Poche Clean Beach Project

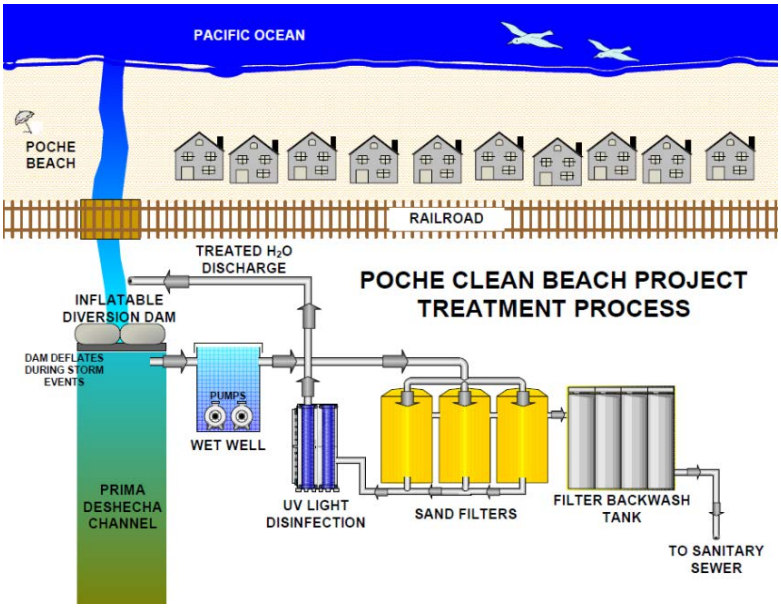
Background

The County of Orange, under the State Clean Beaches Initiative Program and with other project sponsors, constructed an urban runoff treatment facility to treat dry weather runoff from Prima Deshecha Channel before it discharges to the surf zone at Poche Beach. The Poche Clean Beach Project is intended to improve bacterial water quality and healthful water contact recreation at the County-owned Poche Beach. The total project cost is about $3 million and project sponsors include the California State Water Resources Control Board ($1.5 million), County of Orange ($750,000), City of San Clemente ($500,000), and Miocean ($250,000). The facility is being operated by the South Coast Water District on behalf of the County. Project staff contacts include:

- County of Orange: George Edwards, 714-955-0614 or George.Edwards@ocpw.ocgov.com
- City of San Clemente: Tom Bonigut, 949-361-6187 or BonigutT@san-clemente.org

Treatment Process

The treatment process is shown at right. An inflatable dam diverts runoff to a chamber where it is then pumped into the system. Sand filters remove suspended solids and turbidity and then ultraviolet (UV) light is used to disinfect the runoff by disabling bacteria. The treated runoff is discharged back to the channel downstream of the rubber dam. A small amount of filtered water is used to clean the sand filters, which is then discharged to the sewer. The system can treat up to 800 gallons per minute, or 1.1 million gallons per day (MGD).



Water Quality Results (for July-December 2010)

- Average daily treated flows were approximately 0.75 MGD.
- System average bacteria treatment efficiency was 94%; however, treated outflow quality needs to be improved for the enterococcus bacteria.
- Surf zone water quality did not meet bacteria standards for much of this period.
- Water quality monitoring data conclusively demonstrated that the water quality benefit of treated runoff was unable to be delivered to the surfzone due to recontamination within the beach pond back to pre-treatment levels. Treated runoff discharge to the beach pond was required by the Coastal Commission.
- Water quality monitoring data indicated that if treated runoff bypassed the pond and discharged directly to the surfzone, surfzone quality would consistently meet bacteria standards. Additional water quality information is available at www.sccleanocean.org.

Next Steps

- The Coastal Commission recently approved a County request to conduct a demonstration trial for the 2011 summer period to discharge treated runoff to the ocean and bypass the outlet pond. Similar approval has been requested from the San Diego Regional Water Board but the required review period is currently unknown. The Regional Board interim staff contact is Chiara Clemente at 858-467-2359 or cclemente@waterboards.ca.gov.
- The system is currently operating, but with discharge to the pond until Regional Board approval is obtained.

Prima Deshecha/Poche Watershed Bacteria Source Identification Study

Purpose

- To identify the sources of bacteria in this watershed, which will help develop approaches for reducing bacterial loads to reduce postings at Poche Beach and comply with upcoming State TMDL regulations.
- The study is designed to identify bacterial sources and assess bacterial transport mechanisms in the watershed, and includes testing dry weather flows, the scour pond and beach sand at Poche Beach, biofilm in the Prima Deshecha flood control channel, and bioswale through the Shorecliffs Golf Course.

Sampling Results (through March 2011)

- Bacterial concentrations in dry weather surface flows are highest at the upstream end of the developed watershed, but drop significantly toward the ocean outlet.
- Bacteria concentrations were minor in sand samples from Poche Beach, greatest in the scour pond, and low in the surf zone in front of the scour pond.
- For biofilms, highest concentrations were in the mid/upstream portions of the developed watershed.
- Bacteria concentrations in groundwater were highest at the downstream end of the watershed, and lowest at the upstream end (opposite of the surface water results). Samples after a heavy rain had much lower (and in some cases non-detect) bacteria concentrations. Ongoing samples show low bacteria levels.
- The bioswale did not appear to have a significant impact on bacteria concentrations in the runoff.

Next Steps

- Continue with biofilm, flow, pond, and groundwater monitoring. Refer to www.sccleanocean.org for details.

County of Orange Outlet Management Permit

Background

- County of Orange manages Poche Beach and the outlet. County staff strives to notch the berm before flooding of the catwalk occurs and impedes beach access.
- County had a multi-agency permit to manage creek outlets, but it required Corps of Engineers approval each time County staff wished to do outlet maintenance.
- The permit has expired and the County is seeking a new permit from the resource agencies for long term outlet maintenance at Poche Beach. The County is seeking permit conditions which would allow OC Parks to perform outlet maintenance with minimal notification to and authorization by resource agencies.
- The primary purpose of this greater operational flexibility is to improve safe public beach access by reducing the instances of flooding of the catwalk.
- The County staff contact is Leslie Ray at 714-973-6863 or Leslie.Ray@ocparks.com.

Permit Renewal Status

- California Coastal Commission: permit is on the agenda for Wednesday, June 15 public hearing (meeting is in Marina Del Rey). The staff report is available at http://documents.coastal.ca.gov/reports/2011/6/W10d-6-2011.pdf. The staff contact for comments or questions is Fernie Sy, fsy@coastal.ca.gov or 562-590-5071.
- U.S. Army Corps of Engineers: planning to issue a Public Notice with next 2 weeks for 30-day review. The notice should be made available online at: http://www.spl.usace.army.mil/regulatory/. The staff contact for comments or questions is Stephen Estes, Stephen.M.Estes@usace.army.mil or 213-452-3660.
- Regional Water Quality Control Board: will issue 401 Certification but timeline is uncertain. The Regional Board interim staff contact is Chiara Clemente at 858-467-2359 or cclemente@waterboards.ca.gov.