

Trinity Point Marina Water Quality Historical Chemical and Physical Measurements			Contractor Enviropacific Services		Most Recent Event 29-Jun-16	
Site	Date	Temperature [C]	Depth-Average Parameter			
			pH	Turbidity [NTU]	DO [%]	EC [mS/cm]
A	17-Feb-16	28.1	8.3	0.1	65.45 <sup>a</sup>	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 <sup>w</sup>	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
	1-Jun-16	16.9	8.2	0.0	93.7	54.9
	8-Jun-16	16.4	8.3	0.0	92.2	52.5
	24-Jun-16 <sup>w</sup>	15.3	8.3	0.0	88.7	52.9
	29-Jun-16	14.5	8.3	0.0	85.6	52.8
<b>Max</b>	<b>28.1</b>	<b>8.4</b>	<b>3.3</b>	<b>94.1</b>	<b>55.2</b>	
<b>Min</b>	<b>14.5</b>	<b>8.0</b>	<b>0.0</b>	<b>73.4</b>	<b>46.6</b>	
B	17-Feb-16	28.1	8.2	1.5	53.1 <sup>a</sup>	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 <sup>w</sup>	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
	1-Jun-16	16.8	8.2	0.0	87.3	55.0
	8-Jun-16	16.3	8.3	0.0	91.8	59.9
	24-Jun-16 <sup>w</sup>	15.6	8.3	0.0	91.8	52.1
	29-Jun-16	14.4	8.3	0.0	90.6	53.6
<b>Max</b>	<b>28.1</b>	<b>8.5</b>	<b>1.8</b>	<b>105.3</b>	<b>59.9</b>	
<b>Min</b>	<b>14.4</b>	<b>8.0</b>	<b>0.0</b>	<b>72.2</b>	<b>46.5</b>	
C	17-Feb-16	28.0	8.3	0.0	45.9 <sup>a</sup>	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 <sup>w</sup>	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
	1-Jun-16	16.7	8.2	0.0	91.9	53.8
	8-Jun-16	16.7	8.2	0.0	91.9	53.8
	24-Jun-16 <sup>w</sup>	15.5	8.3	0.0	92.5	53.1
	29-Jun-16	14.1	8.3	0.0	96.7	53.4
<b>Max</b>	<b>28.2</b>	<b>8.5</b>	<b>2.6</b>	<b>96.7</b>	<b>59.4</b>	
<b>Min</b>	<b>14.1</b>	<b>8.0</b>	<b>0.0</b>	<b>76.8</b>	<b>48.1</b>	
D	17-Feb-16	28.0	8.3	0.0	51.0 <sup>a</sup>	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 <sup>w</sup>	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
	1-Jun-16	16.9	8.1	0.0	92.0	54.9
	8-Jun-16	16.4	8.2	0.0	91.3	51.5
	24-Jun-16 <sup>w</sup>	15.7	8.3	0.0	101.6	53.0
	29-Jun-16	14.3	8.3	0.0	92.8	53.0
<b>Max</b>	<b>28.0</b>	<b>8.5</b>	<b>1.5</b>	<b>101.6</b>	<b>60.3</b>	
<b>Min</b>	<b>14.3</b>	<b>8.0</b>	<b>0.0</b>	<b>79.1</b>	<b>48.1</b>	
<b>Relevant Trigger Values<sup>b</sup></b>		<b>Reference<sup>c</sup></b>	<b>6.5 - 8.5</b>	<b>20</b>	<b>80 - 110</b>	<b>Reference<sup>c</sup></b>

**NOTES**

Results shaded in grey exceed relevant Trigger Value(s)

<sup>a</sup>Results suspected to be erroneous; possibly affected by faulty sensor or poor calibration; not identified as min values

<sup>b</sup>Sourced from section L2.4 of the EPL issued to JPG and/or Tables 3.3.2 and 3.3.3 of ANZECC Guidelines 2000

