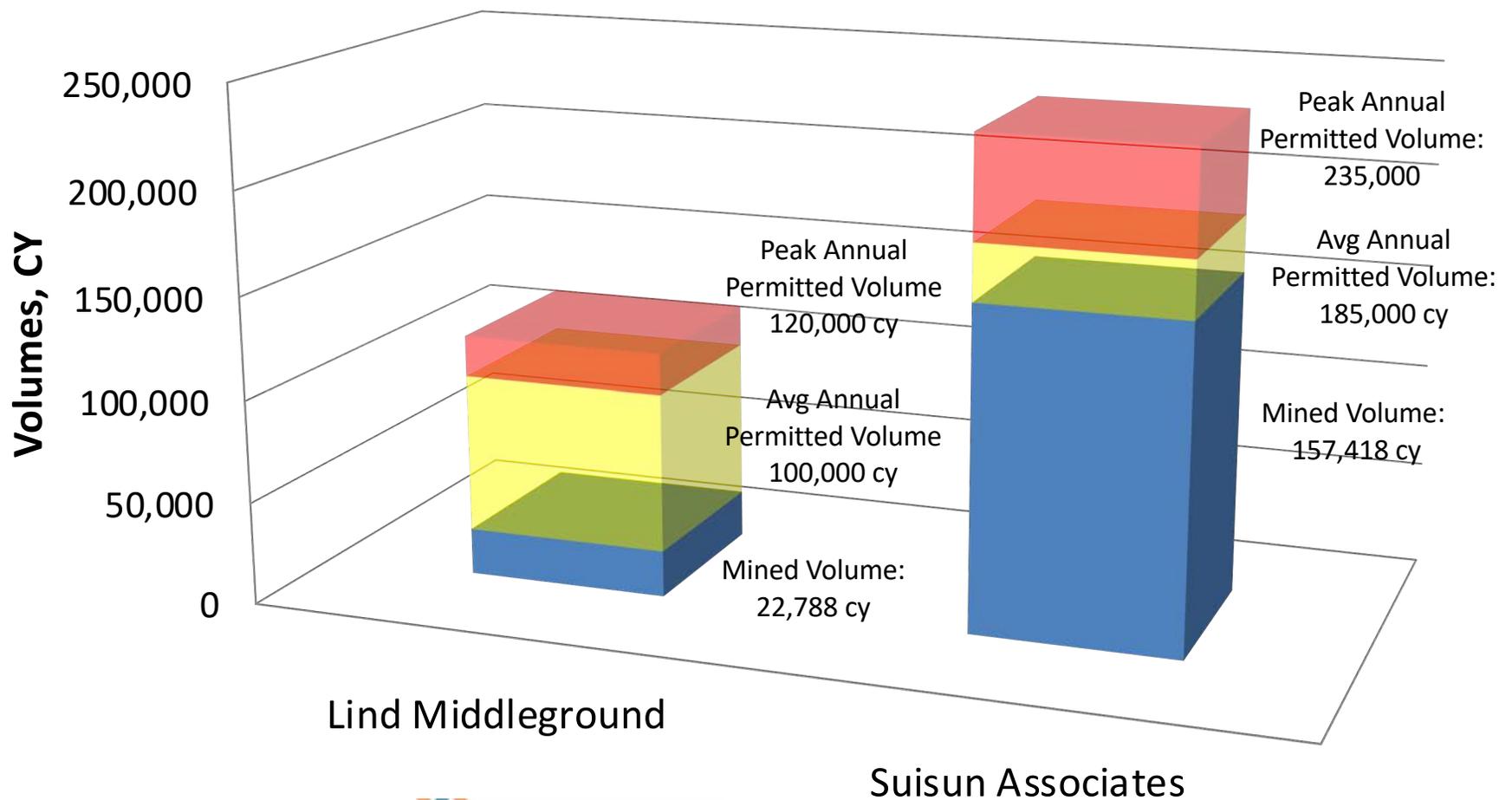


Hanson Central Bay



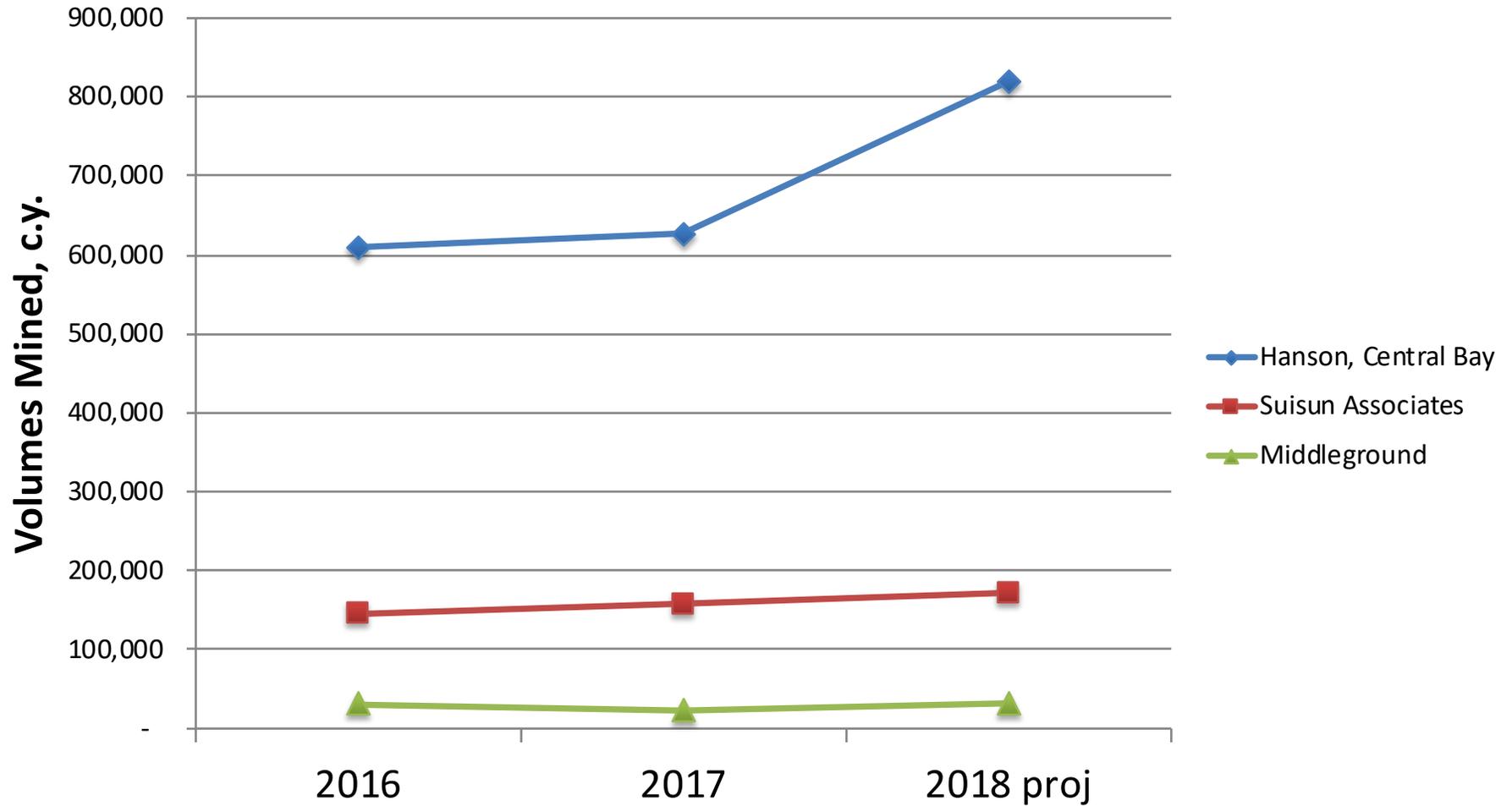
# Mining Activity Summary

## Annual Sand Mining Volumes: 2017 Suisun Bay Leases



# Mining Activity Summary

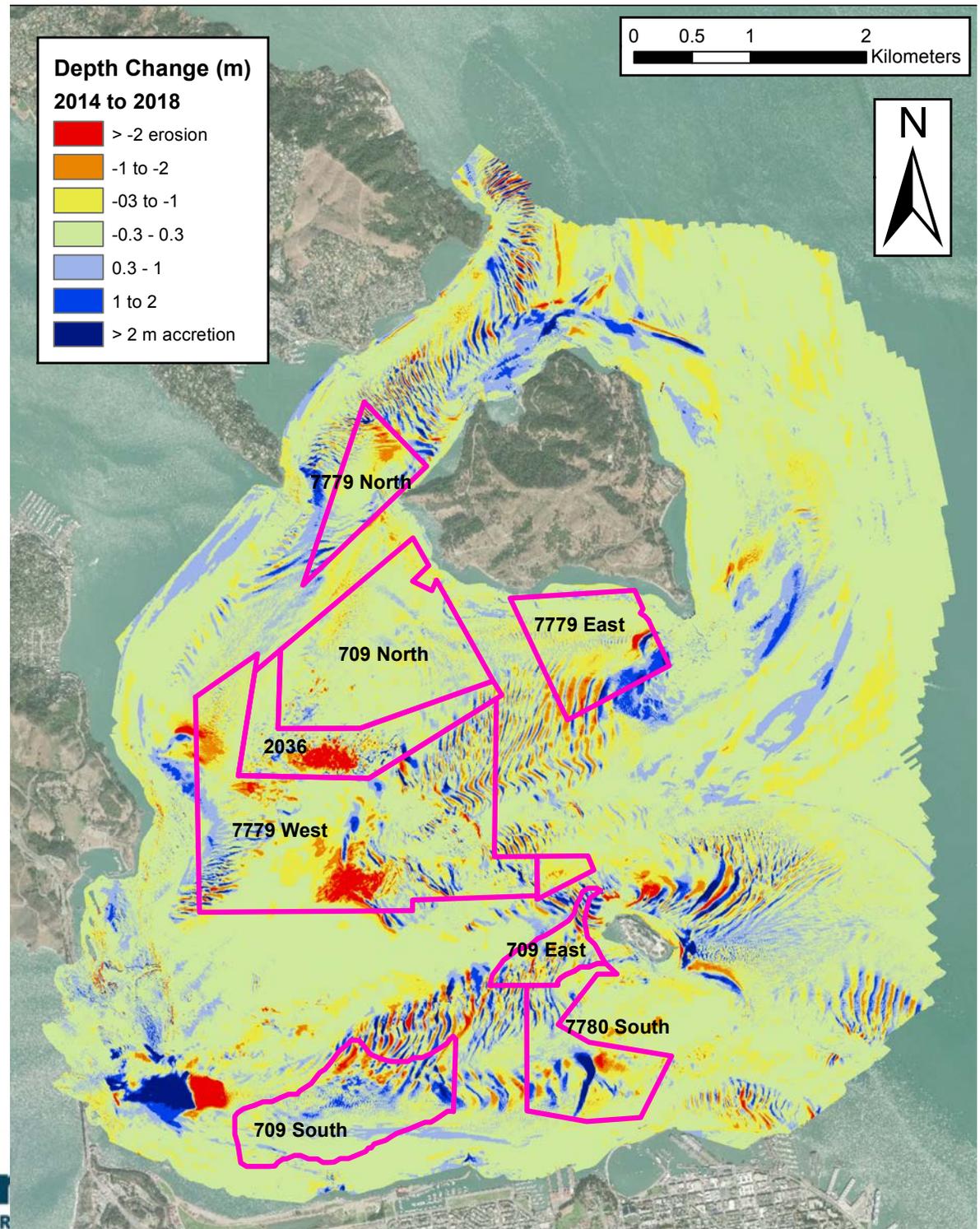
