

Poche Beach Clean Beaches Initiative (CBI) Project



County of Orange/RDMD/Watershed & Coastal Resources



Agenda

- ❖ Location of Poche Beach
- ❖ Photos
- ❖ Background of the Project
- ❖ Watershed Area
- ❖ Bacteria Source Tracking Investigation
- ❖ Design of the Project
- ❖ Project Schedule
- ❖ Expectations



WATERSHED & COASTAL
RESOURCES DIVISION

Public Facilities and Resources Department



Location of the Project



Location of the Project







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Trash Boom for M01





Background of the Poche Beach Project

- ❖ Orange County received a \$500,000 Proposition 13 Grant from the State Water Resources Control Board for an ultraviolet light bacteria disinfection system at Poche Beach in 2002.
- ❖ The complete above ground ultraviolet light bacteria disinfection system was designed. The design was shelved due to lack of construction funds.
- ❖ A less expensive system was installed inside the flood control box.



Background of the Poche Beach Project

- ❖ The in-channel system performed poorly. The reasons are as follows in the order of the largest significance:
 - ❖ 1. There is no manufacturer of UV equipment to be installed inside a flood control channel and the equipment continued to shut off. We went with the best equipment but it was still not the most appropriate equipment.
 - ❖ 2. Access issues – confined space.
 - ❖ 3. Algae plugging the intake.



Background of the Poche Beach Project

- ❖ The State Water Resources Control Board provided \$1,500,000 in funding in the end of 2006 and regulatory permits were re-applied for.
- ❖ The City of San Clemente is providing \$300,000 in funds for the project.

Watershed Area

- ❖ The Poche Beach Watershed is 4400 acres.
- ❖ The watershed is 99% residential homes and golf course. The only commercial is located at the very downstream portion of the watershed.

Stakeholders

- County of Orange (Harbors-Beaches-Parks, Watershed and Coastal Resources, Flood Control)
- City of San Clemente
- Shorecliff's Homeowners Association
- Surfrider Foundation
- City of Dana Point
- Capistrano Bay District
- Regulators



Bacteria Disinfection System

- ❖ The Poche Watershed bacteria source tracking investigation produced some shocking results
- ❖ The volume of urban runoff starts high in the watershed just below the landfill
- ❖ The side drains at the top of the watershed just below the landfill produce over 90 percent of the bacteria load to the beach.



Design of the Project

- ❖ See attached plans.
- ❖ Flows will be diverted into a wet well constructed adjacent to the concrete flood control channel
- ❖ A sump pump will pump the runoff through four large media filtration tanks
- ❖ After the filtration the urban runoff will be disinfected with UV light
- ❖ The discharge to the ocean will be via a 8-inch diameter PVC pipe.
- ❖ About 10 percent of the flow will enter the sanitary sewer system as filter backwash water.



Project Goals

- ◆ Eliminate or drastically reduce beach postings at this location
- ◆ This project is required to last 20 years. Our goal is to perform sufficient upstream source control (irrigation runoff) to eliminate postings without the UV device

Expectations for Success

- ❖ Expectations for the success of this project are high. The SCWD is geographically closer to the project and will be able to provide the attention the project requires.
- ❖ The biggest issue is that we are over the learning curve – we now know the building a UV disinfection system is not difficult, the hard part is keeping in running

Cost Estimates

- ❖ The engineers construction cost estimate is \$1,800,000.
- ❖ Annual O&M is expected to cost \$200,000 to \$250,000

Schedule

- ❖ Board approval on March 13, 2007
- ❖ Bid Opening April 25, 2007
- ❖ Construction contract award June 26, 2007
- ❖ Construction start August 2007
- ❖ Construction completion February 2008



Outstanding Items

Coastal Development Permit

Corps Permit

Water Board Permit

License amendment from OCTA

Agreement with SCWD

Agreement with San Clemente to cost
share the O&M

Good bids



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Coastal Commission Issues

- Discharge pipeline into the surf zone