

Trinity Point Marina Water Quality			Contractor		Most Recent Event		
Historical Chemical and Physical Measurements			Enviropacific Services		25-May-16		
Site	Date	Depth-Average Parameter					
		Temperature [C]	pH	Turbidity [NTU]	DO [%]	EC [mS/cm]	
A	17-Feb-16	28.1	8.3	0.1	65.45 ^a	46.6	
	24-Feb-16	27.8	8.0	0.4	88.8	46.6	
	2-Mar-16	27.5	8.1	0.5	79.2	49.2	
	9-Mar-16	27.7	8.2	1.1	87.5	49.1	
	16-Mar-16 ^w	27.1	8.2	1.3	73.4	51.9	
	23-Mar-16	23.1	8.2	3.3	85.6	50.5	
	1-Apr-16	24.9	8.2	0.0	84.6	53.2	
	6-Apr-16	24.6	8.2	0.4	85.7	53.6	
	20-Apr-16	23.1	8.2	0.0	94.1	51.6	
	27-Apr-16	21.9	8.4	0.0	89.2	53.3	
	5-May-16	21.7	8.4	0.0	89.2	51.8	
	11-May-16	20.0	8.2	0.0	84.1	54.5	
	18-May-16	19.7	8.1	0.0	82.4	55.2	
	25-May-16	18.1	8.2	0.0	89.0	55.0	
		Max	28.1	8.4	3.3	94.1	55.2
		Min	18.1	8.0	0.0	73.4	46.6
B	17-Feb-16	28.1	8.2	1.5	53.1 ^a	46.5	
	24-Feb-16	28.1	8.0	0.2	72.2	49.2	
	2-Mar-16	27.5	8.1	0.0	83.5	51.2	
	9-Mar-16	27.9	8.1	1.1	80.6	50.4	
	16-Mar-16 ^w	27.0	8.2	0.3	77.6	52.1	
	23-Mar-16	23.2	8.2	1.8	89.6	52.1	
	1-Apr-16	24.8	8.2	0.3	86.9	53.2	
	6-Apr-16	24.5	8.2	0.1	89.1	52.3	
	20-Apr-16	23.2	8.2	0.0	97.0	51.2	
	27-Apr-16	22.2	8.4	0.0	89.6	52.2	
	5-May-16	21.7	8.5	0.0	93.4	59.8	
	11-May-16	19.8	8.2	0.1	105.3	54.3	
	18-May-16	19.7	8.2	0.0	87.3	55.3	
	25-May-16	18.3	8.2	0.0	83.7	54.7	
		Max	28.1	8.5	1.8	105.3	59.8
		Min	18.3	8.0	0.0	72.2	46.5
C	17-Feb-16	28.0	8.3	0.0	45.9 ^a	48.1	
	24-Feb-16	27.5	8.0	0.2	87.9	50.3	
	2-Mar-16	28.2	8.1	0.0	82.7	50.1	
	9-Mar-16	27.2	8.2	2.6	82.5	49.1	
	16-Mar-16 ^w	27.1	8.2	1.3	76.8	51.2	
	23-Mar-16	23.0	8.2	0.1	86.1	51.8	
	1-Apr-16	24.4	8.2	0.0	88.4	51.7	
	6-Apr-16	24.5	8.2	0.0	86.1	59.4	
	20-Apr-16	23.1	8.2	0.0	93.8	50.3	
	27-Apr-16	21.9	8.5	0.0	88.1	53.6	
	5-May-16	21.7	8.4	0.0	87.1	52.4	
	11-May-16	20.0	8.2	0.0	87.3	54.1	
	18-May-16	19.5	8.2	0.0	95.0	55.0	
	25-May-16	18.0	8.2	0.0	82.8	54.6	
		Max	28.2	8.5	2.6	95.0	59.4
		Min	18.0	8.0	0.0	76.8	48.1
D	17-Feb-16	28.0	8.3	0.0	51.0 ^a	48.3	
	24-Feb-16	28.0	8.0	0.2	79.1	48.1	
	2-Mar-16	27.9	8.1	0.0	89.6	50.4	
	9-Mar-16	27.8	8.2	1.5	80.7	50.2	
	16-Mar-16 ^w	27.1	8.2	0.3	87.4	51.1	
	23-Mar-16	23.2	8.2	0.4	94.7	51.3	
	1-Apr-16	24.6	8.2	0.0	86.3	51.7	
	6-Apr-16	24.5	8.2	0.0	86.6	52.5	
	20-Apr-16	23.3	8.2	0.0	91.2	53.2	
	27-Apr-16	22.1	8.4	0.0	87.9	54.0	
	5-May-16	21.6	8.5	0.0	89.8	60.3	
	11-May-16	19.9	8.2	0.0	84.0	54.1	
	18-May-16	19.7	8.2	0.0	90.3	53.5	
	25-May-16	18.2	8.1	0.0	98.2	55.2	
		Max	28.0	8.5	1.5	98.2	60.3
		Min	18.2	8.0	0.0	79.1	48.1
Relevant Trigger Values^b		Reference^c		6.5 - 8.5	20	80 - 110	
						Reference^c	

