

## Appendix T

### **Evidence of Water Quality Impairments for Indicator Bacteria in Hydrologic Areas Not On the 2006 Clean Water Act Section 303(d) List of Water Quality Limited Segments Requiring TMDLs**

The *Total Maximum Daily Loads for Indicator Bacteria Project I – Beaches and Creeks in the San Diego Region* project applies to the Pacific shoreline of the Miramar Reservoir and Scripps Hydrologic Areas (HA), even though these segments of shoreline are not listed as impaired by indicator bacteria on the *2006 Clean Water Act Section 303(d) List of Water Quality Limited Segments Requiring TMDLs*. These shoreline segments are included in the TMDL because indicator bacteria water quality data demonstrate that water quality objectives are not met at beaches within the HAs. Indicator bacteria data collected by the County of San Diego's Ocean and Bay Recreational Water Quality Program from 1999-2006 at beaches within the HAs were assessed to make this determination.<sup>1</sup> Data were typically collected on a weekly basis, though the length of time over which data collection occurred at different beaches varies.

Data were assessed to determine impairment according to the State Water Resources Control Board's *Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List* (Listing Policy). Three approaches to data assessment were used for each beach. First, all available data were considered and the number of exceedances of single sample water quality objectives were tallied and compared to the Listing Policy's minimum number of measured exceedances needed to place a water segment on the Clean Water Act Section 303(d) List. Second, samples collected at times that correlated with storm events were identified and the number of those samples that exceeded single sample water quality objectives was identified. The frequency of exceedances that correlated with storm events was also compared to the Listing Policy's minimum number of measured exceedances needed for Clean Water Act Section 303(d) listing. Finally, data were also assessed to identify exceedances of geometric mean (geomean) water quality objectives. Monthly geomean values were calculated from the data, which were then compared to the geomean water quality objectives. Again, exceedances were tallied and compared to the Listing Policy's minimum number of measured exceedances needed for Clean Water Act Section 303(d) listing. Those beaches that exceeded Listing Policy's impairment criteria are identified in Table T-1 below.

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<sup>1</sup> County of San Diego Ocean and Bay Recreational Water Quality Program, 2007. Assembly Bill 411 Monitoring Data, 1999-2006.

Table T-1. Beaches in the Miramar and Scripps HA with Indicator Bacteria Water Quality Impairments

Hydrologic Area	Beach Segment	Total Coliform (REC-1)	Fecal Coliform (REC-1)	Enterococcus (REC-1)	Proposed 2008 303(d) Listing?
Miramar Reservoir HA	Pacific Shoreline at Los Penasquitos Lagoon	16 out of 424 samples exceeded the single sample maximum water quality objective.  2 out of 81 calculated monthly geomeans exceeded the geomean water quality objective.  <b>10 out of 25 samples collected during wet weather exceeded the single sample maximum water quality objective.</b>	26 out of 324 samples exceeded the single sample maximum water quality objective.  None of the 65 calculated monthly geomeans exceeded the geomean water quality objective.  <b>11 out of 21 samples collected during wet weather exceeded the single sample maximum water quality objective.</b>	36 out of 414 samples exceeded the single sample maximum water quality objective.  5 out of 78 calculated monthly geomeans exceeded the geomean water quality objective.  <b>15 out of 27 samples collected during wet weather exceeded the single sample maximum water quality objective.</b>	Yes
	Pacific Shoreline at Anderson Canyon	0 out of 59 samples exceeded the single sample maximum water quality objective.  0 out of 16 calculated monthly geomeans exceeded the geomean water quality objective.  None of the samples were collected during wet weather conditions.	0 out of 59 samples exceeded the single sample maximum water quality objective.  0 out of 16 calculated monthly geomeans exceeded the geomean water quality objective.  None of the samples were collected during wet weather conditions.	1 of the 59 samples exceeded the single sample maximum water quality objective.  0 out of 16 calculated monthly geomeans exceeded the geomean water quality objective.  None of the samples were collected during wet weather conditions.	No
Scripps HA	Pacific Shoreline at Avenida de la Playa	3 out of 325 samples exceeded the single sample maximum water quality objective.  1 out of 66 calculated monthly geomeans exceeded the geomean water quality objective.  2 out of 16 samples collected during wet weather exceeded the single sample maximum water quality objective.	12 out of 272 samples exceeded the single sample maximum water quality objective.  2 out of 53 calculated monthly geomeans exceeded the geomean water quality objective.  3 out of 12 samples collected during wet weather exceeded the single sample maximum water quality objective	32 out of 314 samples exceeded the single sample maximum water quality objective.  7 out of 63 calculated monthly geomeans exceeded the geomean water quality objective.  <b>6 out of 13 samples collected during wet weather exceeded the single sample maximum water quality objective.</b>	Yes

