

Section 5-8

Rockport Harbor & Tribs (Rockport Conservation Commission)

Refer to Chapter 4 of this document for information about sampling methods, sampling sites, and quality assurance.

Overview

The Rockport Conservation Commission joined the VRMP in 2013 with the purpose of monitoring Rockport Harbor, Goose River and other minor streams draining to the harbor. Rockport Harbor watershed is located in Knox County on the mid-coast of Maine in the Penobscot Bay region. The watershed, which has a total area of approximately 10 mi² (25.9 km²) has three sub-watersheds: Goose River, coastal and Lilly Pond. The Goose River, which drains the largest sub-watershed (6.6 mi² or 22.3 km²), arises as the outflow of Hosmer Pond near the base of Bald and Ragged Mountains in Camden, and flows 4.4 miles (7.1 km) southeast to Rockport Harbor. Other smaller streams draining to Rockport Harbor are Harkness Brook and Ott Brook, both of which drain the small coastal subwatershed located along the harbor's western shore, and the unnamed stream draining from Lilly Pond (referred to as Lilly Pond Stream). While relatively small, the Lilly Pond subwatershed contains the Midcoast Solid Waste Corporation facility and grazing pastures associated with the Maine Coast Heritage Trust's Aldermere Farm. A small seasonal stream also drains to the harbor from an upland area to the east. Landuses throughout these subwatersheds include recreation (e.g. golf courses, ski slopes and associated facilities), residential development, light industry, second-growth forest and pasture (Town of Rockport Comprehensive Plan, 2004).

While Lilly Pond has been the subject of previous nutrient-related water quality management efforts (MDEP 2005), there are limited data describing water quality conditions in Rockport Harbor or its freshwater inflows. However, the issuance of public health advisories at Goodies Beach near the head of Rockport Harbor based on bacterial monitoring by Maine Healthy Beaches (MHB) in 2009-2011 prompted efforts by the Rockport Conservation Commission (RCC) to identify potential pollution sources. Results to date were documented in a RCC report (Kennedy 2011). While bacterial levels in Goose River, Ott Brook, Harkness Brook and Lilly Pond stream often exceeded the saltwater criterion for *Enterococcus*, data were insufficient to identify specific upstream sources. However, storm drainage from residential and wetland areas to the west of the harbor clearly had adverse impacts on Goodies Beach. Based on these latter results, the Town of Rockport has initiated a house-by-house inspection of plumbing and sewer connections as a means to identify possible sources. The Town of Rockport is also developing a protocol for issuing health advisories based on antecedent precipitation. MHB continues to monitor bacterial levels at Goodies Beach and issue advisories as required.

Recognizing that Rockport Harbor has significant aesthetic value and is an important natural resource for the Town of Rockport and the surrounding area, the RCC is pursuing an investigative program designed to better understand factors affecting water and environmental quality. This expands RCC's initial efforts from the identification and resolution of bacteria-related impairments at Goodies Beach to include eutrophication-related issues in the harbor.

The current RCC program has the following goals and objectives:

- 1) Assess bacterial inputs to Rockport Harbor from the watershed;
- 2) Establish baseline water quality and trophic condition information for Rockport Harbor
- 3) Assess nutrient inputs to Rockport Harbor from selected freshwater inflows
- 4) Assess the potential influence of inflow mixing on water quality responses in Rockport Harbor.

Methods

The volunteers monitored at a total of nine sites in 2013 (Table 5-8-1 and Figure 5-8-1). Five of the stations [GR-1, HB-1, LPS-1, OTT-1 and WS-1] are freshwater and four stations are marine [RH1, RH2, RH3, RH4 and RO]. All of the sites, except WS-1 (Winter Street Ditch) are VRMP approved sites.

Table 5-8-1: Rockport Harbor and Tributaries Sampling Sites

VRMP Site ID	Organization Site Code	Sample Location	Class
Goose River-NGR01-VRMP	GR-2	Pascal Avenue Bridge	B
Harkness Brook-NHK00-VRMP	HB-1	Elm Street	B
Lily Pond Stream-NLPO0-VRMP	LPS-1	Outlet by Head of Cove	B
Ott Brook-NOT02-VRMP	OTT-1	Footbridge in Harkness Preserve	B
Winter Street Ditch-Ditch-N01	WS-1	Southern side of Winter St	B
Rockport Harbor-RH1-VRMP	RH1	Rockport Harbor	SB
Rockport Harbor-RH2-VRMP	RH2	Rockport Harbor	SB
Rockport Harbor-RH3-VRMP	RH3	Rockport Harbor	SB
Penobscot Bay-RO-VRMP	RO	Penobscot Bay	SB

2013 Rockport Harbor & Tributaries Sampling Sites

Rockport Conservation Commission

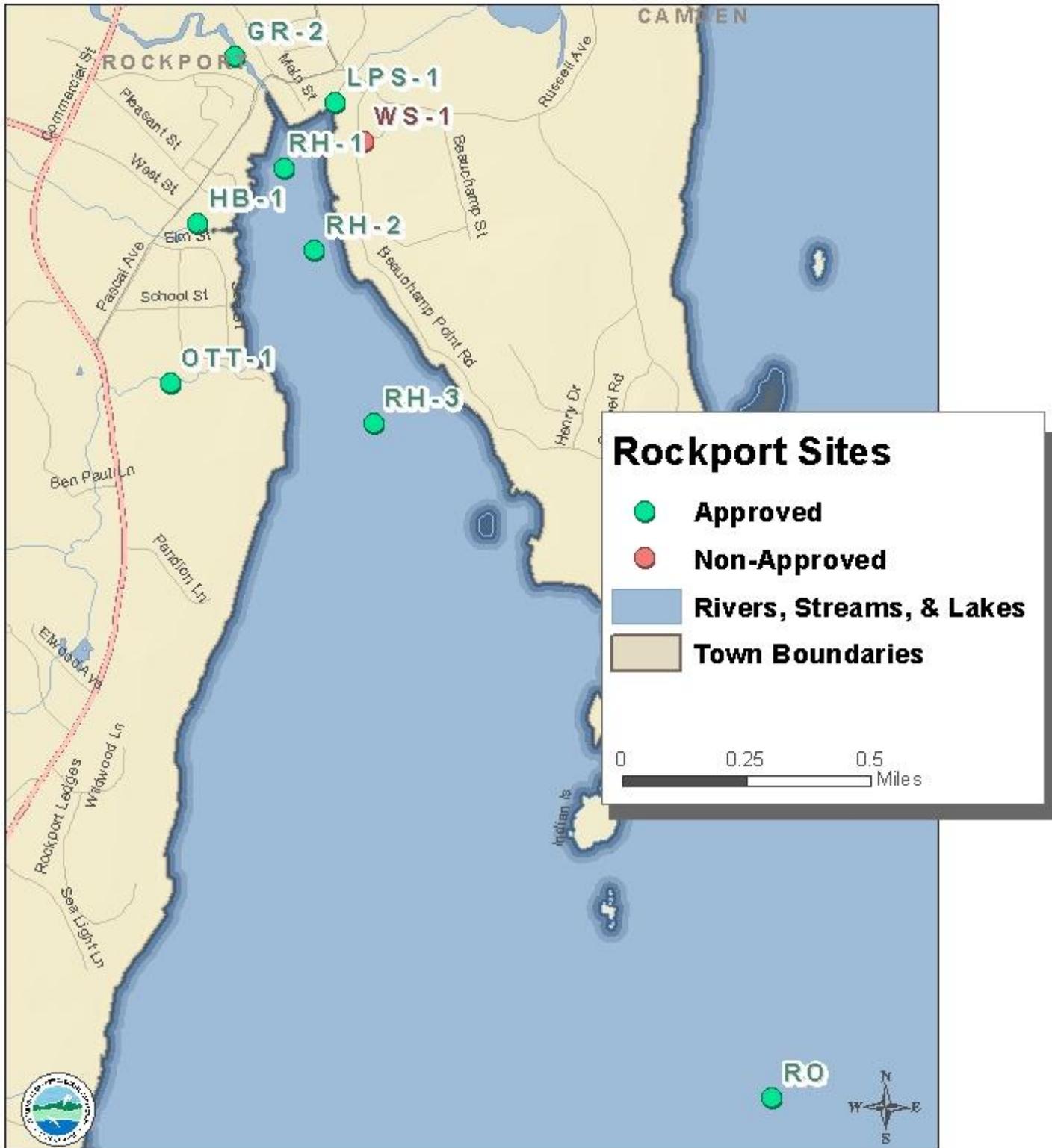


Figure 5-8-1: Map of Rockport Conservation Commission sampling sites.

Monitoring was conducted from May through September 1 time per month. Additional sampling was conducted at Goose River in June to collect nutrient samples and measure stage. At the freshwater sites, the monitors made direct measurements of water temperature and dissolved oxygen using a handheld YSI 550A meter. Conductivity was measured using an Oakton EC Testr 11+/11 conductivity pen. Grab samples were collected for total nitrogen, total phosphorus, *E. coli* and *Enterococci* bacteria (Goose River). At the harbor sites, vertical profiles were obtained for temperature and dissolved oxygen using a handheld YSI 550A meter. Salinity profiles were also obtained by pumping water to the surface and measuring salinity with using a Model 850036 Large Display Salinity Pen. Grab samples were collected at 0.1 meter depths for chlorophyll a, total phosphorus, and total nitrogen. Grab samples were also collected for *Enterococci* bacteria from May to September. Lastly, Secchi depth transparency was measured.

Bacteria samples were transported to Mirror Lake Laboratory (Maine Water, Rockport, ME) for analysis. Chlorophyll a samples were filtered at Mirror Lake Laboratory and frozen. Chlorophyll along with frozen nutrient samples were sent to Nutrient Analytical Services Lab, University of Maryland for analysis.

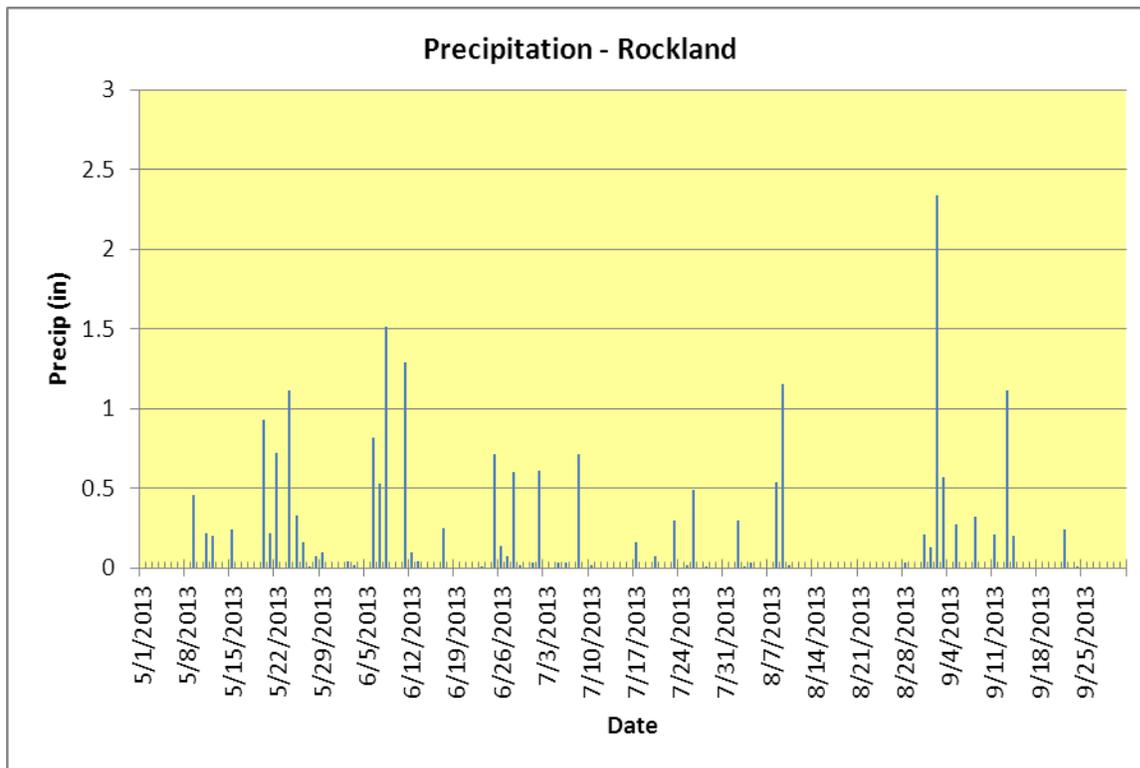
Results

Refer to Appendices A-1 and A-2 in discussion of individual site data and trends at the end of this report.

Precipitation

Figure 5-8-2 provides a graph of rainfall and sampling dates for the monitoring period. Rainfall data were obtained from Weather Underground (<http://www.wunderground.com>) for the weather station at the Knox County Regional Airport (KRKD) Owls Head. The choice was based on proximity and station with most complete records. If there was an airport station close by, this was chosen. This information provides an overview of rainfall events and can be useful in interpreting monitoring results for some parameters. Summer 2013 was wet with significant rain events in June, early August and September.

Figure 5-8-2: Seasonal Precipitation Measured at Rockland Airport



Dissolved Oxygen

Dissolved oxygen was measured 5 times at each of the nine sampling sites (Figure 5-8-3 through Figure 5-8-11; Table 5-8-2 and Table 5-8-3). Monitoring occurred from May through September. Class B criteria for dissolved oxygen are a minimum of 7 mg/l (milligrams/liter) or 75% saturation. To meet water quality criteria, both concentration and saturation standards must be met. The Class SB standard is 85% saturation.

Figure 5-8-3: Graph of dissolved oxygen concentrations at stream sites

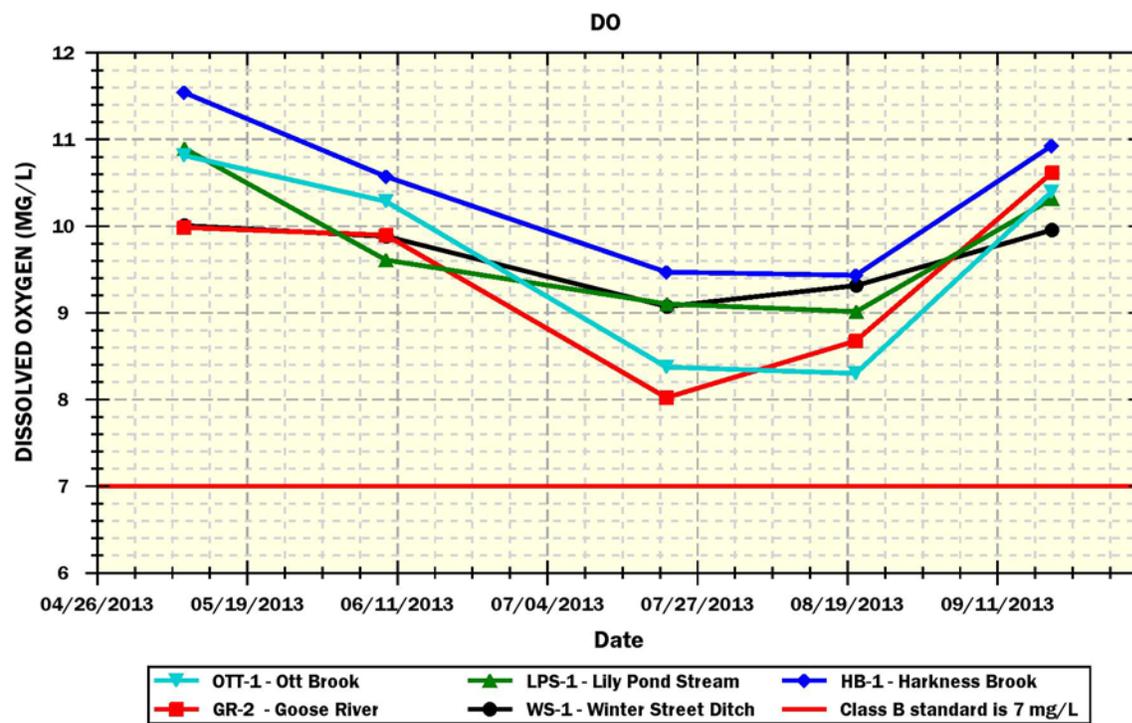


Figure 5-8-4: Graph of surface dissolved oxygen concentrations at harbor sites

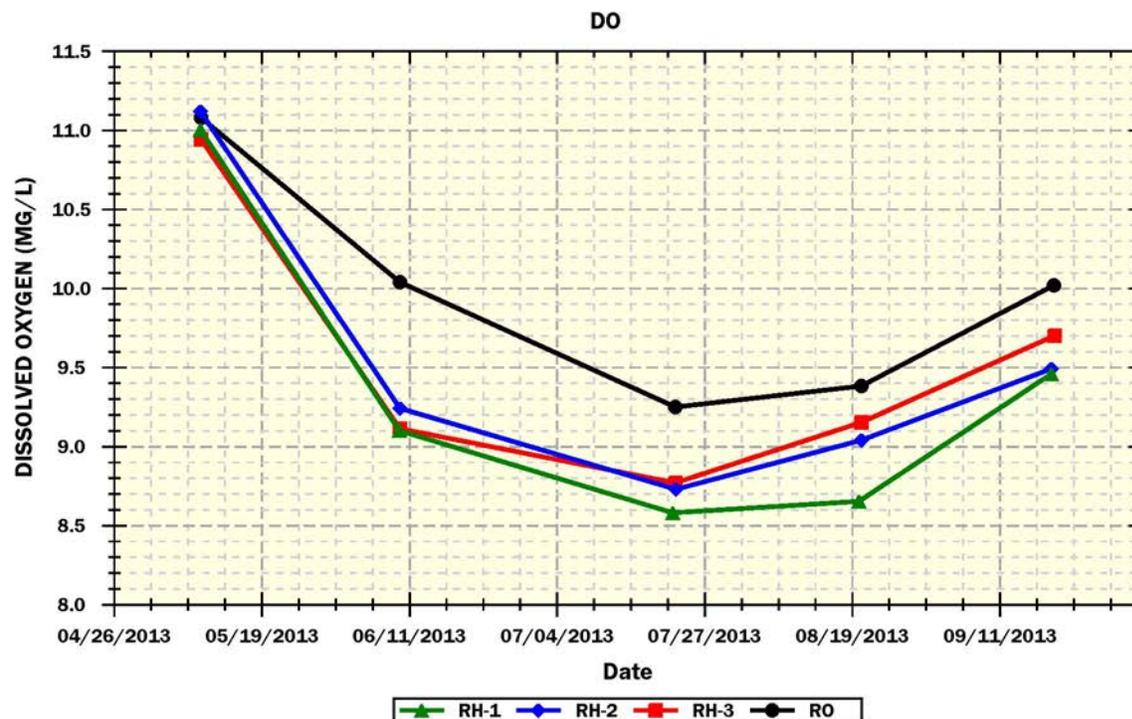


Table 5-8-2: A summary of minimum, maximum, and average dissolved oxygen concentration (mg/l) values at Rockport Conservation Commission monitoring sites. *

Site	Approved Site	# of Samples Events	Minimum Value	Maximum Value	Average Value
GR-2	Y	5	8.0	10.6	9.4
HB-1	Y	5	9.4	11.5	10.4
LPS-1	Y	5	9.0	10.9	9.8
OTT-1	Y	5	8.3	10.8	9.6
WS-1	N	5	9.1	10.0	9.6
RH-1	Y	5	8.6	11.0	9.4
RH-2	Y	5	8.7	11.1	9.5
RH-3	Y	5	8.8	10.9	9.5
RO	Y	5	9.3	11.1	10.0

*Harbor sites are surface values only.

