

Dredging & Beneficial Reuse Challenges & Opportunities



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Chevron Richmond



Processes an average of **247,000** barrels of oil daily



Fuels **65%** of jets at Bay Area airports



Powers **20%** of cars on Bay Area roads



Produces **100%** of base oils on the West Coast

Economy:

2,193 employees /900 contractors

\$186 million spent with Richmond businesses since 2009

More than \$33 million tax revenue to Richmond (FY2012)

Community:

\$15.6 million spent to support education and economic development since 2009

Since 2009, Chevron employees dedicated nearly 8,000 hours of volunteer time in Richmond.



Dredging in SF Bay Area Challenges



DREDGING CHALLENGES & COMPLEXITIES

- Forecasting runoff impact
 - Volume and timing
- Volumetric limits in permits/approvals
- Scheduling
- Equipment selection
- Equipment limitations
- Work Window timing
- Disposal location restriction(s)
- External and Internal Budgeting

Beneficial Reuse in SF Bay Area Challenges



REUSE CHALLENGES & COMPLEXITIES

- Forecasting
- Feasibility of disposal
 - Offloading equipment
- Disposal timing
- Disposal criteria
 - Sites
- And the budget....

Dredging and Beneficial Reuse in SF Bay Area Opportunities



Amount of material that can be reused

- *Over the last 10 years, the Refinery has dredged almost 1.5 MM cubic yards alone*

DMMO communication

- *Implementation of electronic review and response*

Willingness to Participate

- *LTMS in-bay disposal targets were met*
- *More than 40% of total volume of dredged material was beneficially reused*

Volume and quality of data evaluation

- *Working collaboratively to determine what's next*