

Total Maximum Daily Load Progress Report		Rhine Channel (Lower Newport Bay) TMDL
Regional Water Board	Santa Ana, Region 8	STATUS <input checked="" type="checkbox"/> Conditions Improving <input type="checkbox"/> Data Inconclusive <input type="checkbox"/> Improvement Needed <input type="checkbox"/> TMDL Achieved/Waterbody Delisted
Beneficial uses affected	REC1 & 2, WILD, RARE, SPWN, MAR, COMM, NAV, SHEL	
Pollutant(s) addressed:	Metals, Organics	
Implemented through:	Non-regulatory Action	
Approval date:	June 2002	

TMDL summary: The Rhine Channel segment of Lower Newport Bay was listed impaired for organics and metals on the 1998 CWA Section 303(d) list. The pollutant levels in channel sediments and water have caused persistent sediment toxicity that exceed standards for human health protection, and are associated with bioaccumulative effects in the food web. The primary sources are historical discharges of storm water runoff and wastewater that started in the 1920s. In June 2002, the U.S. Environmental Protection Agency established TMDLs for copper, lead, zinc, chromium, mercury, chlordane, dieldrin, PCBs, DDT and selenium.

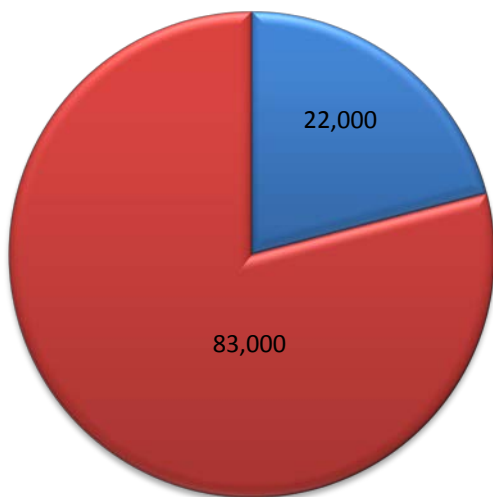
Regional Board staff determined that the channel’s unique geographic configuration allowed for site-specific options to remediate the contaminated sediment and restoration of water quality standards. Although a 2006 State-funded report to investigate cleanup options for the Rhine concluded that “dredging with upland landfill disposal” costing \$18.3 million would be the most feasible alternative, an opportunity to dispose of the contaminated sediments through use of a Port of Long Beach confined facility became available in 2010. A strict timeline to place the sediment spurred the City of Newport Beach, Santa Ana Water Board, and other coordinating agencies to quickly permit the project and implement dredging. One final task is to establish a new water quality baseline for the Channel.

Rhine Channel, Lower Newport Bay Watershed



Rhine Channel TMDL Compliance Dredging (cubic yards)

- Sediment remaining to be Assessed
- Contaminated Sediment Removed



Water Quality Outcomes

- Initiated spring 2010, the Rhine Channel Contaminated Sediment Cleanup Project successfully dredged the channel in November 2011.
- More than 100,000 cubic yards of contaminated sediment, at least 80% of the total amount, were removed.
- The jointly-coordinated project was a voluntary implementation effort by the City of Newport Beach, with cooperation from the Santa Ana Regional Board, CA Coastal Commission, US Army Corps of Engineers and other agencies.
- The sediment removal was fully funded by the City of Newport Beach in the amount of \$4 million. Orange County Coastkeeper, a local non-profit organization, pushed the cleanup effort.
- A post-dredge monitoring program has been prepared and will soon be executed to establish a new baseline of water quality in water and sediment.