Figure 5-8-5: Graph of dissolved oxygen saturation at stream sites

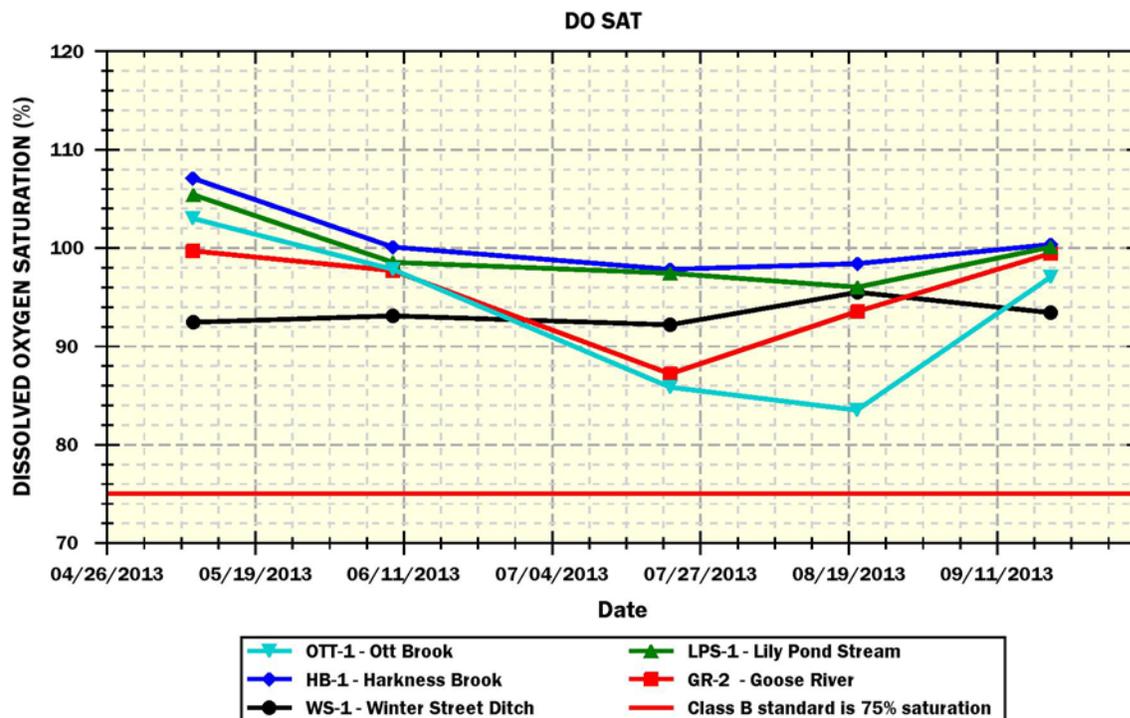


Figure 5-8-6: Graph of surface dissolved oxygen saturation at harbor sites

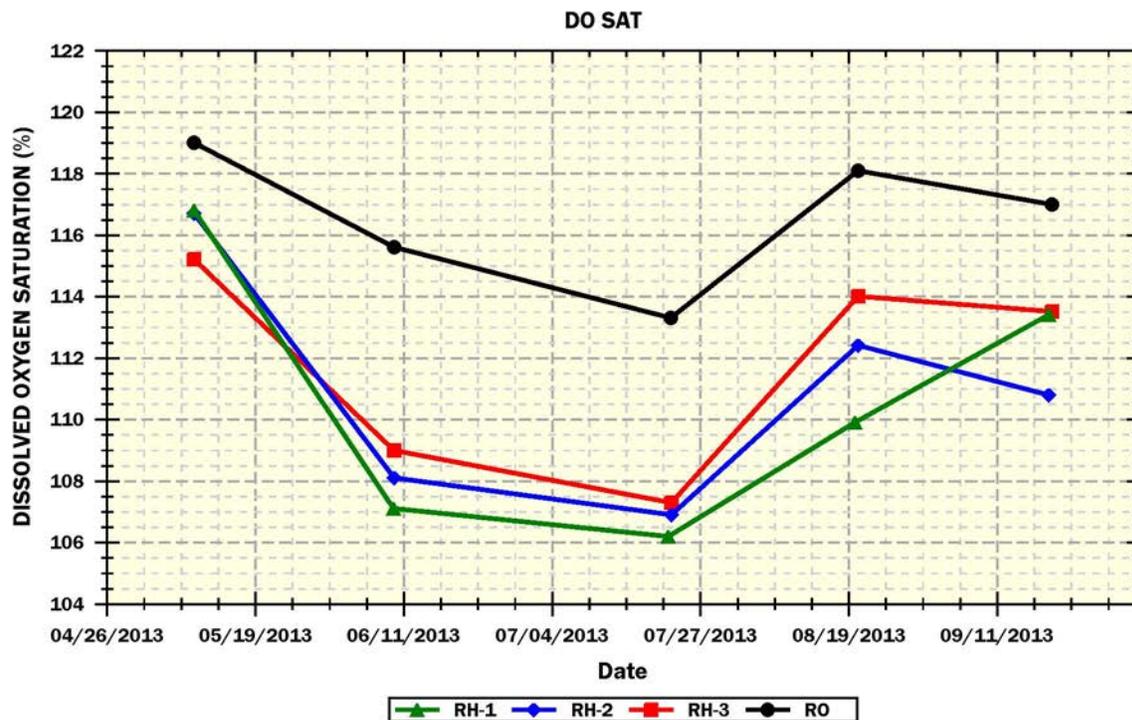


Table 5-8-3: A summary of minimum, maximum, and average dissolved oxygen saturation (%) values at Rockport Conservation Commission monitoring sites. *

Site	Approved Site	# of Samples Events	Minimum Value	Maximum Value	Average Value
GR-2	Y	5	87.2	99.7	95.5
HB-1	Y	5	97.8	107.1	100.7
LPS-1	Y	5	96.0	105.4	99.5
OTT-1	Y	5	83.5	103.0	93.4
WS-1	N	5	92.2	95.5	93.3
RH-1	Y	5	106.2	116.8	110.7
RH-2	Y	5	106.9	116.7	111.0
RH-3	Y	5	107.3	115.2	111.8
RO	Y	5	113.3	119.0	116.6

*Harbor sites are surface values only.

Figure 5-8-7: Depth profile graphs of dissolved oxygen concentration, dissolved oxygen saturation and water temperature at harbor sites on May 9th.

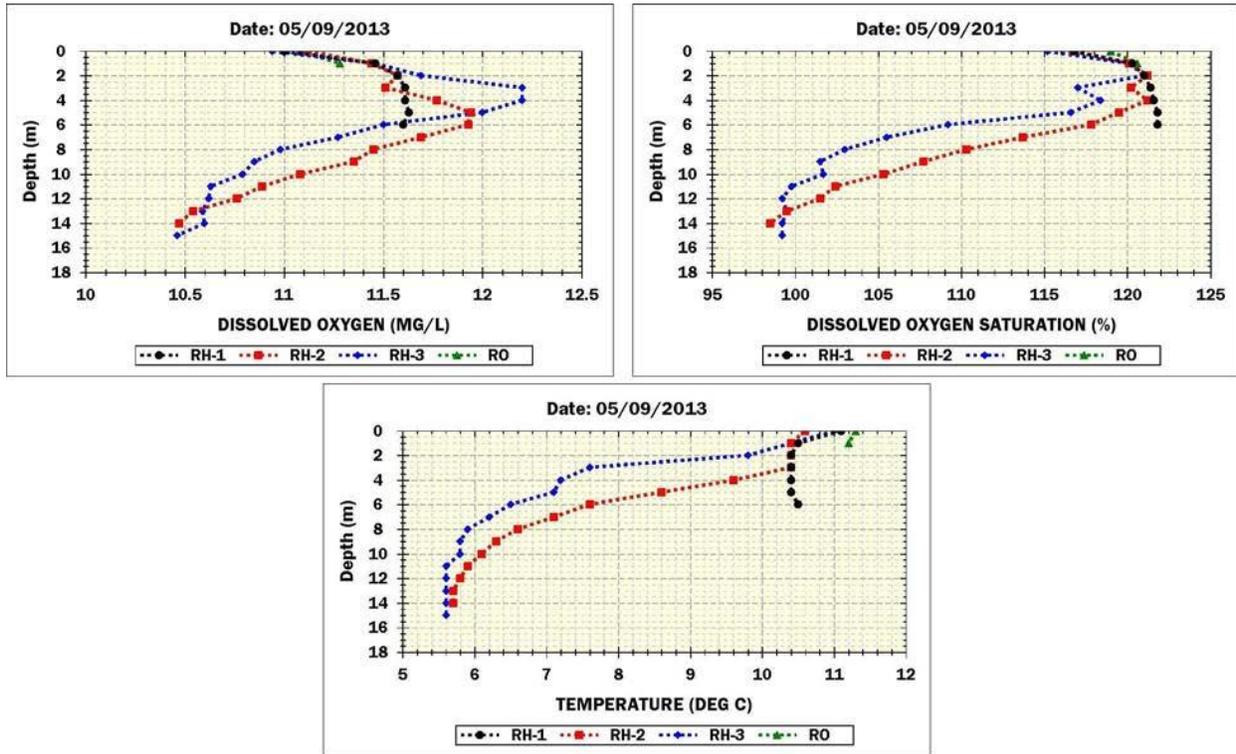


Figure 5-8-8: Depth profile graphs of dissolved oxygen concentration, dissolved oxygen saturation and water temperature at harbor sites on June 9th.

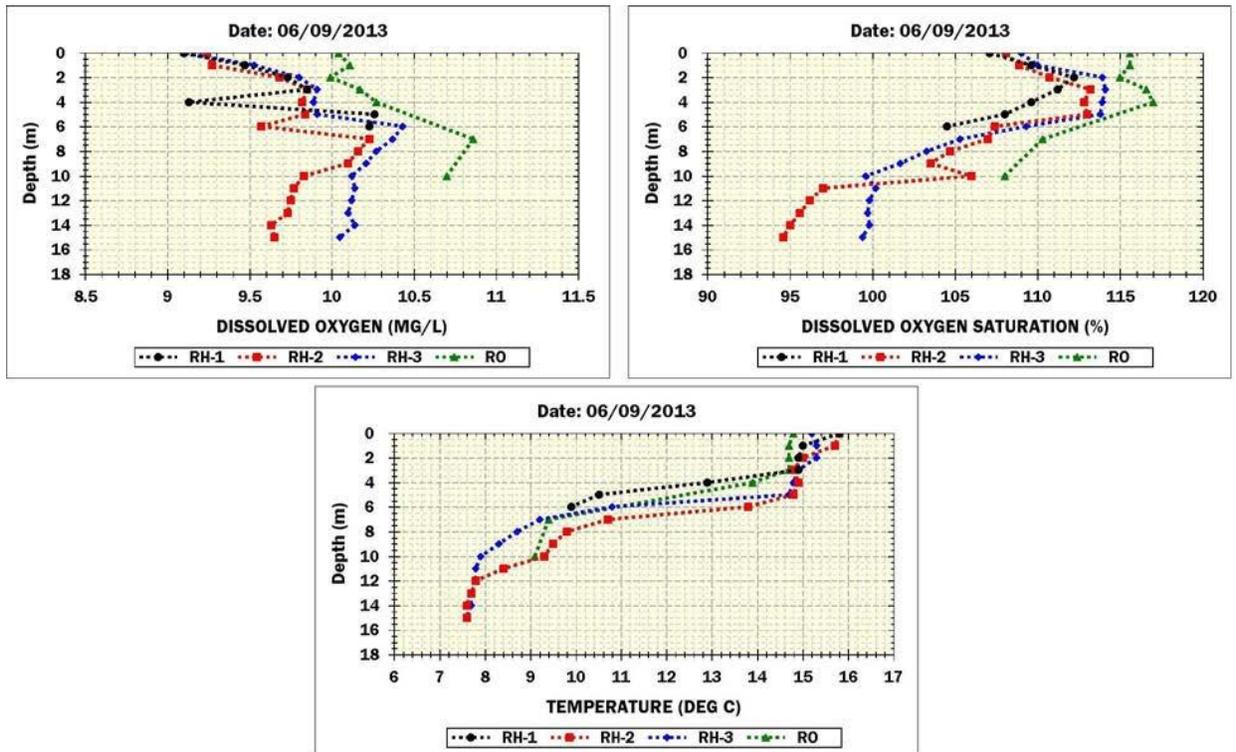


Figure 5-8-9: Depth profile graphs of dissolved oxygen concentration, dissolved oxygen saturation and water temperature at harbor sites on July 22nd.

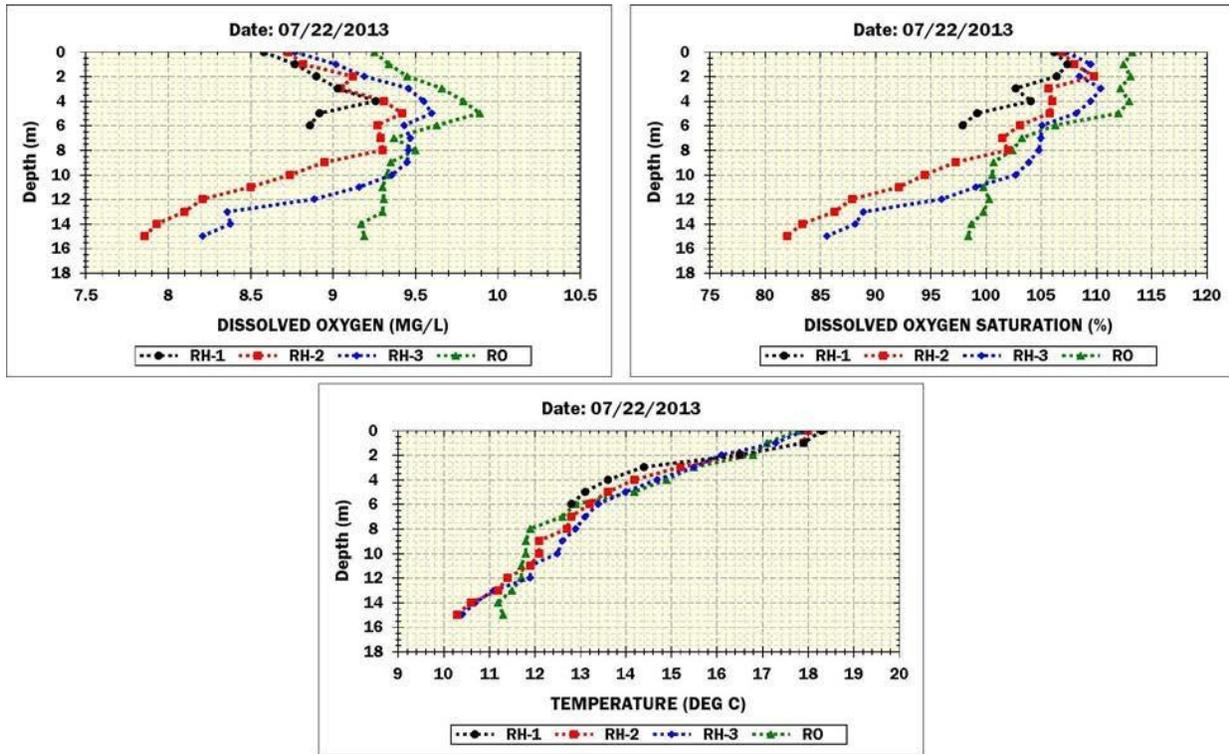


Figure 5-8-10: Depth profile graphs of dissolved oxygen concentration, dissolved oxygen saturation and water temperature at harbor sites on August 20th

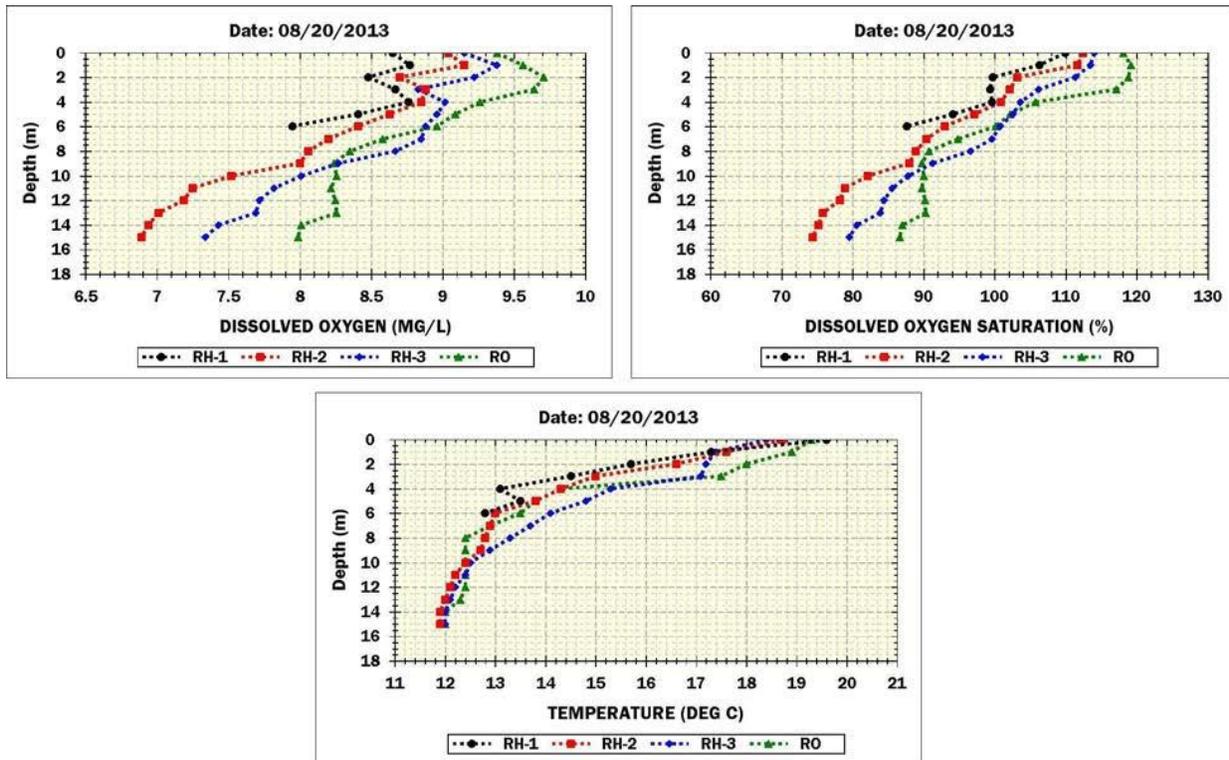
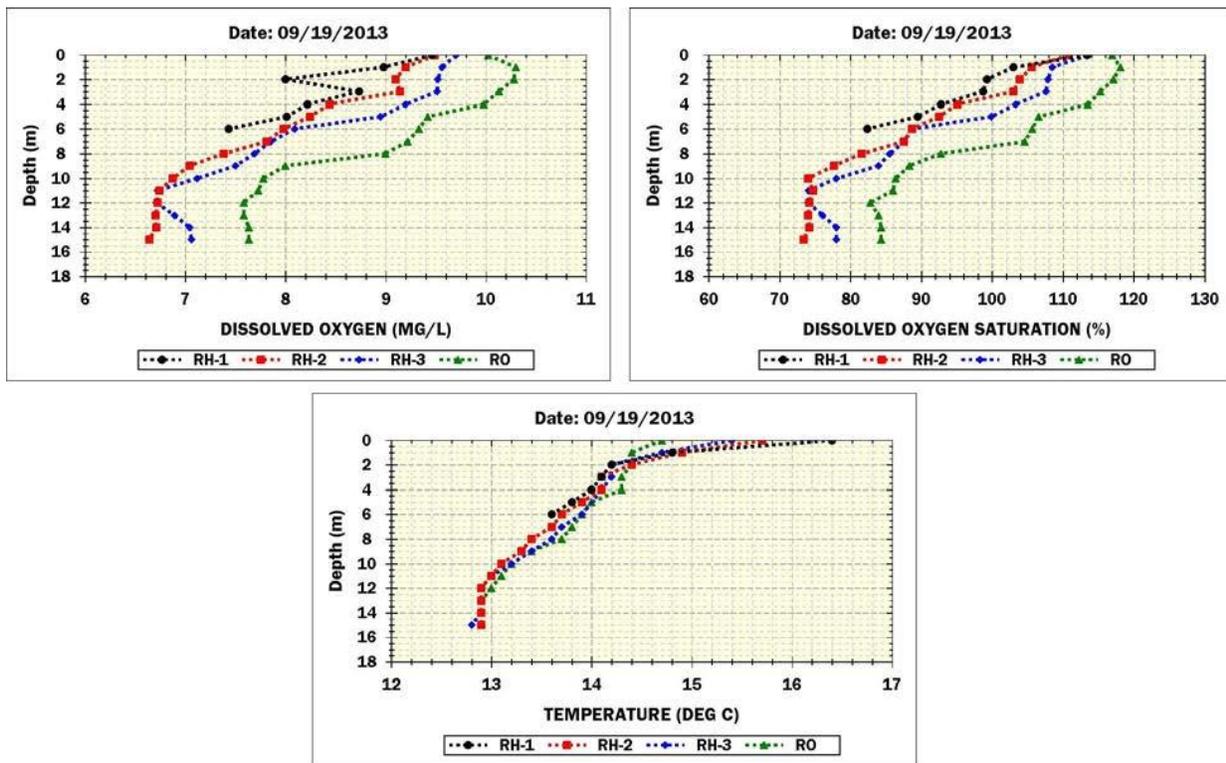


Figure 5-8-11: Depth profile graphs of dissolved oxygen concentration, dissolved oxygen saturation and water temperature at harbor sites on September 19th.



