Appendix A – Analysis of Bacteria Data Using Existing Basin Plan Water Quality Objectives

Ormond Beach Bacteria Summary November 1998 to October 2017									
Rolling 30-day Geometric Mean*									
	Station 42000 No winter samples 1999/2000 and 2004/2005 – 2007/2008			Station 43000 No winter samples 1999/2000 and 2004/2005 – 2007/2008			Station 44000 No winter samples 1999/2000 and 2004/2005 – 2007/2008		
	Total Coliform	Fecal Coliform	Enterococcus	Total Coliform	Fecal Coliform	Enterococcus	Total Coliform	Fecal Coliform	Enterococcus
Objective (cfu/100 ml)	1,000	200	35	1,000	200	35	1,000	200	35
Exceedance Count	10	1	38	21	0	36	4	0	0
Sample Count	731	731	727	497	500	495	447	449	454
Exceedance Percentage	1.37%	0.14%	5.23%	4.23%	0.00%	7.27%	0.89%	0.00%	0.00%

*Calculated only on days where samples were taken

Ormond Beach Bacteria Summary: Single Sample November 1998 to October 2017											
	Station 42000				Station 43000				Station 44000			
	Total Coliform	Fecal Coliform	Fecal to Total Ratio	Enterococcus	Total Coliform	Fecal Coliform	Fecal to Total Ratio	Enterococcus	Total Coliform	Fecal Coliform	Fecal to Total Ratio	Enterococcus
Objective (cfu/100 ml)	10,000	400	1,000*	104	10,000	400	1,000*	104	10,000	400	1,000*	104
Exceedance Count	23	14	7	33	30	8	3	25	10	4	2	5
Sample Count	822	822	821	822	716	716	716	715	702	702	701	703
Exceedance Percentage	2.80%	1.46%	0.61%	4.01%	4.19%	1.12%	0.42%	3.50%	1.42%	0.57%	0.28%	0.71%

*Total coliform density shall not exceed 1,000/100 ml, if the ratio of fecal-to-total coliform exceeds 0.1.

Peninsula Beach Bacteria Summary November 1998 to October 2017 No winter data after 2008/2009		
30-day Rolling Geometric Mean*		
Total Coliform	**Fecal Coliform**	**Enterococcus**
Objective (cfu/100 ml)		
1,000	**200**	**35**
Exceedance Count		
47	0	72
Sample Count		
574	573	566
Exceedance Percentage		
8.19%	0.00%	12.72%

30-day Rolling Geometric Mean*	**Total Coliform**	**Fecal Coliform**	**Enterococcus**
Objective (cfu/100 ml)	**1,000**	**200**	**35**
Exceedance Count	47	0	72
Sample Count	574	573	566
Exceedance Percentage	8.19%	0.00%	12.72%

*Calculated only on days where samples were taken

Peninsula Beach Bacteria Summary: Single Sample November 1998 to October 2017				
	Total Coliform	**Fecal Coliform**	**Fecal to Total Ratio**	**Enterococcus**
Objective (cfu/100 ml)	**10,000**	**400**	**1,000***	**104**
Exceedance Count	23	16	11	47
Sample Count	740	739	739	736
Exceedance Percentage	3.11%	2.17%	1.49%	6.39%

*Total coliform density shall not exceed 1,000/100 ml, if the ratio of fecal-to-total coliform exceeds 0.1.

Point Mugu Beach Bacteria Summary November 1998 to October 2017 No winter data after 2005/2006		
30-day Rolling Geometric Mean*		
Total Coliform	**Fecal Coliform**	**Enterococcus**

	Total Coliform	**Fecal Coliform**	**Enterococcus**
Objective (cfu/100 ml)	**1,000**	**200**	**35**
Exceedance Count	0	0	4
Sample Count	448	446	451
Exceedance Percentage	0.00%	0.00%	0.89%

*Calculated only on days where samples were taken

Point Mugu Beach Bacteria Summary: Single Sample November 1998 to October 2017			
Total Coliform	**Fecal Coliform**	**Fecal to Total Ratio**	**Enterococcus**

	Total Coliform	**Fecal Coliform**	**Fecal to Total Ratio**	**Enterococcus**
Objective (cfu/100 ml)	**10,000**	**400**	**1,000***	**104**
Exceedance Count	12	3	2	10
Sample Count	647	647	646	648
Exceedance Percentage	1.85%	0.46%	0.31%	1.54%

*Total coliform density shall not exceed 1,000/100 ml, if the ratio of fecal-to-total coliform exceeds 0.1.

