

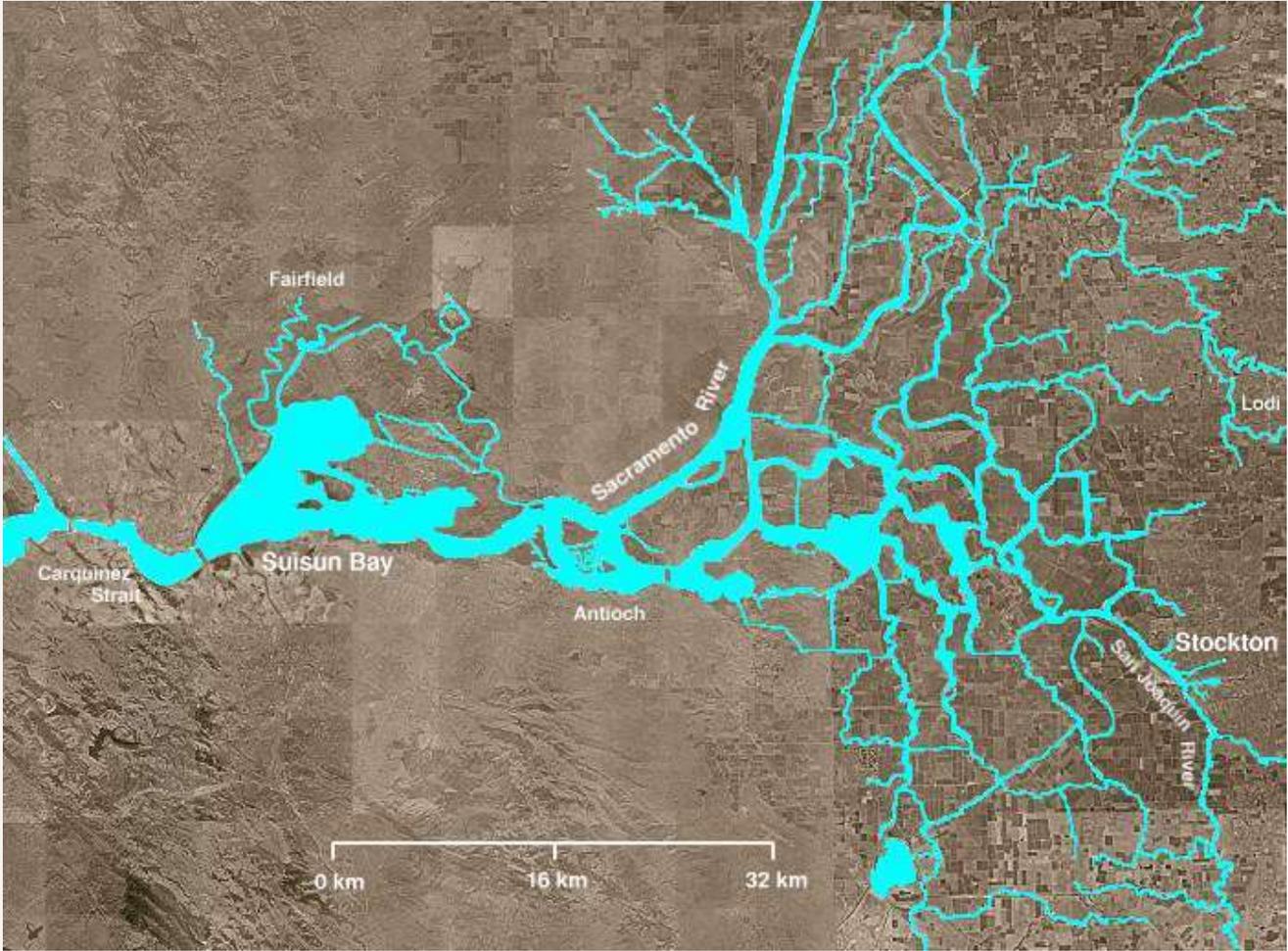
**SACRAMENTO & STOCKTON
DEEP WATER SHIP CHANNELS:
THE EVER CHANGING DELTA**

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OUTLINE

- Site Overview
- Contracting History
- Ross Island's Involvement
- Environmental Factors of Change
 - Endangered Species
 - Water Quality
 - Air Quality
- Disposal Sites
- Ports of West Sacramento and Stockton
- US Army Corps of Engineers, Sacramento & San Francisco Districts

SITE OVERVIEW



CONTRACTING HISTORY

- 1994 through 1999 as One (1) Year contracts for individual channels and later both channels.
- 2000 through 2008 as three (3) year IDIQ low cost contracts with multiple line items for different dredge materials, pumping lengths, depths of cut, and other site CLINS's.
- 2009 –Current as three (3) year RFP best proposals factoring both Contractor Experience and Contractor CLIN Pricing.