Dissolved oxygen concentrations measured at the freshwater sites ranged from 8.0 to 11.5 mg/l. Site HB-1 was always the highest and ranged from 9.4 to 11.5 mg/l. Sites LPS-1 and WS-1 were similar, except for the May date with values ranging from 9.0 to 10.9 mg/l. Sites OTT-1 and GR-2 were also similar with values ranging from 8.0 to 10.8 mg/l. For saturation, Sites HB-1 and LPS-1 were similar with values ranging from 96.0 to 107.1%. Site WS-1 was consistent through the season with values ranging from 92.2 to 95.5%. Sites OTT-1 and GR-1 were similar with the exception of 1 date and ranged from 83.5 to 103.5%. The lowest concentration values for all sites occurred in July and August. Saturation was consistent for most sites June to September, except for Sites OTT-1 and GR-2 which dropped in July and August. All values were above the Class B standard of 7.0 mg/l and 75% saturation. The fact that summer 2013 was a wet summer with good flows may have contributed to overall good dissolved oxygen.

Dissolved oxygen concentration measured at the harbor sites (surface) ranged from 8.6 to 11.1 mg/l. Percent saturation ranged from 106.2 to 119.0% at the surface. Values were above the Class SB standard of 85% saturation. At sites RH-1, RH-3 and RO, percent saturation was below 85% saturation near the bottom in August and September. At Site RH-2, percent saturation was below 85% saturation at the bottom from July to September. Observed maxima in concentration and saturation at depths near or immediately above the thermocline, or strata of rapidly changing temperature, are common for surface waters and likely related to increased algal photosynthesis at these depths.

Water Temperature

Temperature was measured 6-10 times at each of the nine sampling sites (Figure 5-8-12 and 5-8-13: Table 5-8-4). Monitoring occurred from May through September. Maine’s Regulations Relating to Temperature (06-096 CMR Chapter 582) require that discharge of pollutants not raise the temperature of any river and stream above the EPA criteria for indigenous species (23°C maximum and 19°C weekly average) or 0.3°C (0.5°F) above the temperature that would naturally occur outside a mixing zone established by the Board of Environmental Protection. Pollutant is defined in statute as many things including dirt and heat. For tidal waters, discharge of pollutants may not raise the temperature more than 4°F (2.2°C) or more than 1.5°F (0.8°C) from June 1 to September 1, and may not cause the temperature of any tidal waters to exceed 85°F (29°C) at any point outside a mixing zone established by the Board of Environmental Protection.

Figure 5-8-12: Graph of water temperature at stream sites

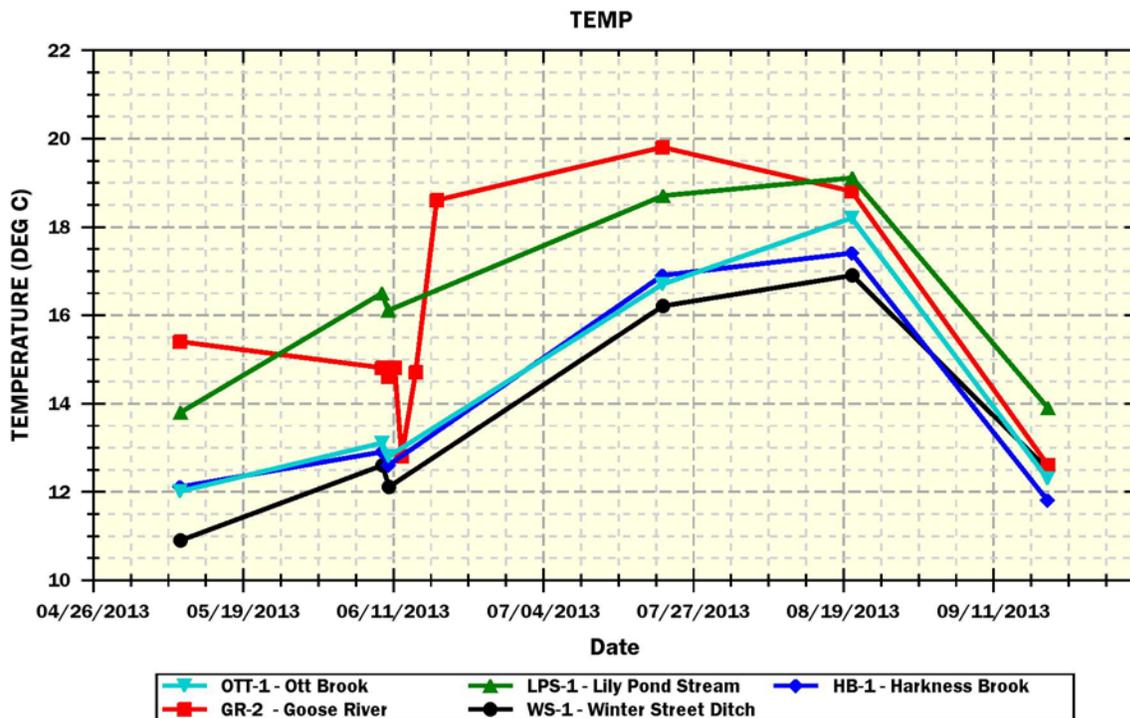


Figure 5-8-13: Graph of surface water temperature at harbor sites

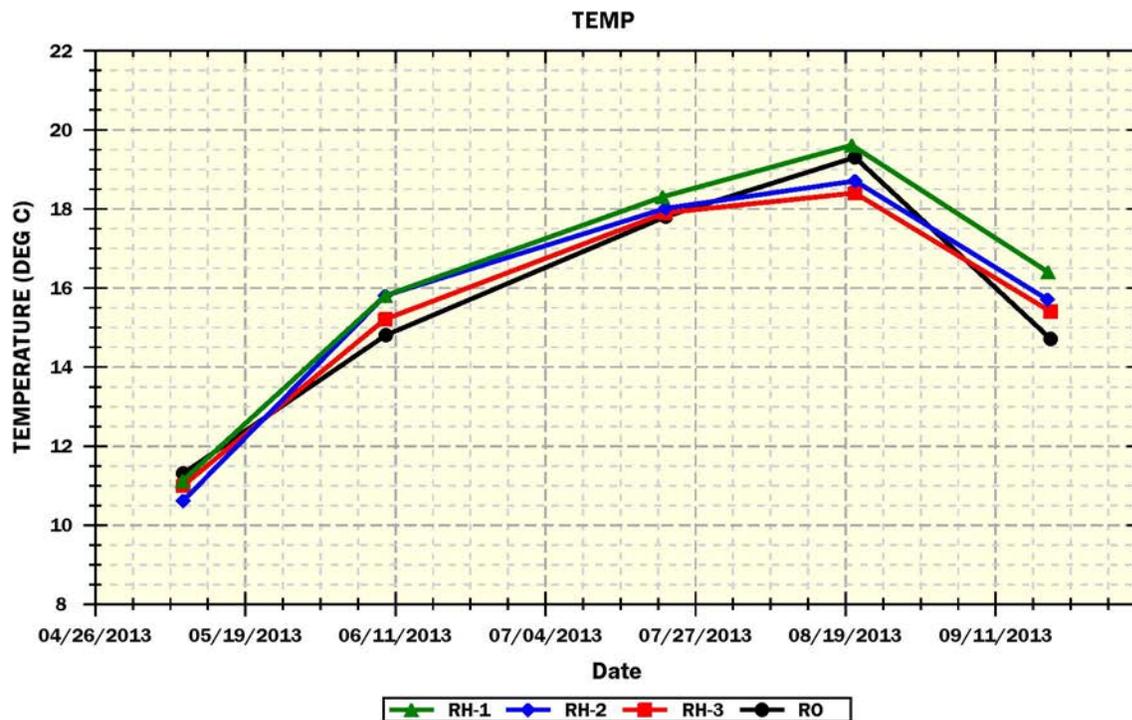


Table 5-8-4: A summary of minimum, maximum, and average water temperature (°C) values at Rockport Conservation Commission monitoring sites. *

Site	Approved Site	# of Samples Events	Minimum Value	Maximum Value	Average Value
GR-2	Y	10	12.6	19.8	15.7
HB-1	Y	6	11.8	17.4	14.0
LPS-1	Y	6	13.8	19.1	16.4
OTT-1	Y	6	12.0	18.2	14.2
WS-1	N	6	10.9	16.9	13.5
RH-1	Y	5	11.1	19.6	16.2
RH-2	Y	5	10.6	18.7	15.8
RH-3	Y	5	11.0	18.4	15.6
RO	Y	5	11.3	19.3	15.6

*Harbor sites are surface values only.

Temperatures at the freshwater sites ranged from 12.6°C to 19.8 °C. Sites GR-2 and LPS-1 had the highest temperatures. Values at GR-2 in July and August ranged from 18.6 °C to 19.8 °C. Values at Site LPS-1 in July and August ranged from 18.7 °C to 19.1 °C. The Goose River is impounded prior to flowing under Route 1 toward Site GR-2 and Site LPS-1 flows from Lilly Pond, so it is not surprising that these two sites were somewhat high due to solar heat gain. The other three sites were similar and moderate with values ranging from 16.2 °C to 18.2 °C for the months of July and August.

Specific Conductance

Specific conductance was measured 6-10 times at each of the five freshwater sampling sites (Figure 5-8-13 and Table 5-8-5). Monitoring occurred from May through September. Specific conductance is related to the amount of dissolved materials in the water. While there are no numerical standards, a relationship exists between conductivity and chloride which has numerical criteria. In general, streams located in urban areas tend to have high specific conductance due to polluted urban stormwater runoff. This may also in large part be due to salt buildup in surface and groundwater from road maintenance practices.

Figure 5-8-13: Graph of specific conductance

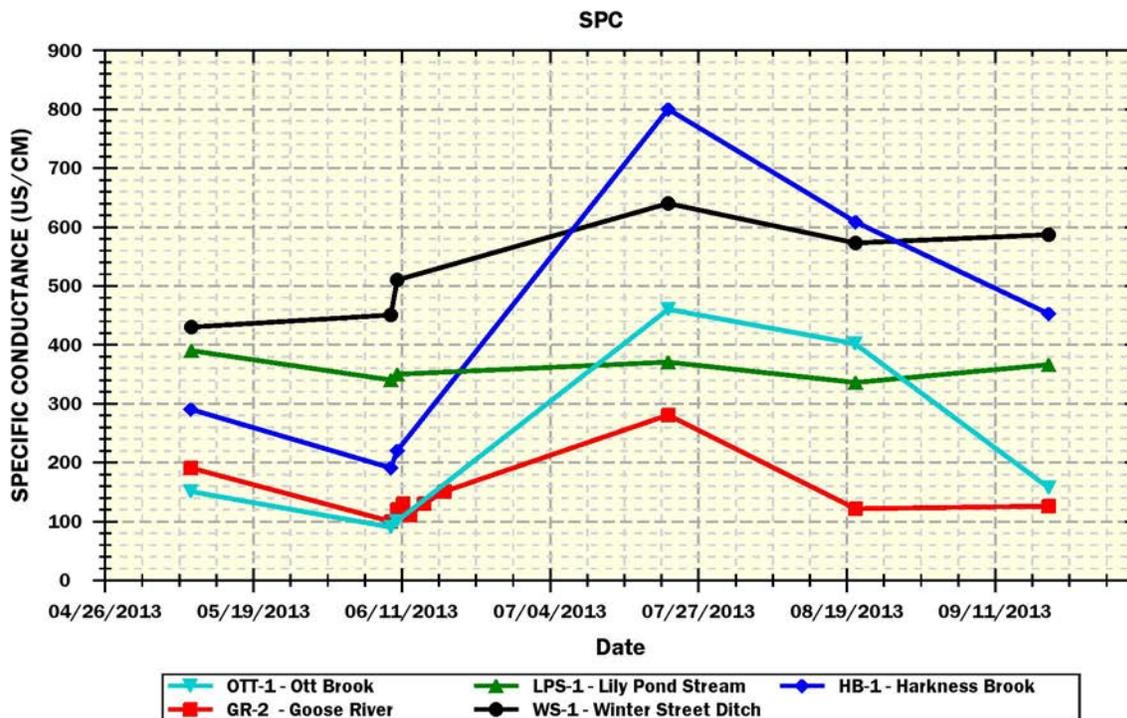


Table 5-8-5: A summary of minimum, maximum, and average specific conductance ($\mu\text{S}/\text{cm}$) values at Rockport Conservation Commission monitoring sites.

Site	Approved Site	# of Samples	Minimum Value	Maximum Value	Average Value
GR-2	Y	10	100	280	146
HB-1	Y	6	190	800	427
LPS-1	Y	6	335	390	359
OTT-1	Y	6	90	460	226
WS-1	N	6	430	640	532

Conductivity at Site WS-1 was highest overall with the exception of one date and ranged from 430 to 640 $\mu\text{S}/\text{cm}$. All the values were moderate to high. Site LPS-1 was consistent through the season with moderate values ranging from 335 to 390 $\mu\text{S}/\text{cm}$. Site OTT-1 values were low to moderate and ranged from 90 to 460 $\mu\text{S}/\text{cm}$. Site GR-2 was lowest overall with low to moderate values ranging from 100 to 280 $\mu\text{S}/\text{cm}$. Overall, the values were as expected. Highest values would be expected in the smaller streams where there is watershed development.

Bacteria

Escherichia coli bacteria were sampled 5 times at the freshwater sites (Figure 5-8-14 and Table 5-8-6). Enterococcus bacteria were also sampled 5 times at Site GR-2 and 5 times at the harbor sites. Monitoring occurred from May through September at the freshwater sites and July through September at the harbor sites. May and June samples were taken during stormflow conditions and July to September samples during baseflow conditions. Enterococcus bacteria are used as the indicator organism for marine waters and *E. coli* bacteria are used for freshwaters. While these types of bacteria are not pathogens, their presence in the water may indicate the presence of other organisms including bacteria and viruses that can cause gastrointestinal illnesses.

Class B criteria for bacteria are as follows: “Between May 15th and Sept 30th, *E. coli* of human and domestic origin shall not exceed a geometric mean of 64/100 ml (milliliters) or an instantaneous level of 236/100 ml.” Class SB criteria are as follows: “Between May 15th and September 30th, the numbers of enterococcus bacteria of human and domestic animal origin in these waters may not exceed a geometric mean of 8 per 100 milliliters or an instantaneous level of 54 per 100 milliliters.” Geometric means are calculated instead of average because it is more appropriate to use this calculation for an indicator such as bacteria where there may be one or more very high or low values that can skew the mean.

Figure 5-8-14: Graph of E. coli (MPN/ml)

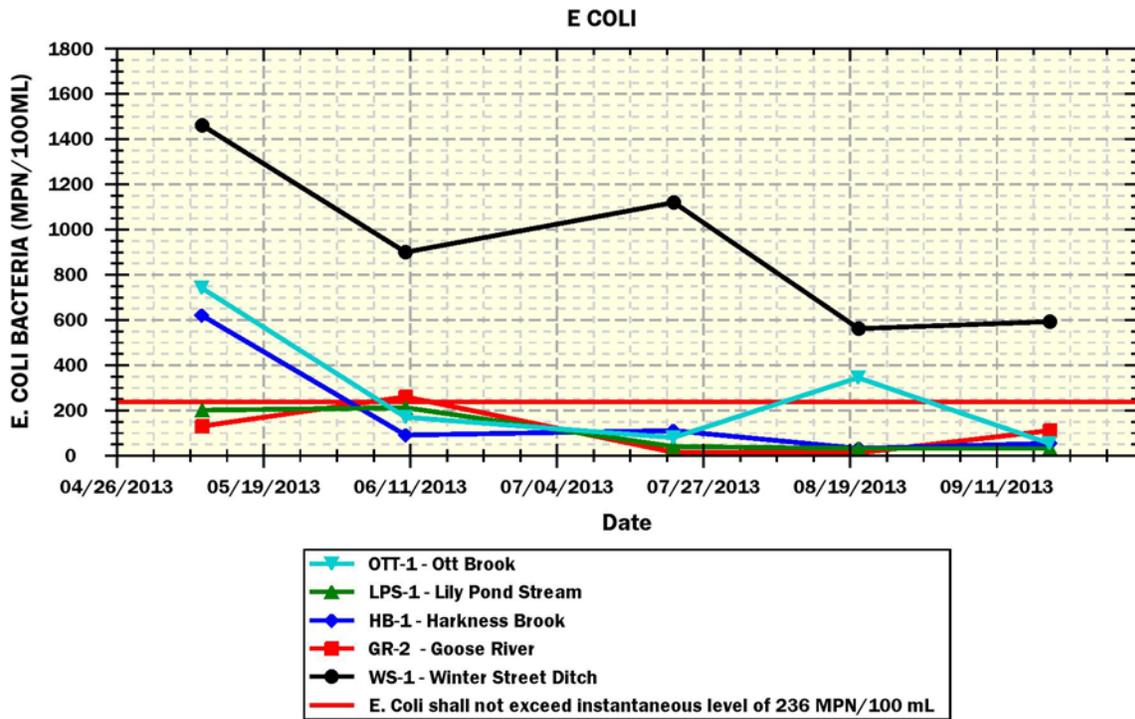


Figure 5-8-15: Graph of Enterococcus (MPN/ml)

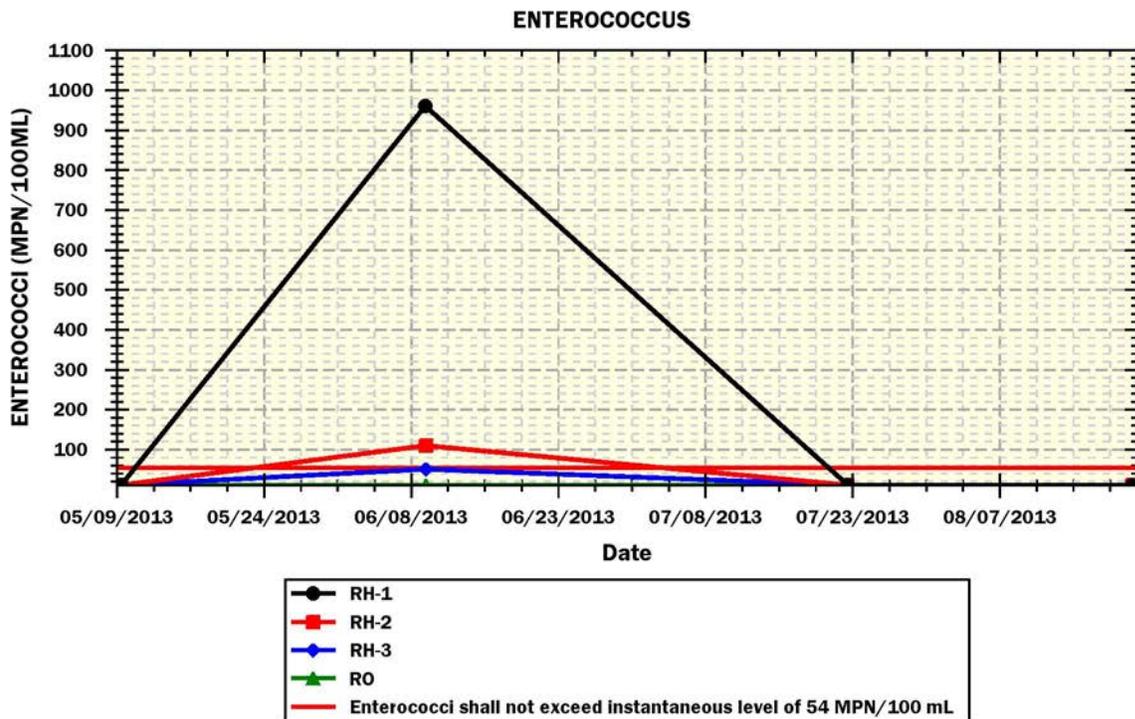


Table 5-8-6: A summary of minimum, maximum, and geometric means for bacteria (MPN/100 mL) values at Rockport Conservation Commission monitoring sites.