Port Hueneme Beach Bacteria Summary November 1998 to October 2017 No winter data 2005/2006 – 2014/2015			
30-day Rolling Geometric Mean*			
	Total Coliform	**Fecal Coliform**	**Enterococcus**
Objective (cfu/100 ml)	**1,000**	**200**	**35**
Exceedance Count	9	0	31
Sample Count	729	729	719
Exceedance Percentage	1.23%	0.00%	4.31%

*Calculated only on days where samples were taken

Port Hueneme Beach Bacteria Summary: Single Sample November 1998 to October 2017				
	Total Coliform	**Fecal Coliform**	**Fecal to Total Ratio**	**Enterococcus**
Objective (cfu/100 ml)	**10,000**	**400**	**1,000***	**104**
Exceedance Count	11	9	8	28
Sample Count	810	810	810	805
Exceedance Percentage	1.36%	1.11%	0.99%	3.48%

*Total coliform density shall not exceed 1,000/100 ml, if the ratio of fecal-to-total coliform exceeds 0.1.

Promenade Park Beach Bacteria Summary November 1998 to October 2017											
Rolling 30-day Geometric Mean*											
Station 14000 No winter data 2008/2009			Station 15000 No winter data after 2004/2005			Station 16000** No winter data after 2004/2005			Station 17000 No winter data after 2004/2005		
Total Coliform	Fecal Coliform	Enterococcus	Total Coliform	Fecal Coliform	Enterococcus	Total Coliform	Fecal Coliform	Enterococcus	Total Coliform	Fecal Coliform	Enterococcus
Objective (cfu/100 ml) 1,000	200	35	1,000	200	35	1,000	200	35	1,000	200	35
Exceedance Count 55	2	62	18	0	19	18	0	12	32	3	49
Sample Count 823	824	823	452	448	455	326	319	325	478	473	475
Exceedance Percentage 6.68%	0.24%	7.53%	3.98%	0.00%	4.18%	5.52%	0.00%	3.69%	6.69%	0.63%	10.32%

*Calculated only on days where samples were taken

**Data is available up to 2008

Promenade Park Bacteria Summary: Single Sample November 1998 to October 2017															
Station 14000				Station 15000				Station 16000**				Station 17000			
Total Coliform	Fecal Coliform	Fecal to Total Ratio	Enterococcus	Total Coliform	Fecal Coliform	Fecal to Total Ratio	Enterococcus	Total Coliform	Fecal Coliform	Fecal to Total Ratio	Enterococcus	Total Coliform	Fecal Coliform	Fecal to Total Ratio	Enterococcus
Objective (cfu/100 ml) 10,000	400	1,000*	104	10,000	400	1,000*	104	10,000	400	1,000*	104	10,000	400	1,000*	104
Exceedance Count 31	22	12	47	10	7	9	24	6	7	9	18	16	11	14	32
Sample Count 910	909	908	910	634	631	629	634	393	390	389	393	666	663	662	663
Exceedance Percentage 3.41%	2.42%	1.32%	5.16%	1.58%	1.11%	1.43%	3.79%	1.53%	1.79%	2.31%	4.58%	2.40%	1.66%	2.11%	4.83%

*Total coliform density shall not exceed 1,000/100 ml, if the ratio of fecal-to-total coliform exceeds 0.1.

**Data is available up to 2008

	Rincon Beach Bacteria Summary November 1998 to October 2017											
	Rolling 30-day Geometric Mean*											
	Station 1000 No winter data 1999/2000 and 2005/2006 – 2008/2009			Station 1001** No winter data after 2004/2005			Station 1050*** No winter data 2004/2005 and after 2008/2009			Station 1100 No winter data 2004/2005, no data 2008-2015, no winter data after 2015		
	Total Coliform	Fecal Coliform	Enterococcus	Total Coliform	Fecal Coliform	Enterococcus	Total Coliform	Fecal Coliform	Enterococcus	Total Coliform	Fecal Coliform	Enterococcus
Objective (cfu/100 ml)	1,000	200	35	1,000	200	35	1,000	200	35	1,000	200	35
Exceedance Count	146	12	139	178	144	165	25	3	41	7	0	19
Sample Count	799	807	802	178	170	166	522	519	512	379	373	377
Exceedance Percentage	18.27%	1.49%	17.33%	100.00%	84.71%	99.40%	4.79%	0.58%	8.01%	1.85%	0.00%	5.04%

*Calculated only on days where samples were taken

**Data was available up to 2008

***Data was available up to 2014

	Rincon Beach Bacteria Summary: Single Sample November 1998 to October 2017															
	Station 1000				Station 1001**				Station 1050***				Station 1100			
	Total Coliform	Fecal Coliform	Fecal to Total Ratio	Enterococcus	Total Coliform	Fecal Coliform	Fecal to Total Ratio	Enterococcus	Total Coliform	Fecal Coliform	Fecal to Total Ratio	Enterococcus	Total Coliform	Fecal Coliform	Fecal to Total Ratio	Enterococcus
Objective (cfu/100 ml)	10,000	400	1,000*	104	10,000	400	1,000*	104	10,000	400	1,000*	104	10,000	400	1,000*	104
Exceedance Count	32	38	30	71	191	181	78	246	10	16	16	29	4	7	11	20
Sample Count	883	884	881	882	330	328	327	327	634	633	633	630	483	482	481	482
Exceedance Percentage	3.62%	4.30%	3.41%	8.05%	57.88%	55.18%	23.85%	75.23%	1.58%	2.53%	2.53%	4.60%	0.83%	1.45%	2.29%	4.15%

*Total coliform density shall not exceed 1,000/100 ml, if the ratio of fecal-to-total coliform exceeds 0.1.

