

## Section 5-7 Rockport Harbor & Tributaries (Rockport Conservation Commission)

### Rockport Harbor & Tributaries

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Rockport Harbor is in Knox County on the mid-coast of Maine in the Penobscot Bay region. The watershed, which has a total area of approximately 10 mi<sup>2</sup> (25.9 km<sup>2</sup>) has three sub-watersheds: Goose River, coastal and Lilly Pond. The Goose River, which drains the largest sub-watershed (6.6 mi<sup>2</sup> or 22.3 km<sup>2</sup>), originates from 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. Land uses 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).

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 initiated a house-by-house inspection of plumbing and sewer connections as a means to identify possible sources. The inspection did not identify any sewer problems. However, nonpoint source pollution likely contributes to high bacteria and nutrient levels in storm water discharges. The Town of Rockport posts health advisories based on antecedent precipitation.

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 pursued an investigative program designed to better understand factors affecting water and environmental quality. This expanded RCC's initial efforts from the identification and resolution of bacteria-related impairments at Goodies Beach to include eutrophication-related issues in the harbor. Nutrient sampling conducted by RCC indicate that nutrients and particular nitrogen from the Goose River affect water quality and clarity in the harbor.

Rockport Conservation Commission received a Coastal Community Grant from the Maine Department of Agriculture, Conservation and Forestry (MDACF)-Municipal Planning Assistance Program. The grant was used to evaluate nonpoint source pollution using a modeling approach. "A Watershed Approach to Managing Land Use Impacts to Coastal Waters-Final Report" was submitted to MDACF in December 2016.

## Monitoring History

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- The Maine Biological Monitoring Program monitored the Goose River in 2002. The data is available on DEP's website.
- With assistance from DEP's Marine Unit, Rockport Conservation Commission (RCC) began monitoring Rockport Harbor in 2012. In 2013, RCC joined the Volunteer River Monitoring Program (VRMP) with the purpose of monitoring Rockport Harbor, Goose River and other minor streams draining to the harbor.
- Maine Healthy Beaches has been monitoring bacterial levels at Goodies Beach since 2009 and issues advisories as required.
- 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 and Sampling Sites

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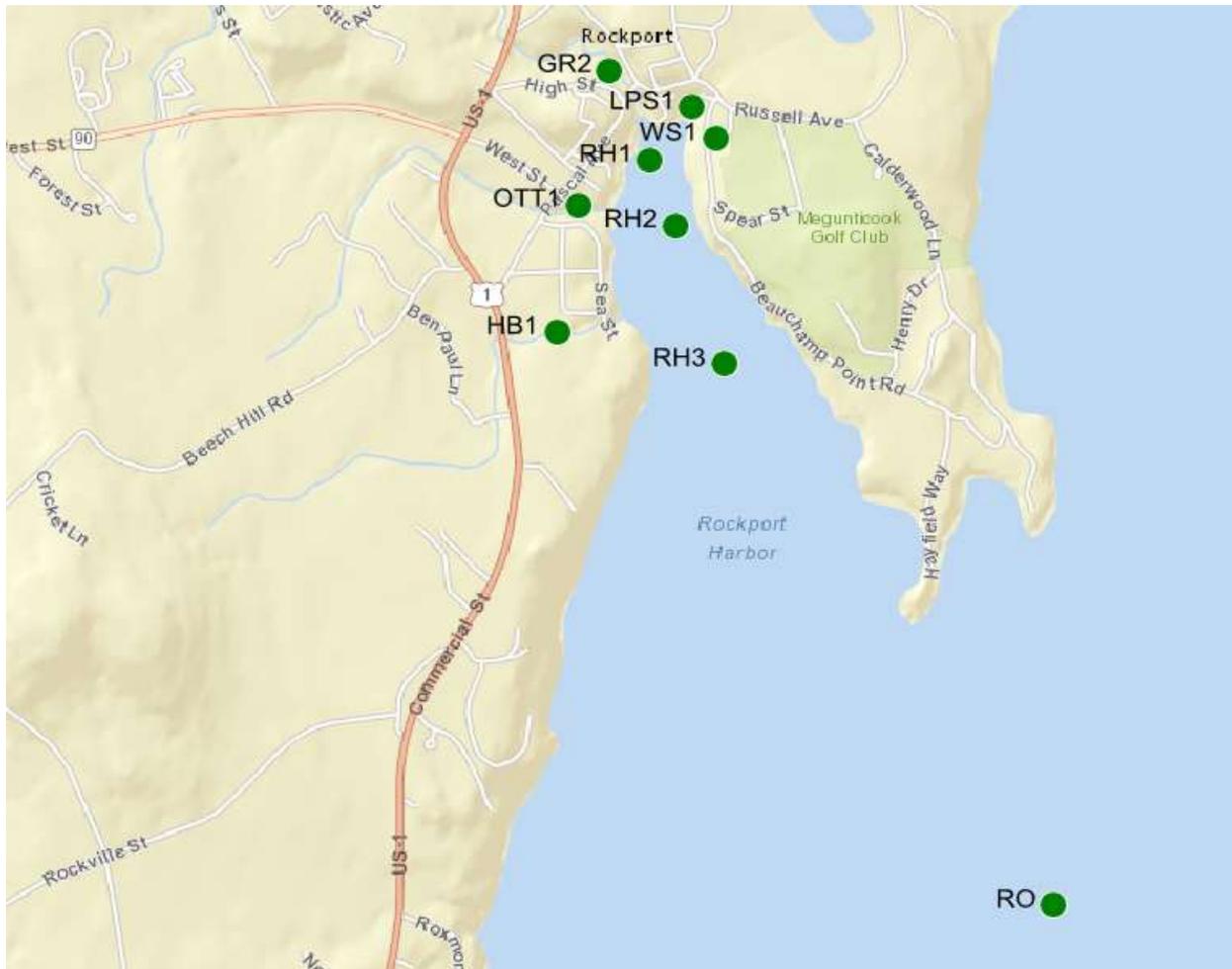
Rockport Conservation Commission monitors four sites in Rockport Harbor. They also monitor the Goose River, three streams, and an intermittent stream/ditch. All the tributary sites are freshwater.

Monitoring is conducted one to two times per month from May through September. Additional sampling has also been conducted at Goose River for nutrient samples and stage for nutrient loading. At the freshwater sites, the monitors measure water temperature and dissolved oxygen using a YSI meter. Conductivity is measured with either a YSI meter or Oakton EC Testr 11+/11 pen. Grab samples may be collected for total nitrogen, total phosphorus, *E. coli* and *Enterococci* bacteria (Goose River). At the harbor sites, vertical profiles are obtained for temperature and dissolved oxygen using a Manta meter. Grab samples are collected at 0.1 meter depths for chlorophyll a, total phosphorus, and total nitrogen. Grab samples are also collected for *Enterococci* bacteria from May to September. Lastly, Secchi depth transparency is measured.

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

## Rockport Harbor & Tributaries Sampling Sites

Rockport Conservation Commission



**Figure 5-7-1:** Map of Rockport Conservation Commission sampling sites.

**Table 5-7-1:** 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-NLP00-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

## Results

Refer to Appendix A in discussion of individual site data and trends at the end of this report.

### *Dissolved Oxygen*

Dissolved oxygen levels are generally lowest early in the morning and then increase during the day, peaking mid to late afternoon. Monitors should try to collect some samples early in the morning. Dissolved oxygen is also affected by flow conditions and temperature. During high flow conditions, more oxygen is added to the river from the atmosphere as the water is more turbulent and there is more opportunity for mixing. If flow during the summer months is higher or lower than normal, dissolved oxygen will be affected.

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.

#### *2017 Results*

**Freshwater sites:** Dissolved oxygen (DO) was measured four times at Goose River from July-October. The measurements were high and were above the Class B dissolved oxygen criteria of 7 mg/l. All the samples were above the percent saturation criterion of 75%, except for 1 date in October which was slightly low. The other freshwater sites (except WS-1) were only sampled 1-2 times early in the season. Dissolved oxygen, at least at Goose River, was good-excellent. The limited dissolved oxygen data for the tributary sites was good-excellent.

**Harbor sites:** Dissolved oxygen was measured five times (June, July, August, September and October) and included depth profiles. Differences in the sites relate to depth and stratification (i.e. when sites stratified and depth of stratification). Dissolved oxygen never fell below the Class SB criterion of 85% saturation, except at site RH-3 late in the season at lower depths. At site RH1, saturation values ranged from 93.2% - 110.2% (depths 0-6 meters). Site RH2 saturation values ranged from 91.9% - 115.6% (depths 0-15 meters). Site RH3 saturation values ranged from 98.1%

**- 121.5% (depths 0-19 meters). Site RO saturation values ranged from 95.4% - 119% (depths 0-26 meters). 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**

**Table 5-7-2:** A summary of minimum, maximum, and mean dissolved oxygen concentration (mg/l) values at Rockport Conservation Commission monitoring sites. \* (Rockport Harbor sites use shallowest point for each station on each sample day. Depths range from 0.0-0.4 meters).

Site	Class	# Sample Points	Mean	Minimum	Maximum	Criterion	# Not Meeting Criterion
GR-2	B	4	7.9	7.0	8.3	7ppm	0
HB-1	B	2	7.5	7.3	7.7	7ppm	0
LPS-1	B	1	8.6	8.6	8.6	7ppm	0
OTT-1	B	2	8.7	8.3	9.1	7ppm	0
WS-1	B	-	-	-	-	7ppm	n/a
RH-1	SB	5	8.6	7.8	9.2	7ppm	0
RH-2	SB	5	9.1	7.9	9.8	7ppm	0
RH-3	SB	5	9.4	8.3	10.3	7ppm	0
RO	SB	5	9.4	8.1	10.2	7ppm	0

**Table 5-7-3:** A summary of minimum, maximum, and mean dissolved oxygen saturation (%) values at Rockport Conservation Commission monitoring sites. \* (Rockport Harbor sites use shallowest point for each station on each sample day. Depths range from 0.0-0.4 meters).

Site	Class	# Sample Points	Mean	Minimum	Maximum	Criterion	# Not Meeting Criterion
GR-2	B	4	82.2	68.5	88.0	75%	1
HB-1	B	2	76.5	74.9	78.0	75%	1
LPS-1	B	1	89.7	89.7	89.7	75%	0
OTT-1	B	2	88.5	85.5	91.4	75%	0
WS-1	B	-	-	-	-	75%	n/a
RH-1	SB	5	103.4	93.2	110.2	75%	0
RH-2	SB	5	108.6	91.9	115.6	75%	0
RH-3	SB	5	111.5	98.1	121.5	75%	0
RO	SB	5	111.2	95.4	119.0	75%	0

Figure 5-7-2: Graph of dissolved oxygen concentrations at stream sites.