Site	Bacteria Type	# of Samples	Minimum Value	Maximum Value	Geometric Mean
GR-2	<i>E. coli</i>	5	10	260	55
GR-2	Enterococcus	5	10	270	57
HB-1	<i>E. coli</i>	5	31	620	100
LPS-1	<i>E. coli</i>	5	31	210	69
OTT-1	<i>E. coli</i>	5	53	740	178
WS-1	<i>E. coli</i>	5	560	1460	866
RH1	Enterococcus	5	<10	960	16
RH2	Enterococcus	5	<10	110	11
RH3	Enterococcus	5	<10	50	8
RO	Enterococcus	5	<10	<10	<10

At the freshwater sites, four sites exceeded the instantaneous criterion of 236 MPN/100 ml [Site GR-2- 1 time; Site HB-1- 1 time; Site OTT-1- 1 time; Site WS-1- 5 times]. All sites except for Site GR-2 exceeded the geometric mean criterion of 64 MPN/100 ml. The highest values generally appear to occur for the May-June samples taken during storm flows. At the harbor sites, Enterococcus bacteria levels did not exceed 10 MPN/100 ml on all sample dates, except 9 June when values increased following heavy rainfall and resulting high flows in the Goose River. Values on this date were highest at site RH1 near the Goose River inflow (960 MPN/100ml) and declined with increasing distance from the river. While the harbor samples were, on average, low, sampling done through the Maine Healthy Beaches Program of Goodies Beach in Rockport Harbor had a number of high values throughout the summer period. Values for 8 out of 21 sampling events were above the criterion of 104 MPN/100 ml. The values for these 8 dates range from 146 to 10462 MPN/100 ml.

Nutrients and Chlorophyll a

Total phosphorus and total nitrogen were measured 5-11 times at each of the freshwater and harbor sites (Figure 5-8-15 and Table 5-8-7). Total chlorophyll *a*, chlorophyll minus *a*-phaeophytin (active chlorophyll) and phaeophytin were also measured at the harbor sites. Samples were taken at 0.1 meter depths. Monitoring occurred from May through September. Nutrient criteria for freshwaters have been developed, but not yet adopted. The draft criteria for Class B waters are ≤ 30 mg/l (total phosphorus). In regards to total nitrogen, DEP Biomonitoring Program staff suggest that good water streams have values below 600 mg/l. Nutrient criteria for marine waters have not been developed.

Figure 5-8-16: Graphs of nitrogen and phosphorus (mg/l), and chlorophyll a, phaeophytin, and chlorophyll a minus phaeophytin (ug/l)

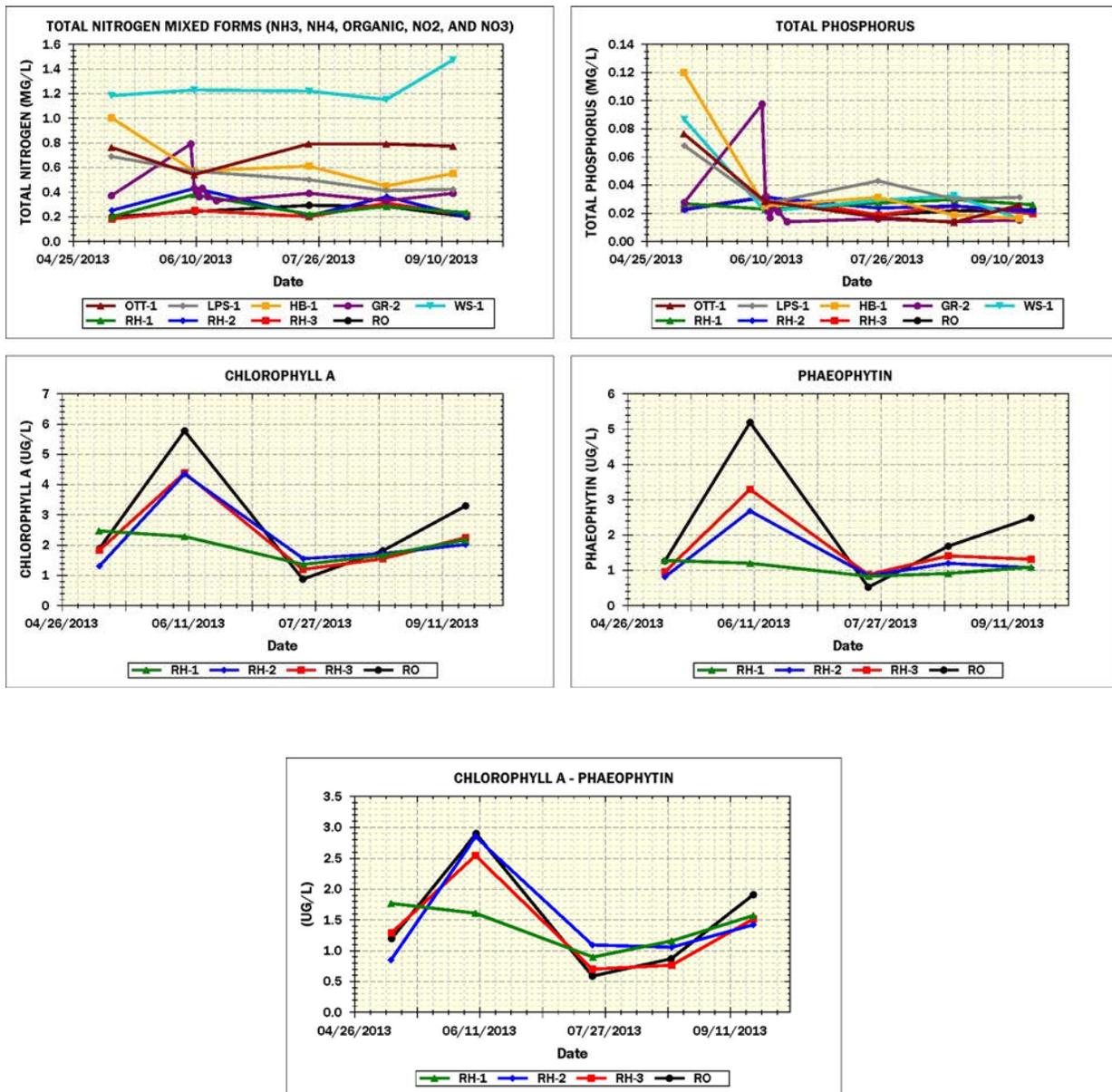


Table 5-8-7: A summary of minimum, maximum, and average nitrogen and phosphorus (mg/l), and chlorophyll a, phaeophytin, and chlorophyll a minus phaeophytin (ug/l) values at Rockport Conservation Commission monitoring sites.

Site	Parameter	# of Samples	Minimum Value	Maximum Value	Average Value
GR-2	NITROGEN	11	0.33	0.79	0.42
GR-2	PHOSPHORUS	11	0.0138	0.0973	0.0269
HB-1	NITROGEN	5	0.45	1.00	0.64
HB-1	PHOSPHORUS	5	0.0161	0.1198	0.0421

Table 5-8-7 (Continued): A summary of minimum, maximum, and average nitrogen and phosphorus (mg/l), and chlorophyll a, phaeophytin, and chlorophyll a minus phaeophytin (ug/l) values at Rockport Conservation Commission monitoring sites.

Site	Parameter	# of Samples	Minimum Value	Maximum Value	Average Value
LPS-1	NITROGEN	5	0.41	0.69	0.52
LPS-1	PHOSPHORUS	5	0.0267	0.0678	0.0397
OTT-1	NITROGEN	5	0.54	0.79	0.73
OTT-1	PHOSPHORUS	5	0.0132	0.0765	0.0321
WS-1	NITROGEN	5	1.15	1.47	1.25
WS-1	PHOSPHORUS	5	0.0158	0.0865	0.0370
RH-1	CHL-A	5	1.35	2.47	1.98
RH-1	CHL-A-PH	5	0.89	1.77	1.40
RH-1	PHAEOPHYTIN	5	0.82	1.27	1.05
RH-1	NITROGEN	5	0.20	0.38	0.26
RH-1	PHOSPHORUS	5	0.0227	0.0297	0.0265
RH-2	CHL-A	5	1.29	4.34	2.18
RH-2	CHL-A-PH	5	0.85	2.85	1.45
RH-2	PHAEOPHYTIN	5	0.80	2.68	1.32
RH-2	NITROGEN	5	0.20	0.43	0.29
RH-2	PHOSPHORUS	5	0.0211	0.0312	0.0246
RH-3	CHL-A	5	1.18	4.37	2.23
RH-3	CHL-A-PH	5	0.70	2.55	1.36
RH-3	PHAEOPHYTIN	5	0.87	3.29	1.57
RH-3	NITROGEN	5	0.18	0.31	0.23
RH-3	PHOSPHORUS	5	0.0188	0.0312	0.0236
RO	CHL-A	5	0.87	5.76	2.72
RO	CHL-A-PH	5	0.58	2.89	1.49
RO	PHAEOPHYTIN	5	0.52	5.18	2.22
RO	NITROGEN	5	0.20	0.29	0.24
RO	PHOSPHORUS	5	0.0186	0.0316	0.0233

At the freshwater sites, 1 to 3 values at each site were above 0.030 µg/l [30 mg/l] for total phosphorus and 1 to 5 values were above 0.6 µg/l [600 mg/l]. Nutrients are somewhat elevated at the freshwater sites. All of the sites except GR-2 have average total phosphorus a little above the proposed criteria of ≤ 30 mg/l. Average total nitrogen at Sites HB-1 and OTT-1 are a little above 600 mg/l. All of the total nitrogen values for Site WS-1 are very high.

At the harbor sites, most of the chlorophyll *a* values were considered low (< 5 µg/l). One value at RHO was 5.76 µg/l (6/9/13). Highest chlorophyll concentrations occurred in June coincident with increased nutrient levels following elevated flows from the Goose River.

Transparency

Transparency is a measure of the water clarity. Transparency is reduced by suspended materials in the water—primarily algae but may also include suspended sediments that are delivered to a water body during a storm event or stirred up from the bottom. It is measured by lowering a black and white disk called a Secchi disk into the water. The point at which the disk is no longer visible is recorded as the transparency or Secchi depth.

Figure 5-8-17: Graph of Transparency (M).

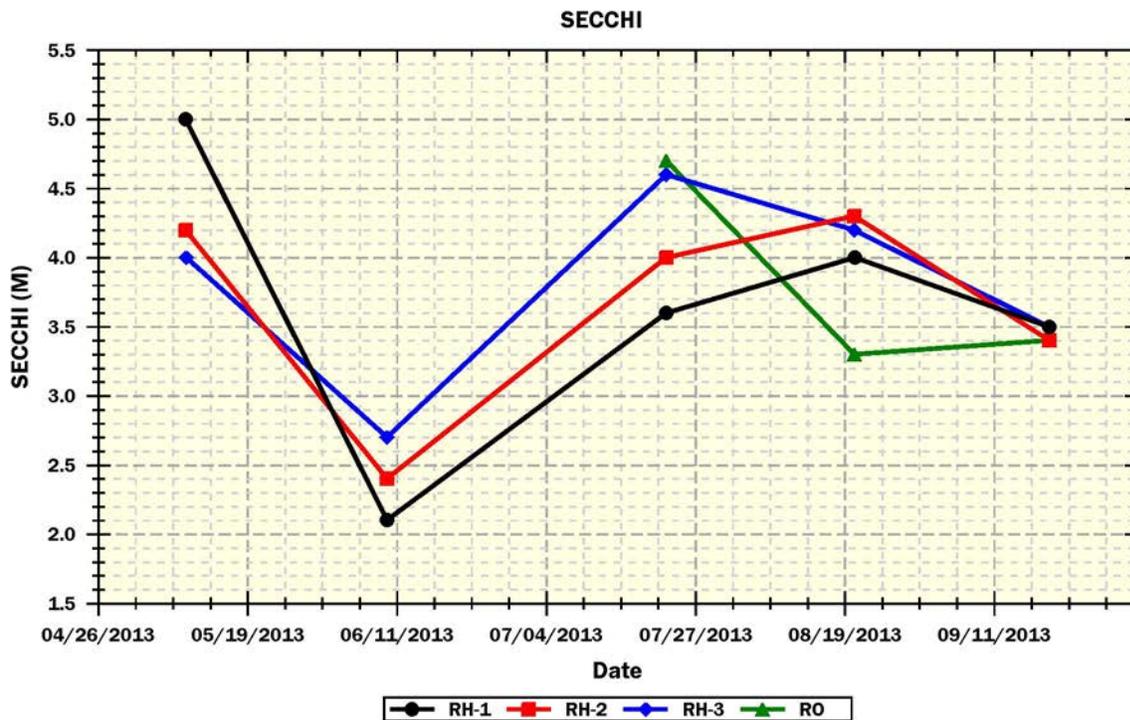


Table 5-8-7: A summary of minimum, maximum, and average Transparency at Rockport Conservation Commission monitoring sites.

Site	Approved Site	# of Samples	Minimum Value	Maximum Value	Average Value
RH-1	Y	5	2.1	5.0	3.6
RH-2	Y	5	2.4	4.14	3.6
RH-3	Y	5	2.7	4.6	3.8
RO	Y	3	3.3	4.7	3.8

Transparency at the four harbor sites was generally similar. The lowest values for all four sites occurred in June following heavy rainfall and turbid flows from the Goose River

Discussion and Recommendations

There are numerous sources of pollution and other stresses to Rockport Harbor and tributaries monitored by the Rockport Conservation Commission that could potentially have a collective impact on water quality. Some of those sources of pollution and stress may include:

- Non-point source pollution (e.g., septic systems, eroded soil, fertilizers, pesticides, heavy metals, petroleum residues, road salt, wildlife and pet feces) and polluted stormwater originating from urban impervious surfaces (e.g., streets, parking lots, driveways, rooftops) (even though urban development and roads are fairly sparse in the watershed), agriculture, and forestry.
- Ponds and impoundments (which often create more pond-like aquatic habitat conditions that may have higher water temperatures and lower dissolved oxygen concentrations than free-flowing waters).
- Natural effects of wetlands (such as contributing waters to a stream/river that have low dissolved oxygen levels due to the decomposition of large amounts of organic matter, respiration of abundant plant matter, and low re-aeration rates that is characteristic of many wetlands).

The following are recommendations for future monitoring:

- Work with the Maine Healthy Beaches Program and DEP Division of Environmental Assessment staff on tracking bacteria sources to Goodies Beach.
- Continue monitoring at all stations to develop a long term trend database.

Appendix A-1. 2013 water quality data for "Approved" and "Non-Approved" sites. Non-Approved sites do not yet meet official VRMP sample location criteria and/or require further inspection and review.

* Sampling depths are only reported for Tier 1 VRMP sites.

** "N" = normal environmental sample ; "D" = field duplicate; "D.O." = dissolved oxygen; "Spec. Cond" = specific conductance

Refer to Appendix A-2 for observational data and quality assurance/quality control (QA/QC) notes.