<sup>c</sup>Reference 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

<sup>w</sup>Represents a wet weather monitoring event

Trinity Point Marina Water Quality			Site		Contractor		Most Recent Event					Trigger Values <sup>a</sup>
Historical Analytical Laboratory Results			A		Enviropacific Services		24-Jun-16					
Analysis	LOR	Unit	Date								Trigger Values <sup>a</sup>	
			24-Feb-16	9-Mar-16	23-Mar-16	6-Apr-16	20-Apr-16	5-May-16	18-May-16	1-Jun-16		24-Jun-16 <sup>w</sup>
Suspended Solids	1	mg/L	4.8	5.9	2.6	2.6 <sup>b</sup>	110	3.6	4.2 <sup>b</sup>	7.4	3.2	10 <sup>b</sup>
Total Nitrogen	0.2	mg/L	0.5 <sup>b</sup>	0.5 <sup>b</sup>	< 0.1	0.5 <sup>b</sup>	< 0.2	3.9 <sup>b</sup>	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	< 0.001	< 0.001	-
Phosphate Total as P <sup>f</sup>	0.05	mg/L	< 0.05	0.79 <sup>b</sup>	0.039 <sup>b</sup>	0.078 <sup>b</sup>	0.057 <sup>b</sup>	0.051 <sup>b</sup>	0.036 <sup>b</sup>	0.031 <sup>b</sup>	0.076	0.03
TRH C10 - C36	0.1	mg/L	< 0.1	< 0.1	< 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	< 0.02	< 0.02	-
<b>BTEX</b>												
Benzene	0.001	mg/L	< 0.001	< 0.001	< 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	< 0.001	< 0.001	-
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 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	< 0.003	< 0.003	-
<b>Dissolved Metals</b>												
Cadmium <sup>c</sup>	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.0055 <sup>d</sup>
Chromium	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	0.0044 <sup>e</sup>
Copper	0.001	mg/L	0.001	0.001	0.001	< 0.001	< 0.005	< 0.001	< 0.001	< 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	< 0.005	< 0.005	-
Zinc	0.001	mg/L	0.009	0.001	< 0.001	0.001	< 0.005	< 0.001	< 0.001	< 0.001	0.005	0.015 <sup>d</sup>

**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)

<sup>a</sup>Values sourced from Table 3.3.2 of ANZECC Guidelines (2000) unless otherwise stated; only 95% trigger values are represented

<sup>b</sup>Sourced from Table 4.4.2 of ANZECC Guidelines (2000)

<sup>c</sup>Species for which possible bioaccumulation and secondary poisoning effects should be considered

<sup>d</sup>Figure may not protect key test species from chronic toxicity

<sup>e</sup>Value given specifically for Cr(IV)

<sup>f</sup>Analyte corresponds to "Total Phosphorus" referred to in ANZECC Guidelines (2000)

<sup>g</sup>Elevated measurement is unlikely to be related to construction activities

<sup>w</sup>Represents a wet weather monitoring event

Trinity Point Marina Water Quality			Site		Contractor		Most Recent Event					Trigger Values <sup>a</sup>
Historical Analytical Laboratory Results			B	Enviropacific Services		24-Jun-16						
Analysis	LOR	Unit	Date								Trigger Values <sup>a</sup>	
			24-Feb-16	9-Mar-16	23-Mar-16	6-Apr-16	20-Apr-16	5-May-16	18-May-16	1-Jun-16		24-Jun-16 <sup>w</sup>
Suspended Solids	1	mg/L	3.6	5	2.8	3.6 <sup>g</sup>	2.7	9.4 <sup>g</sup>	4.2 <sup>g</sup>	4.6	3.9	10 <sup>b</sup>
Total Nitrogen	0.2	mg/L	0.3 <sup>g</sup>	0.5 <sup>g</sup>	< 0.1	0.4 <sup>g</sup>	< 0.2	< 0.2	< 0.2	0.3	< 0.2	0.3
Total PAH	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	-
Phosphate Total as P <sup>f</sup>	0.05	mg/L	< 0.05	< 0.05	0.038 <sup>g</sup>	0.05 <sup>g</sup>	0.027	0.038 <sup>g</sup>	0.029	0.025	0.045	0.03
TRH C10 - C36	0.1	mg/L	< 0.1	< 0.1	0.3	< 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	< 0.02	< 0.02	-
<b>BTEX</b>												
Benzene	0.001	mg/L	< 0.001	< 0.001	< 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	< 0.001	< 0.001	-
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 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	< 0.003	< 0.003	-
<b>Dissolved Metals</b>												
Cadmium <sup>c</sup>	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.0055 <sup>d</sup>
Chromium	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	0.0044 <sup>e</sup>
Copper	0.001	mg/L	0.001	0.001	< 0.001	< 0.001	< 0.005	< 0.001	< 0.001	< 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	< 0.005	< 0.005	-
Zinc	0.001	mg/L	0.002	0.004	0.004	0.002	< 0.005	0.002	< 0.001	< 0.001	0.002	0.015 <sup>d</sup>

**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)

<sup>a</sup>Values sourced from Table 3.3.2 of ANZECC Guidelines (2000) unless otherwise stated; only 95% trigger values are represented

<sup>b</sup>Sourced from Table 4.4.2 of ANZECC Guidelines (2000)

<sup>c</sup>Species for which possible bioaccumulation and secondary poisoning effects should be considered

<sup>d</sup>Figure may not protect key test species from chronic toxicity

<sup>e</sup>Value given specifically for Cr(IV)

<sup>f</sup>Analyte corresponds to "Total Phosphorus" referred to in ANZECC Guidelines (2000)

<sup>g</sup>Elevated measurement is unlikely to be related to construction activities