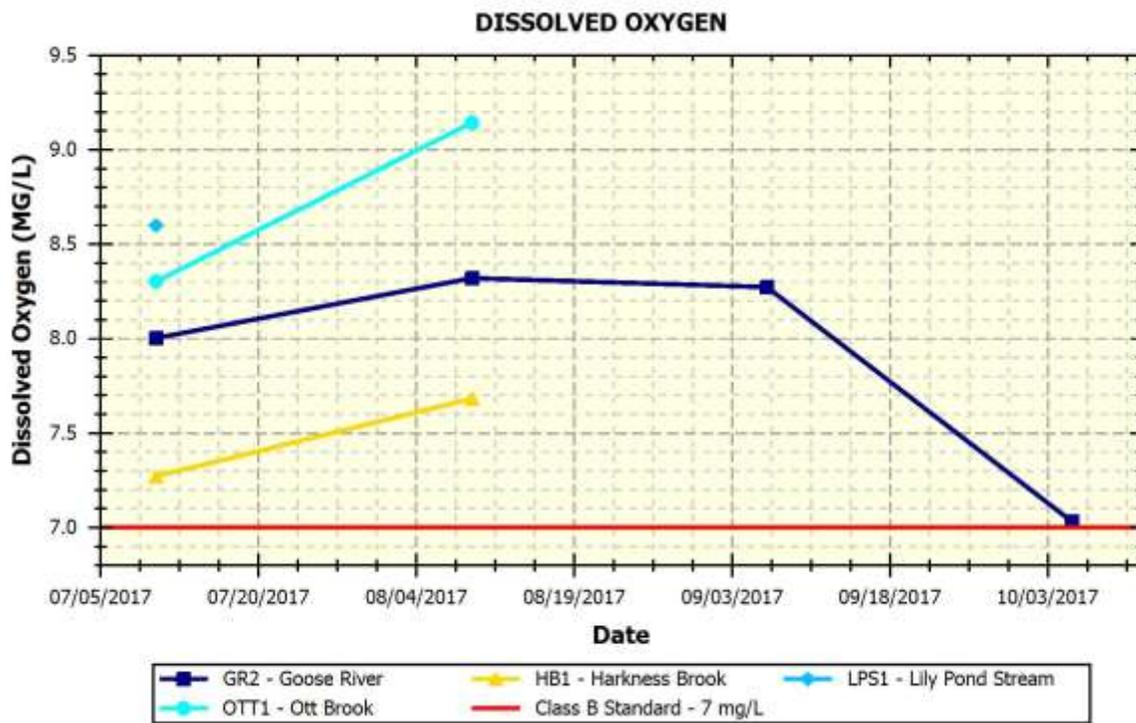
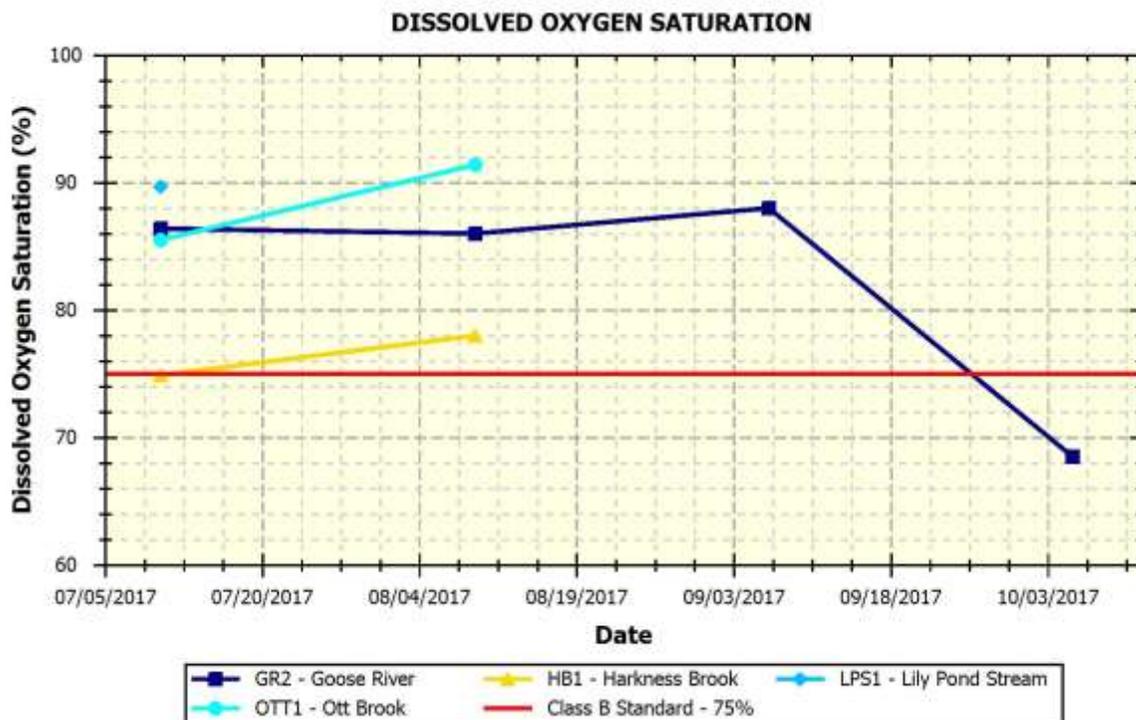
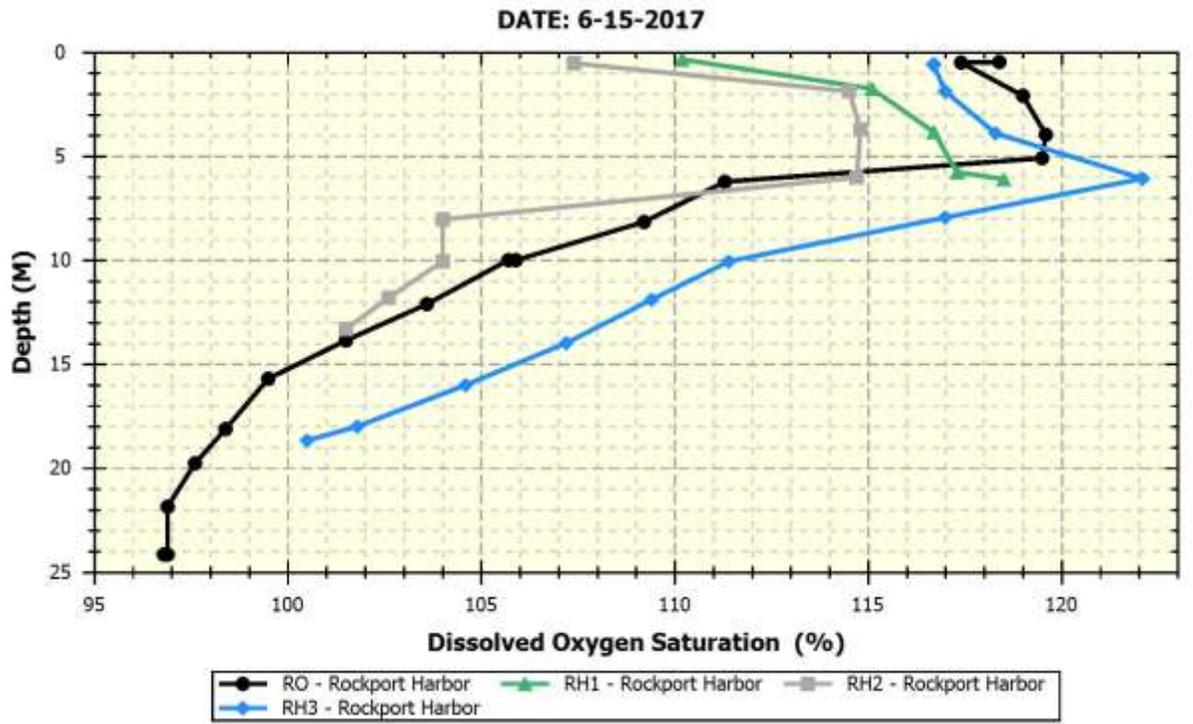
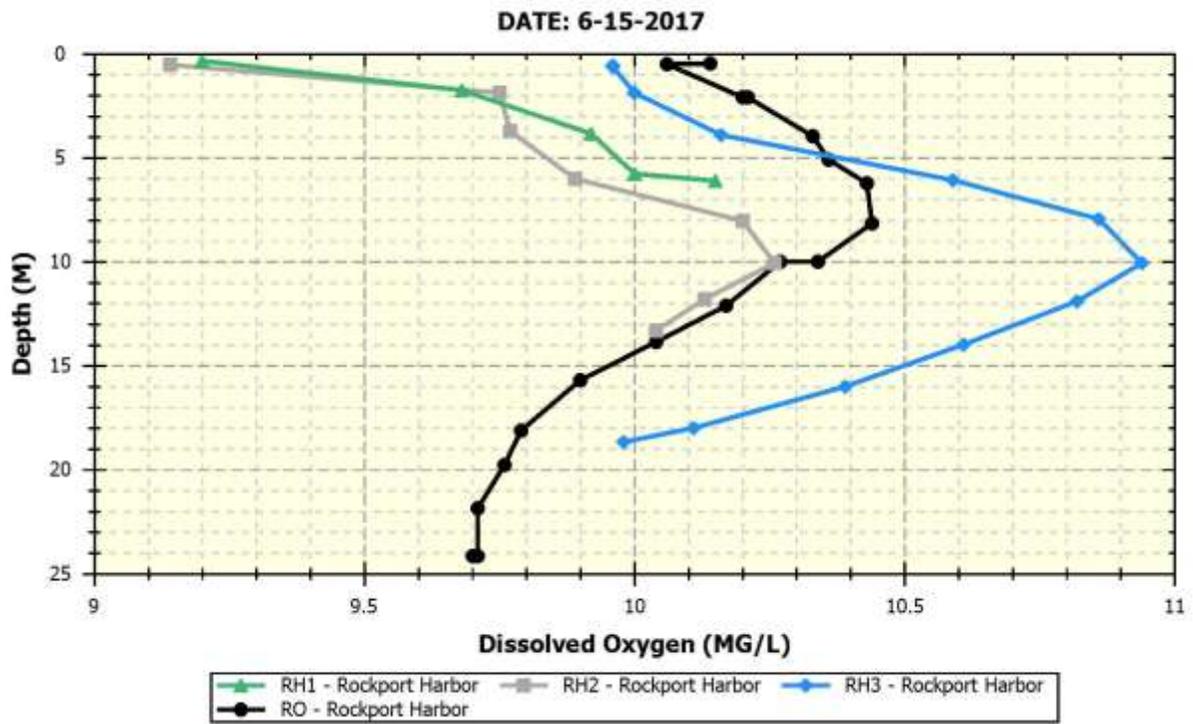
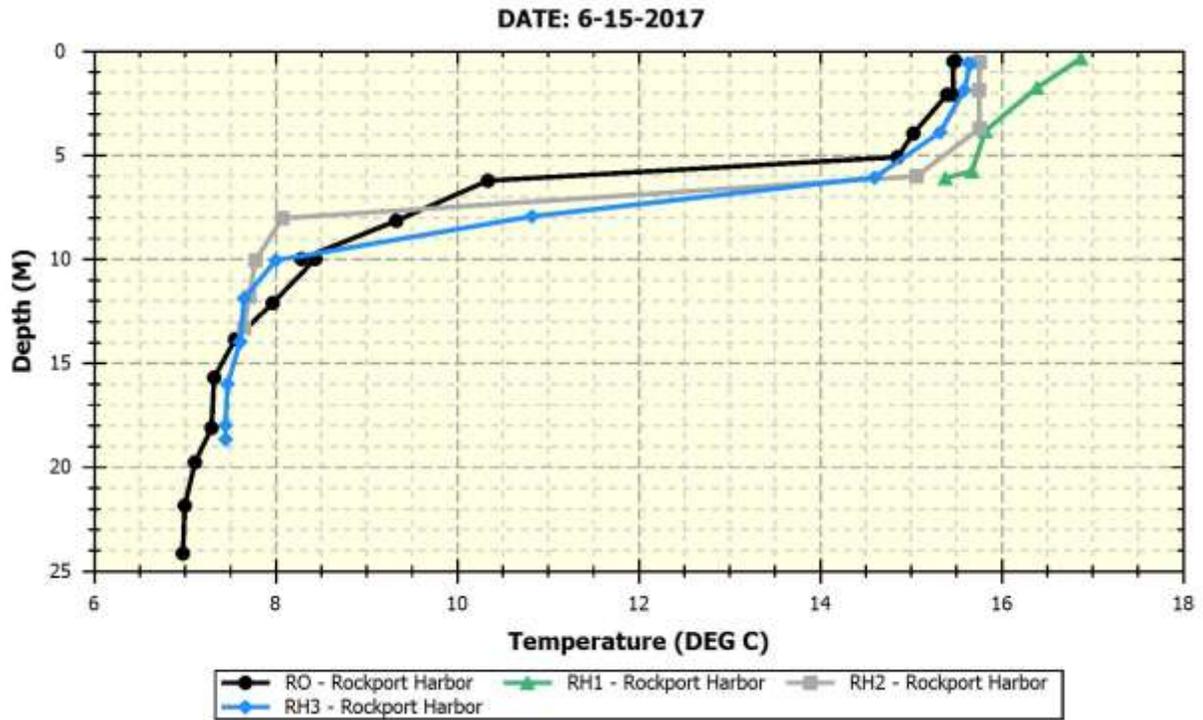


Figure 5-7-3: Graph of dissolved oxygen saturation at stream sites.

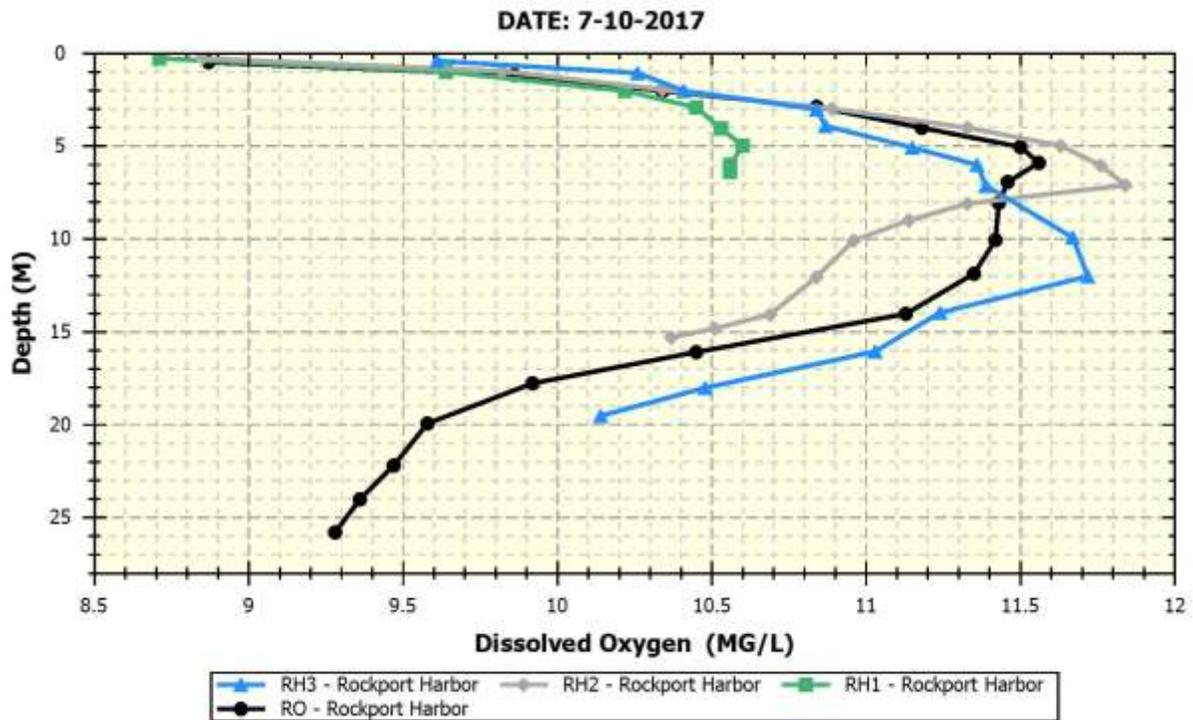


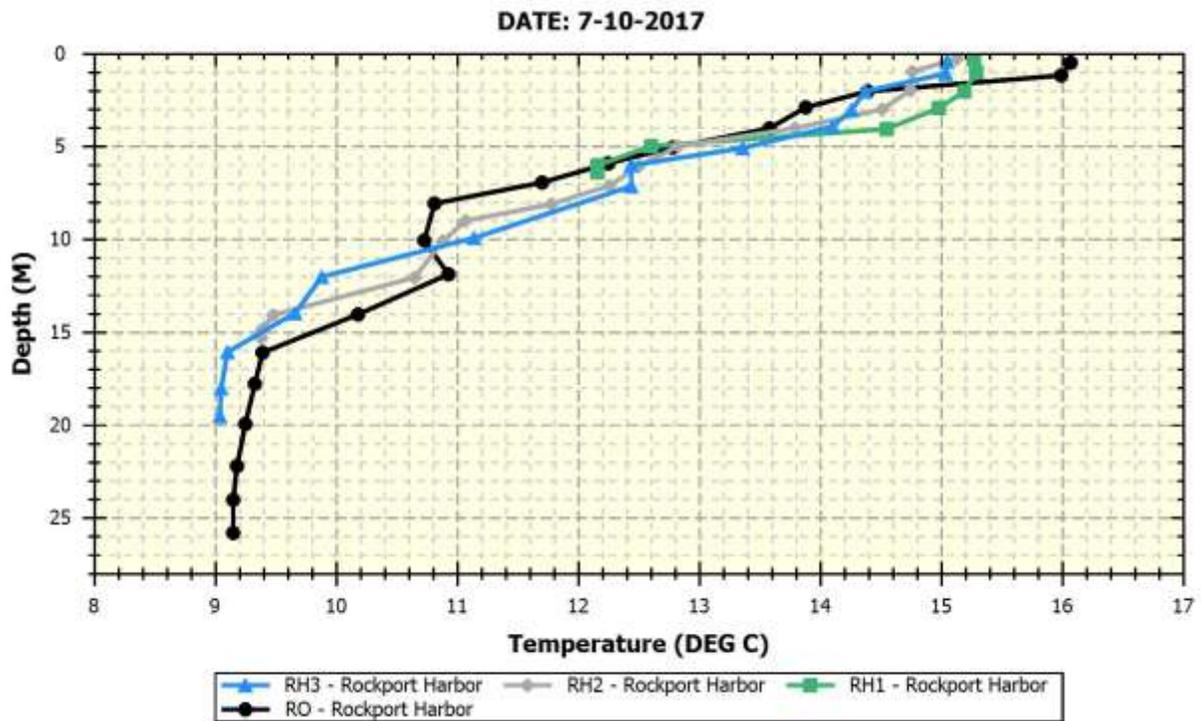
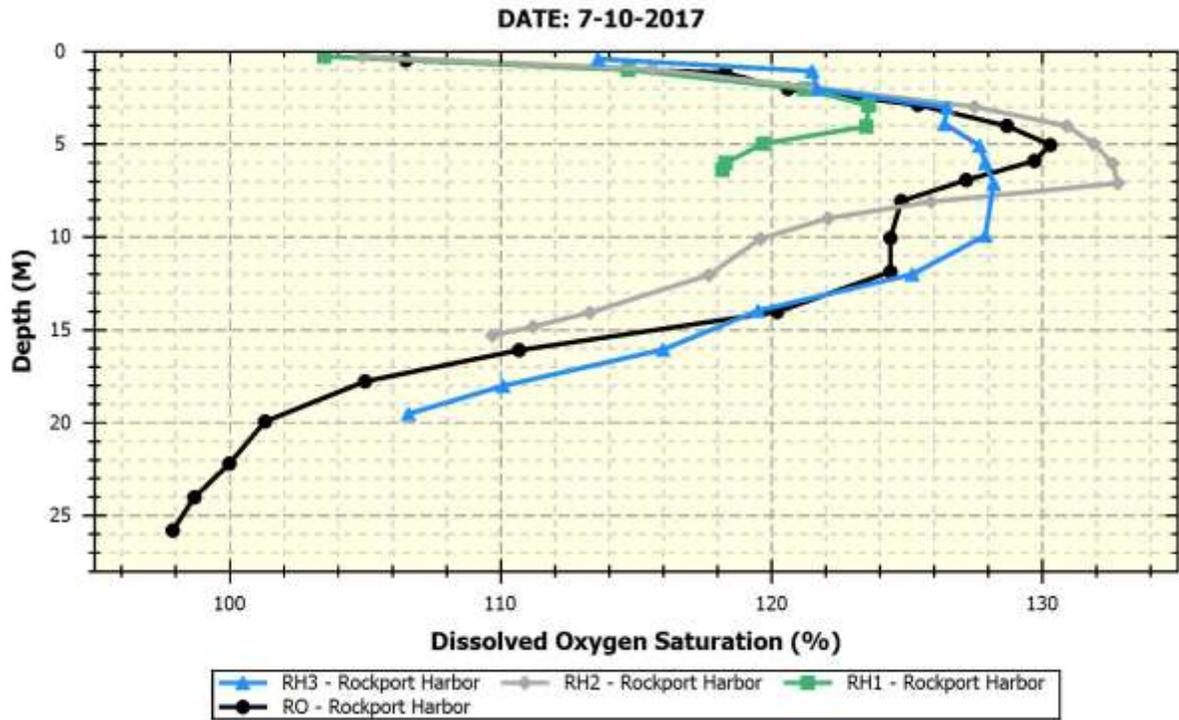
**Figure 5-7-4:** Depth profile graphs of dissolved oxygen concentration, dissolved oxygen saturation and water temperature at harbor sites on June 15<sup>th</sup>.