Organization Site Code	VRMP Site ID	Date	Time	** Sample Type Qualifier	* Sample Depth	Depth Unit	Water Temp (DEG C)	** D.O. Sat. (%)	** D.O. (MG/L)	** Spec. Cond. (US/CM)	Turb- idity (NTU)	Total Nitrogen (MG/L)	Total Phosphorus (MG/L)	Enterococci (MPN/ 100ML)	E Coli Bacteria (MPN/ 100ML)
Rockport Conservation Commission - Approved Sites:															
GR-2	GOOSE RIVER - NGR01 - VRMP	5/9/2013	8:30 AM	N			15.4	99.7	9.98	190		0.37	0.0276	10	130
GR-2	GOOSE RIVER - NGR01 - VRMP	6/8/2013		N	.1 M							0.79	0.0973		
GR-2	GOOSE RIVER - NGR01 - VRMP	6/9/2013	7:25 AM	N			14.8	97.7	9.89	100		0.43	0.0299	270	
GR-2	GOOSE RIVER - NGR01 - VRMP	6/10/2013	6:55 AM	N			14.6			120		0.4	0.0215		260
GR-2	GOOSE RIVER - NGR01 - VRMP	6/11/2013	5:54 AM	N			14.8			130		0.36	0.0165		
GR-2	GOOSE RIVER - NGR01 - VRMP	6/12/2013	7:55 AM	N			12.8			110		0.43	0.0236		
GR-2	GOOSE RIVER - NGR01 - VRMP	6/14/2013	11:45 AM	N			14.7			130		0.36	0.0208		
GR-2	GOOSE RIVER - NGR01 - VRMP	6/17/2013	3:28 PM	N			18.6			150		0.33	0.0138		
GR-2	GOOSE RIVER - NGR01 - VRMP	7/22/2013	7:15 AM	N			19.8	87.2	8.02	280		0.39	0.016	64	13
GR-2	GOOSE RIVER - NGR01 - VRMP	8/20/2013	7:45 AM	N			18.8	93.5	8.67	120.8		0.33	0.0138	64	10
GR-2	GOOSE RIVER - NGR01 - VRMP	9/19/2013	7:35 AM	N			12.6	99.4	10.61	125.2		0.39	0.0149	53	111
GR-2	GOOSE RIVER - NGR01 - VRMP	9/19/2013	7:35 AM	D								0.38	0.0134		64
HB-1	HARKNESS BROOK - NHK00 - VRMP	5/9/2013	8:00 AM	N			12.1	107.1	11.54	290		1	0.1198		620
HB-1	HARKNESS BROOK - NHK00 - VRMP	6/9/2013	7:10 AM	N			12.9	100.1	10.57	190		0.57	0.025		
HB-1	HARKNESS BROOK - NHK00 - VRMP	6/10/2013	6:43 AM	N			12.6			220					90
HB-1	HARKNESS BROOK - NHK00 - VRMP	7/22/2013	7:10 AM	N			16.9	97.8	9.47	800		0.61	0.031		111
HB-1	HARKNESS BROOK - NHK00 - VRMP	8/20/2013	7:35 AM	N			17.4	98.4	9.43	608		0.45	0.0188		31
HB-1	HARKNESS BROOK - NHK00 - VRMP	9/19/2013	7:15 AM	N			11.8	100.3	10.92	452		0.55	0.0161		53
LPS-1	LILY POND STREAM - NLP00 - VRMP	5/9/2013	8:50 AM	N			13.8	105.4	10.89	390		0.69	0.0678		200
LPS-1	LILY POND STREAM - NLP00 - VRMP	6/9/2013	7:45 AM	N			16.5	98.5	9.61	340		0.57	0.0267		
LPS-1	LILY POND STREAM - NLP00 - VRMP	6/10/2013	7:09 AM	N			16.1			350					210
LPS-1	LILY POND STREAM - NLP00 - VRMP	7/22/2013	7:35 AM	N			18.7	97.4	9.1	370		0.5	0.0429		40
LPS-1	LILY POND STREAM - NLP00 - VRMP	7/22/2013	7:35 AM	D			18.7	97.5	9.12						
LPS-1	LILY POND STREAM - NLP00 - VRMP	8/20/2013	7:54 AM	N			19.1	96	9.01	335		0.41	0.0299		31
LPS-1	LILY POND STREAM - NLP00 - VRMP	9/19/2013	7:52 AM	N			13.9	100.1	10.31	366		0.42	0.031		31
OTT-1	OTT BROOK - NOT02 - VRMP	5/9/2013	7:40 AM	N			12	103	10.81	150		0.76	0.0765		740
OTT-1	OTT BROOK - NOT02 - VRMP	6/9/2013	7:00 AM	N			13.1	97.8	10.28	90		0.54	0.0284		
OTT-1	OTT BROOK - NOT02 - VRMP	6/10/2013	6:30 AM	N			12.8			100					170
OTT-1	OTT BROOK - NOT02 - VRMP	7/22/2013	6:35 AM	N			16.7	85.8	8.37	460		0.79	0.017		78
OTT-1	OTT BROOK - NOT02 - VRMP	8/20/2013	7:12 AM	N			18.2	83.5	8.3	401		0.79	0.0132		344
OTT-1	OTT BROOK - NOT02 - VRMP	9/19/2013	7:00 AM	N			12.3	97	10.39	157.1		0.77	0.0254		53

Rockport Conservation Commission - Non-Approved Sites:

Organization Site Code	VRMP Site ID	Date	Time	** Sample Type Qualifier	* Sample Depth	Depth Unit	Water Temp (DEG C)	** D.O. Sat. (%)	** D.O. (MG/L)	** Spec. Cond. (US/CM)	Turb- idity (NTU)	Total Nitrogen (MG/L)	Total Phosphorus (MG/L)	Enterococci (MPN/ 100ML)	E Coli Bacteria (MPN/ 100ML)
WS-1	WINTER STREET DITCH - N01	5/9/2013	9:05 AM	N			10.9	92.4	10	430		1.18	0.0865		1460
WS-1	WINTER STREET DITCH - N01	6/9/2013	8:00 AM	N			12.6	93.1	9.88	450		1.23	0.0212		
WS-1	WINTER STREET DITCH - N01	6/10/2013	7:19 AM	N			12.1			510					900
WS-1	WINTER STREET DITCH - N01	7/22/2013	7:55 AM	N			16.2	92.2	9.07	640		1.22	0.029		1120
WS-1	WINTER STREET DITCH - N01	8/20/2013	8:06 AM	N			16.9	95.5	9.31	572		1.15	0.0325		560
WS-1	WINTER STREET DITCH - N01	9/19/2013	8:07 AM	N			12.5	93.4	9.95	587		1.47	0.0158		591

Appendix A-1. 2013 water quality data for "Approved" and "Non-Approved" sites. Non-Approved sites do not yet meet official VRMP sample location criteria and/or require further inspection and review.

* Sampling depths are only reported for Tier 1 VRMP sites.

** "N" = normal environmental sample ; "D" = field duplicate; "D.O." = dissolved oxygen

Refer to Appendix A-2 for observational data and quality assurance/quality control (QA/QC) notes.

Organization Site Code	VRMP Site ID	Date	Time	** Sample Type Qualifier	* Sample Depth	Depth Unit	Water Temp (DEG C)	** D.O. Sat. (%)	** D.O. (MG/L)	Salinity (PPTH)	Chlorophyll A (UG/L)	Chlorophyll A - Phaeophytin (UG/L)	Phaeophytin (UG/L)	Total Nitrogen (MG/L)	Total Phosphorus (MG/L)	Enterococci (MPN/100ML)
Rockport Harbor, Rockport Conservation Commission - Approved Sites:																
RH-1	ROCKPORT HARBOR-RH1-VRMP	5/9/2013	10:58 AM	N						26.2						U<10
RH-1	ROCKPORT HARBOR-RH1-VRMP	5/9/2013	10:58 AM	N	.0	M	11.1	117	11							
RH-1	ROCKPORT HARBOR-RH1-VRMP	5/9/2013	10:58 AM	N	.1	M					2.47	1.77	1.27	0.2	0.0268	
RH-1	ROCKPORT HARBOR-RH1-VRMP	5/9/2013	10:58 AM	N	1.0	M	10.5	120	11.46							
RH-1	ROCKPORT HARBOR-RH1-VRMP	5/9/2013	10:58 AM	N	2.0	M	10.4	121	11.57							
RH-1	ROCKPORT HARBOR-RH1-VRMP	5/9/2013	10:58 AM	N	3.0	M	10.4	121	11.61							
RH-1	ROCKPORT HARBOR-RH1-VRMP	5/9/2013	10:58 AM	N	4.0	M	10.4	122	11.61							
RH-1	ROCKPORT HARBOR-RH1-VRMP	5/9/2013	10:58 AM	N	5.0	M	10.4	122	11.63							
RH-1	ROCKPORT HARBOR-RH1-VRMP	5/9/2013	10:58 AM	N	6.0	M	10.5	122	11.6							
RH-1	ROCKPORT HARBOR-RH1-VRMP	5/9/2013	10:58 AM	D												U<10
RH-1	ROCKPORT HARBOR-RH1-VRMP	5/9/2013	10:58 AM	D	.1	M					3.13	2.25	1.59	0.26	0.0275	
RH-1	ROCKPORT HARBOR-RH1-VRMP	6/9/2013	11:00 AM	N						15.2						960
RH-1	ROCKPORT HARBOR-RH1-VRMP	6/9/2013	11:00 AM	N	.0	M	15.8	107	9.1							
RH-1	ROCKPORT HARBOR-RH1-VRMP	6/9/2013	11:00 AM	N	.1	M					2.27	1.61	1.19	0.38	0.0227	
RH-1	ROCKPORT HARBOR-RH1-VRMP	6/9/2013	11:00 AM	N	1.0	M	15	110	9.47							
RH-1	ROCKPORT HARBOR-RH1-VRMP	6/9/2013	11:00 AM	N	2.0	M	14.9	112	9.73							
RH-1	ROCKPORT HARBOR-RH1-VRMP	6/9/2013	11:00 AM	N	3.0	M	14.9	111	9.85							
RH-1	ROCKPORT HARBOR-RH1-VRMP	6/9/2013	11:00 AM	N	4.0	M	12.9	110	9.13							
RH-1	ROCKPORT HARBOR-RH1-VRMP	6/9/2013	11:00 AM	N	5.0	M	10.5	108	10.26							
RH-1	ROCKPORT HARBOR-RH1-VRMP	6/9/2013	11:00 AM	N	6.0	M	9.9	105	10.23							
RH-1	ROCKPORT HARBOR-RH1-VRMP	7/22/2013	12:22 AM	N						28.3						
RH-1	ROCKPORT HARBOR-RH1-VRMP	7/22/2013	12:22 AM	N	.0	M	18.3	106	8.58							
RH-1	ROCKPORT HARBOR-RH1-VRMP	7/22/2013	12:22 AM	N	1.0	M	17.9	107	8.77							
RH-1	ROCKPORT HARBOR-RH1-VRMP	7/22/2013	12:22 AM	N	2.0	M	16.5	106	8.9							
RH-1	ROCKPORT HARBOR-RH1-VRMP	7/22/2013	12:22 AM	N	3.0	M	14.4	103	9.03							
RH-1	ROCKPORT HARBOR-RH1-VRMP	7/22/2013	12:22 AM	N	4.0	M	13.6	104	9.26							
RH-1	ROCKPORT HARBOR-RH1-VRMP	7/22/2013	12:22 AM	N	5.0	M	13.1	99	8.92							
RH-1	ROCKPORT HARBOR-RH1-VRMP	7/22/2013	12:22 AM	N	6.0	M	12.8	98	8.86							
RH-1	ROCKPORT HARBOR-RH1-VRMP	7/22/2013	12:22 PM	N												
RH-1	ROCKPORT HARBOR-RH1-VRMP	7/22/2013	12:22 PM	N	.1	M					1.35	0.89	0.82	0.22	0.0271	U<10
RH-1	ROCKPORT HARBOR-RH1-VRMP	8/20/2013	12:10 AM	N						28.1						
RH-1	ROCKPORT HARBOR-RH1-VRMP	8/20/2013	12:10 AM	N	.0	M	19.6	110	8.65							
RH-1	ROCKPORT HARBOR-RH1-VRMP	8/20/2013	12:10 AM	N	1.0	M	17.3	106	8.77							
RH-1	ROCKPORT HARBOR-RH1-VRMP	8/20/2013	12:10 AM	N	2.0	M	15.7	100	8.48							

Organization Site Code	VRMP Site ID	Date	Time	** Sample Type Qualifier	* Sample Depth	Depth Unit	Water Temp (DEG C)	D.O. Sat. (%)	** D.O. (MG/L)	Salinity (PPTH)	Chlorophyll A (UG/L)	Chlorophyll A - Phaeophytin (UG/L)	Phaeophytin (UG/L)	Total Nitrogen (MG/L)	Total Phosphorus (MG/L)	Entero- cocci (MPN/ 100ML)
RH-1	ROCKPORT HARBOR-RH1-VRMP	8/20/2013	12:10 AM	N	3.0	M	14.5	99	8.67							
RH-1	ROCKPORT HARBOR-RH1-VRMP	8/20/2013	12:10 AM	N	4.0	M	13.1	100	8.76							
RH-1	ROCKPORT HARBOR-RH1-VRMP	8/20/2013	12:10 AM	N	5.0	M	13.5	94	8.41							
RH-1	ROCKPORT HARBOR-RH1-VRMP	8/20/2013	12:10 AM	N	6.0	M	12.8	88	7.95							
RH-1	ROCKPORT HARBOR-RH1-VRMP	8/20/2013	12:10 PM	N												
RH-1	ROCKPORT HARBOR-RH1-VRMP	8/20/2013	12:10 PM	N	.1	M					1.66	1.16	0.9	0.28	0.0297	10
RH-1	ROCKPORT HARBOR-RH1-VRMP	8/20/2013	12:10 PM	D												
RH-1	ROCKPORT HARBOR-RH1-VRMP	8/20/2013	12:10 PM	D	.1	M					1.46	0.92	0.97	0.24	0.0223	10
RH-1	ROCKPORT HARBOR-RH1-VRMP	9/19/2013	12:41 AM	N						25.7						
RH-1	ROCKPORT HARBOR-RH1-VRMP	9/19/2013	12:41 AM	N	.0	M	16.4	113	9.46							
RH-1	ROCKPORT HARBOR-RH1-VRMP	9/19/2013	12:41 AM	N	1.0	M	14.8	103	8.98							
RH-1	ROCKPORT HARBOR-RH1-VRMP	9/19/2013	12:41 AM	N	2.0	M	14.2	99	8							
RH-1	ROCKPORT HARBOR-RH1-VRMP	9/19/2013	12:41 AM	N	3.0	M	14.1	99	8.73							
RH-1	ROCKPORT HARBOR-RH1-VRMP	9/19/2013	12:41 AM	N	4.0	M	14	93	8.22							
RH-1	ROCKPORT HARBOR-RH1-VRMP	9/19/2013	12:41 AM	N	5.0	M	13.8	90	8.01							
RH-1	ROCKPORT HARBOR-RH1-VRMP	9/19/2013	12:41 AM	N	6.0	M	13.6	82	7.43							
RH-1	ROCKPORT HARBOR-RH1-VRMP	9/19/2013	12:41 PM	N												
RH-1	ROCKPORT HARBOR-RH1-VRMP	9/19/2013	12:41 PM	N	.1	M					2.17	1.57	1.08	0.23	0.026	U<10
RH-1	ROCKPORT HARBOR-RH1-VRMP	9/19/2013	12:41 PM	D	.1	M					2.16	1.53	1.13	0.21	0.0245	U<10
RH-2	ROCKPORT HARBOR-RH2-VRMP	5/9/2013	11:29 AM	N						26.3						10
RH-2	ROCKPORT HARBOR-RH2-VRMP	5/9/2013	11:29 AM	N	.0	M	10.6	117	11.12							
RH-2	ROCKPORT HARBOR-RH2-VRMP	5/9/2013	11:29 AM	N	.1	M					1.29	0.85	0.8	0.25	0.0221	
RH-2	ROCKPORT HARBOR-RH2-VRMP	5/9/2013	11:29 AM	N	1.0	M	10.4	120	11.44							
RH-2	ROCKPORT HARBOR-RH2-VRMP	5/9/2013	11:29 AM	N	2.0	M	10.4	121	11.57							
RH-2	ROCKPORT HARBOR-RH2-VRMP	5/9/2013	11:29 AM	N	3.0	M	10.4	120	11.51							
RH-2	ROCKPORT HARBOR-RH2-VRMP	5/9/2013	11:29 AM	N	4.0	M	9.6	121	11.77							
RH-2	ROCKPORT HARBOR-RH2-VRMP	5/9/2013	11:29 AM	N	5.0	M	8.6	120	11.94							
RH-2	ROCKPORT HARBOR-RH2-VRMP	5/9/2013	11:29 AM	N	6.0	M	7.6	118	11.93							
RH-2	ROCKPORT HARBOR-RH2-VRMP	5/9/2013	11:29 AM	N	7.0	M	7.1	114	11.69							
RH-2	ROCKPORT HARBOR-RH2-VRMP	5/9/2013	11:29 AM	N	8.0	M	6.6	110	11.45							
RH-2	ROCKPORT HARBOR-RH2-VRMP	5/9/2013	11:29 AM	N	9.0	M	6.3	108	11.35							
RH-2	ROCKPORT HARBOR-RH2-VRMP	5/9/2013	11:29 AM	N	10.0	M	6.1	105	11.08							
RH-2	ROCKPORT HARBOR-RH2-VRMP	5/9/2013	11:29 AM	N	11.0	M	5.9	102	10.89							
RH-2	ROCKPORT HARBOR-RH2-VRMP	5/9/2013	11:29 AM	N	12.0	M	5.8	102	10.76							
RH-2	ROCKPORT HARBOR-RH2-VRMP	5/9/2013	11:29 AM	N	13.0	M	5.7	100	10.54							
RH-2	ROCKPORT HARBOR-RH2-VRMP	5/9/2013	11:29 AM	N	14.0	M	5.7	99	10.47							
RH-2	ROCKPORT HARBOR-RH2-VRMP	6/9/2013	11:29 AM	D	.1	M					3.33	1.97	2.44	0.3	0.0307	110
RH-2	ROCKPORT HARBOR-RH2-VRMP	6/9/2013	11:50 AM	N						18.2						110
RH-2	ROCKPORT HARBOR-RH2-VRMP	6/9/2013	11:50 AM	N	.0	M	15.8	108	9.24							
RH-2	ROCKPORT HARBOR-RH2-VRMP	6/9/2013	11:50 AM	N	.1	M					4.34	2.85	2.68	0.43	0.0312	
RH-2	ROCKPORT HARBOR-RH2-VRMP	6/9/2013	11:50 AM	N	1.0	M	15.7	109	9.27							
RH-2	ROCKPORT HARBOR-RH2-VRMP	6/9/2013	11:50 AM	N	2.0	M	15	111	9.68							

Organization Site Code	VRMP Site ID	Date	Time	** Sample Type Qualifier	* Sample Depth	Depth Unit	Water Temp (DEG C)	** D.O. Sat. (%)	** D.O. (MG/L)	Salinity (PPTH)	Chlorophyll A (UG/L)	Chlorophyll A - Phaeophytin (UG/L)	Phaeophytin (UG/L)	Total Nitrogen (MG/L)	Total Phosphorus (MG/L)	Entero- cocci (MPN/ 100ML)
RH-2	ROCKPORT HARBOR-RH2-VRMP	6/9/2013	11:50 AM	N	3.0	M	14.8	113	9.85							
RH-2	ROCKPORT HARBOR-RH2-VRMP	6/9/2013	11:50 AM	N	4.0	M	14.9	113	9.82							
RH-2	ROCKPORT HARBOR-RH2-VRMP	6/9/2013	11:50 AM	N	5.0	M	14.8	113	9.84							
RH-2	ROCKPORT HARBOR-RH2-VRMP	6/9/2013	11:50 AM	N	6.0	M	13.8	107	9.57							
RH-2	ROCKPORT HARBOR-RH2-VRMP	6/9/2013	11:50 AM	N	7.0	M	10.7	107	10.23							
RH-2	ROCKPORT HARBOR-RH2-VRMP	6/9/2013	11:50 AM	N	8.0	M	9.8	105	10.16							
RH-2	ROCKPORT HARBOR-RH2-VRMP	6/9/2013	11:50 AM	N	9.0	M	9.5	104	10.1							
RH-2	ROCKPORT HARBOR-RH2-VRMP	6/9/2013	11:50 AM	N	10.0	M	9.3	106	9.83							
RH-2	ROCKPORT HARBOR-RH2-VRMP	6/9/2013	11:50 AM	N	11.0	M	8.4	97	9.77							
RH-2	ROCKPORT HARBOR-RH2-VRMP	6/9/2013	11:50 AM	N	12.0	M	7.8	96	9.75							
RH-2	ROCKPORT HARBOR-RH2-VRMP	6/9/2013	11:50 AM	N	13.0	M	7.7	96	9.73							
RH-2	ROCKPORT HARBOR-RH2-VRMP	6/9/2013	11:50 AM	N	14.0	M	7.6	95	9.63							
RH-2	ROCKPORT HARBOR-RH2-VRMP	6/9/2013	11:50 AM	N	15.0	M	7.6	95	9.65							
RH-2	ROCKPORT HARBOR-RH2-VRMP	7/22/2013	11:54 AM	N						28.2						
RH-2	ROCKPORT HARBOR-RH2-VRMP	7/22/2013	11:54 AM	N	.0	M	18	107	8.73							
RH-2	ROCKPORT HARBOR-RH2-VRMP	7/22/2013	11:54 AM	N	.1	M					1.55	1.09	0.84	0.21	0.0234	U<10
RH-2	ROCKPORT HARBOR-RH2-VRMP	7/22/2013	11:54 AM	N	1.0	M	17.9	108	8.82							
RH-2	ROCKPORT HARBOR-RH2-VRMP	7/22/2013	11:54 AM	N	2.0	M	16.5	110	9.12							
RH-2	ROCKPORT HARBOR-RH2-VRMP	7/22/2013	11:54 AM	N	3.0	M	15.2	106	9.05							
RH-2	ROCKPORT HARBOR-RH2-VRMP	7/22/2013	11:54 AM	N	4.0	M	14.2	106	9.31							
RH-2	ROCKPORT HARBOR-RH2-VRMP	7/22/2013	11:54 AM	N	5.0	M	13.6	106	9.42							
RH-2	ROCKPORT HARBOR-RH2-VRMP	7/22/2013	11:54 AM	N	6.0	M	13.2	103	9.27							
RH-2	ROCKPORT HARBOR-RH2-VRMP	7/22/2013	11:54 AM	N	7.0	M	12.8	102	9.29							
RH-2	ROCKPORT HARBOR-RH2-VRMP	7/22/2013	11:54 AM	N	8.0	M	12.7	102	9.3							
RH-2	ROCKPORT HARBOR-RH2-VRMP	7/22/2013	11:54 AM	N	9.0	M	12.1	97	8.95							
RH-2	ROCKPORT HARBOR-RH2-VRMP	7/22/2013	11:54 AM	N	10.0	M	12.1	95	8.74							
RH-2	ROCKPORT HARBOR-RH2-VRMP	7/22/2013	11:54 AM	N	11.0	M	11.9	92	8.5							
RH-2	ROCKPORT HARBOR-RH2-VRMP	7/22/2013	11:54 AM	N	12.0	M	11.4	88	8.21							
RH-2	ROCKPORT HARBOR-RH2-VRMP	7/22/2013	11:54 AM	N	13.0	M	11.2	86	8.1							
RH-2	ROCKPORT HARBOR-RH2-VRMP	7/22/2013	11:54 AM	N	14.0	M	10.6	83	7.93							
RH-2	ROCKPORT HARBOR-RH2-VRMP	7/22/2013	11:54 AM	N	15.0	M	10.3	82	7.86							
RH-2	ROCKPORT HARBOR-RH2-VRMP	8/20/2013	11:35 AM	N						27.8						
RH-2	ROCKPORT HARBOR-RH2-VRMP	8/20/2013	11:35 AM	N	.0	M	18.7	112	9.04							
RH-2	ROCKPORT HARBOR-RH2-VRMP	8/20/2013	11:35 AM	N	.1	M					1.71	1.05	1.19	0.36	0.0251	U<10
RH-2	ROCKPORT HARBOR-RH2-VRMP	8/20/2013	11:35 AM	N	1.0	M	17.6	112	9.15							
RH-2	ROCKPORT HARBOR-RH2-VRMP	8/20/2013	11:35 AM	N	2.0	M	16.6	103	8.7							
RH-2	ROCKPORT HARBOR-RH2-VRMP	8/20/2013	11:35 AM	N	3.0	M	15	102	8.88							
RH-2	ROCKPORT HARBOR-RH2-VRMP	8/20/2013	11:35 AM	N	4.0	M	14.3	101	8.85							
RH-2	ROCKPORT HARBOR-RH2-VRMP	8/20/2013	11:35 AM	N	5.0	M	13.8	97	8.63							
RH-2	ROCKPORT HARBOR-RH2-VRMP	8/20/2013	11:35 AM	N	6.0	M	13	93	8.41							
RH-2	ROCKPORT HARBOR-RH2-VRMP	8/20/2013	11:35 AM	N	7.0	M	12.9	90	8.2							
RH-2	ROCKPORT HARBOR-RH2-VRMP	8/20/2013	11:35 AM	N	8.0	M	12.8	89	8.06							