<sup>w</sup>Represents a wet weather monitoring event

Trinity Point Marina Water Quality		Site	Contractor		Most Recent Event						Trigger Values <sup>a</sup>	
Historical Analytical Laboratory Results		C	Enviropacific Services		24-Jun-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	1-Jun-16		24-Jun-16 <sup>w</sup>
Suspended Solids	1	mg/L	10 <sup>g</sup>	5.7	< 1	2	3.1	23 <sup>g</sup>	1.8	6.2	9.5	10 <sup>b</sup>
Total Nitrogen	0.2	mg/L	0.2	0.2	< 0.1	0.4 <sup>g</sup>	< 0.2	0.5 <sup>g</sup>	< 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	< 0.001	< 0.001	-
Phosphate Total as P <sup>f</sup>	0.05	mg/L	< 0.05	< 0.05	0.031 <sup>g</sup>	0.044 <sup>g</sup>	0.039 <sup>g</sup>	0.031 <sup>g</sup>	0.028	0.028	0.037	0.03
TRH C10 - C36	0.1	mg/L	< 0.1	< 0.1	< 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	< 0.02	< 0.02	-
<b>BTEX</b>												
Benzene	0.001	mg/L	< 0.001	< 0.001	< 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	< 0.001	< 0.001	-
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 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	< 0.003	< 0.003	-
<b>Dissolved Metals</b>												
Cadmium <sup>c</sup>	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.0055 <sup>d</sup>
Chromium	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	0.0044 <sup>e</sup>
Copper	0.001	mg/L	0.001	0.001	< 0.001	< 0.001	< 0.005	< 0.001	< 0.001	< 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	< 0.005	< 0.005	-
Zinc	0.001	mg/L	0.001	0.002	0.002	< 0.001	< 0.005	0.002	< 0.001	< 0.001	0.002	0.015 <sup>d</sup>

#### 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)

<sup>a</sup>Values sourced from Table 3.3.2 of ANZECC Guidelines (2000) unless otherwise stated; only 95% trigger values are represented

<sup>b</sup>Sourced from Table 4.4.2 of ANZECC Guidelines (2000)

<sup>c</sup>Species for which possible bioaccumulation and secondary poisoning effects should be considered

<sup>d</sup>Figure may not protect key test species from chronic toxicity

<sup>e</sup>Value given specifically for Cr(IV)

<sup>f</sup>Analyte corresponds to "Total Phosphorus" referred to in ANZECC Guidelines (2000)

<sup>g</sup>Elevated measurement is unlikely to be related to construction activities

<sup>w</sup>Represents a wet weather monitoring event

Trinity Point Marina Water Quality			Site		Contractor		Most Recent Event					Trigger Values <sup>a</sup>
Historical Analytical Laboratory Results			D	Enviropacific Services		24-Jun-16						
Analysis	LOR	Unit	Date								Trigger Values <sup>a</sup>	
			24-Feb-16	9-Mar-16	23-Mar-16	6-Apr-16	20-Apr-16	5-May-16	18-May-16	1-Jun-16		24-Jun-16 <sup>w</sup>
Suspended Solids	1	mg/L	6.5	4.6	3.6	1.2	2.8	3.6	11 <sup>g</sup>	12 <sup>g</sup>	5.9	10 <sup>b</sup>
Total Nitrogen	0.2	mg/L	<0.1	0.2	0.5 <sup>g</sup>	0.7 <sup>g</sup>	<0.2	3.9 <sup>g</sup>	<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	<0.001	<0.001	-
Phosphate Total as P <sup>f</sup>	0.05	mg/L	<0.05	<0.05	0.034 <sup>g</sup>	0.041 <sup>g</sup>	0.035 <sup>g</sup>	0.051 <sup>g</sup>	0.03	0.042 <sup>g</sup>	0.041	0.03
TRH C10 - C36	0.1	mg/L	<0.1	<0.1	0.3	<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	<0.02	<0.02	-
<b>BTEX</b>												
Benzene	0.001	mg/L	<0.001	<0.001	<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	<0.001	<0.001	-
Ethylbenzene	0.001	mg/L	<0.001	<0.001	<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	<0.003	<0.003	-
<b>Dissolved Metals</b>												
Cadmium <sup>c</sup>	0.0002	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	0.0055 <sup>d</sup>
Chromium	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	0.0044 <sup>e</sup>
Copper	0.001	mg/L	0.001	0.001	0.001	<0.001	<0.005	<0.001	<0.001	<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	<0.005	<0.005	-
Zinc	0.001	mg/L	0.002	0.005	0.005	0.002	<0.005	<0.001	<0.001	<0.001	0.003	0.015 <sup>d</sup>

**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)

<sup>a</sup>Values sourced from Table 3.3.2 of ANZECC Guidelines (2000) unless otherwise stated; only 95% trigger values are represented

<sup>b</sup>Sourced from Table 4.4.2 of ANZECC Guidelines (2000)

<sup>c</sup>Species for which possible bioaccumulation and secondary poisoning effects should be considered

<sup>d</sup>Figure may not protect key test species from chronic toxicity

<sup>e</sup>Value given specifically for Cr(IV)

<sup>f</sup>Analyte corresponds to "Total Phosphorus" referred to in ANZECC Guidelines (2000)

<sup>g</sup>Elevated measurement is unlikely to be related to construction activities

<sup>w</sup>Represents a wet weather monitoring event