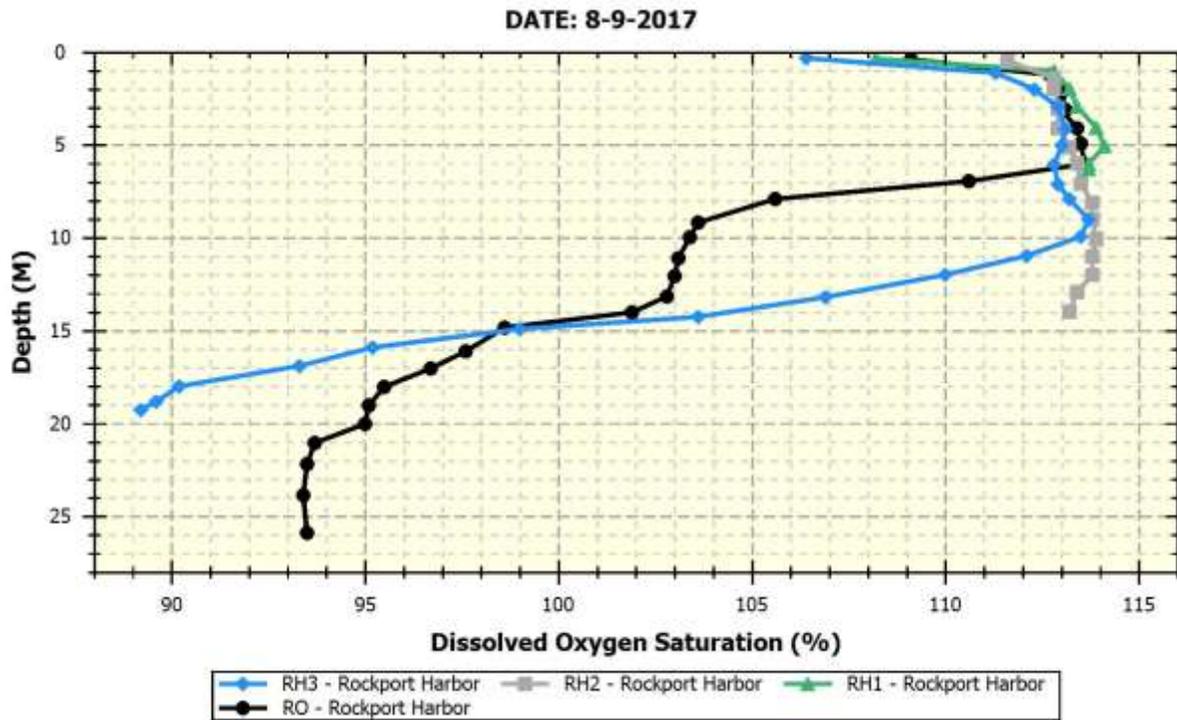
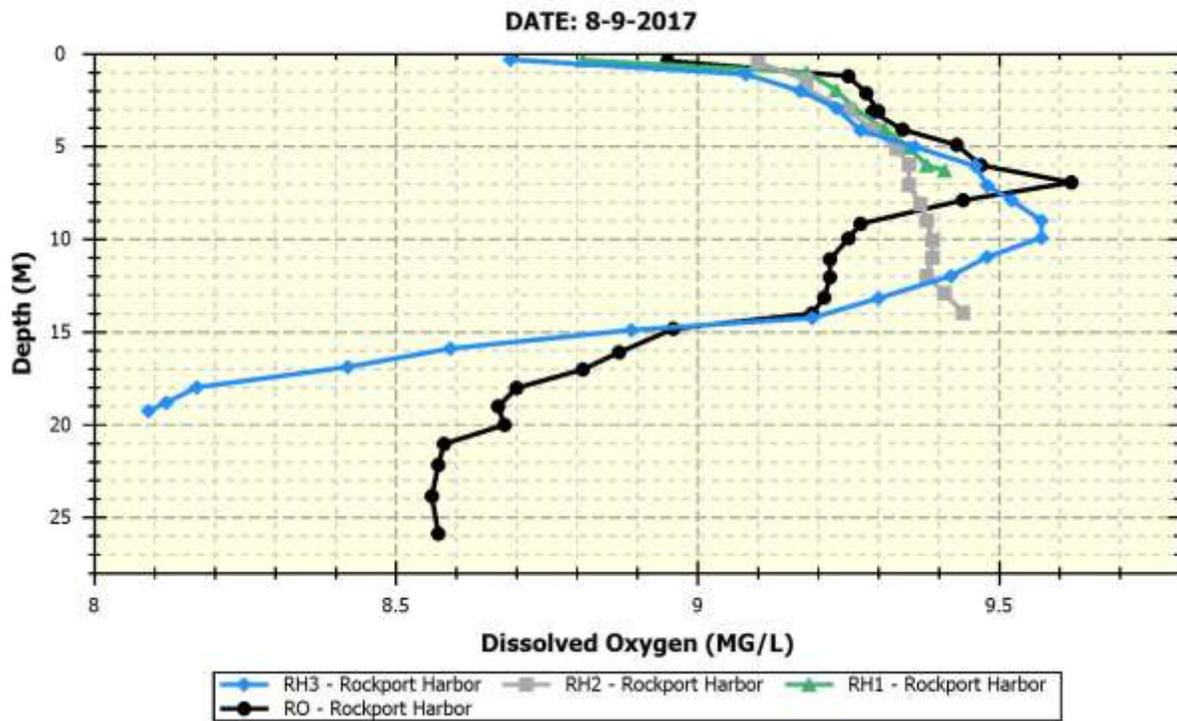


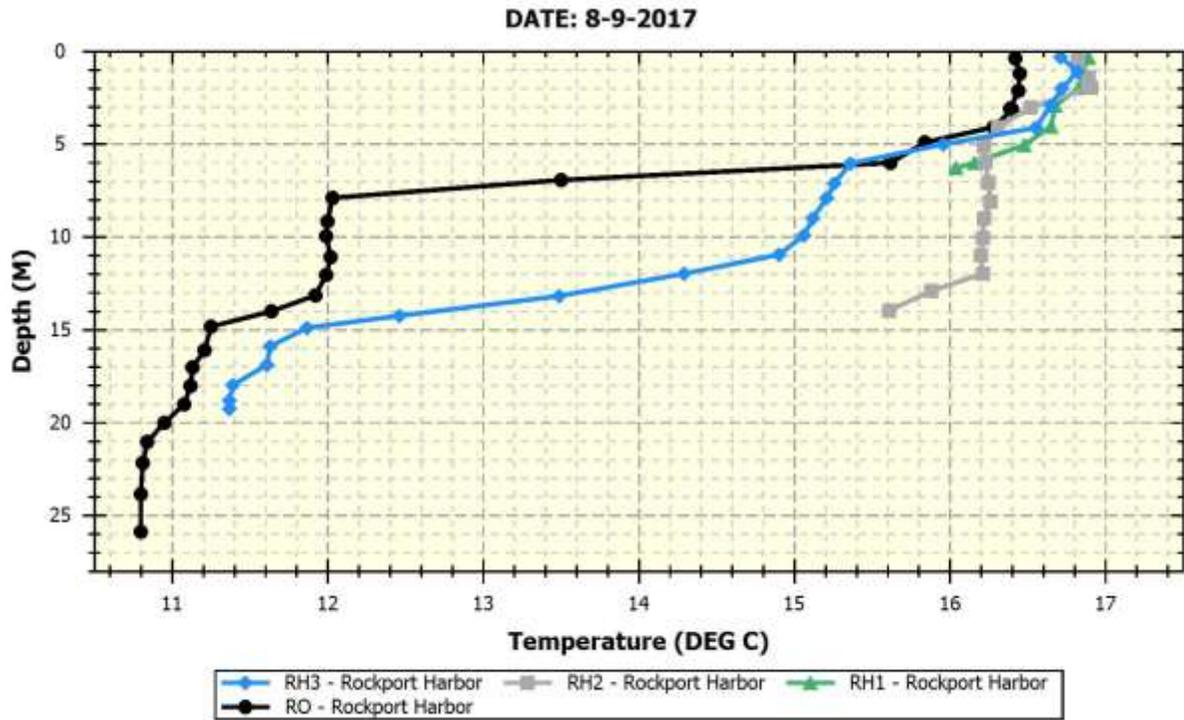
**Figure 5-7-5:** Depth profile graphs of dissolved oxygen concentration, dissolved oxygen saturation and water temperature at harbor sites on July 10<sup>th</sup>.



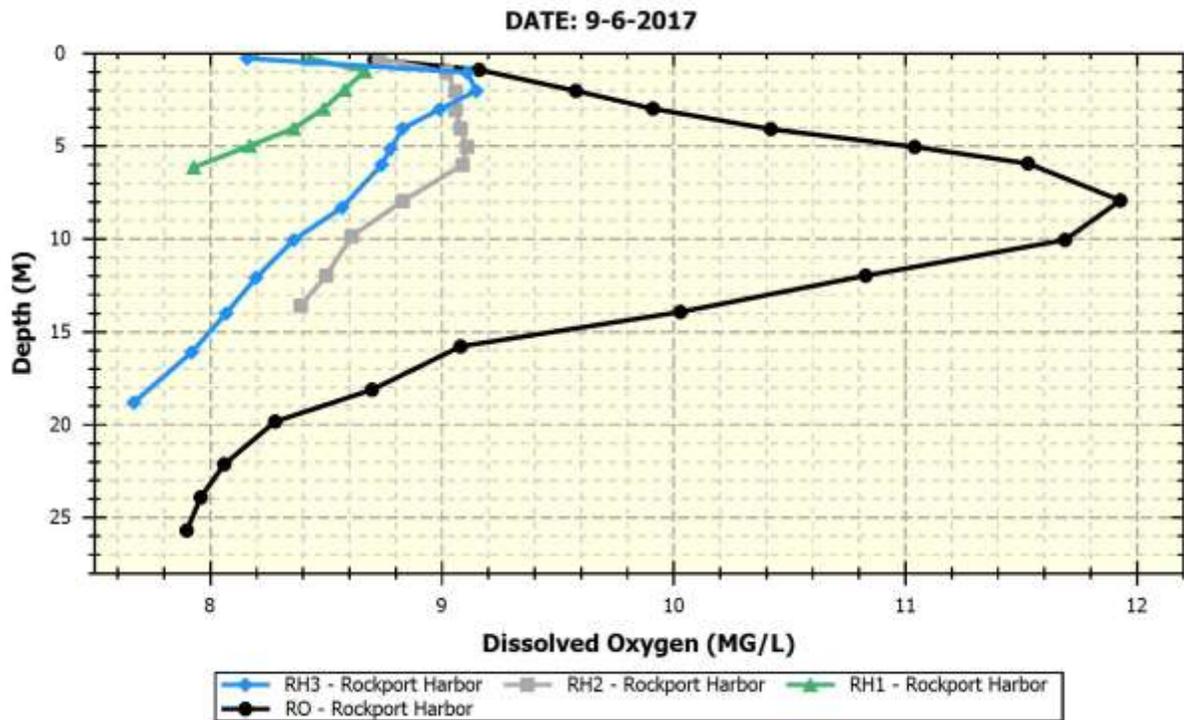


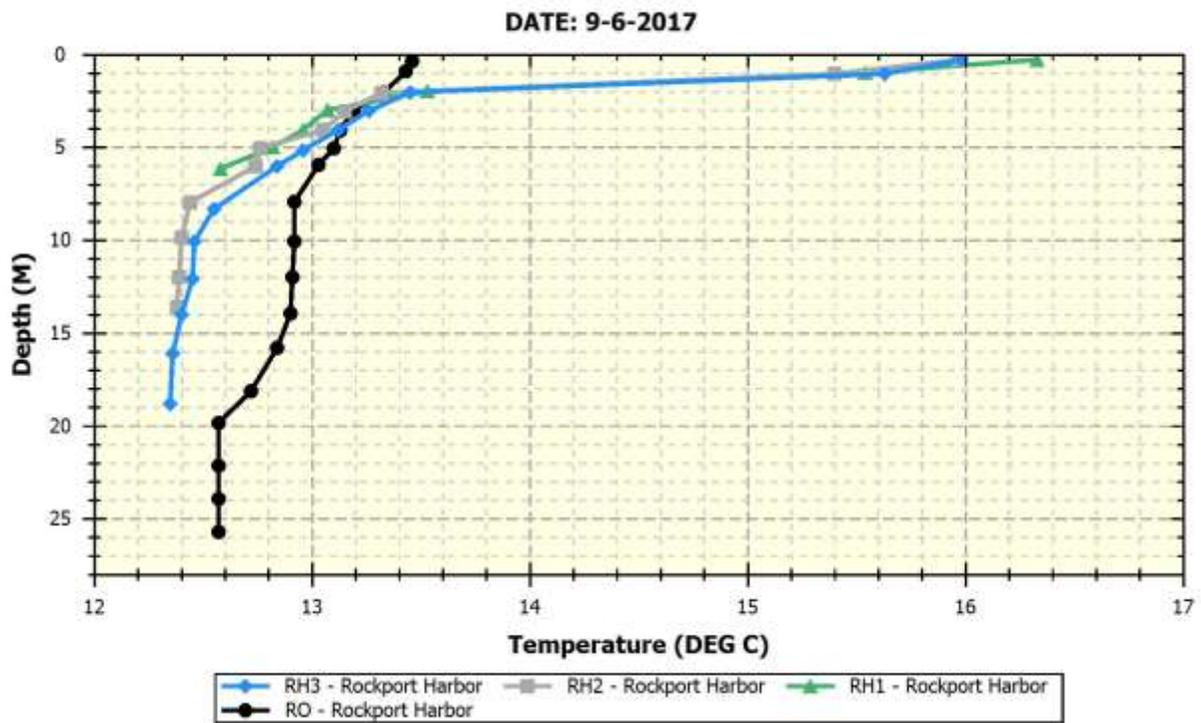
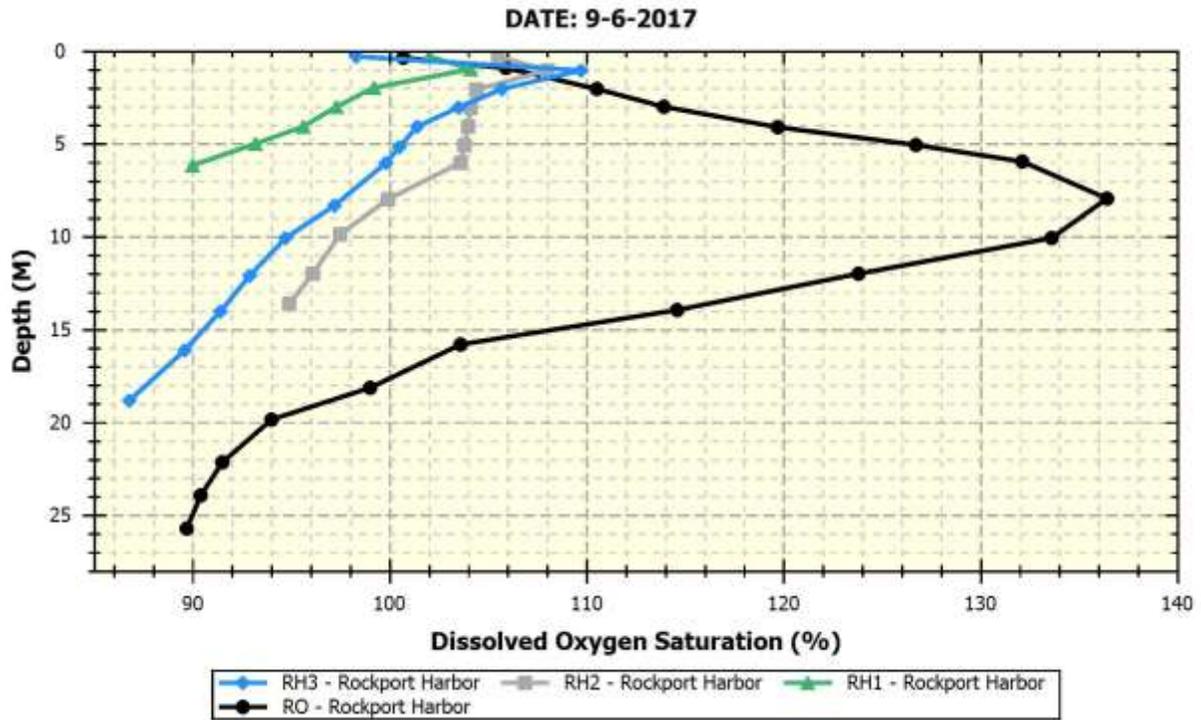
**Figure 5-7-6:** Depth profile graphs of dissolved oxygen concentration, dissolved oxygen saturation and water temperature at harbor sites on August 9<sup>th</sup>.



