

APPENDIX D

Threshold References

Thresholds and Pre-Set Targets Summary Table

**Table D-1.
RHMP Threshold Levels and Preset Targets**

Measure	Threshold Value	Preset Target ^a (%)
Primary Indicators		
Dissolved Copper (water)	4.8 µg/L	42%
Total Copper (water)	5.8 µg/L	49%
Mean ER-M Quotient	0.2	54%
BRI	39.96	45%
Amphipod mortality	20% effect relative to control	45%
Secondary Indicators		
Dissolved Zinc (water)	90 µg/L	0
Total Zinc (water)	95 µg/L	1%
Dissolved Nickel (water)	74 µg/L	0%
Total Nickel (water)	75 µg/L	0%
Sediment Arsenic	8.2 µg/g	48%
Sediment Cadmium	1.2 µg/g	8%
Sediment Chromium	81 µg/g	17%
Sediment Copper	175 µg/g	32%
Sediment Lead	46.7 µg/g	25%
Sediment Mercury	0.15 µg/g	74%
Sediment Nickel	20.9 µg/g	20%
Sediment Zinc	150 µg/g	55%
Sediment Total PAHs	4,022 ng/g	21%
Sediment Total Chlordanes	0.5 ng/g	14%
Sediment Total Dichlorodiphenyltrichloroethane (DDT)s	1.58 ng/g	46%
Sediment Total PCBs	22.7 ng/g	53%
Shannon-Wiener Diversity Index	2	14%
Number of Taxa	24	18%
Bivalve Embryo Development	60% effect relative to control	40%

Notes:

- a Preset target values represent the fraction of sample results (RHMP historical baseline data) exceeding the threshold values, except for the Shannon-Wiener Diversity Index and Number of Taxa, where values below the threshold value represent disturbed conditions.

RHMP Historic Data Sources

**Table D-2. Studies Used to Establish Historic Ambient Reference Values
for RHMP**

Study Name	Year	Dana Point Harbor	Oceanside Harbor	Mission Bay	San Diego Bay
Sediment Chemistry					
America's Cup Harbor	2001				X
Bight '98	1998	X		X	X
BPTCP	1994, 1996	X	X	X	X
Central SD Bay Nav. Channel Deepening	1998, 2003				X
Chollas Creek	2003				X
10th Avenue Marine Terminal	2002				X
National City Wharf Extension	1999				X
Navy Arco	2000				X
Navy P-326	2000				X
Paleta Creek	2003				X
Reference reconnaissance	2003				X
Sediment sampling	2003	X			
Toxic Hot Spots Sediment	2003				X
Water and Sediment Testing Project	2001-2003			X	
Bight '03	2003	X		X	X
RHMP Pilot Project	2005-2007	X	X	X	X
Benthic Infauna					
Ambient Bay and Lagoon Monitoring	2003		X	X	
America's Cup Harbor	2002				X
Bight '98	1998	X		X	X
Reference reconnaissance	2003				X
Switzer Creek	2002				X
Bight '03	2003	X		X	X
RHMP Pilot Project	2005-2007	X	X	X	X
Sediment Toxicity					
Bight '98	1998				X
Benthic Infauna Analysis	2003-2004	X			
National City Wharf Extension	1999				X
Water and Sediment Testing Project	2001-2003			X	
Bight '03	2003	X		X	X
RHMP Pilot Project	2005-2007	X	X	X	X
Water Column Chemistry					
Bay-wide Copper Assessment	2002				X
Dana Point monitoring	1992-2002	X			
Paco Bay Water measurements	1992-1999				X
RHMP Pilot Project	2005-2007	X	X	X	X

Table Source: Originally published in the following report by MEC/ Weston Solutions for the RHMP: *Establishment of Preliminary Reference Ambient Values and Preset Target Percentages, Progress Report for the Harbor Monitoring Program for San Diego Region, March 2005.*