Organization Site Code	VRMP Site ID	Date	Time	** Sample Type Qualifier	* Sample Depth	Depth Unit	Water Temp (DEG C)	** D.O. Sat. (%)	** D.O. (MG/L)	Salinity (PPTH)	Chlorophyll A (UG/L)	Chlorophyll A - Phaeophytin (UG/L)	Phaeophytin (UG/L)	Total Nitrogen (MG/L)	Total Phosphorus (MG/L)	Enterococci (MPN/100ML)
RH-2	ROCKPORT HARBOR-RH2-VRMP	8/20/2013	11:35 AM	N	9.0	M	12.7	88	8							
RH-2	ROCKPORT HARBOR-RH2-VRMP	8/20/2013	11:35 AM	N	10.0	M	12.4	82	7.52							
RH-2	ROCKPORT HARBOR-RH2-VRMP	8/20/2013	11:35 AM	N	11.0	M	12.2	79	7.25							
RH-2	ROCKPORT HARBOR-RH2-VRMP	8/20/2013	11:35 AM	N	12.0	M	12.1	78	7.19							
RH-2	ROCKPORT HARBOR-RH2-VRMP	8/20/2013	11:35 AM	N	13.0	M	12	76	7.01							
RH-2	ROCKPORT HARBOR-RH2-VRMP	8/20/2013	11:35 AM	N	14.0	M	11.9	75	6.94							
RH-2	ROCKPORT HARBOR-RH2-VRMP	8/20/2013	11:35 AM	N	15.0	M	11.9	74	6.89							
RH-2	ROCKPORT HARBOR-RH2-VRMP	9/19/2013	12:15 AM	N						28						
RH-2	ROCKPORT HARBOR-RH2-VRMP	9/19/2013	12:15 AM	N	.0	M	15.7	111	9.49							
RH-2	ROCKPORT HARBOR-RH2-VRMP	9/19/2013	12:15 AM	N	1.0	M	14.9	106	9.2							
RH-2	ROCKPORT HARBOR-RH2-VRMP	9/19/2013	12:15 AM	N	2.0	M	14.4	104	9.1							
RH-2	ROCKPORT HARBOR-RH2-VRMP	9/19/2013	12:15 AM	N	3.0	M	14.1	103	9.14							
RH-2	ROCKPORT HARBOR-RH2-VRMP	9/19/2013	12:15 AM	N	4.0	M	14.1	95	8.44							
RH-2	ROCKPORT HARBOR-RH2-VRMP	9/19/2013	12:15 AM	N	5.0	M	13.9	93	8.24							
RH-2	ROCKPORT HARBOR-RH2-VRMP	9/19/2013	12:15 AM	N	6.0	M	13.7	89	7.98							
RH-2	ROCKPORT HARBOR-RH2-VRMP	9/19/2013	12:15 AM	N	7.0	M	13.6	88	7.81							
RH-2	ROCKPORT HARBOR-RH2-VRMP	9/19/2013	12:15 AM	N	8.0	M	13.4	82	7.38							
RH-2	ROCKPORT HARBOR-RH2-VRMP	9/19/2013	12:15 AM	N	9.0	M	13.3	78	7.04							
RH-2	ROCKPORT HARBOR-RH2-VRMP	9/19/2013	12:15 AM	N	10.0	M	13.1	74	6.87							
RH-2	ROCKPORT HARBOR-RH2-VRMP	9/19/2013	12:15 AM	N	11.0	M	13	75	6.74							
RH-2	ROCKPORT HARBOR-RH2-VRMP	9/19/2013	12:15 AM	N	12.0	M	12.9	74	6.72							
RH-2	ROCKPORT HARBOR-RH2-VRMP	9/19/2013	12:15 AM	N	13.0	M	12.9	74	6.7							
RH-2	ROCKPORT HARBOR-RH2-VRMP	9/19/2013	12:15 AM	N	14.0	M	12.9	74	6.71							
RH-2	ROCKPORT HARBOR-RH2-VRMP	9/19/2013	12:15 AM	N	15.0	M	12.9	73	6.64							
RH-2	ROCKPORT HARBOR-RH2-VRMP	9/19/2013	12:15 PM	N												
RH-2	ROCKPORT HARBOR-RH2-VRMP	9/19/2013	12:15 PM	N	.1	M					2.01	1.42	1.07	0.2	0.0211	U<10
RH-3	ROCKPORT HARBOR-RH3-VRMP	5/9/2013	12:17 PM	N						26.9						U<10
RH-3	ROCKPORT HARBOR-RH3-VRMP	5/9/2013	12:17 PM	N	.0	M	11	115	10.94							
RH-3	ROCKPORT HARBOR-RH3-VRMP	5/9/2013	12:17 PM	N	.1	M					1.82	1.29	0.96	0.18	0.0232	
RH-3	ROCKPORT HARBOR-RH3-VRMP	5/9/2013	12:17 PM	N	1.0	M	10.4	120	11.46							
RH-3	ROCKPORT HARBOR-RH3-VRMP	5/9/2013	12:17 PM	N	2.0	M	9.8	121	11.69							
RH-3	ROCKPORT HARBOR-RH3-VRMP	5/9/2013	12:17 PM	N	3.0	M	7.6	117	12.2							
RH-3	ROCKPORT HARBOR-RH3-VRMP	5/9/2013	12:17 PM	N	4.0	M	7.2	118	12.2							
RH-3	ROCKPORT HARBOR-RH3-VRMP	5/9/2013	12:17 PM	N	5.0	M	7.1	117	12							
RH-3	ROCKPORT HARBOR-RH3-VRMP	5/9/2013	12:17 PM	N	6.0	M	6.5	109	11.5							
RH-3	ROCKPORT HARBOR-RH3-VRMP	5/9/2013	12:17 PM	N	7.0	M	6.2	106	11.27							
RH-3	ROCKPORT HARBOR-RH3-VRMP	5/9/2013	12:17 PM	N	8.0	M	5.9	103	10.98							
RH-3	ROCKPORT HARBOR-RH3-VRMP	5/9/2013	12:17 PM	N	9.0	M	5.8	102	10.85							
RH-3	ROCKPORT HARBOR-RH3-VRMP	5/9/2013	12:17 PM	N	10.0	M	5.8	102	10.79							
RH-3	ROCKPORT HARBOR-RH3-VRMP	5/9/2013	12:17 PM	N	11.0	M	5.6	100	10.63							
RH-3	ROCKPORT HARBOR-RH3-VRMP	5/9/2013	12:17 PM	N	12.0	M	5.6	99	10.62							
RH-3	ROCKPORT HARBOR-RH3-VRMP	5/9/2013	12:17 PM	N	13.0	M	5.6	100	10.59							

Organization Site Code	VRMP Site ID	Date	Time	** Sample Type Qualifier	* Sample Depth	Depth Unit	Water Temp (DEG C)	** D.O. Sat. (%)	** D.O. (MG/L)	Salinity (PPTH)	Chlorophyll A (UG/L)	Chlorophyll A - Phaeophytin (UG/L)	Phaeophytin (UG/L)	Total Nitrogen (MG/L)	Total Phosphorus (MG/L)	Entero- cocci (MPN/ 100ML)
RH-3	ROCKPORT HARBOR-RH3-VRMP	5/9/2013	12:17 PM	N	14.0	M	5.6	99	10.6							
RH-3	ROCKPORT HARBOR-RH3-VRMP	5/9/2013	12:17 PM	N	15.0	M	5.6	99	10.46							
RH-3	ROCKPORT HARBOR-RH3-VRMP	6/9/2013	12:30 PM	N						20.6						50
RH-3	ROCKPORT HARBOR-RH3-VRMP	6/9/2013	12:30 PM	N	.0	M	15.2	109	9.11							
RH-3	ROCKPORT HARBOR-RH3-VRMP	6/9/2013	12:30 PM	N	.1	M					4.37	2.55	3.29	0.25	0.0312	
RH-3	ROCKPORT HARBOR-RH3-VRMP	6/9/2013	12:30 PM	N	1.0	M	15.3	110	9.53							
RH-3	ROCKPORT HARBOR-RH3-VRMP	6/9/2013	12:30 PM	N	2.0	M	15.3	114	9.8							
RH-3	ROCKPORT HARBOR-RH3-VRMP	6/9/2013	12:30 PM	N	3.0	M	14.9	114	9.91							
RH-3	ROCKPORT HARBOR-RH3-VRMP	6/9/2013	12:30 PM	N	4.0	M	14.8	114	9.89							
RH-3	ROCKPORT HARBOR-RH3-VRMP	6/9/2013	12:30 PM	N	5.0	M	14.7	114	9.91							
RH-3	ROCKPORT HARBOR-RH3-VRMP	6/9/2013	12:30 PM	N	6.0	M	10.8	109	10.43							
RH-3	ROCKPORT HARBOR-RH3-VRMP	6/9/2013	12:30 PM	N	7.0	M	9.2	105	10.37							
RH-3	ROCKPORT HARBOR-RH3-VRMP	6/9/2013	12:30 PM	N	8.0	M	8.7	103	10.27							
RH-3	ROCKPORT HARBOR-RH3-VRMP	6/9/2013	12:30 PM	N	9.0	M	8.3	102	10.21							
RH-3	ROCKPORT HARBOR-RH3-VRMP	6/9/2013	12:30 PM	N	10.0	M	7.9	100	10.12							
RH-3	ROCKPORT HARBOR-RH3-VRMP	6/9/2013	12:30 PM	N	11.0	M	7.8	100	10.14							
RH-3	ROCKPORT HARBOR-RH3-VRMP	6/9/2013	12:30 PM	N	12.0	M	7.8	100	10.12							
RH-3	ROCKPORT HARBOR-RH3-VRMP	6/9/2013	12:30 PM	N	13.0	M	7.7	100	10.1							
RH-3	ROCKPORT HARBOR-RH3-VRMP	6/9/2013	12:30 PM	N	14.0	M	7.7	100	10.14							
RH-3	ROCKPORT HARBOR-RH3-VRMP	6/9/2013	12:30 PM	N	15.0	M	7.6	99	10.05							
RH-3	ROCKPORT HARBOR-RH3-VRMP	7/22/2013	11:20 AM	N						28.1						
RH-3	ROCKPORT HARBOR-RH3-VRMP	7/22/2013	11:20 AM	N	.0	M	17.9	107	8.77							
RH-3	ROCKPORT HARBOR-RH3-VRMP	7/22/2013	11:20 AM	N	1.0	M	17.3	110	9.02							
RH-3	ROCKPORT HARBOR-RH3-VRMP	7/22/2013	11:20 AM	N	2.0	M	16.1	109	9.19							
RH-3	ROCKPORT HARBOR-RH3-VRMP	7/22/2013	11:20 AM	N	3.0	M	15.5	110	9.46							
RH-3	ROCKPORT HARBOR-RH3-VRMP	7/22/2013	11:20 AM	N	4.0	M	14.7	110	9.55							
RH-3	ROCKPORT HARBOR-RH3-VRMP	7/22/2013	11:20 AM	N	5.0	M	14	108	9.6							
RH-3	ROCKPORT HARBOR-RH3-VRMP	7/22/2013	11:20 AM	N	6.0	M	13.4	105	9.43							
RH-3	ROCKPORT HARBOR-RH3-VRMP	7/22/2013	11:20 AM	N	7.0	M	13.1	105	9.47							
RH-3	ROCKPORT HARBOR-RH3-VRMP	7/22/2013	11:20 AM	N	8.0	M	12.9	105	9.46							
RH-3	ROCKPORT HARBOR-RH3-VRMP	7/22/2013	11:20 AM	N	9.0	M	12.6	104	9.45							
RH-3	ROCKPORT HARBOR-RH3-VRMP	7/22/2013	11:20 AM	N	10.0	M	12.5	103	9.36							
RH-3	ROCKPORT HARBOR-RH3-VRMP	7/22/2013	11:20 AM	N	11.0	M	11.9	99	9.16							
RH-3	ROCKPORT HARBOR-RH3-VRMP	7/22/2013	11:20 AM	N	12.0	M	11.9	96	8.89							
RH-3	ROCKPORT HARBOR-RH3-VRMP	7/22/2013	11:20 AM	N	13.0	M	11.1	89	8.36							
RH-3	ROCKPORT HARBOR-RH3-VRMP	7/22/2013	11:20 AM	N	14.0	M	10.7	88	8.38							
RH-3	ROCKPORT HARBOR-RH3-VRMP	7/22/2013	11:20 AM	N	15.0	M	10.4	86	8.21							
RH-3	ROCKPORT HARBOR-RH3-VRMP	7/22/2013	11:20 AM	D	.0	M	17.8	107	8.69							
RH-3	ROCKPORT HARBOR-RH3-VRMP	7/22/2013	11:29 AM	N												
RH-3	ROCKPORT HARBOR-RH3-VRMP	7/22/2013	11:29 AM	N	.1	M					1.18	0.7	0.87	0.2	0.0188	U<10
RH-3	ROCKPORT HARBOR-RH3-VRMP	7/22/2013	11:29 AM	D												
RH-3	ROCKPORT HARBOR-RH3-VRMP	7/22/2013	11:29 AM	D	.1	M					1.17	0.79	0.69	0.18	0.0195	U<10

Organization Site Code	VRMP Site ID	Date	Time	** Sample Type Qualifier	* Sample Depth	Depth Unit	Water Temp (DEG C)	** D.O. Sat. (%)	** D.O. (MG/L)	Salinity (PPTH)	Chlorophyll A (UG/L)	Chlorophyll A - Phaeophytin (UG/L)	Phaeophytin (UG/L)	Total Nitrogen (MG/L)	Total Phosphorus (MG/L)	Entero- cocci (MPN/ 100ML)
RH-3	ROCKPORT HARBOR-RH3-VRMP	8/20/2013	11:05 AM	N						27.6						
RH-3	ROCKPORT HARBOR-RH3-VRMP	8/20/2013	11:05 AM	N	.0	M	18.4	114	9.15							
RH-3	ROCKPORT HARBOR-RH3-VRMP	8/20/2013	11:05 AM	N	.1	M					1.54	0.76	1.41	0.31	0.0252	U<10
RH-3	ROCKPORT HARBOR-RH3-VRMP	8/20/2013	11:05 AM	N	1.0	M	17.4	114	9.38							
RH-3	ROCKPORT HARBOR-RH3-VRMP	8/20/2013	11:05 AM	N	2.0	M	17.2	111	9.22							
RH-3	ROCKPORT HARBOR-RH3-VRMP	8/20/2013	11:05 AM	N	3.0	M	17.1	106	8.83							
RH-3	ROCKPORT HARBOR-RH3-VRMP	8/20/2013	11:05 AM	N	4.0	M	15.3	104	9.02							
RH-3	ROCKPORT HARBOR-RH3-VRMP	8/20/2013	11:05 AM	N	5.0	M	14.8	103	8.96							
RH-3	ROCKPORT HARBOR-RH3-VRMP	8/20/2013	11:05 AM	N	6.0	M	14.1	101	8.88							
RH-3	ROCKPORT HARBOR-RH3-VRMP	8/20/2013	11:05 AM	N	7.0	M	13.7	100	8.85							
RH-3	ROCKPORT HARBOR-RH3-VRMP	8/20/2013	11:05 AM	N	8.0	M	13.3	97	8.67							
RH-3	ROCKPORT HARBOR-RH3-VRMP	8/20/2013	11:05 AM	N	9.0	M	12.9	91	8.27							
RH-3	ROCKPORT HARBOR-RH3-VRMP	8/20/2013	11:05 AM	N	10.0	M	12.5	88	8.01							
RH-3	ROCKPORT HARBOR-RH3-VRMP	8/20/2013	11:05 AM	N	11.0	M	12.4	86	7.82							
RH-3	ROCKPORT HARBOR-RH3-VRMP	8/20/2013	11:05 AM	N	12.0	M	12.2	84	7.72							
RH-3	ROCKPORT HARBOR-RH3-VRMP	8/20/2013	11:05 AM	N	13.0	M	12.1	84	7.69							
RH-3	ROCKPORT HARBOR-RH3-VRMP	8/20/2013	11:05 AM	N	14.0	M	12	81	7.43							
RH-3	ROCKPORT HARBOR-RH3-VRMP	8/20/2013	11:05 AM	N	15.0	M	12	80	7.34							
RH-3	ROCKPORT HARBOR-RH3-VRMP	9/19/2013	11:36 AM	N						27.7						
RH-3	ROCKPORT HARBOR-RH3-VRMP	9/19/2013	11:36 AM	N	.0	M	15.4	114	9.7							
RH-3	ROCKPORT HARBOR-RH3-VRMP	9/19/2013	11:36 AM	N	.1	M					2.23	1.51	1.3	0.21	0.0194	U<10
RH-3	ROCKPORT HARBOR-RH3-VRMP	9/19/2013	11:36 AM	N	1.0	M	14.7	109	9.56							
RH-3	ROCKPORT HARBOR-RH3-VRMP	9/19/2013	11:36 AM	N	2.0	M	14.2	108	9.52							
RH-3	ROCKPORT HARBOR-RH3-VRMP	9/19/2013	11:36 AM	N	3.0	M	14.2	108	9.51							
RH-3	ROCKPORT HARBOR-RH3-VRMP	9/19/2013	11:36 AM	N	4.0	M	14.1	103	9.2							
RH-3	ROCKPORT HARBOR-RH3-VRMP	9/19/2013	11:36 AM	N	5.0	M		100	8.95							
RH-3	ROCKPORT HARBOR-RH3-VRMP	9/19/2013	11:36 AM	N	6.0	M	13.9	89	8.09							
RH-3	ROCKPORT HARBOR-RH3-VRMP	9/19/2013	11:36 AM	N	7.0	M	13.7	88	7.85							
RH-3	ROCKPORT HARBOR-RH3-VRMP	9/19/2013	11:36 AM	N	8.0	M	13.6	86	7.69							
RH-3	ROCKPORT HARBOR-RH3-VRMP	9/19/2013	11:36 AM	N	9.0	M	13.4	84	7.5							
RH-3	ROCKPORT HARBOR-RH3-VRMP	9/19/2013	11:36 AM	N	10.0	M	13.2	78	7.12							
RH-3	ROCKPORT HARBOR-RH3-VRMP	9/19/2013	11:36 AM	N	11.0	M	13	74	6.72							
RH-3	ROCKPORT HARBOR-RH3-VRMP	9/19/2013	11:36 AM	N	12.0	M	12.9	74	6.71							
RH-3	ROCKPORT HARBOR-RH3-VRMP	9/19/2013	11:36 AM	N	13.0	M	12.9	76	6.89							
RH-3	ROCKPORT HARBOR-RH3-VRMP	9/19/2013	11:36 AM	N	14.0	M	12.9	78	7.04							
RH-3	ROCKPORT HARBOR-RH3-VRMP	9/19/2013	11:36 AM	N	15.0	M	12.8	78	7.06							
RO	ROCKPORT HARBOR-RO-VRMP	5/9/2013	1:03 PM	N						25.9						U<10
RO	ROCKPORT HARBOR-RO-VRMP	5/9/2013	1:03 PM	N	.0	M	11.3	119	11.08							
RO	ROCKPORT HARBOR-RO-VRMP	5/9/2013	1:03 PM	N	.1	M					1.88	1.19	1.26	0.2	0.023	
RO	ROCKPORT HARBOR-RO-VRMP	5/9/2013	1:03 PM	N	1.0	M	11.2	121	11.28							
RO	ROCKPORT HARBOR-RO-VRMP	6/9/2013	1:05 PM	N						21.7						U<10
RO	ROCKPORT HARBOR-RO-VRMP	6/9/2013	1:05 PM	N	.0	M	14.8	116	10.04							