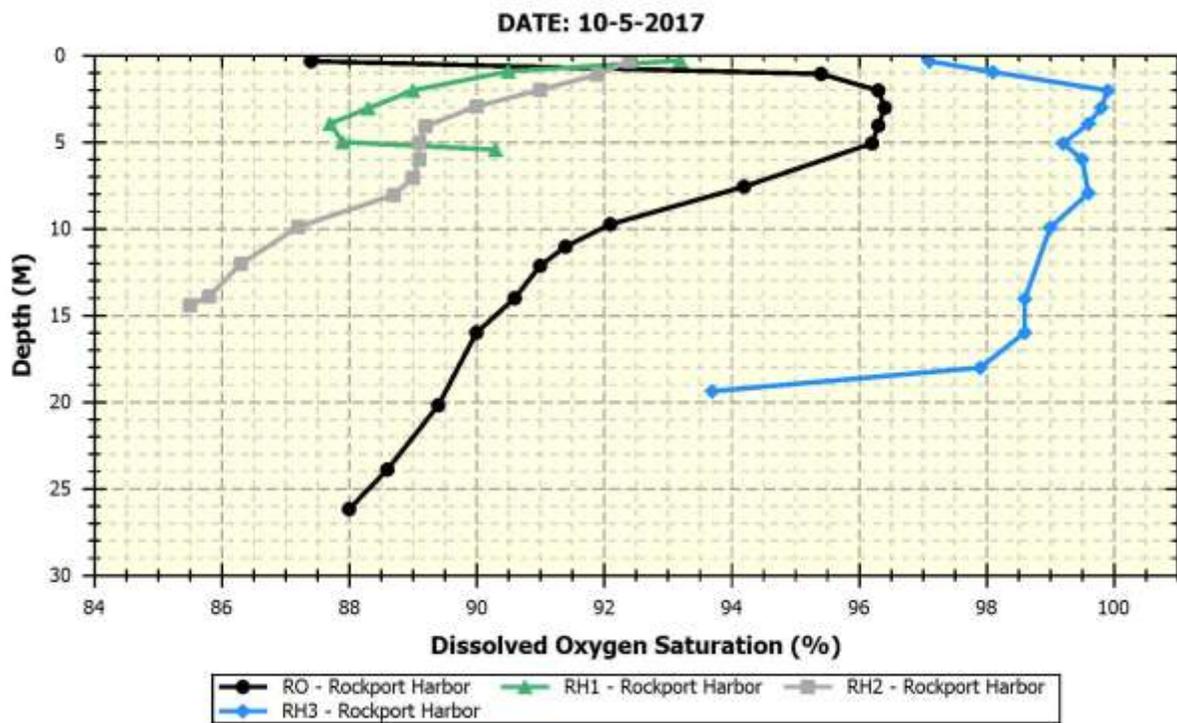
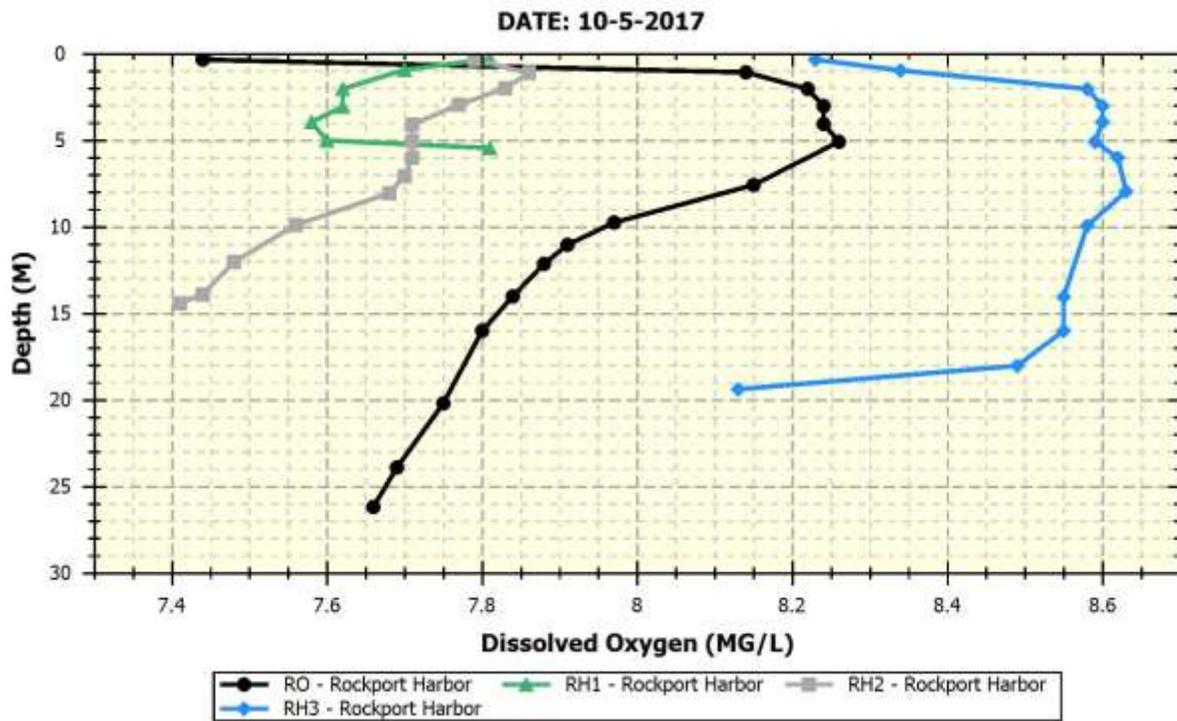


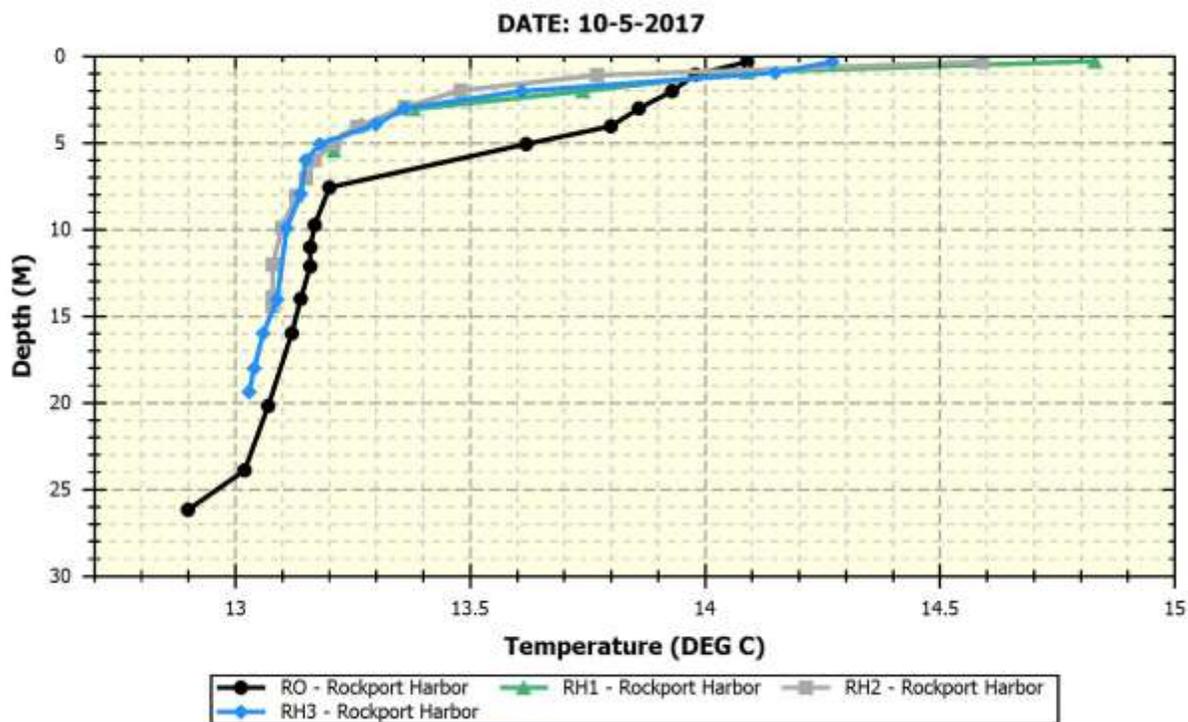
**Figure 5-7-7:** Depth profile graphs of dissolved oxygen concentration, dissolved oxygen saturation and water temperature at harbor sites on September 6<sup>th</sup>.





**Figure 5-7-8:** Depth profile graphs of dissolved oxygen concentration, dissolved oxygen saturation and water temperature at harbor sites on October 5<sup>th</sup>.





### *Water Temperature*

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.

#### *2017 Results*

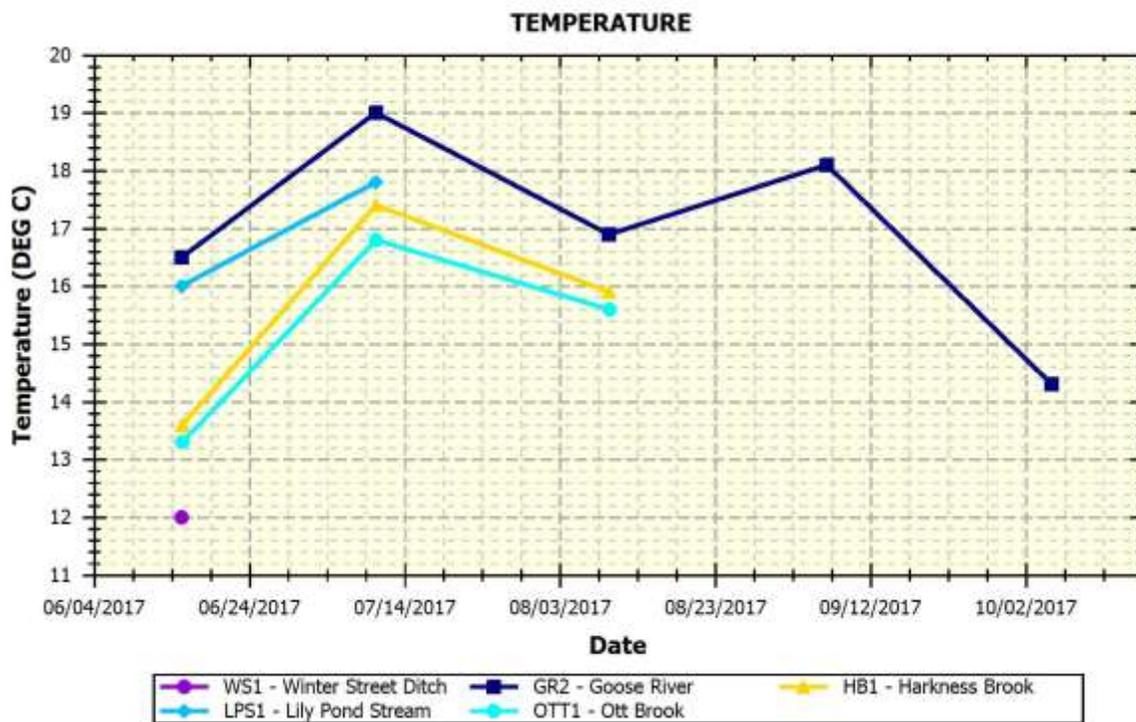
**Freshwater sites:** Temperature was measured five times at Goose River. The other freshwater sites (Harkness Brook, Lily Pond Stream, Ott Brook and Winter Street ditch) were sampled one-three times. Overall, temperature at Goose River was good and the other streams appear to have lower temperatures compared to Goose River.

**Harbor sites:** Surface temperature at the harbor sites ranged from 12.0-16.9 °C and mean temperatures ranged from 15.0-16.0 °C. Sites RH1, RH2, RH3 and RO were similar, except RO was colder in August.

**Table 5-7-4:** A summary of minimum, maximum, and mean water temperature (°C) values at Rockport Conservation Commission monitoring sites. (Temperatures for Rockport Harbor sites are surface temperatures. Depths range from 0.3-0.6 meters).

Site	Class	# Sample Points	Mean	Minimum	Maximum	Criterion	# Exceeding Criterion
GR-2	B	5	17.0	14.3	19.0	n/a	n/a
HB-1	B	3	15.6	13.6	17.4	n/a	n/a
LPS-1	B	2	16.9	16.0	17.8	n/a	n/a
OTT-1	B	3	15.2	13.3	16.8	n/a	n/a
WS-1	B	1	12.0	12.0	12.0	n/a	n/a
RH-1	SB	5	16.0	14.8	16.9	n/a	n/a
RH-2	SB	5	15.3	13.8	16.9	n/a	n/a
RH-3	SB	5	15.4	14.2	16.8	n/a	n/a
RO	SB	5	15.0	13.3	16.5	n/a	n/a

**Figure 5-7-9:** Graph of water temperature at stream sites



### Specific Conductance

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.

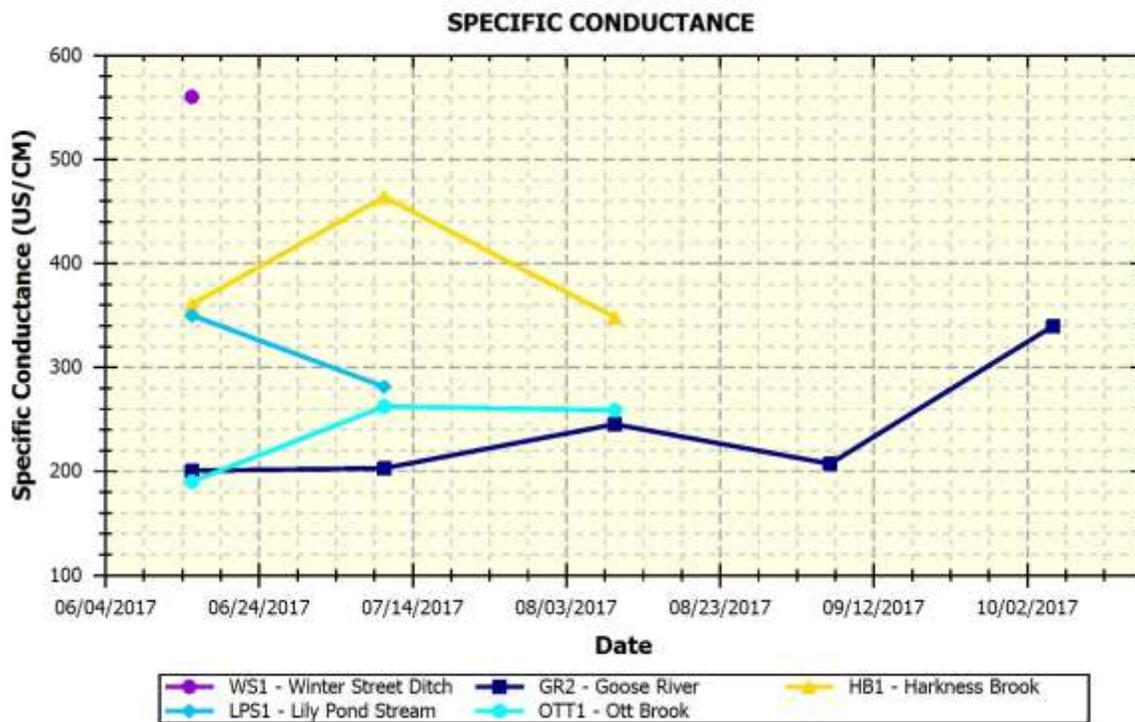
**2017 Results**

Specific conductance was measured five times at Goose River and one-three times at the other tributaries. Specific conductance at Goose River and for the limited Ott Brook samples was good. The limited samples at the other tributaries were high, especially for Winter Street Ditch which is not surprising.

**Table 5-7-5:** A summary of minimum, maximum, and mean specific conductance ( $\mu\text{S}/\text{cm}$ ) values at Rockport Conservation Commission monitoring sites.

Site	Class	# Sample Points	Mean	Minimum	Maximum	Criterion	# Exceeding Criterion
GR-2	B	5	239	200	339	n/a	n/a
HB-1	B	3	391	348	464	n/a	n/a
LPS-1	B	2	315	281	350	n/a	n/a
OTT-1	B	3	237	190	262	n/a	n/a
WS-1	B	1	560	560	560	n/a	n/a

**Figure 5-7-10:** Graph of specific conductance (us/cm) at stream sites



## Bacteria

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 15<sup>th</sup> and Sept 30<sup>th</sup>, *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 15<sup>th</sup> and September 30<sup>th</sup>, 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.

### 2017 Results

**Freshwater sites:** Goose River (site GR2) was sampled three to five times for both *E. coli* and Enterococcus bacteria. There were mostly no exceedances of the instantaneous criterion, but the geometric mean was slightly above criterion. Harkness Brook was the exception with values over the instantaneous criterion for all three sample dates and Ott Brook was high on one of three sample dates. In order to calculate an accurate geometric mean, at least 6 samples should be collected and they should include both baseflow and storm event samples.

**Harbor sites:** The harbor sites were sampled four times. Site RH1 exceeded the instantaneous criterion on one date. All sites exceeded the geometric mean criterion.

**Table 5-7-6:** A summary of minimum, maximum, and geometric means for bacteria (MPN/100 mL) values at Rockport Conservation Commission monitoring sites.

Site	Class	Bacteria Type	# Sample Points	Mean	Minimum	Maximum	Criterion (Insta/Geo)	# Exceeding Criterion
GR-2	B	E. Coli	5	71	15	140	236/64	0
GR-2	B	Enterococci	3	11	2	41	n/a	n/a
HB-1	B	E. Coli	3	750	248	1733	236/64	3
LPS-1	B	E. Coli	2	50	36	70	236/64	0
OTT-1	B	E. Coli	3	295	214	548	236/64	1
WS-1	B	E. Coli	1	NA	124	124	236/64	0
RH-1	SB	Enterococci	4	30	8	387	54/8	1
RH-2	SB	Enterococci	4	23	11	45	54/8	0
RH-3	SB	Enterococci	4	16	8	37	54/8	0
RO	SB	Enterococci	4	11	6	19	54/8	0

**\*At least 6 samples should be collected to calculate the geometric mean. One sample date was outside the sampling period of May 15-September 30 established for the Maine Bacteria Criterion (10/5/17).**

Figure 5-7-11: Graph of E. Coli Bacteria at Freshwater Sites (MPN/100ml).