ENVIRONMENTAL FACTORS

FISHERIES MONITORING

- Delta Smelt – Entrainment & Community Monitoring 2006 through 2008
- Enhance Fisheries Entrainment Monitoring with engineered Fish Entrainment Screen
- Entrainment Screen Enhancements
- New Fisheries Entrainment Screen by the Port of Stockton
- Elimination of Community Monitoring in the 2016 and 2017 seasons due to low sampling numbers by CA Fish and Game.
- Where does all the data go and does it make any conclusions for dredging?

FISHERIES MONITORING

DELTA SMELT



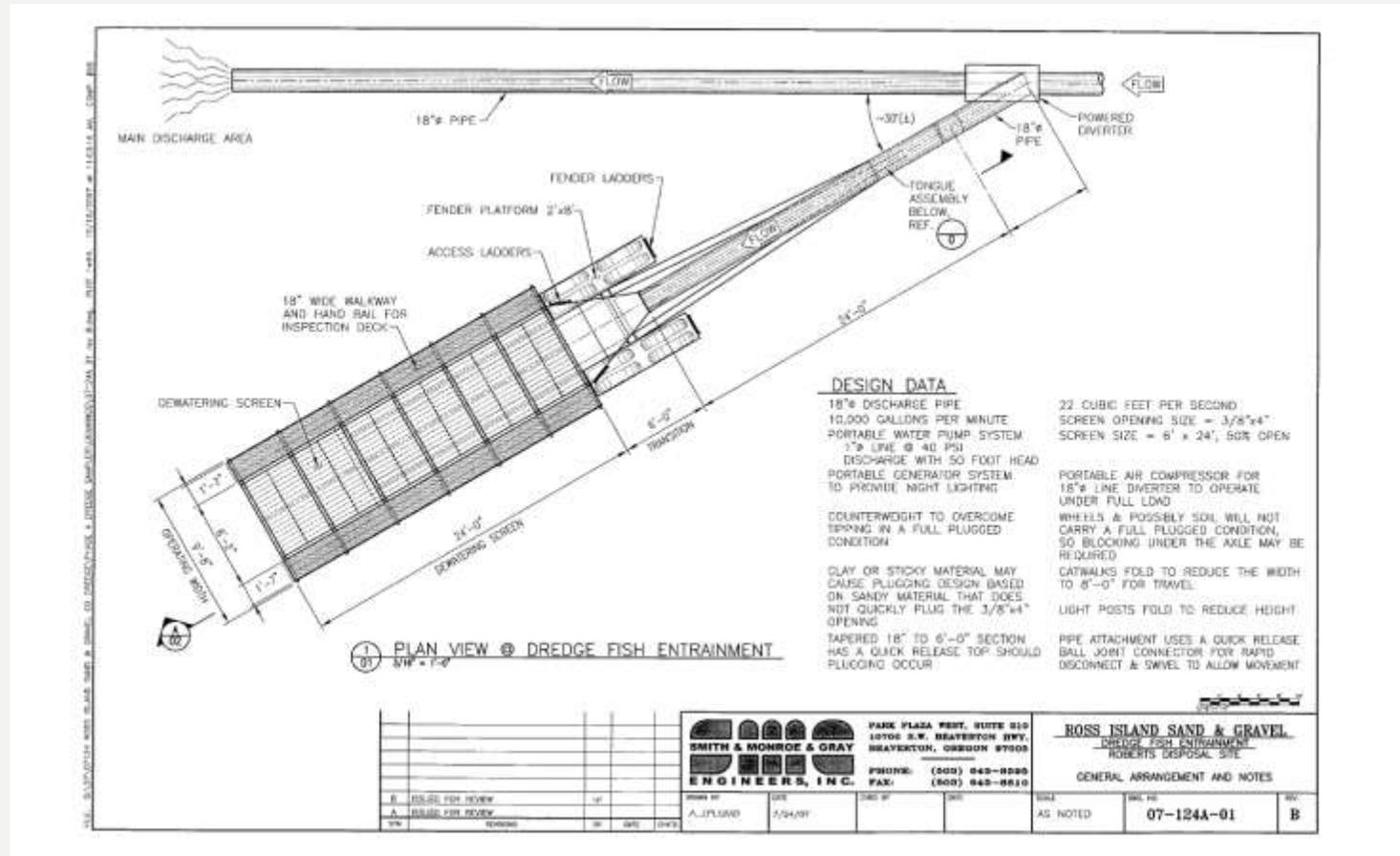
FISHERIES MONITORING

THE EARLY YEARS



FISHERIES MONITORING

FIRST GENERATION MODIFICATIONS



FISHERIES MONITORING *ENTRAINMENT SCREEN*



FISHERIES MONITORING

ENTRAINMENT SCREEN IN USE



FISHERIES MONITORING

COMMUNITY SAMPLING

- Otter Trawling the Ship Channel in the vicinity of dredging to find the species of fish around the active dredge area.
- Lengthy Fish Count Collections given schools of various species.
- Trawl propensity to snags in areas of heavy vegetation and/or runoff.
- Close working proximity to the dredging operation.
- Firm numbers in net vs. human collected numbers in entrainment.