**Data was available up to 2008

***Data was available up to 20014

Rincon Parkway North Beach Bacteria Summary Rolling November 1998 to October 2008 No winter data after 2004/2005		
30-day Rolling Geometric Mean*		
Total Coliform	**Fecal Coliform**	**Enterococcus**
1,000	**200**	**35**
Exceedance Count 8	0	0
Sample Count 324	324	319
Exceedance Percentage 2.47%	0.00%	0.00%

*Calculated only on days where samples were taken

Rincon Parkway North Beach Bacteria Summary: Single Sample November 1998 to October 2008			
Total Coliform	**Fecal Coliform**	**Fecal to Total Ratio**	**Enterococcus**
Objective (cfu/100 ml) 10,000	400	1,000*	104
Exceedance Count 1	2	2	4
Sample Count 387	387	387	386
Exceedance Percentage 0.26%	0.52%	0.52%	1.04%

*Total coliform density shall not exceed 1,000/100 ml, if the ratio of fecal-to-total coliform exceeds 0.1.

	San Buenaventura Beach Bacteria Summary November 1998 to October 2017											
	Rolling 30-day Geometric Mean*											
	Station 18000 No winter data after 2004/2005			Station 19000 No winter data 2005/2006 – 2009/2010			Station 20000 No winter data after 2004/2005			Station 21000 No winter data after 2004/2005		
	Total Coliform	Fecal Coliform	Enterococcus	Total Coliform	Fecal Coliform	Enterococcus	Total Coliform	Fecal Coliform	Enterococcus	Total Coliform	Fecal Coliform	Enterococcus
Objective (cfu/100 ml)	1,000	200	35	1,000	200	35	1,000	200	35	1,000	200	35
Exceedance Count	7	0	23	78	2	75	8	0	14	4	0	4
Sample Count	444	438	446	789	787	783	465	462	458	450	450	442
Exceedance Percentage	1.58%	0.00%	5.16%	9.89%	0.25%	9.58%	1.72%	0.00%	3.06%	0.89%	0.00%	0.90%

*Calculated only on days where samples were taken

	San Buenaventura Beach Bacteria Summary: Single Sample															
	Station 18000				Station 19000				Station 20000				Station 21000			
	Total Coliform	Fecal Coliform	Fecal to Total Ratio	Enterococcus	Total Coliform	Fecal Coliform	Fecal to Total Ratio	Enterococcus	Total Coliform	Fecal Coliform	Fecal to Total Ratio	Enterococcus	Total Coliform	Fecal Coliform	Fecal to Total Ratio	Enterococcus
Objective (cfu/100 ml)	10,000	400	1,000*	104	10,000	400	1,000*	104	10,000	400	1,000*	104	10,000	400	1,000*	104
Exceedance Count	8	14	8	23	42	25	19	57	3	9	6	14	2	4	5	12
Sample Count	636	633	632	635	872	871	871	869	639	640	638	637	634	634	633	631
Exceedance Percentage	1.26%	2.21%	1.27%	3.62%	4.82%	2.87%	2.18%	6.56%	0.47%	1.41%	0.94%	2.20%	0.32%	0.63%	0.79%	1.90%

*Total coliform density shall not exceed 1,000/100 ml, if the ratio of fecal-to-total coliform exceeds 0.1.

Surfer's Point Beach Bacteria Summary No data winter 2008/2009		
30-day Rolling Geometric Mean*		
Total Coliform	**Fecal Coliform**	**Enterococcus**
Objective (cfu/100 ml) **1,000**	**200**	**35**

	Total Coliform	Fecal Coliform	Enterococcus
Objective (cfu/100 ml)	**1,000**	**200**	**35**
Exceedance Count	168	10	85
Sample Count	831	837	838
Exceedance Percentage	20.21%	11.95%	10.14%

*Calculated only on days where samples were taken

Surfer's Point Beach Bacteria Summary: Single Sample			
	Total Coliform	Fecal Coliform	Fecal to Total Ratio	Enterococcus
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Objective (cfu/100 ml)	**10,000**	**400**	**1,000***	**104**
Exceedance Count	39	24	14	56
Sample Count	924	924	920	924
Exceedance Percentage	4.22%	2.60%	1.52%	6.06%

*Total coliform density shall not exceed 1,000/100 ml, if the ratio of fecal-to-total coliform exceeds 0.1.