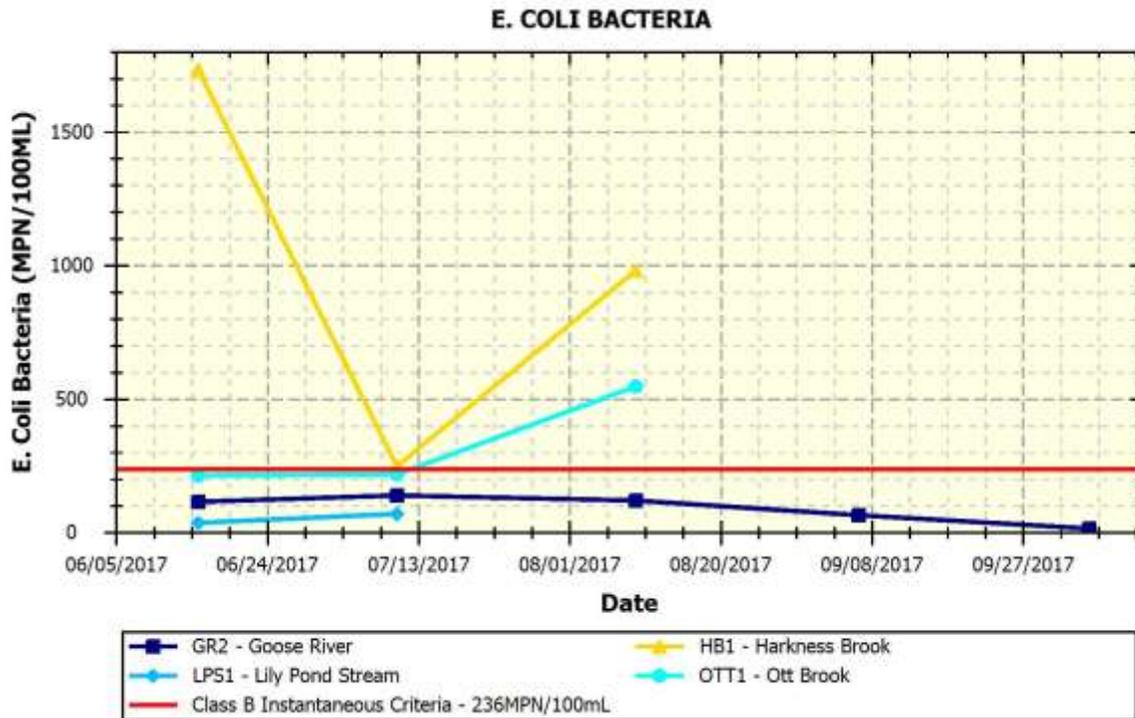
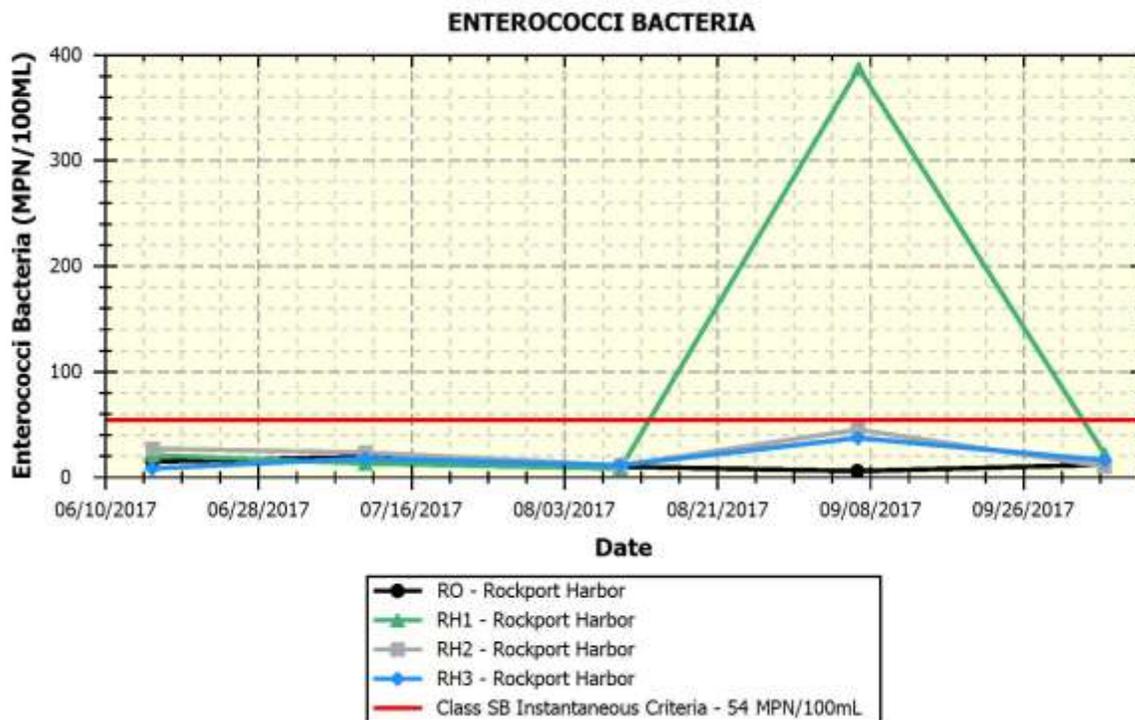


Figure 5-7-12: Graph of Enterococci at Harbor sites (MPN/100ml).



### *Nutrients and Chlorophyll a*

Nutrient criterion for freshwaters have been developed, but not yet adopted. The draft criteria for Class B waters are  $\leq 0.03$  mg/l (total phosphorus). In regards to total nitrogen, DEP Biomonitoring Program staff suggests that good water streams have values below 0.6 mg/l. Nutrient criteria for marine waters have not been developed.

#### *2017 Results*

**Freshwater sites:** Total phosphorus and total nitrogen were measured five times at Goose River (site GR2) and between one and three times at the other freshwater sites. At Goose River, one sample was well above 0.03 mg/l [300  $\mu$ g/l] for total phosphorus. The value of 0.03 mg/l is the proposed nutrient criterion value for total phosphorus and 0.6 mg/l of nitrogen is the value that DEP biologists estimate distinguishes between enriched versus non-enriched streams. Sites HB-1 and LPS-1 had one to two values slightly above 0.03 mg/l for total phosphorus. The total nitrogen for the three samples taken at site OTT-1 were slightly above 0.6 mg/l. The one sample for nitrogen at site WS-1 was way above 0.6 mg/l. Overall, nutrients were low to moderate at the freshwater sites, with the exception of one sample date for GR-2 and site WS-1 which had high total nitrogen.

**Harbor sites:** Total phosphorus was similar at all the harbor sites. Total nitrogen levels at the harbor sites were all similar (RO slightly lower) with mean values ranging from 0.17-0.25 mg/l. At the harbor sites, chlorophyll *a* was low (< 5  $\mu$ g/l is considered low).

**Table 5-7-7:** A summary of minimum, maximum, and mean total phosphorus (mg/l) values at Rockport Conservation Commission monitoring sites.

Site	Class	# Sample Points	Mean	Minimum	Maximum	Criterion	# Exceeding Criterion
GR-2	B	5	0.053	0.009	0.198	n/a	n/a
HB-1	B	3	0.023	0.016	0.031	n/a	n/a
LPS-1	B	2	0.039	0.034	0.044	n/a	n/a
OTT-1	B	3	0.022	0.019	0.026	n/a	n/a
WS-1	B	1	0.017	0.017	0.017	n/a	n/a
RH-1	SB	5	0.028	0.019	0.041	n/a	n/a
RH-2	SB	5	0.026	0.018	0.041	n/a	n/a
RH-3	SB	5	0.029	0.019	0.042	n/a	n/a
RO	SB	5	0.028	0.017	0.041	n/a	n/a

**Table 5-7-8:** A summary of minimum, maximum, and mean total nitrogen (mg/l) values at Rockport Conservation Commission monitoring sites.

Site	Class	# Sample Points	Mean	Minimum	Maximum	Criterion	# Exceeding Criterion
GR-2	B	5	0.44	0.31	0.52	n/a	n/a
HB-1	B	3	0.54	0.54	0.55	n/a	n/a
LPS-1	B	2	0.46	0.45	0.47	n/a	n/a
OTT-1	B	3	0.71	0.66	0.81	n/a	n/a
WS-1	B	1	1.47	1.47	1.47	n/a	n/a
RH-1	SB	5	0.17	0.15	0.19	n/a	n/a
RH-2	SB	5	0.17	0.15	0.19	n/a	n/a
RH-3	SB	5	0.21	0.17	0.26	n/a	n/a
RO	SB	5	0.25	0.18	0.34	n/a	n/a

**Table 5-7-9:** A summary of minimum, minimum and mean chlorophyll a (ug/l) values at Rockport Conservation Commission monitoring sites.

Site	Class	# Sample Points	Mean	Minimum	Maximum	Criterion	# Exceeding Criterion
RH-1	SB	5	1.62	0.89	4.35	n/a	n/a
RH-2	SB	5	1.74	0.89	4.76	n/a	n/a
RH-3	SB	5	1.69	0.89	4.13	n/a	n/a
RO	SB	5	1.58	0.89	3.69	n/a	n/a

**Table 5-7-10:** A summary of minimum, maximum, and mean phaeophytin (ug/l) values at Rockport Conservation Commission monitoring sites.

Site	Class	# Sample Points	Mean	Minimum	Maximum	Criterion	# Not Meeting Criterion
RH-1	SB	5	0.57	0.38	1.18	n/a	n/a
RH-2	SB	5	0.69	0.38	1.30	n/a	n/a
RH-3	SB	5	0.58	0.38	1.09	n/a	n/a
RO	SB	5	0.68	0.38	1.35	n/a	n/a

**Table 5-7-11:** A summary of minimum, maximum, and mean chlorophyll a minus phaeophytin (ug/l) values at Rockport Conservation Commission monitoring sites.

Site	Class	# Sample Points	Mean	Minimum	Maximum	Criterion	# Exceeding Criterion
RH-1	SB	5	1.55	1.01	3.69	n/a	n/a
RH-2	SB	5	1.61	1.01	4.03	n/a	n/a
RH-3	SB	5	1.58	1.01	3.52	n/a	n/a
RO	SB	5	1.42	1.01	2.94	n/a	n/a

**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.

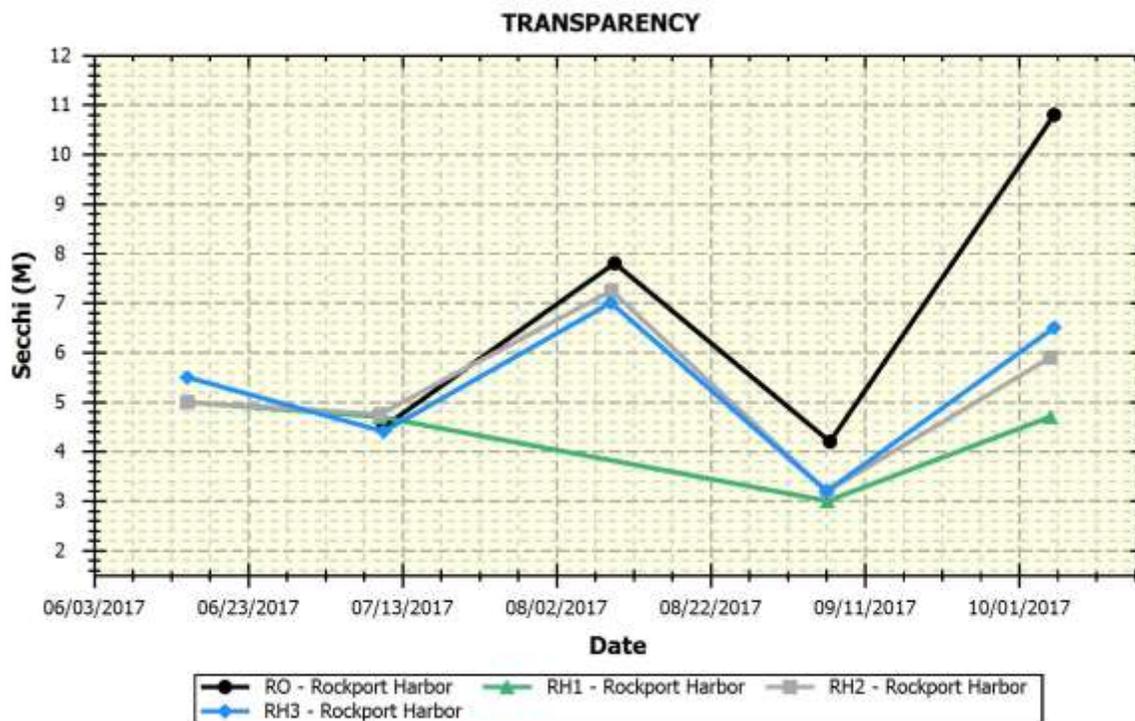
**2017 Results**

Mean transparency at the four harbor sites ranged from 3.0-10.8 meters. Sites RH1, RH2 and RH3 were similar. Site RO was higher than the other sites, especially late in the season.

**Table 5-7-7:** A summary of minimum, maximum, and mean transparency at Rockport Conservation Commission monitoring sites.

Site	Class	# Sample Points	Mean	Minimum	Maximum	Criterion	# Not Meeting Criterion
RH-1	SB	4	4.4	3.0	5.0	n/a	n/a
RH-2	SB	5	5.2	3.2	7.3	n/a	n/a
RH-3	SB	5	5.3	3.2	7.0	n/a	n/a
RO	SB	4	6.8	4.2	10.8	n/a	n/a

**Figure 5-7-13:** Graph of Transparency (meters) at harbor sites.



## Discussion and Recommendations

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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:**

- **Bacteria samples should be collected at least six times over the sampling season and include both baseflow and storm event samples. Two of the streams had some high values.**
- **Continue monitoring at all stations to develop a long-term trend database.**

**Appendix A**

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

\*\* "N/A" = normal environmental sample ; "D" = field duplicate; "D.O." = dissolved oxygen; "Spec. Cond" = specific conductance; "TDS" = Total dissolved solids; "TSS" = total suspended solids"

Organization Site Code	VRMP Site ID	Date	Time	** Sample Type Qualifier	* Sample Depth	Depth Unit	Water Temp (DEG C)	** D.O. (MG/L)	** D.O. Sat. (%)	** Spec. Cond. (US/CM)	Salinity (PPTH)	Turbidity (NTU)	** TDS (MG/L)	** TSS (MG/L)	E. coli Bacteria (MPN/100ML)	Enterococci (MPN/100ML)
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GR-2	GOOSE RIVER - NGR01 - VRMP	6/15/2017	7:02 AM	NA			16.5			200					115	18
GR-2	GOOSE RIVER - NGR01 - VRMP	6/15/2017	7:02 AM	NA	.1	M										
GR-2	GOOSE RIVER - NGR01 - VRMP	6/15/2017	7:02 AM	D												57
GR-2	GOOSE RIVER - NGR01 - VRMP	6/15/2017	7:02 AM	D	.1	M										
GR-2	GOOSE RIVER - NGR01 - VRMP	7/10/2017	6:50 AM	NA			19.0	8.0	86.4	203					140	2
GR-2	GOOSE RIVER - NGR01 - VRMP	7/10/2017	6:50 AM	NA	.1	M										
GR-2	GOOSE RIVER - NGR01 - VRMP	7/10/2017	6:50 AM	D			19.0	8.0	86.3	203						45
GR-2	GOOSE RIVER - NGR01 - VRMP	7/10/2017	6:50 AM	D	.1	M										
GR-2	GOOSE RIVER - NGR01 - VRMP	8/9/2017	7:39 AM	NA			16.9	8.3	86.0	244.8					119	41
GR-2	GOOSE RIVER - NGR01 - VRMP	8/9/2017	7:39 AM	NA	.1	M										
GR-2	GOOSE RIVER - NGR01 - VRMP	8/9/2017	7:39 AM	D			16.9	8.3	85.3	244.8					155	
GR-2	GOOSE RIVER - NGR01 - VRMP	8/9/2017	7:42 AM	D	.1	M										
GR-2	GOOSE RIVER - NGR01 - VRMP	9/6/2017	7:33 AM	NA			18.1	8.3	88.0	207.3					65	
GR-2	GOOSE RIVER - NGR01 - VRMP	9/6/2017	7:33 AM	NA	.1	M										
GR-2	GOOSE RIVER - NGR01 - VRMP	9/6/2017	7:33 AM	D											68	
GR-2	GOOSE RIVER - NGR01 - VRMP	9/6/2017	7:33 AM	D	.1	M										
GR-2	GOOSE RIVER - NGR01 - VRMP	10/5/2017		L	.1	M										
GR-2	GOOSE RIVER - NGR01 - VRMP	10/5/2017	7:45 AM	NA			14.3	7.0	68.5	339.1					15	
GR-2	GOOSE RIVER - NGR01 - VRMP	10/5/2017	7:45 AM	NA	.1	M										
GR-2	GOOSE RIVER - NGR01 - VRMP	10/5/2017	7:45 AM	D			14.3	7.1	68.8	340.4					11	
GR-2	GOOSE RIVER - NGR01 - VRMP	10/5/2017	7:50 AM	D	.1	M										
HB-1	HARKNESS BROOK - NHK00 - VRMP	6/15/2017	7:08 AM	NA			13.6			360					1733	
HB-1	HARKNESS BROOK - NHK00 - VRMP	6/15/2017	7:08 AM	NA	.1	M										
HB-1	HARKNESS BROOK - NHK00 - VRMP	7/10/2017	7:05 AM	NA			17.4	7.3	74.9	464					248	
HB-1	HARKNESS BROOK - NHK00 - VRMP	7/10/2017	7:05 AM	NA	.1	M										
HB-1	HARKNESS BROOK - NHK00 - VRMP	8/9/2017		L	.1	M										
HB-1	HARKNESS BROOK - NHK00 - VRMP	8/9/2017	7:51 AM	NA			15.9	7.7	78.0	348.1					980	
HB-1	HARKNESS BROOK - NHK00 - VRMP	8/9/2017	7:51 AM	NA	.1	M										
LPS-1	LILY POND STREAM - NLP00 - VRMP	6/15/2017	6:48 AM	NA			16.0			350					36	
LPS-1	LILY POND STREAM - NLP00 - VRMP	6/15/2017	6:48 AM	NA	.1	M										
LPS-1	LILY POND STREAM - NLP00 - VRMP	7/10/2017	6:40 AM	NA			17.8	8.6	89.7	281					70	
LPS-1	LILY POND STREAM - NLP00 - VRMP	7/10/2017	6:40 AM	NA	.1	M										
OTT-1	OTT BROOK - NOT02 - VRMP	6/15/2017	7:19 AM	NA			13.3			190					214	