NOTES

Results shaded in grey exceed relevant Trigger Value(s)

^aResults suspected to be erroneous; possibly affected by faulty sensor or poor calibration; not identified as min values

^bSourced from section L2.4 of the EPL issued to JPG and/or Tables 3.3.2 and 3.3.3 of ANZECC Guidelines 2000

^cReference data typically refers to site-specific data collected over long periods (preferably 12 months) that can be used to establish appropriate trigger values for that particular area

^wRepresents a wet weather monitoring event

Trinity Point Marina Water Quality		Site	Contractor		Most Recent Event					Trigger Values ^a
Historical Analytical Laboratory Results		A	Enviropacific Services		18-May-16					
Analysis	LOR	Unit	Date							
			24-Feb-16	9-Mar-16	23-Mar-16	6-Apr-16	20-Apr-16	5-May-16	18-May-16	
Suspended Solids	1	mg/L	4.8	5.9	2.6	2.6 ^g	110	3.6	4.2 ^g	10 ^b
Total Nitrogen	0.2	mg/L	0.5 ^g	0.5 ^g	< 0.1	0.5 ^g	< 0.2	3.9 ^g	0.2	0.3
Total PAH	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	-
Phosphate Total as P ^f	0.05	mg/L	< 0.05	0.79 ^g	0.039 ^g	0.078 ^g	0.057 ^g	0.051 ^g	0.036 ^g	0.03
TRH C10 - C36	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	-
TRH C6 - C9	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	-
<u>BTEX</u>										
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.7
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	-
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	-
Total Xylenes	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	-
<u>Dissolved Metals</u>										
Cadmium ^c	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0002	< 0.0002	0.0055 ^d
Chromium	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.001	< 0.001	0.0044 ^e
Copper	0.001	mg/L	0.001	0.001	0.001	< 0.001	< 0.005	< 0.001	< 0.001	0.0013
Tin	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.025	< 0.005	< 0.005	-
Zinc	0.001	mg/L	0.009	0.001	< 0.001	0.001	< 0.005	< 0.001	< 0.001	0.015 ^d

NOTES

Shaded results indicate exceedence of 95% ANZECC Trigger Value(s) and/or value is 20% greater than that of background sites

Dashes (-) indicate applicable data is not provided in ANZECC guidelines (2000)

^aValues sourced from Table 3.3.2 of ANZECC Guidelines (2000) unless otherwise stated; only 95% trigger values are represented

^bSourced from Table 4.4.2 of ANZECC Guidelines (2000)

^cSpecies for which possible bioaccumulation and secondary poisoning effects should be considered

^dFigure may not protect key test species from chronic toxicity

^eValue given specifically for Cr(IV)

^fAnalyte corresponds to "Total Phosphorus" referred to in ANZECC Guidelines (2000)

^gElevated measurement is unlikely to be related to construction activities

Trinity Point Marina Water Quality		Site	Contractor		Most Recent Event					Trigger Values ^a
Historical Analytical Laboratory Results		B	Enviropacific Services		18-May-16					
Analysis	LOR	Unit	Date							
			24-Feb-16	9-Mar-16	23-Mar-16	6-Apr-16	20-Apr-16	5-May-16	18-May-16	
Suspended Solids	1	mg/L	3.6	5	2.8	3.6 ^g	2.7	9.4 ^g	4.2 ^g	10 ^b
Total Nitrogen	0.2	mg/L	0.3 ^g	0.5 ^g	< 0.1	0.4 ^g	< 0.2	< 0.2	< 0.2	0.3
Total PAH	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	-
Phosphate Total as P ^f	0.05	mg/L	< 0.05	< 0.05	0.038 ^g	0.05 ^g	0.027	0.038 ^g	0.029	0.03
TRH C10 - C36	0.1	mg/L	< 0.1	< 0.1	0.3	< 0.1	< 0.1	< 0.1	< 0.1	-
TRH C6 - C9	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	-
BTEX										
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.7
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	-
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	-
Total Xylenes	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	-
Dissolved Metals										
Cadmium ^c	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0002	< 0.0002	0.0055 ^d
Chromium	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.001	< 0.001	0.0044 ^e
Copper	0.001	mg/L	0.001	0.001	< 0.001	< 0.001	< 0.005	< 0.001	< 0.001	0.0013
Tin	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.025	< 0.005	< 0.005	-
Zinc	0.001	mg/L	0.002	0.004	0.004	0.002	< 0.005	0.002	< 0.001	0.015 ^d