Organization Site Code	VRMP Site ID	Date	Time	** Sample Type Qualifier	* Sample Depth	Depth Unit	Water Temp (DEG C)	** D.O. Sat. (%)	** D.O. (MG/L)	Salinity (PPTH)	Chlorophyll A (UG/L)	Chlorophyll A - Phaeophytin (UG/L)	Phaeophytin (UG/L)	Total Nitrogen (MG/L)	Total Phosphorus (MG/L)	Entero- cocci (MPN/ 100ML)
RO	ROCKPORT HARBOR-RO-VRMP	6/9/2013	1:05 PM	N	.1	M					5.76	2.89	5.18	0.24	0.0316	
RO	ROCKPORT HARBOR-RO-VRMP	6/9/2013	1:05 PM	N	1.0	M	14.7	116	10.11							
RO	ROCKPORT HARBOR-RO-VRMP	6/9/2013	1:05 PM	N	2.0	M	14.7	115	9.99							
RO	ROCKPORT HARBOR-RO-VRMP	6/9/2013	1:05 PM	N	3.0	M	14.7	117	10.17							
RO	ROCKPORT HARBOR-RO-VRMP	6/9/2013	1:05 PM	N	4.0	M	13.9	117	10.27							
RO	ROCKPORT HARBOR-RO-VRMP	6/9/2013	1:05 PM	N	7.0	M	9.4	110	10.86							
RO	ROCKPORT HARBOR-RO-VRMP	6/9/2013	1:05 PM	N	10.0	M	9.1	108	10.7							
RO	ROCKPORT HARBOR-RO-VRMP	7/22/2013	10:35 AM	N						27.8						
RO	ROCKPORT HARBOR-RO-VRMP	7/22/2013	10:35 AM	N	.0	M	17.8	113	9.25							
RO	ROCKPORT HARBOR-RO-VRMP	7/22/2013	10:35 AM	N	1.0	M	17.1	113	9.34							
RO	ROCKPORT HARBOR-RO-VRMP	7/22/2013	10:35 AM	N	2.0	M	16.8	113	9.45							
RO	ROCKPORT HARBOR-RO-VRMP	7/22/2013	10:35 AM	N	3.0	M	15.5	112	9.66							
RO	ROCKPORT HARBOR-RO-VRMP	7/22/2013	10:35 AM	N	4.0	M	14.9	113	9.79							
RO	ROCKPORT HARBOR-RO-VRMP	7/22/2013	10:35 AM	N	5.0	M	14.2	112	9.89							
RO	ROCKPORT HARBOR-RO-VRMP	7/22/2013	10:35 AM	N	6.0	M	12.9	106	9.63							
RO	ROCKPORT HARBOR-RO-VRMP	7/22/2013	10:35 AM	N	7.0	M	12.6	103	9.37							
RO	ROCKPORT HARBOR-RO-VRMP	7/22/2013	10:35 AM	N	8.0	M	11.9	102	9.5							
RO	ROCKPORT HARBOR-RO-VRMP	7/22/2013	10:35 AM	N	9.0	M	11.8	101	9.35							
RO	ROCKPORT HARBOR-RO-VRMP	7/22/2013	10:35 AM	N	10.0	M	11.8	101	9.33							
RO	ROCKPORT HARBOR-RO-VRMP	7/22/2013	10:35 AM	N	11.0	M	11.7	100	9.3							
RO	ROCKPORT HARBOR-RO-VRMP	7/22/2013	10:35 AM	N	12.0	M	11.7	100	9.31							
RO	ROCKPORT HARBOR-RO-VRMP	7/22/2013	10:35 AM	N	13.0	M	11.5	100	9.3							
RO	ROCKPORT HARBOR-RO-VRMP	7/22/2013	10:35 AM	N	14.0	M	11.2	99	9.17							
RO	ROCKPORT HARBOR-RO-VRMP	7/22/2013	10:35 AM	N	15.0	M	11.3	98	9.19							
RO	ROCKPORT HARBOR-RO-VRMP	7/22/2013	10:35 AM	N	.1	M					0.87	0.58	0.52	0.29	0.0186	U<10
RO	ROCKPORT HARBOR-RO-VRMP	8/20/2013	10:25 AM	N						24.3						
RO	ROCKPORT HARBOR-RO-VRMP	8/20/2013	10:25 AM	N	.0	M	19.3	118	9.38							
RO	ROCKPORT HARBOR-RO-VRMP	8/20/2013	10:25 AM	N	.1	M					1.81	0.87	1.68	0.28	0.0213	U<10
RO	ROCKPORT HARBOR-RO-VRMP	8/20/2013	10:25 AM	N	1.0	M	18.9	119	9.56							
RO	ROCKPORT HARBOR-RO-VRMP	8/20/2013	10:25 AM	N	2.0	M	18	119	9.71							
RO	ROCKPORT HARBOR-RO-VRMP	8/20/2013	10:25 AM	N	3.0	M	17.5	117	9.64							
RO	ROCKPORT HARBOR-RO-VRMP	8/20/2013	10:25 AM	N	4.0	M	14.3	106	9.26							
RO	ROCKPORT HARBOR-RO-VRMP	8/20/2013	10:25 AM	N	5.0	M	13.8	102	9.09							
RO	ROCKPORT HARBOR-RO-VRMP	8/20/2013	10:25 AM	N	6.0	M	13.5	100	8.96							
RO	ROCKPORT HARBOR-RO-VRMP	8/20/2013	10:25 AM	N	7.0	M	12.9	95	8.58							
RO	ROCKPORT HARBOR-RO-VRMP	8/20/2013	10:25 AM	N	8.0	M	12.4	91	8.35							
RO	ROCKPORT HARBOR-RO-VRMP	8/20/2013	10:25 AM	N	9.0	M	12.4	90	8.24							
RO	ROCKPORT HARBOR-RO-VRMP	8/20/2013	10:25 AM	N	10.0	M	12.4	90	8.26							
RO	ROCKPORT HARBOR-RO-VRMP	8/20/2013	10:25 AM	N	11.0	M	12.4	90	8.22							
RO	ROCKPORT HARBOR-RO-VRMP	8/20/2013	10:25 AM	N	12.0	M	12.4	90	8.25							
RO	ROCKPORT HARBOR-RO-VRMP	8/20/2013	10:25 AM	N	13.0	M	12.3	90	8.26							
RO	ROCKPORT HARBOR-RO-VRMP	8/20/2013	10:25 AM	N	14.0	M	12	87	8.01							

Organization Site Code	VRMP Site ID	Date	Time	** Sample Type Qualifier	* Sample Depth	Depth Unit	Water Temp (DEG C)	** D.O. Sat. (%)	** D.O. (MG/L)	Salinity (PPTH)	Chlorophyll A (UG/L)	Chlorophyll A - Phaeophytin (UG/L)	Phaeophytin (UG/L)	Total Nitrogen (MG/L)	Total Phosphorus (MG/L)	Entero-cocci (MPN/100ML)
RO	ROCKPORT HARBOR-RO-VRMP	8/20/2013	10:25 AM	N	15.0	M	12	87	7.99							
RO	ROCKPORT HARBOR-RO-VRMP	9/19/2013	10:57 AM	N						27.1						
RO	ROCKPORT HARBOR-RO-VRMP	9/19/2013	10:57 AM	N	.0	M	14.7	117	10.02							
RO	ROCKPORT HARBOR-RO-VRMP	9/19/2013	10:57 AM	N	.1	M					3.29	1.91	2.48	0.2	0.0222	U<10
RO	ROCKPORT HARBOR-RO-VRMP	9/19/2013	10:57 AM	N	1.0	M	14.4	118	10.3							
RO	ROCKPORT HARBOR-RO-VRMP	9/19/2013	10:57 AM	N	2.0	M	14.4	117	10.28							
RO	ROCKPORT HARBOR-RO-VRMP	9/19/2013	10:57 AM	N	3.0	M	14.3	115	10.13							
RO	ROCKPORT HARBOR-RO-VRMP	9/19/2013	10:57 AM	N	4.0	M	14.3	114	9.98							
RO	ROCKPORT HARBOR-RO-VRMP	9/19/2013	10:57 AM	N	5.0	M	14	107	9.42							
RO	ROCKPORT HARBOR-RO-VRMP	9/19/2013	10:57 AM	N	6.0	M	13.9	106	9.33							
RO	ROCKPORT HARBOR-RO-VRMP	9/19/2013	10:57 AM	N	7.0	M	13.8	105	9.22							
RO	ROCKPORT HARBOR-RO-VRMP	9/19/2013	10:57 AM	N	8.0	M	13.7	93	9							
RO	ROCKPORT HARBOR-RO-VRMP	9/19/2013	10:57 AM	N	9.0	M	13.4	88	8							
RO	ROCKPORT HARBOR-RO-VRMP	9/19/2013	10:57 AM	N	10.0	M	13.2	86	7.78							
RO	ROCKPORT HARBOR-RO-VRMP	9/19/2013	10:57 AM	N	11.0	M	13.1	86	7.73							
RO	ROCKPORT HARBOR-RO-VRMP	9/19/2013	10:57 AM	N	12.0	M	13	83	7.58							
RO	ROCKPORT HARBOR-RO-VRMP	9/19/2013	10:57 AM	N	13.0	M	12.9	84	7.58							
RO	ROCKPORT HARBOR-RO-VRMP	9/19/2013	10:57 AM	N	14.0	M	12.9	84	7.63							
RO	ROCKPORT HARBOR-RO-VRMP	9/19/2013	10:57 AM	N	15.0	M	12.9	84	7.63							

Appendix A-2. 2013 observational data and quality assurance/quality control (QA/QC) notes for "approved" and "non-approved" sites.
 ** "N" = normal environmental sample; "D" = field duplicate; "L" = lab duplicate
 Refer to Appendix A-1 for water quality data

Organization Site Code	VRMP Site ID	Date	Time	** Sample Type Qualifier	Flow	Stage	Air Temp (°C)	Sample Location	Current Weather	Air Condition	Past 24HR Weather	Habitat	Tide Stage	Water Appearance	Comments
Rockport Conservation Commission - Approved Sites:															
GR-2	GOOSE RIVER - NGR01 - VRMP	5/9/2013	8:30 AM	N	STORM FLOW	MED		BANK	CLOUDY, HEAVY RAIN		CLOUDY, FOGGY, HEAVY RAIN	RIFFLE		TURBID	STAGE GR-2=17"; GR-2-1=16 1/8" WADEABLE/MID-DEPTH
GR-2	GOOSE RIVER - NGR01 - VRMP	6/8/2013		N				BANK							
GR-2	GOOSE RIVER - NGR01 - VRMP	6/9/2013	7:25 AM	N	STORM FLOW	HIGH	15.2	BANK	CLOUDY	CALM	CLOUDY, HEAVY RAIN, LIGHT RAIN	RIFFLE		MEDIUM STAINED	STAGE GR-2=2 1/4"; GR-2.1=6 1/2" WADEABLE/MID-DEPTH
GR-2	GOOSE RIVER - NGR01 - VRMP	6/10/2013	6:55 AM	N	STORM FLOW	HIGH		BANK	CLEAR		CLOUDY, PARTLY CLOUDY	RIFFLE		MEDIUM STAINED	STAGE GR-2=8 7/8"; GR 2.1=11" WADEABLE/MID-DEPTH
GR-2	GOOSE RIVER - NGR01 - VRMP	6/11/2013	5:54 AM	N	STORM FLOW	HIGH	12.2	BANK	SHOWERS		MOSTLY CLOUDY, SHOWERS	RIFFLE		MEDIUM STAINED	STAGE GR-2=11 5/8"; GR-2-1=13" WADEABLE/MID-DEPTH
GR-2	GOOSE RIVER - NGR01 - VRMP	6/12/2013	7:55 AM	N	STORM FLOW	HIGH	13.9	BANK	LIGHT RAIN	CALM	HEAVY RAIN	RUN		MEDIUM STAINED	STAGE GR-2= UNDER WATER; GR-2.1=4" ± (DIFFICULT TO MEASURE ACCURATELY) WADEABLE/MID-DEPTH
GR-2	GOOSE RIVER - NGR01 - VRMP	6/14/2013	11:45 AM	N	BASE FLOW	MED	16.2	BANK	MOSTLY CLOUDY	CALM	CLOUDY	RIFFLE		MEDIUM STAINED	STAGE GR-2= 9 1/4"; GR-2.1 + 11 1/2" WADEABLE/MID-DEPTH
GR-2	GOOSE RIVER - NGR01 - VRMP	6/17/2013	3:28 PM	N	BASE FLOW	LOW		BANK	CLEAR	BREEZE	CLEAR	RIFFLE		CLEAR	STAGE GR-2 =14.75"; GR-2.1 = 15.0" WADEABLE/MID-DEPTH
GR-2	GOOSE RIVER - NGR01 - VRMP	7/22/2013	7:15 AM	N	BASE FLOW	LOW		BANK	CLEAR	CALM	CLEAR	RIFFLE		CLEAR	STAGE GR-2 = NA (ABOVE WATER); GR 2.1 = 21 1/8" (SLIGHT ANGLE) WADEABLE/MID-DEPTH
GR-2	GOOSE RIVER - NGR01 - VRMP	8/20/2013	7:45 AM	N	BASE FLOW	LOW		BANK	PARTLY CLOUDY	CALM	CLEAR	RIFFLE		CLEAR	STAGE GR-2 = DRY; GR 2.1 = 20" WADEABLE/MID-DEPTH
GR-2	GOOSE RIVER - NGR01 - VRMP	9/19/2013	7:35 AM	N	BASE FLOW	MED		BANK	CLEAR	CALM	CLEAR	RIFFLE		CLEAR	STAGE GR-2 = 19 1/2"; GR-2.1 = 17 3/4" WADEABLE/MID-DEPTH
GR-2	GOOSE RIVER - NGR01 - VRMP	9/19/2013	7:35 AM	D				BANK							STAGE GR-2 = 19 1/2"; GR-2.1 = 17 3/4" WADEABLE/MID-DEPTH
HB-1	HARKNESS BROOK - NHK00 - VRMP	5/9/2013	8:00 AM	N	STORM FLOW	MED		BANK	CLOUDY, HEAVY RAIN		CLOUDY, FOGGY, HEAVY RAIN	RIFFLE		TURBID	WADEABLE/MID-DEPTH
HB-1	HARKNESS BROOK - NHK00 - VRMP	6/9/2013	7:10 AM	N	STORM FLOW	MED		BANK	CLOUDY	CALM	CLOUDY, HEAVY RAIN, LIGHT RAIN	RIFFLE		DARKLY STAINED	WADEABLE/MID-DEPTH
HB-1	HARKNESS BROOK - NHK00 - VRMP	6/10/2013	6:43 AM	N	BASE FLOW	MED		BANK	CLEAR		CLOUDY, PARTLY CLOUDY	RIFFLE		MEDIUM STAINED	WADEABLE/MID-DEPTH
HB-1	HARKNESS BROOK - NHK00 - VRMP	7/22/2013	7:10 AM	N	BASE FLOW	LOW		BANK	CLEAR	CALM	CLEAR	RIFFLE		CLEAR	WADEABLE/MID-DEPTH
HB-1	HARKNESS BROOK - NHK00 - VRMP	8/20/2013	7:35 AM	N	BASE FLOW	LOW		BANK	PARTLY CLOUDY	CALM	CLEAR	RIFFLE		CLEAR	WADEABLE/MID-DEPTH
HB-1	HARKNESS BROOK - NHK00 - VRMP	9/19/2013	7:15 AM	N	BASE FLOW	MED		BANK	CLEAR	CALM	CLEAR	RIFFLE		CLEAR	WADEABLE/MID-DEPTH
LPS-1	LILY POND STREAM - NLP00 - VRMP	5/9/2013	8:50 AM	N	STORM FLOW	MED		BANK	CLOUDY, HEAVY RAIN		CLOUDY, FOGGY, HEAVY RAIN	RIFFLE		CLEAR	WADEABLE/MID-DEPTH