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OTT-1	OTT BROOK - NOT02 - VRMP	6/15/2017	7:19 AM	NA	.1	M										
OTT-1	OTT BROOK - NOT02 - VRMP	7/10/2017	7:20 AM	NA			16.8	8.3	85.5	262					219	
OTT-1	OTT BROOK - NOT02 - VRMP	7/10/2017	7:20 AM	NA	.1	M										
OTT-1	OTT BROOK - NOT02 - VRMP	8/9/2017	8:05 AM	NA			15.6	9.1	91.4	258.5					548	
OTT-1	OTT BROOK - NOT02 - VRMP	8/9/2017	8:05 AM	NA	.1	M										
RH-1	ROCKPORT HARBOR-RH1-VRMP	6/15/2017	2:16 PM	NA												21
RH-1	ROCKPORT HARBOR-RH1-VRMP	6/15/2017	2:16 PM	NA	.1	M										
RH-1	ROCKPORT HARBOR-RH1-VRMP	6/15/2017	2:16 PM	NA	.4	M	16.9	9.2	110.2	26.03						
RH-1	ROCKPORT HARBOR-RH1-VRMP	6/15/2017	2:16 PM	NA	1.8	M	16.4	9.7	115.1	26.31						
RH-1	ROCKPORT HARBOR-RH1-VRMP	6/15/2017	2:16 PM	NA	3.8	M	15.8	9.9	116.7	26.51						
RH-1	ROCKPORT HARBOR-RH1-VRMP	6/15/2017	2:16 PM	NA	5.8	M	15.7	10.0	117.3	26.55						
RH-1	ROCKPORT HARBOR-RH1-VRMP	6/15/2017	2:16 PM	NA	6.1	M	15.4	10.2	118.5	26.7						
RH-1	ROCKPORT HARBOR-RH1-VRMP	6/15/2017	2:16 PM	D												35
RH-1	ROCKPORT HARBOR-RH1-VRMP	6/15/2017	2:16 PM	D	.1	M										
RH-1	ROCKPORT HARBOR-RH1-VRMP	7/10/2017		L	.1	M										
RH-1	ROCKPORT HARBOR-RH1-VRMP	7/10/2017	1:51 PM	NA												13
RH-1	ROCKPORT HARBOR-RH1-VRMP	7/10/2017	1:51 PM	NA	.1	M										
RH-1	ROCKPORT HARBOR-RH1-VRMP	7/10/2017	1:51 PM	NA	.3	M	15.27	8.71	103.5	29.24						
RH-1	ROCKPORT HARBOR-RH1-VRMP	7/10/2017	1:51 PM	NA	1.0	M	15.29	9.64	114.7	29.32						
RH-1	ROCKPORT HARBOR-RH1-VRMP	7/10/2017	1:51 PM	NA	2.1	M	15.19	10.22	121.2	29.28						
RH-1	ROCKPORT HARBOR-RH1-VRMP	7/10/2017	1:51 PM	NA	2.9	M	14.98	10.45	123.6	29.46						
RH-1	ROCKPORT HARBOR-RH1-VRMP	7/10/2017	1:51 PM	NA	4.1	M	14.55	10.53	123.5	29.47						
RH-1	ROCKPORT HARBOR-RH1-VRMP	7/10/2017	1:51 PM	NA	5.0	M	12.6	10.6	119.7	29.85						
RH-1	ROCKPORT HARBOR-RH1-VRMP	7/10/2017	1:51 PM	NA	6.0	M	12.16	10.56	118.3	30						
RH-1	ROCKPORT HARBOR-RH1-VRMP	7/10/2017	1:51 PM	NA	6.4	M	12.16	10.56	118.2	29.91						
RH-1	ROCKPORT HARBOR-RH1-VRMP	7/10/2017	1:51 PM	D												20
RH-1	ROCKPORT HARBOR-RH1-VRMP	7/10/2017	1:51 PM	D	.1	M										
RH-1	ROCKPORT HARBOR-RH1-VRMP	7/10/2017	1:51 PM	D	6.4	M	12.16	10.56	118.2	29.98						
RH-1	ROCKPORT HARBOR-RH1-VRMP	8/9/2017	2:25 PM	NA												8
RH-1	ROCKPORT HARBOR-RH1-VRMP	8/9/2017	2:25 PM	NA	.1	M										
RH-1	ROCKPORT HARBOR-RH1-VRMP	8/9/2017	2:25 PM	NA	.3	M	16.89	8.81	108.2	30.18						
RH-1	ROCKPORT HARBOR-RH1-VRMP	8/9/2017	2:25 PM	NA	1.0	M	16.86	9.18	112.8	30.29						
RH-1	ROCKPORT HARBOR-RH1-VRMP	8/9/2017	2:25 PM	NA	2.0	M	16.83	9.23	113.2	30.2						
RH-1	ROCKPORT HARBOR-RH1-VRMP	8/9/2017	2:25 PM	NA	2.9	M	16.68	9.26	113.4	30.34						
RH-1	ROCKPORT HARBOR-RH1-VRMP	8/9/2017	2:25 PM	NA	4.1	M	16.65	9.31	113.9	30.26						
RH-1	ROCKPORT HARBOR-RH1-VRMP	8/9/2017	2:25 PM	NA	5.0	M	16.48	9.35	114.1	30.28						
RH-1	ROCKPORT HARBOR-RH1-VRMP	8/9/2017	2:25 PM	NA	6.0	M	16.16	9.38	113.7	30.29						
RH-1	ROCKPORT HARBOR-RH1-VRMP	8/9/2017	2:25 PM	NA	6.3	M	16.04	9.41	113.7	30.3						
RH-1	ROCKPORT HARBOR-RH1-VRMP	8/9/2017	2:25 PM	D												9
RH-1	ROCKPORT HARBOR-RH1-VRMP	8/9/2017	2:25 PM	D	.1	M										
RH-1	ROCKPORT HARBOR-RH1-VRMP	9/6/2017	2:11 PM	NA												387
RH-1	ROCKPORT HARBOR-RH1-VRMP	9/6/2017	2:11 PM	NA	.1	M										
RH-1	ROCKPORT HARBOR-RH1-VRMP	9/6/2017	2:11 PM	NA	.3	M	16.33	8.43	102	29.49						
RH-1	ROCKPORT HARBOR-RH1-VRMP	9/6/2017	2:11 PM	NA	1.0	M	15.54	8.67	104.1	30.73						

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RH-1	ROCKPORT HARBOR-RH1-VRMP	9/6/2017	2:11 PM	NA	2.0	M	13.53	8.58	99.2		31.33				
RH-1	ROCKPORT HARBOR-RH1-VRMP	9/6/2017	2:11 PM	NA	3.0	M	13.07	8.49	97.3		31.42				
RH-1	ROCKPORT HARBOR-RH1-VRMP	9/6/2017	2:11 PM	NA	4.1	M	12.96	8.36	95.6		31.48				
RH-1	ROCKPORT HARBOR-RH1-VRMP	9/6/2017	2:11 PM	NA	5.0	M	12.82	8.17	93.2		31.45				
RH-1	ROCKPORT HARBOR-RH1-VRMP	9/6/2017	2:11 PM	NA	6.1	M	12.58	7.93	90		31.5				
RH-1	ROCKPORT HARBOR-RH1-VRMP	9/6/2017	2:11 PM	D											245
RH-1	ROCKPORT HARBOR-RH1-VRMP	9/6/2017	2:11 PM	D	.1	M									
RH-1	ROCKPORT HARBOR-RH1-VRMP	10/5/2017	1:46 PM	NA											22
RH-1	ROCKPORT HARBOR-RH1-VRMP	10/5/2017	1:46 PM	NA	.1	M									
RH-1	ROCKPORT HARBOR-RH1-VRMP	10/5/2017	1:46 PM	NA	.3	M	14.83	7.81	93.2		31.61				
RH-1	ROCKPORT HARBOR-RH1-VRMP	10/5/2017	1:46 PM	NA	.9	M	14.09	7.7	90.5		31.68				
RH-1	ROCKPORT HARBOR-RH1-VRMP	10/5/2017	1:46 PM	NA	2.1	M	13.74	7.62	89		31.72				
RH-1	ROCKPORT HARBOR-RH1-VRMP	10/5/2017	1:46 PM	NA	3.1	M	13.38	7.62	88.3		31.81				
RH-1	ROCKPORT HARBOR-RH1-VRMP	10/5/2017	1:46 PM	NA	3.9	M	13.27	7.58	87.7		31.87				
RH-1	ROCKPORT HARBOR-RH1-VRMP	10/5/2017	1:46 PM	NA	5.0	M	13.2	7.6	87.9		31.93				
RH-1	ROCKPORT HARBOR-RH1-VRMP	10/5/2017	1:46 PM	NA	5.5	M	13.21	7.81	90.3		31.91				
RH-1	ROCKPORT HARBOR-RH1-VRMP	10/5/2017	1:46 PM	D											26
RH-1	ROCKPORT HARBOR-RH1-VRMP	10/5/2017	1:46 PM	D	.1	M									
RH-2	ROCKPORT HARBOR-RH2-VRMP	6/15/2017	2:02 PM	NA											27
RH-2	ROCKPORT HARBOR-RH2-VRMP	6/15/2017	2:02 PM	NA	.1	M									
RH-2	ROCKPORT HARBOR-RH2-VRMP	6/15/2017	2:02 PM	NA	.5	M	15.76	9.14	107.4		26.45				
RH-2	ROCKPORT HARBOR-RH2-VRMP	6/15/2017	2:02 PM	NA	1.9	M	15.75	9.75	114.5		26.47				
RH-2	ROCKPORT HARBOR-RH2-VRMP	6/15/2017	2:02 PM	NA	3.7	M	15.76	9.77	114.8		26.5				
RH-2	ROCKPORT HARBOR-RH2-VRMP	6/15/2017	2:02 PM	NA	6.0	M	15.06	9.89	114.7		26.72				
RH-2	ROCKPORT HARBOR-RH2-VRMP	6/15/2017	2:02 PM	NA	8.0	M	8.07	10.2	104		29.86				
RH-2	ROCKPORT HARBOR-RH2-VRMP	6/15/2017	2:02 PM	NA	10.1	M	7.78	10.26	104		30.07				
RH-2	ROCKPORT HARBOR-RH2-VRMP	6/15/2017	2:02 PM	NA	11.8	M	7.71	10.13	102.6		30.1				
RH-2	ROCKPORT HARBOR-RH2-VRMP	6/15/2017	2:02 PM	NA	13.3	M	7.65	10.04	101.5		30.25				
RH-2	ROCKPORT HARBOR-RH2-VRMP	7/10/2017	1:22 PM	NA											23
RH-2	ROCKPORT HARBOR-RH2-VRMP	7/10/2017	1:22 PM	NA	.3	M	15.13	8.85	104.9		29.25				
RH-2	ROCKPORT HARBOR-RH2-VRMP	7/10/2017	1:22 PM	NA	1.0	M	14.76	9.82	115.6		29.28				
RH-2	ROCKPORT HARBOR-RH2-VRMP	7/10/2017	1:22 PM	NA	2.0	M	14.75	10.34	121.6		29.36				
RH-2	ROCKPORT HARBOR-RH2-VRMP	7/10/2017	1:22 PM	NA	3.0	M	14.51	10.89	127.5		29.38				
RH-2	ROCKPORT HARBOR-RH2-VRMP	7/10/2017	1:22 PM	NA	4.0	M	13.79	11.33	130.9		29.62				
RH-2	ROCKPORT HARBOR-RH2-VRMP	7/10/2017	1:22 PM	NA	5.0	M	12.83	11.63	131.9		29.77				
RH-2	ROCKPORT HARBOR-RH2-VRMP	7/10/2017	1:22 PM	NA	6.0	M	12.5	11.76	132.6		29.92				
RH-2	ROCKPORT HARBOR-RH2-VRMP	7/10/2017	1:22 PM	NA	7.1	M	12.26	11.84	132.8		29.92				
RH-2	ROCKPORT HARBOR-RH2-VRMP	7/10/2017	1:22 PM	NA	8.1	M	11.78	11.33	125.9		30.04				
RH-2	ROCKPORT HARBOR-RH2-VRMP	7/10/2017	1:22 PM	NA	9.0	M	11.07	11.14	122.1		30.22				
RH-2	ROCKPORT HARBOR-RH2-VRMP	7/10/2017	1:22 PM	NA	10.1	M	10.88	10.96	119.6		30.12				
RH-2	ROCKPORT HARBOR-RH2-VRMP	7/10/2017	1:22 PM	NA	12.1	M	10.65	10.84	117.7		30.27				
RH-2	ROCKPORT HARBOR-RH2-VRMP	7/10/2017	1:22 PM	NA	14.1	M	9.48	10.69	113.3		30.54				
RH-2	ROCKPORT HARBOR-RH2-VRMP	7/10/2017	1:22 PM	NA	14.9	M	9.39	10.51	111.2		30.54				
RH-2	ROCKPORT HARBOR-RH2-VRMP	7/10/2017	1:22 PM	NA	15.3	M	9.38	10.37	109.7		30.54				