## Mining Volume Trends - 2016-2018



# # 2 - Bathymetric Trend Analysis

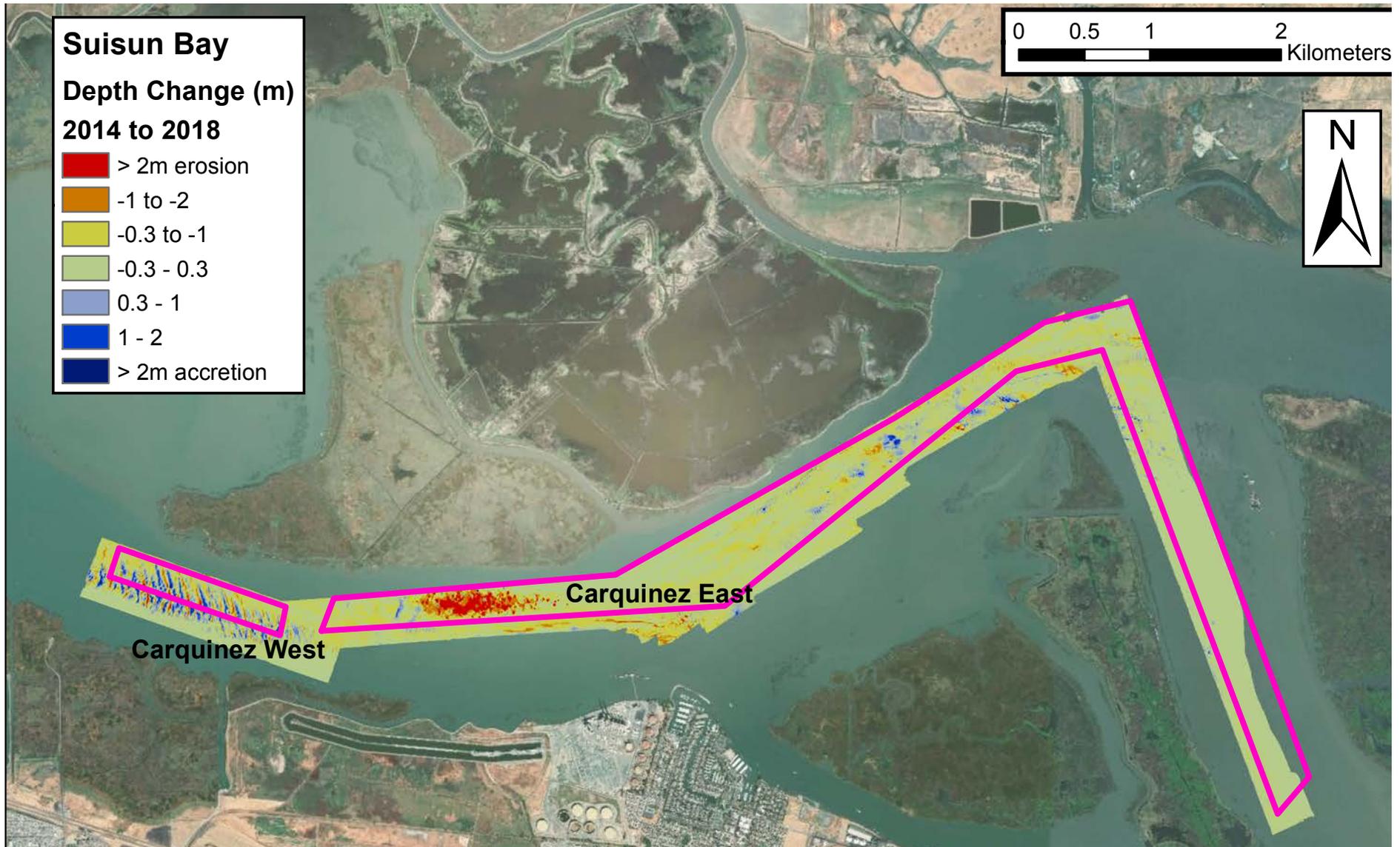
- Bathymetric Trend Analysis
  - Spring 2018 - Multibeam bathymetry survey
  - October 2018 – Report submitted
    - (a) Multibeam surveys of all lease areas and surrounding or reference areas,
    - (b) Analysis of changes in bathymetry