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Hydrologic Area	Beach Segment	Total Coliform (REC-1)	Fecal Coliform (REC-1)	Enterococcus (REC-1)	Proposed 2008 303(d) Listing?
Scripps HA	Pacific Shoreline at El Paseo Grande	<p>1 out of 172 samples exceeded the single sample maximum water quality objective.</p> <p>1 out of 46 calculated monthly geomeans exceeded the geomean water quality objective.</p> <p>0 out of 6 samples collected during wet weather exceeded the single sample maximum water quality objective.</p>	<p>1 out of 174 samples exceeded the single sample maximum water quality objective.</p> <p>1 out of 46 calculated monthly geomeans exceeded the geomean water quality objective.</p> <p>0 out of 5 samples collected during wet weather exceeded the single sample maximum water quality objective.</p>	<p>4 out of 175 samples exceeded the single sample maximum water quality objective.</p> <p>2 out of 46 calculated monthly geomeans exceeded the geomean water quality objective.</p> <p>1 of the 6 samples collected during wet weather exceeded the single sample maximum water quality objective.</p>	No
	Pacific Shoreline at Scripps Pier	<p>0 out of 214 samples exceeded the single sample maximum water quality objective.</p> <p>0 out of 51 calculated monthly geomeans exceeded the geomean water quality objective.</p> <p>0 out of 4 samples collected during wet weather exceeded the single sample maximum water quality objective.</p>	<p>5 out of 174 samples exceeded the single sample maximum water quality objective.</p> <p>1 out of 39 calculated monthly geomeans exceeded the geomean water quality objective.</p> <p>0 out of 3 samples collected during wet weather exceeded the single sample maximum water quality objective.</p>	<p>8 out of 213 samples exceeded the single sample maximum water quality objective.</p> <p>2 out of 50 calculated monthly geomeans exceeded the geomean water quality objective.</p> <p>1 of the 4 samples collected during wet weather exceeded the single sample maximum water quality objective.</p>	No
	Pacific Shoreline at Vallecitos	<p>0 out of 33 samples exceeded the single sample maximum water quality objective.</p> <p>0 out of 4 calculated monthly geomeans exceeded the geomean water quality objective.</p> <p>None of the samples were collected during wet weather.</p>	<p>2 out of 33 samples exceeded the single sample maximum water quality objective.</p> <p>1 out of four calculated monthly geomeans exceeded the geomean water quality objective.</p> <p>None of the samples were collected during wet weather.</p>	<p><b>6 out of 33 samples exceeded the single sample maximum water quality objective.</b></p> <p>1 out of two calculated monthly geomeans exceeded the geomean water quality objective.</p> <p>None of the samples were collected during wet weather.</p>	Yes

Hydrologic Area	Beach Segment	Total Coliform (REC-1)	Fecal Coliform (REC-1)	Enterococcus (REC-1)	Proposed 2008 303(d) Listing?
Scripps HA	Pacific Shoreline at Grand Avenue	0 out of 241 samples exceeded the single sample maximum water quality objective.  0 out of 50 calculated monthly geomeans exceeded the geomean water quality objective.  0 out of 5 samples collected during wet weather exceeded the single sample maximum water quality objective.	2 out of 244 samples exceeded the single sample maximum water quality objective.  0 out of 53 calculated monthly geomeans exceeded the geomean water quality objective.  0 out of 5 samples collected during wet weather exceeded the single sample maximum water quality objective.	3 out of 265 samples exceeded the single sample maximum water quality objective.  0 out of 47 calculated monthly geomeans exceeded the geomean water quality objective.  1 out of 7 samples collected during wet weather exceeded the single sample maximum water quality objective.	No
	Pacific Shoreline at Pacific Beach Point	10 out of 429 samples exceeded the single sample maximum water quality objective.  4 out of 71 calculated monthly geomeans exceeded the geomean water quality objective.  0 out of 9 samples collected during wet weather exceeded the single sample maximum water quality objective.	<b>81 out of 452 samples exceeded the single sample maximum water quality objective.</b>  10 out of 78 calculated monthly geomeans exceeded the geomean water quality objective.  1 of the 10 samples collected during wet weather exceeded the single sample maximum water quality objective.	<b>161 out of 487 samples exceeded the single sample maximum water quality objective.</b>  <b>47 out of 78 calculated monthly geomeans exceeded the geomean water quality objective.</b>  <b>5 out of 10 samples collected during wet weather exceeded the single sample maximum water quality objective.</b>	Yes
	Pacific Shoreline at Tourmaline Surf Park	0 out of 239 samples exceeded the single sample maximum water quality objective.  0 out of 58 calculated monthly geomeans exceeded the geomean water quality objective.  0 out of 15 samples collected during wet weather exceeded the single sample maximum water quality objective.	4 out of 198 samples exceeded the single sample maximum water quality objective.  0 out of 48 calculated monthly geomeans exceeded the geomean water quality objective.  3 out of 12 samples collected during wet weather exceeded the single sample maximum water quality objective.	12 out of 236 samples exceeded the single sample maximum water quality objective.  4 out of 57 calculated monthly geomeans exceeded the geomean water quality objective.  <b>5 out of 13 samples collected during wet weather exceeded the single sample maximum water quality objective.</b>	Yes