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RH-2	ROCKPORT HARBOR-RH2-VRMP	7/10/2017	1:24 PM	NA	.1	M									
RH-2	ROCKPORT HARBOR-RH2-VRMP	8/9/2017	2:00 PM	NA											11
RH-2	ROCKPORT HARBOR-RH2-VRMP	8/9/2017	2:00 PM	NA	.1	M									
RH-2	ROCKPORT HARBOR-RH2-VRMP	8/9/2017	2:00 PM	NA	.5	M	16.82	9.1	111.6		30.21				
RH-2	ROCKPORT HARBOR-RH2-VRMP	8/9/2017	2:00 PM	NA	1.4	M	16.89	9.18	112.8		30.18				
RH-2	ROCKPORT HARBOR-RH2-VRMP	8/9/2017	2:00 PM	NA	1.5	M	16.89	9.18	112.8		30.21				
RH-2	ROCKPORT HARBOR-RH2-VRMP	8/9/2017	2:00 PM	NA	2.0	M	16.91	9.18	112.8		30.18				
RH-2	ROCKPORT HARBOR-RH2-VRMP	8/9/2017	2:00 PM	NA	3.0	M	16.52	9.25	112.9		30.29				
RH-2	ROCKPORT HARBOR-RH2-VRMP	8/9/2017	2:00 PM	NA	4.1	M	16.31	9.29	112.9		30.3				
RH-2	ROCKPORT HARBOR-RH2-VRMP	8/9/2017	2:00 PM	NA	5.1	M	16.22	9.33	113.2		30.35				
RH-2	ROCKPORT HARBOR-RH2-VRMP	8/9/2017	2:00 PM	NA	6.0	M	16.23	9.35	113.4		30.28				
RH-2	ROCKPORT HARBOR-RH2-VRMP	8/9/2017	2:00 PM	NA	7.1	M	16.25	9.35	113.5		30.34				
RH-2	ROCKPORT HARBOR-RH2-VRMP	8/9/2017	2:00 PM	NA	8.1	M	16.26	9.37	113.8		30.3				
RH-2	ROCKPORT HARBOR-RH2-VRMP	8/9/2017	2:00 PM	NA	9.0	M	16.22	9.38	113.8		30.3				
RH-2	ROCKPORT HARBOR-RH2-VRMP	8/9/2017	2:00 PM	NA	10.1	M	16.21	9.39	113.9		30.3				
RH-2	ROCKPORT HARBOR-RH2-VRMP	8/9/2017	2:00 PM	NA	11.0	M	16.2	9.39	113.8		30.29				
RH-2	ROCKPORT HARBOR-RH2-VRMP	8/9/2017	2:00 PM	NA	12.0	M	16.21	9.38	113.8		30.35				
RH-2	ROCKPORT HARBOR-RH2-VRMP	8/9/2017	2:00 PM	NA	12.9	M	15.88	9.41	113.4		30.26				
RH-2	ROCKPORT HARBOR-RH2-VRMP	8/9/2017	2:00 PM	NA	14.0	M	15.61	9.44	113.2		30.28				
RH-2	ROCKPORT HARBOR-RH2-VRMP	9/6/2017	1:36 PM	NA											45
RH-2	ROCKPORT HARBOR-RH2-VRMP	9/6/2017	1:36 PM	NA	.1	M									
RH-2	ROCKPORT HARBOR-RH2-VRMP	9/6/2017	1:36 PM	NA	.3	M	15.97	8.73	105.5		30.56				
RH-2	ROCKPORT HARBOR-RH2-VRMP	9/6/2017	1:36 PM	NA	1.0	M	15.4	9.02	108		30.88				
RH-2	ROCKPORT HARBOR-RH2-VRMP	9/6/2017	1:36 PM	NA	2.1	M	13.32	9.06	104.4		31.44				
RH-2	ROCKPORT HARBOR-RH2-VRMP	9/6/2017	1:36 PM	NA	3.1	M	13.15	9.06	104.1		31.42				
RH-2	ROCKPORT HARBOR-RH2-VRMP	9/6/2017	1:36 PM	NA	4.1	M	13.05	9.08	104		31.43				
RH-2	ROCKPORT HARBOR-RH2-VRMP	9/6/2017	1:36 PM	NA	5.1	M	12.76	9.11	103.8		31.52				
RH-2	ROCKPORT HARBOR-RH2-VRMP	9/6/2017	1:36 PM	NA	6.0	M	12.74	9.09	103.6		31.51				
RH-2	ROCKPORT HARBOR-RH2-VRMP	9/6/2017	1:36 PM	NA	8.0	M	12.44	8.83	99.9		31.52				
RH-2	ROCKPORT HARBOR-RH2-VRMP	9/6/2017	1:36 PM	NA	9.9	M	12.4	8.61	97.5		31.55				
RH-2	ROCKPORT HARBOR-RH2-VRMP	9/6/2017	1:36 PM	NA	12.0	M	12.39	8.5	96.1		31.57				
RH-2	ROCKPORT HARBOR-RH2-VRMP	9/6/2017	1:36 PM	NA	13.6	M	12.38	8.39	94.9		31.54				
RH-2	ROCKPORT HARBOR-RH2-VRMP	10/5/2017	1:23 PM	NA											10
RH-2	ROCKPORT HARBOR-RH2-VRMP	10/5/2017	1:23 PM	NA	.1	M									
RH-2	ROCKPORT HARBOR-RH2-VRMP	10/5/2017	1:23 PM	NA	.3	M	14.59	7.79	92.4		31.62				
RH-2	ROCKPORT HARBOR-RH2-VRMP	10/5/2017	1:23 PM	NA	1.1	M	13.77	7.86	91.9		31.84				
RH-2	ROCKPORT HARBOR-RH2-VRMP	10/5/2017	1:23 PM	NA	2.0	M	13.48	7.83	91		31.79				
RH-2	ROCKPORT HARBOR-RH2-VRMP	10/5/2017	1:23 PM	NA	3.0	M	13.36	7.77	90		31.82				
RH-2	ROCKPORT HARBOR-RH2-VRMP	10/5/2017	1:23 PM	NA	4.1	M	13.26	7.71	89.2		31.86				
RH-2	ROCKPORT HARBOR-RH2-VRMP	10/5/2017	1:23 PM	NA	5.1	M	13.21	7.71	89.1		31.85				
RH-2	ROCKPORT HARBOR-RH2-VRMP	10/5/2017	1:23 PM	NA	6.0	M	13.17	7.71	89.1		31.85				
RH-2	ROCKPORT HARBOR-RH2-VRMP	10/5/2017	1:23 PM	NA	7.1	M	13.15	7.7	89		31.95				
RH-2	ROCKPORT HARBOR-RH2-VRMP	10/5/2017	1:23 PM	NA	8.1	M	13.13	7.68	88.7		31.89				
RH-2	ROCKPORT HARBOR-RH2-VRMP	10/5/2017	1:23 PM	NA	9.9	M	13.1	7.56	87.2		31.92				

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RH-2	ROCKPORT HARBOR-RH2-VRMP	10/5/2017	1:23 PM	NA	12.0	M	13.08	7.48	86.3		31.89		
RH-2	ROCKPORT HARBOR-RH2-VRMP	10/5/2017	1:23 PM	NA	13.9	M	13.08	7.44	85.8		31.88		
RH-2	ROCKPORT HARBOR-RH2-VRMP	10/5/2017	1:23 PM	NA	14.4	M	13.08	7.41	85.5		31.97		
RH-3	ROCKPORT HARBOR-RH3-VRMP	6/15/2017	1:39 PM	NA									8
RH-3	ROCKPORT HARBOR-RH3-VRMP	6/15/2017	1:39 PM	NA	.1	M							
RH-3	ROCKPORT HARBOR-RH3-VRMP	6/15/2017	1:39 PM	NA	.6	M	15.63	9.96	116.7		26.32		
RH-3	ROCKPORT HARBOR-RH3-VRMP	6/15/2017	1:39 PM	NA	.6	M	15.65	9.96	116.7		26.32		
RH-3	ROCKPORT HARBOR-RH3-VRMP	6/15/2017	1:39 PM	NA	1.9	M	15.59	10	117		26.37		
RH-3	ROCKPORT HARBOR-RH3-VRMP	6/15/2017	1:39 PM	NA	3.9	M	15.32	10.16	118.3		26.45		
RH-3	ROCKPORT HARBOR-RH3-VRMP	6/15/2017	1:39 PM	NA	6.1	M	14.6	10.59	122.1		27.15		
RH-3	ROCKPORT HARBOR-RH3-VRMP	6/15/2017	1:39 PM	NA	8.0	M	10.82	10.86	117		29.08		
RH-3	ROCKPORT HARBOR-RH3-VRMP	6/15/2017	1:39 PM	NA	10.1	M	8	10.94	111.4		29.98		
RH-3	ROCKPORT HARBOR-RH3-VRMP	6/15/2017	1:39 PM	NA	11.9	M	7.65	10.82	109.4		30.13		
RH-3	ROCKPORT HARBOR-RH3-VRMP	6/15/2017	1:39 PM	NA	14.0	M	7.61	10.61	107.2		30.18		
RH-3	ROCKPORT HARBOR-RH3-VRMP	6/15/2017	1:39 PM	NA	16.0	M	7.47	10.39	104.6		30.18		
RH-3	ROCKPORT HARBOR-RH3-VRMP	6/15/2017	1:39 PM	NA	18.0	M	7.45	10.11	101.8		30.25		
RH-3	ROCKPORT HARBOR-RH3-VRMP	6/15/2017	1:39 PM	NA	18.7	M	7.45	9.98	100.5		30.28		
RH-3	ROCKPORT HARBOR-RH3-VRMP	7/10/2017	12:54 PM	NA									18
RH-3	ROCKPORT HARBOR-RH3-VRMP	7/10/2017	12:54 PM	NA	.1	M							
RH-3	ROCKPORT HARBOR-RH3-VRMP	7/10/2017	12:54 PM	NA	.4	M	15.05	9.61	113.6		29.17		
RH-3	ROCKPORT HARBOR-RH3-VRMP	7/10/2017	12:54 PM	NA	1.1	M	15.04	10.26	121.5		29.32		
RH-3	ROCKPORT HARBOR-RH3-VRMP	7/10/2017	12:54 PM	NA	2.1	M	14.37	10.41	121.7		29.44		
RH-3	ROCKPORT HARBOR-RH3-VRMP	7/10/2017	12:54 PM	NA	3.0	M	14.26	10.84	126.5		29.5		
RH-3	ROCKPORT HARBOR-RH3-VRMP	7/10/2017	12:54 PM	NA	3.9	M	14.1	10.87	126.4		29.55		
RH-3	ROCKPORT HARBOR-RH3-VRMP	7/10/2017	12:54 PM	NA	5.1	M	13.36	11.15	127.7		29.65		
RH-3	ROCKPORT HARBOR-RH3-VRMP	7/10/2017	12:54 PM	NA	6.0	M	12.44	11.36	127.9		29.98		
RH-3	ROCKPORT HARBOR-RH3-VRMP	7/10/2017	12:54 PM	NA	7.1	M	12.44	11.39	128.2		29.88		
RH-3	ROCKPORT HARBOR-RH3-VRMP	7/10/2017	12:54 PM	NA	9.9	M	11.14	11.67	127.9		30.12		
RH-3	ROCKPORT HARBOR-RH3-VRMP	7/10/2017	12:54 PM	NA	12.0	M	9.88	11.72	125.2		30.43		
RH-3	ROCKPORT HARBOR-RH3-VRMP	7/10/2017	12:54 PM	NA	14.0	M	9.66	11.24	119.5		30.44		
RH-3	ROCKPORT HARBOR-RH3-VRMP	7/10/2017	12:54 PM	NA	16.1	M	9.1	11.03	116		30.65		
RH-3	ROCKPORT HARBOR-RH3-VRMP	7/10/2017	12:54 PM	NA	18.0	M	9.05	10.48	110.1		30.65		
RH-3	ROCKPORT HARBOR-RH3-VRMP	7/10/2017	12:54 PM	NA	19.5	M	9.04	10.14	106.6		30.62		
RH-3	ROCKPORT HARBOR-RH3-VRMP	8/9/2017	1:28 PM	NA									11
RH-3	ROCKPORT HARBOR-RH3-VRMP	8/9/2017	1:28 PM	NA	.3	M	16.71	8.69	106.4		30.17		
RH-3	ROCKPORT HARBOR-RH3-VRMP	8/9/2017	1:28 PM	NA	1.1	M	16.82	9.08	111.3		30.15		
RH-3	ROCKPORT HARBOR-RH3-VRMP	8/9/2017	1:28 PM	NA	2.0	M	16.72	9.17	112.3		30.21		
RH-3	ROCKPORT HARBOR-RH3-VRMP	8/9/2017	1:28 PM	NA	2.9	M	16.65	9.23	112.9		30.22		
RH-3	ROCKPORT HARBOR-RH3-VRMP	8/9/2017	1:28 PM	NA	4.1	M	16.55	9.27	113.1		30.24		
RH-3	ROCKPORT HARBOR-RH3-VRMP	8/9/2017	1:28 PM	NA	5.0	M	15.96	9.36	113		30.28		
RH-3	ROCKPORT HARBOR-RH3-VRMP	8/9/2017	1:28 PM	NA	6.0	M	15.36	9.46	112.8		30.34		
RH-3	ROCKPORT HARBOR-RH3-VRMP	8/9/2017	1:28 PM	NA	7.1	M	15.26	9.48	112.9		30.36		
RH-3	ROCKPORT HARBOR-RH3-VRMP	8/9/2017	1:28 PM	NA	7.9	M	15.21	9.52	113.2		30.38		
RH-3	ROCKPORT HARBOR-RH3-VRMP	8/9/2017	1:28 PM	NA	9.0	M	15.12	9.57	113.7		30.37		

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RH-3	ROCKPORT HARBOR-RH3-VRMP	8/9/2017	1:28 PM	NA	9.9	M	15.06	9.57	113.5		30.35			
RH-3	ROCKPORT HARBOR-RH3-VRMP	8/9/2017	1:28 PM	NA	11.0	M	14.9	9.48	112.1		30.33			
RH-3	ROCKPORT HARBOR-RH3-VRMP	8/9/2017	1:28 PM	NA	12.0	M	14.29	9.42	110		30.48			
RH-3	ROCKPORT HARBOR-RH3-VRMP	8/9/2017	1:28 PM	NA	13.2	M	13.49	9.3	106.9		30.59			
RH-3	ROCKPORT HARBOR-RH3-VRMP	8/9/2017	1:28 PM	NA	14.3	M	12.46	9.19	103.6		30.79			
RH-3	ROCKPORT HARBOR-RH3-VRMP	8/9/2017	1:28 PM	NA	14.9	M	11.87	8.89	99		30.86			
RH-3	ROCKPORT HARBOR-RH3-VRMP	8/9/2017	1:28 PM	NA	15.9	M	11.63	8.59	95.2		30.95			
RH-3	ROCKPORT HARBOR-RH3-VRMP	8/9/2017	1:28 PM	NA	16.9	M	11.61	8.42	93.3		30.82			
RH-3	ROCKPORT HARBOR-RH3-VRMP	8/9/2017	1:28 PM	NA	18.0	M	11.39	8.17	90.2		31.03			
RH-3	ROCKPORT HARBOR-RH3-VRMP	8/9/2017	1:28 PM	NA	18.8	M	11.37	8.12	89.6		30.91			
RH-3	ROCKPORT HARBOR-RH3-VRMP	8/9/2017	1:28 PM	NA	19.3	M	11.37	8.09	89.2		30.91			
RH-3	ROCKPORT HARBOR-RH3-VRMP	8/9/2017	1:29 PM	NA	.1	M								
RH-3	ROCKPORT HARBOR-RH3-VRMP	9/6/2017	1:52 PM	NA										37
RH-3	ROCKPORT HARBOR-RH3-VRMP	9/6/2017	1:52 PM	NA	.1	M								
RH-3	ROCKPORT HARBOR-RH3-VRMP	9/6/2017	1:52 PM	NA	.3	M	15.98	8.16	98.3		29.99			
RH-3	ROCKPORT HARBOR-RH3-VRMP	9/6/2017	1:52 PM	NA	1.0	M	15.63	9.11	109.7		31.07			
RH-3	ROCKPORT HARBOR-RH3-VRMP	9/6/2017	1:52 PM	NA	2.1	M	13.45	9.15	105.7		31.41			
RH-3	ROCKPORT HARBOR-RH3-VRMP	9/6/2017	1:52 PM	NA	3.0	M	13.26	8.99	103.5		31.46			
RH-3	ROCKPORT HARBOR-RH3-VRMP	9/6/2017	1:52 PM	NA	4.1	M	13.12	8.83	101.4		31.5			
RH-3	ROCKPORT HARBOR-RH3-VRMP	9/6/2017	1:52 PM	NA	5.2	M	12.96	8.78	100.5		31.51			
RH-3	ROCKPORT HARBOR-RH3-VRMP	9/6/2017	1:52 PM	NA	6.0	M	12.84	8.74	99.8		31.45			
RH-3	ROCKPORT HARBOR-RH3-VRMP	9/6/2017	1:52 PM	NA	8.3	M	12.55	8.57	97.2		31.54			
RH-3	ROCKPORT HARBOR-RH3-VRMP	9/6/2017	1:52 PM	NA	10.1	M	12.46	8.36	94.7		31.56			
RH-3	ROCKPORT HARBOR-RH3-VRMP	9/6/2017	1:52 PM	NA	12.1	M	12.45	8.2	92.9		31.52			
RH-3	ROCKPORT HARBOR-RH3-VRMP	9/6/2017	1:52 PM	NA	14.0	M	12.4	8.07	91.4		31.6			
RH-3	ROCKPORT HARBOR-RH3-VRMP	9/6/2017	1:52 PM	NA	16.1	M	12.36	7.92	89.6		31.61			
RH-3	ROCKPORT HARBOR-RH3-VRMP	9/6/2017	1:52 PM	NA	18.8	M	12.35	7.67	86.8		31.59			
RH-3	ROCKPORT HARBOR-RH3-VRMP	10/5/2017	12:54 PM	NA										16
RH-3	ROCKPORT HARBOR-RH3-VRMP	10/5/2017	12:54 PM	NA	.1	M								
RH-3	ROCKPORT HARBOR-RH3-VRMP	10/5/2017	12:54 PM	NA	.4	M	14.27	8.23	97.1		31.66			
RH-3	ROCKPORT HARBOR-RH3-VRMP	10/5/2017	12:54 PM	NA	1.0	M	14.15	8.34	98.1		31.69			
RH-3	ROCKPORT HARBOR-RH3-VRMP	10/5/2017	12:54 PM	NA	2.0	M	13.61	8.58	99.9		31.73			
RH-3	ROCKPORT HARBOR-RH3-VRMP	10/5/2017	12:54 PM	NA	3.0	M	13.36	8.6	99.8		31.87			
RH-3	ROCKPORT HARBOR-RH3-VRMP	10/5/2017	12:54 PM	NA	4.0	M	13.3	8.6	99.6		31.83			
RH-3	ROCKPORT HARBOR-RH3-VRMP	10/5/2017	12:54 PM	NA	5.1	M	13.18	8.59	99.2		31.86			
RH-3	ROCKPORT HARBOR-RH3-VRMP	10/5/2017	12:54 PM	NA	6.0	M	13.15	8.62	99.5		31.92			
RH-3	ROCKPORT HARBOR-RH3-VRMP	10/5/2017	12:54 PM	NA	8.0	M	13.14	8.63	99.6		31.83			
RH-3	ROCKPORT HARBOR-RH3-VRMP	10/5/2017	12:54 PM	NA	10.0	M	13.11	8.58	99		31.89			
RH-3	ROCKPORT HARBOR-RH3-VRMP	10/5/2017	12:54 PM	NA	14.1	M	13.09	8.55	98.6		31.89			
RH-3	ROCKPORT HARBOR-RH3-VRMP	10/5/2017	12:54 PM	NA	16.0	M	13.06	8.55	98.6		31.92			
RH-3	ROCKPORT HARBOR-RH3-VRMP	10/5/2017	12:54 PM	NA	18.0	M	13.04	8.49	97.9		31.95			
RH-3	ROCKPORT HARBOR-RH3-VRMP	10/5/2017	12:54 PM	NA	19.4	M	13.03	8.13	93.7		32			
RO	ROCKPORT HARBOR-RO-VRMP	6/15/2017	12:56 PM	NA										15
RO	ROCKPORT HARBOR-RO-VRMP	6/15/2017	12:56 PM	NA	.1	M								