    - (c) A quality control analysis completed by an independent third party

# Central Bay Change Analysis

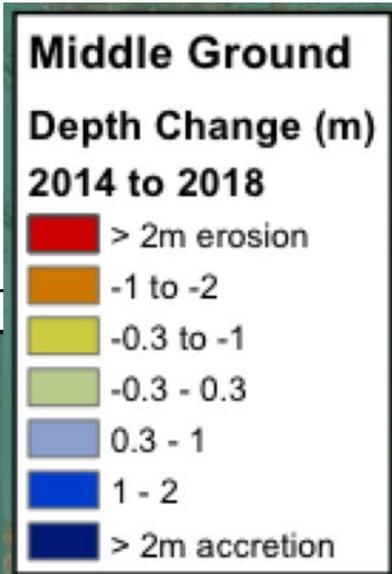


# Suisun Bay

## Depth Change Analysis



# Middle Ground Change Analysis



# Bathymetric Trend Analysis

- Comparison of 2008 and 2014 data:
  - West-Central Bay and Suisun Bay: net trend of accretion
- Comparison of 2014 and 2018 data within lease boundaries and surrounding environs:
  - West-Central Bay and Suisun Bay: net trend of erosion
  - Middle Ground: trend of accretion
- Next survey in 2023 will provide additional information

