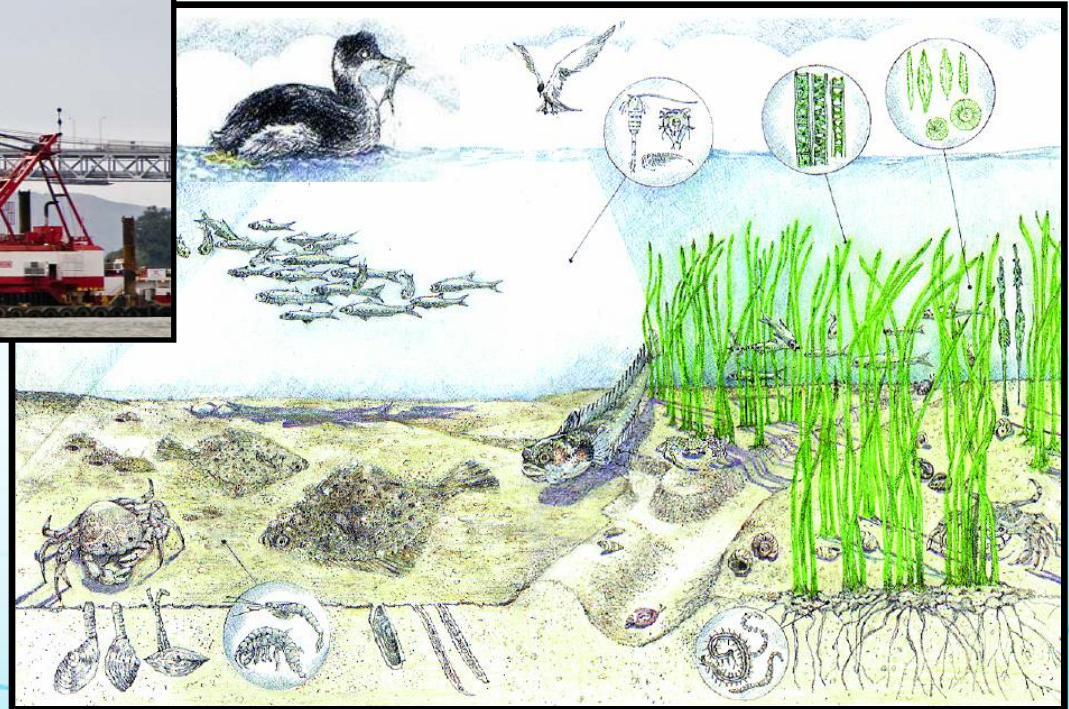


# Mobilization of Metals in Sediments Placed at Bay/Delta Beneficial Sites: Measures to Minimize Environmental Risk



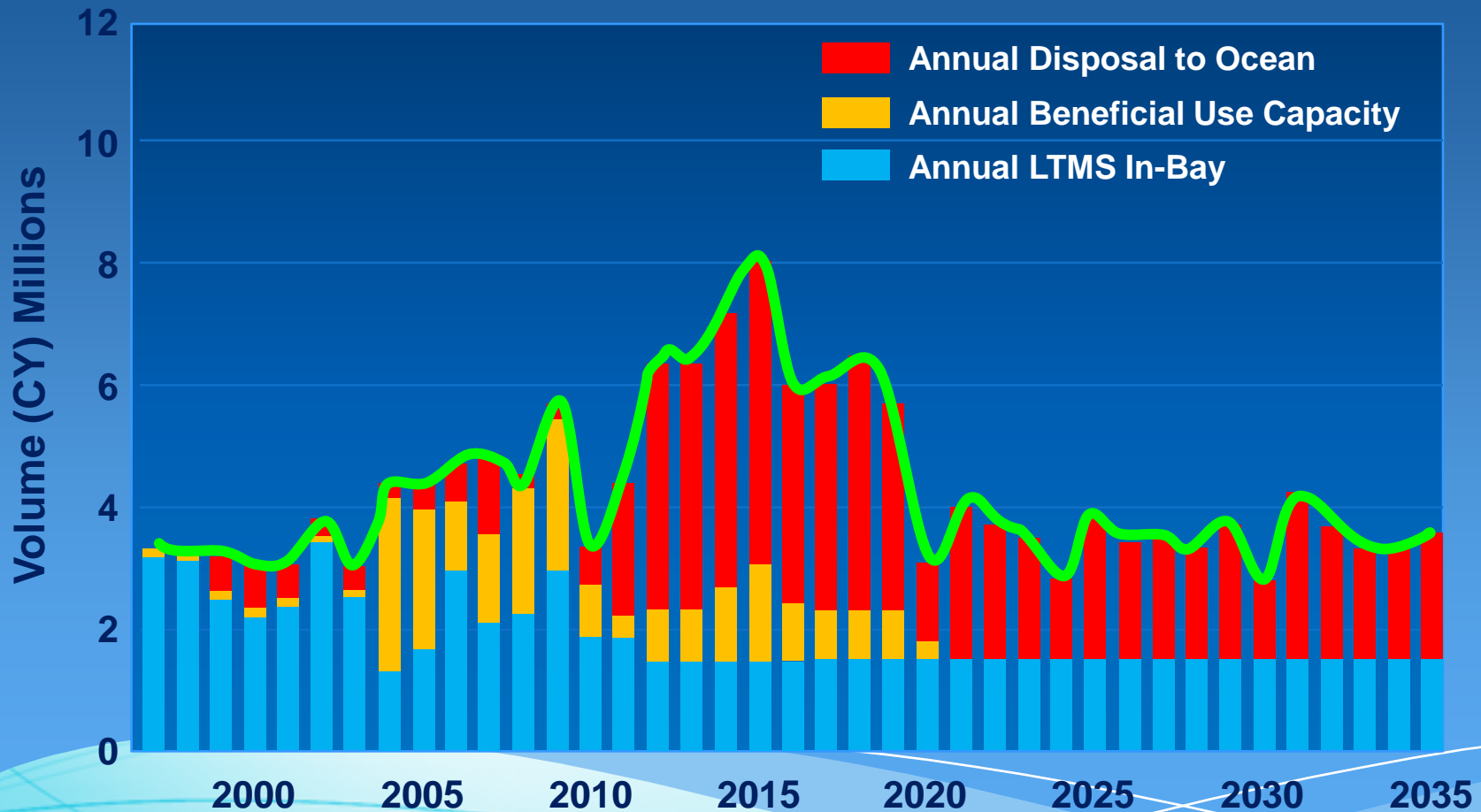
CMANC Fall Meeting  
October 11, 2012



# Beneficial Use Drivers

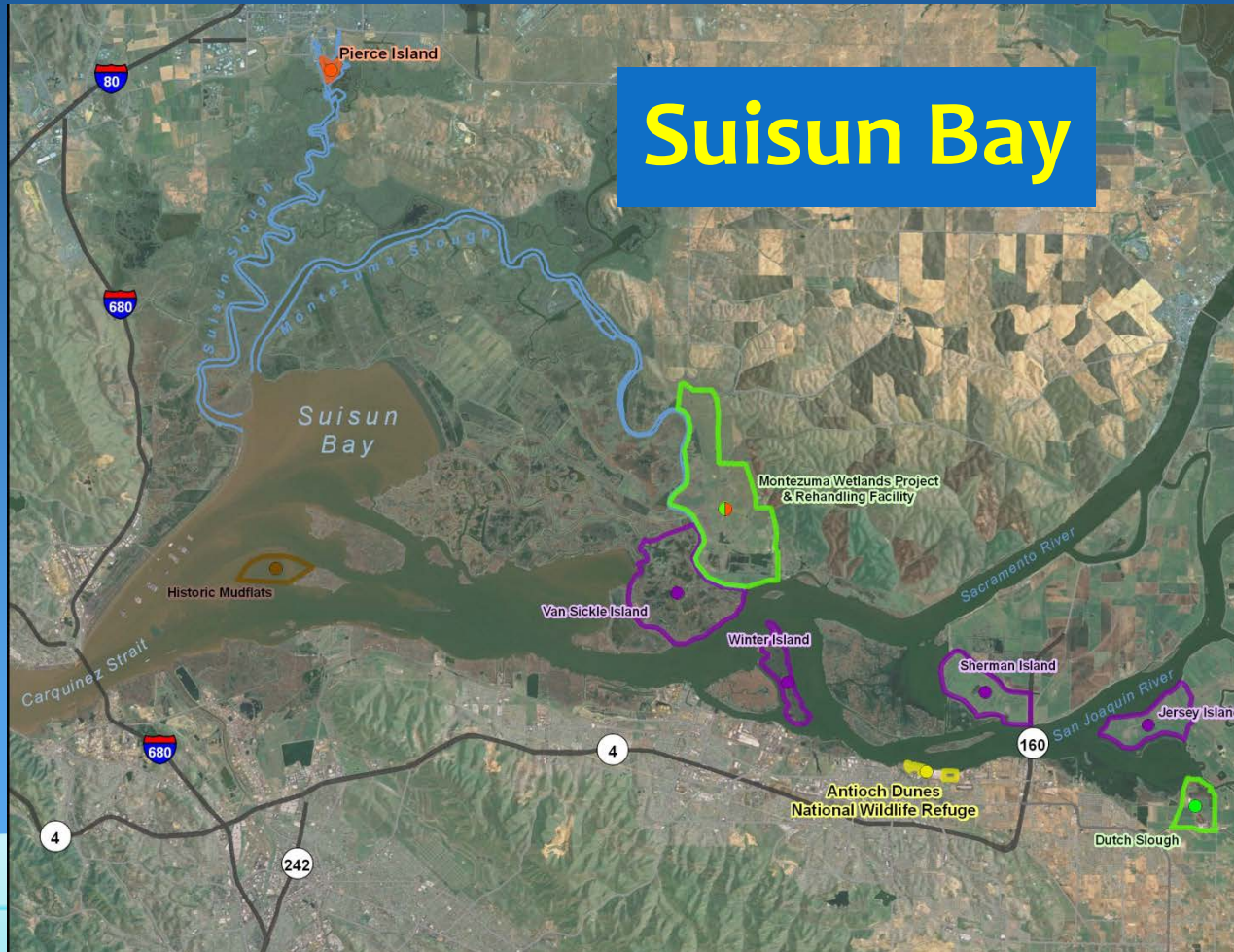
- Baylands Ecosystem Habitat Goals and Subtidal Habitat Goals
- Long Term Management Strategy: 40-40-20 Plan
  - 80% of Bay dredged material to beneficial use sites providing they are lower cost than ocean disposal
  - 25-Year dredge quantity = **114 million CY**
  - Current beneficial use capacity = **16 million CY**
  - Potential beneficial use capacity = **180 million CY**

# Beneficial Use Drivers





# Potential Beneficial Use Capacity



# Potential Beneficial Use Capacity





# Potential Beneficial Use Capacity



# Potential Beneficial Use Capacity





# Inner Bair Island



- 300K Cubic Yards from Redwood City Channel
- Screened for contaminants
- Concern over mobilization of leachable metals while drying dredged material used for high marsh





# Bair Island Resolution

- Mounding of dredged material provides high marsh habitat that will benefit sensitive species
- Drying of dredged sediment has the potential to acidify soils and increase the solubility of metals and subsequently increase toxicity in the receiving waters
- RWQCB and BCDC agreed to suspend requirement to keep sediments wet, providing material is tested for pH prior to levee breach

# Potential BMPs for Future Beneficial Use Sites

- **Sediment Quality Screening:** Addition of low-cost analytical procedures to conventional analyses
  - Acid generating potential (AGP)
  - Waste Extraction Testing
  - Redox Potential
- **Phased distribution:** Increased AGP sediments used for low marsh objectives
- **Acceptance of Cover and Non-Cover Sediments:** Material with moderately elevated metals concentration can be used as foundation