FISHERIES MONITORING

GOING FORWARD...

- Separate from Dredging Contract?
- Which agencies need the data and where did the last 11 years of data go to prove or disprove the existence and interaction of Delta and or Longfin Smelt in the vicinity of dredging operations?
- Does the Corps of Engineers Regulatory Branch require fisheries monitoring on clamshell projects?
- Does the Corps of Engineers Regulatory Branch require fisheries monitoring on any private projects?

WATER QUALITY MONITORING

THROUGH THE YEARS

- Central Valley Regional Water Quality Control Board (CVRWQCB) administration of the surface water quality collection and reporting.
- Standard metered testing of Turbidity, Dissolved Oxygen, pH, Temperature, etc.
- Early 2000's - Heavy Metals Studies.
- Mid 2000's - Acute and Chronic Bioassay Studies.
- 2008 – Current – MethylMercury (MeHg) Monitoring Studies
 - Contractor collected initially
 - Subcontractor Collected 2009 through current (at 100x cost to taxpayer).

AIR QUALITY REQUIREMENTS

EPA TIER HISTORY

- Tier 1 passed in from 1996 through 2000.
- Tier 2 and Tier 3 with phase in schedules from 2000 through 2008.
- Tier 4 (>750bhp) phased in from 2008 through 2015.
- Tier 4 Final standards became effective early 2014, however, engines over 750bhp are unable to meet tier requirements from the manufacturers without the inclusion of particulate filters, NOx reductions, and/or Diesel Emission Fluid Usage to gain compliance.
- CARB PERP Registration Program – Helped consolidate Air District Permits

AIR QUALITY IMPROVEMENTS

THE REAL IMPACTS TO DREDGES



AIR QUALITY IMPROVEMENTS *NEED FOR NEW DREDGES*



CARB CERTIFIED TIER 2 ENGINES

3050BHP MAIN ENGINE & 2250BHP GENERATOR



CARB CERTIFIED BOOSTER PUMP

2250BHP V-12 MTU TIER 2 DIESEL



DREDGE MATERIAL PLACEMENT SITES

MANY NEEDS IN LIMITED REAL ESTATE

- Many of the 1986 Stockton Deepening Placement Sites are not only at capacity, but have not been re-upped as authorized placement sites.
- Sites on the Sacramento Channel are virtually unusable by outside interests (i.e., Grand Island for the Elderberry Beetle/Bush and Augusto Pit due to trailer park development).
- New placement site development requires long-term planning from the Ports, including real estate purchases, and coordination with land owning reclamation districts in the multitude of Delta islands.
- New sites and/or updated sites needed for future deepening efforts.

THE PORTS ARE THE CLIENTS

WEST SACRAMENTO AND STOCKTON

- Port of West Sacramento is the import/export waterway of the Sacramento Valley and parts North. West Sacramento is a -30' channel.
- Port of Stockton is the import/export hub of the San Joaquin Valley. The Stockton Channel is a -35' channel.
- Both Ports have ready access to I-5 and thus I-80 east.
- Port of Stockton has seen the bulk of shipping traffic in recent years.
- In addition, the Port of Stockton acquired the Rough and Ready Island Naval Communications site in 2000. Has since deepened all docks 14-20 to a -35' channel depth.

U.S. ARMY CORPS OF ENGINEERS

SACRAMENTO & SAN FRANCISCO DISTRICTS

- Sacramento District (SPK) administered contracts until 2015, up to and including the last public procurement in 2014 before administrative transfer to San Francisco District (SPN).
- San Francisco District has multiple dredging contracts a any one time vs. SPK having the channel projects as the only dredging project.
- QA and Administrative resources are more readily available through SPN.
- Growing pains exist with agency permitting and environmental interaction.
- State Agencies have a tendency to hold the Corps “hostage” for their program funding and/or scientific needs, with Port and Contractor left waiting to achieve the required dredging in an ever shrinking window of time.

THE CHANNELS ARE PUBLIC

GREAT FISHING AND RECREATION

- Public interaction with the project has grown over the years.
- More recreational boaters and fishermen equates to more exposure to incidents with the dredge and/or dredge pipeline.
- Accidents have occurred, and have consequences.



- Greater public outreach by the contractor is a positive solution.

THE CHANNELS FORWARD

CHANGES TO COME

- Next State regulator may insist on other “Constituents of Concern”.
- Will Contractor hire Fisheries and MeHg Subcontractors as a pass through?
- Politics will always be a part of the Delta. Will State and Federal environmental agencies dictate how the delta is ultimately dredged, or will the Ports exert influence to dredge the channels per congressional mandate as economically viable commercial channel(s).
- American exports from the Sacramento and San Joaquin regions are viable enterprises.
- USACE/CVRWQCB/Ports personnel retirement attrition. ☹️

SACRAMENTO AND STOCKTON DEEP WATER SHIP CHANNELS

- Questions? Comments? Randy's Full Of...?



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