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^bSourced from Table 4.4.2 of ANZECC Guidelines (2000)

^cSpecies for which possible bioaccumulation and secondary poisoning effects should be considered

^dFigure may not protect key test species from chronic toxicity

^eValue given specifically for Cr(IV)

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^gElevated measurement is unlikely to be related to construction activities

Trinity Point Marina Water Quality		Site	Contractor		Most Recent Event					Trigger Values ^a
Historical Analytical Laboratory Results		C	Enviropacific Services		18-May-16					
Analysis	LOR	Unit	Date							
			24-Feb-16	9-Mar-16	23-Mar-16	6-Apr-16	20-Apr-16	5-May-16	18-May-16	
Suspended Solids	1	mg/L	10 ^g	5.7	< 1	2	3.1	23 ^g	1.8	10 ^b
Total Nitrogen	0.2	mg/L	0.2	0.2	< 0.1	0.4 ^g	< 0.2	0.5 ^g	< 0.2	0.3
Total PAH	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	-
Phosphate Total as P ^f	0.05	mg/L	< 0.05	< 0.05	0.031 ^g	0.044 ^g	0.039 ^g	0.031 ^g	0.028	0.03
TRH C10 - C36	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	-
TRH C6 - C9	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	-
<u>BTEX</u>										
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.7
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	-
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	-
Total Xylenes	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	-
<u>Dissolved Metals</u>										
Cadmium ^c	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0002	< 0.0002	0.0055 ^d
Chromium	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.001	< 0.001	0.0044 ^e
Copper	0.001	mg/L	0.001	0.001	< 0.001	< 0.001	< 0.005	< 0.001	< 0.001	0.0013
Tin	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.025	< 0.005	< 0.005	-
Zinc	0.001	mg/L	0.001	0.002	0.002	< 0.001	< 0.005	0.002	< 0.001	0.015 ^d

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^gElevated measurement is unlikely to be related to construction activities

Trinity Point Marina Water Quality		Site	Contractor		Most Recent Event					Trigger Values ^a
Historical Analytical Laboratory Results		D	Enviropacific Services		18-May-16					
Analysis	LOR	Unit	Date							
			24-Feb-16	9-Mar-16	23-Mar-16	6-Apr-16	20-Apr-16	5-May-16	18-May-16	
Suspended Solids	1	mg/L	6.5	4.6	3.6	1.2	2.8	3.6	11 ^g	10 ^b
Total Nitrogen	0.2	mg/L	<0.1	0.2	0.5 ^g	0.7 ^g	< 0.2	3.9 ^g	< 0.2	0.3
Total PAH	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	-
Phosphate Total as P ^f	0.05	mg/L	< 0.05	< 0.05	0.034 ^g	0.041 ^g	0.035 ^g	0.051 ^g	0.03	0.03
TRH C10 - C36	0.1	mg/L	< 0.1	< 0.1	0.3	< 0.1	< 0.1	< 0.1	< 0.1	-
TRH C6 - C9	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	-
<u>BTEX</u>										
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.7
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	-
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	-
Total Xylenes	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	-
<u>Dissolved Metals</u>										
Cadmium ^c	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0002	< 0.0002	0.0055 ^d
Chromium	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.001	< 0.001	0.0044 ^e
Copper	0.001	mg/L	0.001	0.001	0.001	< 0.001	< 0.005	< 0.001	< 0.001	0.0013
Tin	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.025	< 0.005	< 0.005	-
Zinc	0.001	mg/L	0.002	0.005	0.005	0.002	< 0.005	< 0.001	< 0.001	0.015 ^d

NOTES

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