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RO	ROCKPORT HARBOR-RO-VRMP	6/15/2017	12:56 PM	NA	.5	M	15.49	10.14	118.4		26.28			
RO	ROCKPORT HARBOR-RO-VRMP	6/15/2017	12:56 PM	NA	.5	M	15.47	10.06	117.4		26.25			
RO	ROCKPORT HARBOR-RO-VRMP	6/15/2017	12:56 PM	NA	2.1	M	15.46	10.2	119		26.26			
RO	ROCKPORT HARBOR-RO-VRMP	6/15/2017	12:56 PM	NA	2.1	M	15.4	10.21	119		26.19			
RO	ROCKPORT HARBOR-RO-VRMP	6/15/2017	12:56 PM	NA	4.0	M	15.03	10.33	119.6		26.34			
RO	ROCKPORT HARBOR-RO-VRMP	6/15/2017	12:56 PM	NA	5.1	M	14.85	10.36	119.5		26.43			
RO	ROCKPORT HARBOR-RO-VRMP	6/15/2017	12:56 PM	NA	6.2	M	10.34	10.43	111.3		29.23			
RO	ROCKPORT HARBOR-RO-VRMP	6/15/2017	12:56 PM	NA	8.2	M	9.33	10.44	109.2		29.52			
RO	ROCKPORT HARBOR-RO-VRMP	6/15/2017	12:56 PM	NA	10.0	M	8.28	10.34	105.9		30.01			
RO	ROCKPORT HARBOR-RO-VRMP	6/15/2017	12:56 PM	NA	10.0	M	8.44	10.27	105.7		29.97			
RO	ROCKPORT HARBOR-RO-VRMP	6/15/2017	12:56 PM	NA	12.1	M	7.97	10.17	103.6		30.18			
RO	ROCKPORT HARBOR-RO-VRMP	6/15/2017	12:56 PM	NA	13.9	M	7.55	10.04	101.5		30.37			
RO	ROCKPORT HARBOR-RO-VRMP	6/15/2017	12:56 PM	NA	15.7	M	7.32	9.9	99.5		30.4			
RO	ROCKPORT HARBOR-RO-VRMP	6/15/2017	12:56 PM	NA	18.1	M	7.29	9.79	98.4		30.41			
RO	ROCKPORT HARBOR-RO-VRMP	6/15/2017	12:56 PM	NA	19.8	M	7.11	9.76	97.6		30.4			
RO	ROCKPORT HARBOR-RO-VRMP	6/15/2017	12:56 PM	NA	21.9	M	7	9.71	96.9		30.4			
RO	ROCKPORT HARBOR-RO-VRMP	6/15/2017	12:56 PM	NA	24.1	M	6.98	9.71	96.9		30.49			
RO	ROCKPORT HARBOR-RO-VRMP	6/15/2017	12:56 PM	NA	24.2	M	6.98	9.7	96.8		30.49			
RO	ROCKPORT HARBOR-RO-VRMP	7/10/2017	12:12 PM	NA										19
RO	ROCKPORT HARBOR-RO-VRMP	7/10/2017	12:12 PM	NA	.1	M								
RO	ROCKPORT HARBOR-RO-VRMP	7/10/2017	12:12 PM	NA	.5	M	16.07	8.87	106.5		28.43			
RO	ROCKPORT HARBOR-RO-VRMP	7/10/2017	12:12 PM	NA	1.2	M	15.99	9.86	118.3		28.5			
RO	ROCKPORT HARBOR-RO-VRMP	7/10/2017	12:12 PM	NA	2.0	M	14.39	10.34	120.6		29.08			
RO	ROCKPORT HARBOR-RO-VRMP	7/10/2017	12:12 PM	NA	2.9	M	13.88	10.84	125.4		29.42			
RO	ROCKPORT HARBOR-RO-VRMP	7/10/2017	12:12 PM	NA	4.0	M	13.58	11.18	128.7		29.63			
RO	ROCKPORT HARBOR-RO-VRMP	7/10/2017	12:12 PM	NA	5.1	M	12.78	11.5	130.3		29.83			
RO	ROCKPORT HARBOR-RO-VRMP	7/10/2017	12:12 PM	NA	5.9	M	12.25	11.56	129.7		30.03			
RO	ROCKPORT HARBOR-RO-VRMP	7/10/2017	12:12 PM	NA	7.0	M	11.7	11.46	127.2		30.03			
RO	ROCKPORT HARBOR-RO-VRMP	7/10/2017	12:12 PM	NA	8.1	M	10.81	11.43	124.8		30.58			
RO	ROCKPORT HARBOR-RO-VRMP	7/10/2017	12:12 PM	NA	10.1	M	10.73	11.42	124.4		30.56			
RO	ROCKPORT HARBOR-RO-VRMP	7/10/2017	12:12 PM	NA	11.9	M	10.93	11.35	124.4		30.78			
RO	ROCKPORT HARBOR-RO-VRMP	7/10/2017	12:12 PM	NA	14.1	M	10.18	11.13	120.2		30.98			
RO	ROCKPORT HARBOR-RO-VRMP	7/10/2017	12:12 PM	NA	16.1	M	9.39	10.45	110.7		30.72			
RO	ROCKPORT HARBOR-RO-VRMP	7/10/2017	12:12 PM	NA	17.8	M	9.33	9.92	105		30.86			
RO	ROCKPORT HARBOR-RO-VRMP	7/10/2017	12:12 PM	NA	20.0	M	9.25	9.58	101.3		30.93			
RO	ROCKPORT HARBOR-RO-VRMP	7/10/2017	12:12 PM	NA	22.2	M	9.18	9.47	100		30.91			
RO	ROCKPORT HARBOR-RO-VRMP	7/10/2017	12:12 PM	NA	24.0	M	9.15	9.36	98.7		30.93			
RO	ROCKPORT HARBOR-RO-VRMP	7/10/2017	12:12 PM	NA	25.8	M	9.15	9.28	97.9		30.91			
RO	ROCKPORT HARBOR-RO-VRMP	8/9/2017	12:41 PM	NA										10
RO	ROCKPORT HARBOR-RO-VRMP	8/9/2017	12:41 PM	NA	.4	M	16.42	8.95	109.1		30.29			
RO	ROCKPORT HARBOR-RO-VRMP	8/9/2017	12:41 PM	NA	1.2	M	16.45	9.25	112.7		30.24			
RO	ROCKPORT HARBOR-RO-VRMP	8/9/2017	12:41 PM	NA	2.2	M	16.44	9.28	113		30.27			
RO	ROCKPORT HARBOR-RO-VRMP	8/9/2017	12:41 PM	NA	3.1	M	16.39	9.3	113.1		30.24			
RO	ROCKPORT HARBOR-RO-VRMP	8/9/2017	12:41 PM	NA	3.1	M	16.4	9.29	113		30.22			

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RO	ROCKPORT HARBOR-RO-VRMP	8/9/2017	12:41 PM	NA	4.1	M	16.28	9.34	113.4		30.2			
RO	ROCKPORT HARBOR-RO-VRMP	8/9/2017	12:41 PM	NA	4.9	M	15.84	9.43	113.5		30.24			
RO	ROCKPORT HARBOR-RO-VRMP	8/9/2017	12:41 PM	NA	6.0	M	15.62	9.47	113.6		30.33			
RO	ROCKPORT HARBOR-RO-VRMP	8/9/2017	12:41 PM	NA	6.9	M	13.5	9.62	110.6		30.49			
RO	ROCKPORT HARBOR-RO-VRMP	8/9/2017	12:41 PM	NA	7.9	M	12.03	9.44	105.6		30.94			
RO	ROCKPORT HARBOR-RO-VRMP	8/9/2017	12:41 PM	NA	9.2	M	12	9.27	103.6		30.93			
RO	ROCKPORT HARBOR-RO-VRMP	8/9/2017	12:41 PM	NA	10.0	M	11.99	9.25	103.4		30.88			
RO	ROCKPORT HARBOR-RO-VRMP	8/9/2017	12:41 PM	NA	11.1	M	12.02	9.22	103.1		30.88			
RO	ROCKPORT HARBOR-RO-VRMP	8/9/2017	12:41 PM	NA	12.1	M	11.99	9.22	103		30.89			
RO	ROCKPORT HARBOR-RO-VRMP	8/9/2017	12:41 PM	NA	13.2	M	11.92	9.21	102.8		30.94			
RO	ROCKPORT HARBOR-RO-VRMP	8/9/2017	12:41 PM	NA	14.0	M	11.64	9.19	101.9		30.99			
RO	ROCKPORT HARBOR-RO-VRMP	8/9/2017	12:41 PM	NA	14.9	M	11.25	8.96	98.6		31.1			
RO	ROCKPORT HARBOR-RO-VRMP	8/9/2017	12:41 PM	NA	16.1	M	11.21	8.87	97.6		31.06			
RO	ROCKPORT HARBOR-RO-VRMP	8/9/2017	12:41 PM	NA	17.0	M	11.13	8.81	96.7		31.11			
RO	ROCKPORT HARBOR-RO-VRMP	8/9/2017	12:41 PM	NA	18.0	M	11.12	8.7	95.5		31.11			
RO	ROCKPORT HARBOR-RO-VRMP	8/9/2017	12:41 PM	NA	19.0	M	11.08	8.67	95.1		31.11			
RO	ROCKPORT HARBOR-RO-VRMP	8/9/2017	12:41 PM	NA	20.0	M	10.95	8.68	95		31.16			
RO	ROCKPORT HARBOR-RO-VRMP	8/9/2017	12:41 PM	NA	21.0	M	10.84	8.58	93.7		31.2			
RO	ROCKPORT HARBOR-RO-VRMP	8/9/2017	12:41 PM	NA	22.2	M	10.81	8.57	93.5		31.22			
RO	ROCKPORT HARBOR-RO-VRMP	8/9/2017	12:41 PM	NA	23.9	M	10.8	8.56	93.4		31.22			
RO	ROCKPORT HARBOR-RO-VRMP	8/9/2017	12:41 PM	NA	25.9	M	10.8	8.57	93.5		31.17			
RO	ROCKPORT HARBOR-RO-VRMP	8/9/2017	12:42 PM	NA	.1	M								
RO	ROCKPORT HARBOR-RO-VRMP	9/6/2017		L	.1	M								
RO	ROCKPORT HARBOR-RO-VRMP	9/6/2017	11:47 AM	NA										6
RO	ROCKPORT HARBOR-RO-VRMP	9/6/2017	11:47 AM	NA	.1	M								
RO	ROCKPORT HARBOR-RO-VRMP	9/6/2017	11:47 AM	NA	.4	M	13.46	8.71	100.7		31.4			
RO	ROCKPORT HARBOR-RO-VRMP	9/6/2017	11:47 AM	NA	.9	M	13.43	9.16	105.9		31.51			
RO	ROCKPORT HARBOR-RO-VRMP	9/6/2017	11:47 AM	NA	2.0	M	13.33	9.58	110.5		31.5			
RO	ROCKPORT HARBOR-RO-VRMP	9/6/2017	11:47 AM	NA	3.0	M	13.19	9.91	113.9		31.49			
RO	ROCKPORT HARBOR-RO-VRMP	9/6/2017	11:47 AM	NA	4.1	M	13.13	10.42	119.7		31.54			
RO	ROCKPORT HARBOR-RO-VRMP	9/6/2017	11:47 AM	NA	5.1	M	13.1	11.04	126.7		31.47			
RO	ROCKPORT HARBOR-RO-VRMP	9/6/2017	11:47 AM	NA	5.9	M	13.03	11.53	132.1		31.44			
RO	ROCKPORT HARBOR-RO-VRMP	9/6/2017	11:47 AM	NA	8.0	M	12.92	11.93	136.4		31.52			
RO	ROCKPORT HARBOR-RO-VRMP	9/6/2017	11:47 AM	NA	10.1	M	12.92	11.69	133.6		31.44			
RO	ROCKPORT HARBOR-RO-VRMP	9/6/2017	11:47 AM	NA	12.0	M	12.91	10.83	123.8		31.46			
RO	ROCKPORT HARBOR-RO-VRMP	9/6/2017	11:47 AM	NA	14.0	M	12.9	10.03	114.6		31.57			
RO	ROCKPORT HARBOR-RO-VRMP	9/6/2017	11:47 AM	NA	15.8	M	12.84	9.08	103.6		31.51			
RO	ROCKPORT HARBOR-RO-VRMP	9/6/2017	11:47 AM	NA	18.1	M	12.72	8.7	99		31.51			
RO	ROCKPORT HARBOR-RO-VRMP	9/6/2017	11:47 AM	NA	19.9	M	12.57	8.28	94		31.59			
RO	ROCKPORT HARBOR-RO-VRMP	9/6/2017	11:47 AM	NA	22.1	M	12.57	8.06	91.5		31.55			
RO	ROCKPORT HARBOR-RO-VRMP	9/6/2017	11:47 AM	NA	23.9	M	12.57	7.96	90.4		31.53			
RO	ROCKPORT HARBOR-RO-VRMP	9/6/2017	11:47 AM	NA	25.7	M	12.57	7.9	89.7		31.54			
RO	ROCKPORT HARBOR-RO-VRMP	10/5/2017	12:27 PM	NA										12
RO	ROCKPORT HARBOR-RO-VRMP	10/5/2017	12:27 PM	NA	.3	M	14.09	7.44	87.4		31.53			

Rockport Harbor & Tributaries - Rockport Conservation Commission: Approved Sites															
RO	ROCKPORT HARBOR-RO-VRMP	10/5/2017	12:27 PM	NA	1.1	M	13.98	8.14	95.4		31.61				
RO	ROCKPORT HARBOR-RO-VRMP	10/5/2017	12:27 PM	NA	2.1	M	13.93	8.22	96.3		31.6				
RO	ROCKPORT HARBOR-RO-VRMP	10/5/2017	12:27 PM	NA	3.0	M	13.86	8.24	96.4		31.67				
RO	ROCKPORT HARBOR-RO-VRMP	10/5/2017	12:27 PM	NA	4.1	M	13.8	8.24	96.3		31.61				
RO	ROCKPORT HARBOR-RO-VRMP	10/5/2017	12:27 PM	NA	5.1	M	13.62	8.26	96.2		31.64				
RO	ROCKPORT HARBOR-RO-VRMP	10/5/2017	12:27 PM	NA	7.6	M	13.2	8.15	94.2		31.87				
RO	ROCKPORT HARBOR-RO-VRMP	10/5/2017	12:27 PM	NA	9.7	M	13.17	7.97	92.1		31.91				
RO	ROCKPORT HARBOR-RO-VRMP	10/5/2017	12:27 PM	NA	11.1	M	13.16	7.91	91.4		31.89				
RO	ROCKPORT HARBOR-RO-VRMP	10/5/2017	12:27 PM	NA	12.2	M	13.16	7.88	91		31.9				
RO	ROCKPORT HARBOR-RO-VRMP	10/5/2017	12:27 PM	NA	14.0	M	13.14	7.84	90.6		31.89				
RO	ROCKPORT HARBOR-RO-VRMP	10/5/2017	12:27 PM	NA	16.0	M	13.12	7.8	90		31.9				
RO	ROCKPORT HARBOR-RO-VRMP	10/5/2017	12:27 PM	NA	20.2	M	13.07	7.75	89.4		31.86				
RO	ROCKPORT HARBOR-RO-VRMP	10/5/2017	12:27 PM	NA	23.9	M	13.02	7.69	88.6		31.91				
RO	ROCKPORT HARBOR-RO-VRMP	10/5/2017	12:27 PM	NA	26.2	M	12.9	7.66	88		31.95				
RO	ROCKPORT HARBOR-RO-VRMP	10/5/2017	12:28 PM	NA	.1	M									
WS-1	WINTER STREET DITCH-N01	6/15/2017	6:38 AM	NA			12			560				124	
WS-1	WINTER STREET DITCH-N01	6/15/2017	6:38 AM	NA	.1	M									