Organization Site Code	VRMP Site ID	Date	Time	** Sample Type Qualifier	Flow	Stage	Air Temp (°C)	Sample Location	Current Weather	Air Condition	Past 24HR Weather	Habitat	Tide Stage	Water Appearance	Comments
LPS-1	LILY POND STREAM - NLP00 - VRMP	6/9/2013	7:45 AM	N	STORM FLOW	HIGH	15.2	BANK	CLOUDY	CALM	CLOUDY, HEAVY RAIN, LIGHT RAIN	CASCADE		CLEAR	WADEABLE/MID-DEPTH
LPS-1	LILY POND STREAM - NLP00 - VRMP	6/10/2013	7:09 AM	N	BASE FLOW	MED		BANK	CLEAR		CLOUDY, PARTLY CLOUDY	CASCADE		CLEAR	WADEABLE/MID-DEPTH
LPS-1	LILY POND STREAM - NLP00 - VRMP	7/22/2013	7:35 AM	N	BASE FLOW	LOW		BANK	CLEAR	CALM	CLEAR	RIFFLE		CLEAR	WADEABLE/MID-DEPTH
LPS-1	LILY POND STREAM - NLP00 - VRMP	7/22/2013	7:35 AM	D				BANK							WADEABLE/MID-DEPTH
LPS-1	LILY POND STREAM - NLP00 - VRMP	8/20/2013	7:54 AM	N	BASE FLOW	LOW		BANK	PARTLY CLOUDY	CALM	CLEAR	RIFFLE		CLEAR	WADEABLE/MID-DEPTH
LPS-1	LILY POND STREAM - NLP00 - VRMP	9/19/2013	7:52 AM	N	BASE FLOW	MED		BANK	CLEAR	CALM	CLEAR	RIFFLE		CLEAR	WADEABLE/MID-DEPTH
OTT-1	OTT BROOK - NOT02 - VRMP	5/9/2013	7:40 AM	N	STORM FLOW	MED		BANK	CLOUDY, HEAVY RAIN		CLOUDY, FOGGY, HEAVY RAIN	RIFFLE		MILKY	WADEABLE/MID-DEPTH
OTT-1	OTT BROOK - NOT02 - VRMP	6/9/2013	7:00 AM	N	STORM FLOW	MED	15.2	BANK	CLOUDY	CALM	CLOUDY, HEAVY RAIN, LIGHT RAIN	RIFFLE		DARKLY STAINED	WADEABLE/MID-DEPTH
OTT-1	OTT BROOK - NOT02 - VRMP	6/10/2013	6:30 AM	N	BASE FLOW	MED		BANK	CLEAR		CLOUDY, PARTLY CLOUDY	RIFFLE		DARKLY STAINED	WADEABLE/MID-DEPTH
OTT-1	OTT BROOK - NOT02 - VRMP	7/22/2013	6:35 AM	N	BASE FLOW	LOW		BANK	CLEAR	CALM	CLEAR	RIFFLE		MEDIUM STAINED	WADEABLE/MID-DEPTH
OTT-1	OTT BROOK - NOT02 - VRMP	8/20/2013	7:12 AM	N	BASE FLOW	LOW		BANK	PARTLY CLOUDY	CALM	CLEAR	RIFFLE		MEDIUM STAINED	WADEABLE/MID-DEPTH
OTT-1	OTT BROOK - NOT02 - VRMP	9/19/2013	7:00 AM	N	BASE FLOW	MED		BANK	CLEAR	CALM	CLEAR	RIFFLE		DARKLY STAINED	WADEABLE/MID-DEPTH

Rockport Conservation Commission - Non-Approved Sites:

WS-1	WINTER STREET DITCH - N01	5/9/2013	9:05 AM	N	STORM FLOW	MED		BANK	CLOUDY, HEAVY RAIN		CLOUDY, FOGGY, HEAVY RAIN	RIFFLE		CLEAR	WADEABLE/MID-DEPTH
WS-1	WINTER STREET DITCH - N01	6/9/2013	8:00 AM	N	STORM FLOW	MED	15.2	BANK	CLOUDY	CALM	CLOUDY, HEAVY RAIN, LIGHT RAIN	RIFFLE		CLEAR	WADEABLE/MID-DEPTH
WS-1	WINTER STREET DITCH - N01	6/10/2013	7:19 AM	N				BANK	CLEAR		CLOUDY, PARTLY CLOUDY				WADEABLE/MID-DEPTH
WS-1	WINTER STREET DITCH - N01	7/22/2013	7:55 AM	N	BASE FLOW	LOW		BANK	CLEAR	CALM	CLEAR	RIFFLE		CLEAR	WADEABLE/MID-DEPTH
WS-1	WINTER STREET DITCH - N01	8/20/2013	8:06 AM	N	BASE FLOW	LOW		BANK	PARTLY CLOUDY	CALM	CLEAR	RIFFLE		CLEAR	WADEABLE/MID-DEPTH
WS-1	WINTER STREET DITCH - N01	9/19/2013	8:07 AM	N	BASE FLOW	MED		BANK	CLEAR	CALM	CLEAR	RIFFLE		CLEAR	WADEABLE/MID-DEPTH

Appendix A-2. 2013 observational data and quality assurance/quality control (QA/QC) notes for "approved" and "non-approved" sites.
 ** "N" = normal environmental sample; "D" = field duplicate; "L" = lab duplicate
 Refer to Appendix A-1 for water quality data

Organization Site Code	VRMP Site ID	Date	Time	** Sample Type Qualifier	Flow	Stage	Air Temp (°C)	Sample Location	Current Weather	Air Condition	Past 24HR Weather	Habitat	Tide Stage	Water Appearance	Comments
Rockport Harbor, Rockport Conservation Commission - Approved Sites:															
RH-1	ROCKPORT HARBOR-RH1-VRMP	5/9/2013	10:58 AM	N				BOAT	CLOUDY, SHOWERS	BREEZE	CLOUDY, HEAVY RAIN, LIGHT RAIN		HIGH		SECCHI DEPTH = 5.0 METERS NON-WADEABLE/3 FT BELOW SURFACE
RH-1	ROCKPORT HARBOR-RH1-VRMP	5/9/2013	10:58 AM	N				BOAT							SECCHI DEPTH = 5.0 METERS NON-WADEABLE/3 FT BELOW SURFACE
RH-1	ROCKPORT HARBOR-RH1-VRMP	5/9/2013	10:58 AM	N				BOAT							
RH-1	ROCKPORT HARBOR-RH1-VRMP	5/9/2013	10:58 AM	N				BOAT							SECCHI DEPTH = 5.0 METERS NON-WADEABLE/3 FT BELOW SURFACE
RH-1	ROCKPORT HARBOR-RH1-VRMP	5/9/2013	10:58 AM	N				BOAT							SECCHI DEPTH = 5.0 METERS NON-WADEABLE/3 FT BELOW SURFACE
RH-1	ROCKPORT HARBOR-RH1-VRMP	5/9/2013	10:58 AM	N				BOAT							SECCHI DEPTH = 5.0 METERS NON-WADEABLE/3 FT BELOW SURFACE
RH-1	ROCKPORT HARBOR-RH1-VRMP	5/9/2013	10:58 AM	N				BOAT							SECCHI DEPTH = 5.0 METERS NON-WADEABLE/3 FT BELOW SURFACE
RH-1	ROCKPORT HARBOR-RH1-VRMP	5/9/2013	10:58 AM	N				BOAT							SECCHI DEPTH = 5.0 METERS NON-WADEABLE/3 FT BELOW SURFACE
RH-1	ROCKPORT HARBOR-RH1-VRMP	5/9/2013	10:58 AM	N				BOAT							SECCHI DEPTH = 5.0 METERS NON-WADEABLE/3 FT BELOW SURFACE
RH-1	ROCKPORT HARBOR-RH1-VRMP	5/9/2013	10:58 AM	D									HIGH		
RH-1	ROCKPORT HARBOR-RH1-VRMP	5/9/2013	10:58 AM	D				BOAT							
RH-1	ROCKPORT HARBOR-RH1-VRMP	6/9/2013	11:00 AM	N				BOAT	CLEAR, MOSTLY CLOUDY	STRONG WIND	CLOUDY, HEAVY RAIN, MOSTLY CLOUDY		HIGH		SECCHI DEPTH = 2.1 METERS NON-WADEABLE/3 FT BELOW SURFACE
RH-1	ROCKPORT HARBOR-RH1-VRMP	6/9/2013	11:00 AM	N				BOAT							SECCHI DEPTH = 2.1 METERS NON-WADEABLE/3 FT BELOW SURFACE
RH-1	ROCKPORT HARBOR-RH1-VRMP	6/9/2013	11:00 AM	N				BOAT							
RH-1	ROCKPORT HARBOR-RH1-VRMP	6/9/2013	11:00 AM	N				BOAT							SECCHI DEPTH = 2.1 METERS NON-WADEABLE/3 FT BELOW SURFACE
RH-1	ROCKPORT HARBOR-RH1-VRMP	6/9/2013	11:00 AM	N				BOAT							SECCHI DEPTH = 2.1 METERS NON-WADEABLE/3 FT BELOW SURFACE
RH-1	ROCKPORT HARBOR-RH1-VRMP	6/9/2013	11:00 AM	N				BOAT							SECCHI DEPTH = 2.1 METERS NON-WADEABLE/3 FT BELOW SURFACE
RH-1	ROCKPORT HARBOR-RH1-VRMP	6/9/2013	11:00 AM	N				BOAT							SECCHI DEPTH = 2.1 METERS NON-WADEABLE/3 FT BELOW SURFACE
RH-1	ROCKPORT HARBOR-RH1-VRMP	6/9/2013	11:00 AM	N				BOAT							SECCHI DEPTH = 2.1 METERS NON-WADEABLE/3 FT BELOW SURFACE
RH-1	ROCKPORT HARBOR-RH1-VRMP	6/9/2013	11:00 AM	N				BOAT							SECCHI DEPTH = 2.1 METERS NON-WADEABLE/3 FT BELOW SURFACE
RH-1	ROCKPORT HARBOR-RH1-VRMP	7/22/2013	12:22 AM	N				BOAT	PARTLY CLOUDY	BREEZE	PARTLY CLOUDY		HIGH		SECCHI DEPTH = 3.6 METERS NON-WADEABLE/3 FT BELOW SURFACE
RH-1	ROCKPORT HARBOR-RH1-VRMP	7/22/2013	12:22 AM	N				BOAT							SECCHI DEPTH = 3.6 METERS NON-WADEABLE/3 FT BELOW SURFACE
RH-1	ROCKPORT HARBOR-RH1-VRMP	7/22/2013	12:22 AM	N				BOAT							SECCHI DEPTH = 3.6 METERS NON-WADEABLE/3 FT BELOW SURFACE
RH-1	ROCKPORT HARBOR-RH1-VRMP	7/22/2013	12:22 AM	N				BOAT							SECCHI DEPTH = 3.6 METERS NON-WADEABLE/3 FT BELOW SURFACE
RH-1	ROCKPORT HARBOR-RH1-VRMP	7/22/2013	12:22 AM	N				BOAT							SECCHI DEPTH = 3.6 METERS NON-WADEABLE/3 FT BELOW SURFACE
RH-1	ROCKPORT HARBOR-RH1-VRMP	7/22/2013	12:22 AM	N				BOAT							SECCHI DEPTH = 3.6 METERS NON-WADEABLE/3 FT BELOW SURFACE
RH-1	ROCKPORT HARBOR-RH1-VRMP	7/22/2013	12:22 AM	N				BOAT							SECCHI DEPTH = 3.6 METERS NON-WADEABLE/3 FT BELOW SURFACE
RH-1	ROCKPORT HARBOR-RH1-VRMP	7/22/2013	12:22 AM	N				BOAT							SECCHI DEPTH = 3.6 METERS NON-WADEABLE/3 FT BELOW SURFACE
RH-1	ROCKPORT HARBOR-RH1-VRMP	7/22/2013	12:22 PM	N									HIGH		
RH-1	ROCKPORT HARBOR-RH1-VRMP	7/22/2013	12:22 PM	N				BOAT							
RH-1	ROCKPORT HARBOR-RH1-VRMP	8/20/2013	12:10 AM	N				BOAT	CLEAR	BREEZE	CLEAR		HIGH		SECCHI DEPTH = 4.0 AND 4.1 METERS NON-WADEABLE/3 FT BELOW SURFACE
RH-1	ROCKPORT HARBOR-RH1-VRMP	8/20/2013	12:10 AM	N				BOAT							SECCHI DEPTH = 4.0 AND 4.1 METERS NON-WADEABLE/3 FT BELOW SURFACE
RH-1	ROCKPORT HARBOR-RH1-VRMP	8/20/2013	12:10 AM	N				BOAT							SECCHI DEPTH = 4.0 AND 4.1 METERS NON-WADEABLE/3 FT BELOW SURFACE
RH-1	ROCKPORT HARBOR-RH1-VRMP	8/20/2013	12:10 AM	N				BOAT							SECCHI DEPTH = 4.0 AND 4.1 METERS NON-WADEABLE/3 FT BELOW SURFACE
RH-1	ROCKPORT HARBOR-RH1-VRMP	8/20/2013	12:10 AM	N				BOAT							SECCHI DEPTH = 4.0 AND 4.1 METERS NON-WADEABLE/3 FT BELOW SURFACE
RH-1	ROCKPORT HARBOR-RH1-VRMP	8/20/2013	12:10 AM	N				BOAT							SECCHI DEPTH = 4.0 AND 4.1 METERS NON-WADEABLE/3 FT BELOW SURFACE
RH-1	ROCKPORT HARBOR-RH1-VRMP	8/20/2013	12:10 AM	N				BOAT							SECCHI DEPTH = 4.0 AND 4.1 METERS NON-WADEABLE/3 FT BELOW SURFACE
RH-1	ROCKPORT HARBOR-RH1-VRMP	8/20/2013	12:10 PM	N									HIGH		
RH-1	ROCKPORT HARBOR-RH1-VRMP	8/20/2013	12:10 PM	N				BOAT							
RH-1	ROCKPORT HARBOR-RH1-VRMP	8/20/2013	12:10 PM	D									HIGH		
RH-1	ROCKPORT HARBOR-RH1-VRMP	8/20/2013	12:10 PM	D				BOAT							
RH-1	ROCKPORT HARBOR-RH1-VRMP	9/19/2013	12:41 AM	N				BOAT	CLEAR	BREEZE	CLEAR				SECCHI DEPTH = 3.5 METERS NON-WADEABLE/3 FT BELOW SURFACE
RH-1	ROCKPORT HARBOR-RH1-VRMP	9/19/2013	12:41 AM	N				BOAT							SECCHI DEPTH = 3.5 METERS NON-WADEABLE/3 FT BELOW SURFACE

Organization Site Code	VRMP Site ID	Date	Time	** Sample Type Qualifier	Flow	Stage	Air Temp (°C)	Sample Location	Current Weather	Air Condition	Past 24HR Weather	Habitat	Tide Stage	Water Appearance	Comments
RO	ROCKPORT HARBOR-RO-VRMP	5/9/2013	1:03 PM	N				BOAT							STRONG CURRENT-UNABLE TO DO PROFILE. SALINITY DEPTH AT 0.1 METERS.
RO	ROCKPORT HARBOR-RO-VRMP	6/9/2013	1:05 PM	N				BOAT	CLEAR, MOSTLY CLOUDY	STRONG WIND	CLOUDY, HEAVY RAIN, MOSTLY CLOUDY		HIGH		SALINITY VALUE AT 0.1 METER DEPTH
RO	ROCKPORT HARBOR-RO-VRMP	6/9/2013	1:05 PM	N				BOAT							SALINITY VALUE AT 0.1 METER DEPTH
RO	ROCKPORT HARBOR-RO-VRMP	6/9/2013	1:05 PM	N				BOAT							SALINITY VALUE AT 0.1 METER DEPTH
RO	ROCKPORT HARBOR-RO-VRMP	6/9/2013	1:05 PM	N				BOAT							SALINITY VALUE AT 0.1 METER DEPTH
RO	ROCKPORT HARBOR-RO-VRMP	6/9/2013	1:05 PM	N				BOAT							SALINITY VALUE AT 0.1 METER DEPTH
RO	ROCKPORT HARBOR-RO-VRMP	6/9/2013	1:05 PM	N				BOAT							SALINITY VALUE AT 0.1 METER DEPTH
RO	ROCKPORT HARBOR-RO-VRMP	6/9/2013	1:05 PM	N				BOAT							SALINITY VALUE AT 0.1 METER DEPTH
RO	ROCKPORT HARBOR-RO-VRMP	6/9/2013	1:05 PM	N				BOAT							SALINITY VALUE AT 0.1 METER DEPTH
RO	ROCKPORT HARBOR-RO-VRMP	7/22/2013	10:35 AM	N				BOAT	PARTLY CLOUDY	BREEZE	PARTLY CLOUDY		HIGH		SECCHI DEPTH = 4.7 METERS NON-WADEABLE/3 FT BELOW SURFACE
RO	ROCKPORT HARBOR-RO-VRMP	7/22/2013	10:35 AM	N				BOAT							SECCHI DEPTH = 4.7 METERS NON-WADEABLE/3 FT BELOW SURFACE
RO	ROCKPORT HARBOR-RO-VRMP	7/22/2013	10:35 AM	N				BOAT							SECCHI DEPTH = 4.7 METERS NON-WADEABLE/3 FT BELOW SURFACE
RO	ROCKPORT HARBOR-RO-VRMP	7/22/2013	10:35 AM	N				BOAT							SECCHI DEPTH = 4.7 METERS NON-WADEABLE/3 FT BELOW SURFACE
RO	ROCKPORT HARBOR-RO-VRMP	7/22/2013	10:35 AM	N				BOAT							SECCHI DEPTH = 4.7 METERS NON-WADEABLE/3 FT BELOW SURFACE
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RO	ROCKPORT HARBOR-RO-VRMP	7/22/2013	10:35 AM	N				BOAT							SECCHI DEPTH = 4.7 METERS NON-WADEABLE/3 FT BELOW SURFACE
RO	ROCKPORT HARBOR-RO-VRMP	8/20/2013	10:25 AM	N				BOAT	CLEAR	BREEZE	CLEAR		HIGH		SECCHI DEPTH = 3.3 METERS NON-WADEABLE/3 FT BELOW SURFACE
RO	ROCKPORT HARBOR-RO-VRMP	8/20/2013	10:25 AM	N				BOAT							SECCHI DEPTH = 3.3 METERS NON-WADEABLE/3 FT BELOW SURFACE
RO	ROCKPORT HARBOR-RO-VRMP	8/20/2013	10:25 AM	N				BOAT							SECCHI DEPTH = 3.3 METERS NON-WADEABLE/3 FT BELOW SURFACE
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RO	ROCKPORT HARBOR-RO-VRMP	9/19/2013	10:57 AM	N				BOAT	CLEAR	BREEZE	CLEAR		HIGH		WATER NOTICEABLY BROWNISH; SECCHI DEPTH = 3.4 METERS NON-WADEABLE/3 FT BELOW SURFACE
RO	ROCKPORT HARBOR-RO-VRMP	9/19/2013	10:57 AM	N				BOAT							WATER NOTICEABLY BROWNISH; SECCHI DEPTH = 3.4 METERS NON-WADEABLE/3 FT BELOW SURFACE
RO	ROCKPORT HARBOR-RO-VRMP	9/19/2013	10:57 AM	N				BOAT							WATER NOTICEABLY BROWNISH; SECCHI DEPTH = 3.4 METERS NON-WADEABLE/3 FT BELOW SURFACE
RO	ROCKPORT HARBOR-RO-VRMP	9/19/2013	10:57 AM	N				BOAT							WATER NOTICEABLY BROWNISH; SECCHI DEPTH = 3.4 METERS NON-WADEABLE/3 FT BELOW SURFACE

Organization Site Code	VRMP Site ID	Date	Time	** Sample Type Qualifier	Flow	Stage	Air Temp (°C)	Sample Location	Current Weather	Air Condition	Past 24HR Weather	Habitat	Tide Stage	Water Appearance	Comments
RO	ROCKPORT HARBOR-RO-VRMP	9/19/2013	10:57 AM	N				BOAT							WATER NOTICEABLY BROWNISH; SECCHI DEPTH = 3.4 METERS NON-WADEABLE/3 FT BELOW SURFACE
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