# # 3 - Benthic Study Update

- Benthic Technical Advisory Committee (TAC)

Members:

- SF Bay Conservation and Development Commission
- California State Lands Commission
- US Army Corps of Engineers
- SF Regional Water Quality Control Board
- National Marine Fisheries Service
- California Department of Fish and Wildlife
- US Geological Survey - Biologist Specialist
- Hanson Marine Operations & Lind Marine

# Benthic Study Update

- October 2015 – May 2016: TAC met on multiple occasions to establish study objectives
- March 2016 – TAC developed and approved RFP, distributed to qualified entities
- April 2016 - Received submissions
- June 2016 - TAC reviewed each proposal and selected NewFields to perform the Benthic Study



Photo Page B-7. Central Bay sediment sample at station CB38-T12, October 2017.

# Benthic Study Update

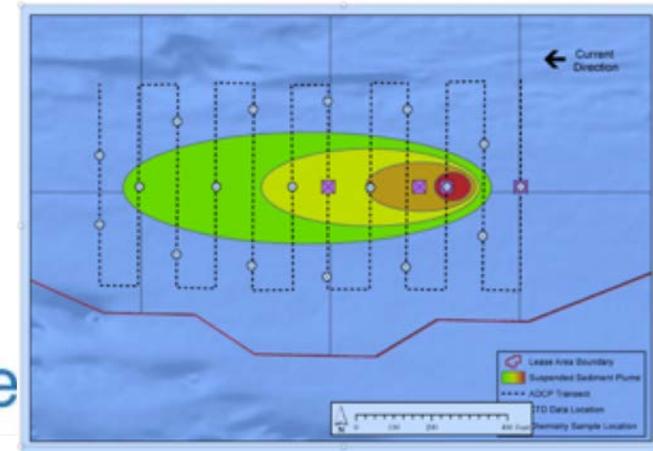
- July 2016 – Newfields developed Sampling and Analysis Plan (SAP) per the RFP
  - SAP outlined the design, sampling schedule, sample processing, data analysis, and other elements of the proposed project
  - Robustness of data collected was emphasized such that adequate statistical analyses could be conducted
- August 2016 – TAC members reviewed and approved SAP

# Benthic Study Update

- The Benthic Study was performed over two years:
  - October 2016 – Baseline sampling completed
  - October 2017 – Second year sampling completed
- April 27, 2018 – Draft Final Report submitted to all TAC members
- The Draft Final Report is still being reviewed by TAC members

# # 4 - Water Quality Monitoring Study

- Study and analyses completed
  - Two seasons of sampling at three locations:
    - August 2015 and April 2016
    - Central Bay, Middle Ground and Suisun Channel
- Effluent water samples were collected and analyzed September 2016 –
- Draft report submitted to SFRWQCB
  - Reviewed by BCDC and SFRWQCB



# Water Quality Monitoring Study

- September 6, 2018 - Revised report per feedback, submitted to the SFRWQCB
- –Study conclusion:  
*“Overall, the monitoring results from both surveys demonstrate that effluent from sand mining operations do not adversely impact the water column with regards to chemical concentrations or toxicity, and that any physical effects related to plume turbidity are spatially limited and ephemeral in nature.”*

# # 5 - Sediment Transport Study

- Sediment Technical Advisory Committee (STAC) Members:
  - SF Bay Conservation and Development Commission
  - California State Lands Commission
  - US Army Corps of Engineers
  - NOAA National Marine Fisheries Service
  - San Francisco BayKeepers
  - State Coastal Conservancy
  - California Coastal Commission
  - Greater Farallones Marine Sanctuary
  - Hanson Marine Operations & Lind Marine

# Sediment Transport Study

- Three funding installments deposited to State Coastal Conservancy (SCC)
  - Fourth and final this year
- Management Questions developed by TAC
- Study questions and design approach will be developed by Independent Science Panel and make recommendations to the TAC

# Sediment Transport Study

- May 12, 2017 – Sediment TAC first meeting
- June 2018 - Sediment TAC formalized multiple Management Questions
- September 2018 – BCDC/SCC selected Science Study Coordinator with input from the TAC
  - RevellCoastal
- Target: BCDC/SCC to convene 1<sup>st</sup> Independent Science Panel meeting in January 2019
- Completed studies anticipated to inform both CEQA and permits

Questions?