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Hydrologic Area	Beach Segment	Total Coliform (REC-1)	Fecal Coliform (REC-1)	Enterococcus (REC-1)	Proposed 2008 303(d) Listing?
Scripps HA	Pacific Shoreline at Whispering Sands	<p>1 out of 191 samples exceeded the single sample maximum water quality objective.</p> <p>1 out of 46 calculated monthly geomeans exceeded the geomean water quality objective.</p> <p>0 out of 5 samples collected during wet weather exceeded the single sample maximum water quality objective.</p>	<p>1 out of 144 samples exceeded the single sample maximum water quality objective.</p> <p>0 out of 40 calculated monthly geomeans exceeded the geomean water quality objective.</p> <p>0 out of 3 samples collected during wet weather exceeded the single sample maximum water quality objective.</p>	<p>5 out of 146 samples exceeded the single sample maximum water quality objective.</p> <p>3 out of 43 calculated monthly geomeans exceeded the geomean water quality objective.</p> <p>1 out of four samples collected during wet weather exceeded the single sample maximum water quality objective.</p>	No
	Pacific Shoreline at Bonair	<p>0 out of 142 samples exceeded the single sample maximum water quality objective.</p> <p>0 out of 35 calculated monthly geomeans exceeded the geomean water quality objective.</p> <p>0 out of 8 samples collected during wet weather exceeded the single sample maximum water quality objective.</p>	<p>4 out of 142 samples exceeded the single sample maximum water quality objective.</p> <p>0 out of 33 calculated monthly geomeans exceeded the geomean water quality objective.</p> <p>1 out of 7 samples collected during wet weather exceeded the single sample maximum water quality objective.</p>	<p>3 out of 130 samples exceeded the single sample maximum water quality objective.</p> <p>0 out of 31 calculated monthly geomeans exceeded the geomean water quality objective.</p> <p>1 out of 7 samples collected during wet weather exceeded the single sample maximum water quality objective.</p>	No
	Pacific Shoreline at Playa Del Norte	<p>0 out of 274 samples exceeded the single sample maximum water quality objective.</p> <p>0 out of 64 calculated monthly geomeans exceeded the geomean water quality objective.</p> <p>0 out of 3 samples collected during wet weather exceeded the single sample maximum water quality objective.</p>	<p>0 out of 235 samples exceeded the single sample maximum water quality objective.</p> <p>0 out of 59 calculated monthly geomeans exceeded the geomean water quality objective.</p> <p>0 out of 3 samples collected during wet weather exceeded the single sample maximum water quality objective.</p>	<p>2 out of 275 samples exceeded the single sample maximum water quality objective.</p> <p>1 out of 64 calculated monthly geomeans exceeded the geomean water quality objective.</p> <p>0 out of 7 samples collected during wet weather exceeded the single sample maximum water quality objective.</p>	No

Hydrologic Area	Beach Segment	Total Coliform (REC-1)	Fecal Coliform (REC-1)	Enterococcus (REC-1)	Proposed 2008 303(d) Listing?
Scripps HA	Pacific Shoreline at Vista de la Playa	<p>0 out of 55 samples exceeded the single sample maximum water quality objective.</p> <p>0 out of 12 calculated monthly geomeans exceeded the geomean water quality objective.</p> <p>None of the samples were collected during wet weather.</p>	<p>0 out of 55 samples exceeded the single sample maximum water quality objective.</p> <p>0 out of 12 calculated monthly geomeans exceeded the geomean water quality objective.</p> <p>None of the samples were collected during wet weather.</p>	<p>1 out of 55 samples exceeded the single sample maximum water quality objective.</p> <p>0 out of 11 calculated monthly geomeans exceeded the geomean water quality objective.</p> <p>None of the samples were collected during wet weather.</p>	No

Descriptions in **BOLD** indicate evidence of water quality impairments according to the State Water Resources Control Board's *Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List*.