



## Investigative Report

### Frenchman Bay, Growing Area EI

This report is an overview of the water quality in the Frenchman Bay area of Maine (Figure 1). It has been generated to provide an update on water quality within the region. Further comments or requests for updates may be made to the growing area scientist, Hannah Horecka, at [hannah.horecka@maine.gov](mailto:hannah.horecka@maine.gov) or the growing area supervisor David Miller, at [david.w.miller@maine.gov](mailto:david.w.miller@maine.gov) or by calling 667-5654.

### Water Quality Station Data

There are 78 water quality sampling stations and 7 investigatory stations associated with the Frenchman Bay area.

**Table 1:** The calculated P90 scores from the last 30 samples collected at WQ stations within Frenchman Bay. Data is current and inclusive to 12/31/2016. Conditional Area stations (Class CA or CR) are calculated using data in the open status only. Stations that do not meet their current classification standards are highlighted in red.

Station	Classification	Geomean CFU/100ml	P90 CFU/100ml
EI001.00	A	3.7	22.4
EI003.00	P	4.6	29.9
EI008.00	P	3.7	21
EI009.00	CR	2.1	4.5
EI023.70	P	3.6	16.6
EI024.00	A	3	17.4
EI029.00	A	2.5	7.6
EI031.00	P	4.2	29.8
EI033.00	R	3.7	32.4
EI034.00	A	3.2	19.4
EI034.20	A	3.2	10.9
EI034.30	P	3.9	17.3
EI034.70	P	4.1	19
EI036.00	R	4.6	28.6
EI037.00	A	3.7	13.9
EI039.00	A	4.2	27.5
EI040.00	A	3.4	11.4
EI041.00	R	3.1	13

Station	Classification	Geomean CFU/100ml	P90 CFU/100ml
EI042.00	A	2	3.3
EI043.00	A	2.1	2.9
EI044.00	A	2.7	5.7
EI045.00	R	6	28.8
EI045.50	A	2.5	6.7
EI046.00	P	4	20.1
EI047.00	A	2.8	9.6
EI047.60	R	5.1	30.2
EI050.00	A	2.9	10.1
EI051.00	R	4.4	37
EI054.00	A	2	2.7
EI056.00	A	2.6	10.7
EI058.00	A	2.2	3.7
EI061.00	A	2	2.7
EI063.00	A	2.6	7.4
EI064.00	P	5.3	52.8
EI065.00	A	3.3	18.2
EI068.00	A	2.3	6.2



Station	Classification	Geomean CFU/100ml	P90 CFU/100ml
EI069.00	A	2	2.7
EI070.00	A	2.4	6.2
EI070.10	A	2.4	5.2
EI070.15	A	2.7	6
EI070.20	R	3.9	17.7
EI070.40	R	4.3	47.3
EI070.52	P	4.7	15.9
EI070.60	R	2.7	6.7
EI070.70	P	5.1	37.3
EI070.82	A	3.2	10.4
EI070.90	A	3.4	12.5
EI071.00	A	3.7	14.9
EI071.50	P	10.2	80.2
EI072.50	P	2.8	9.6
EI073.00	A	3.6	17
EI074.00	A	5.7	31
EI075.00	A	3.1	12.5
EI075.60	A	3.2	14.9
EI075.90	A	2.7	12.1
EI079.00	A	1.9	1.9
EI081.00	A	2.6	7

Station	Classification	Geomean CFU/100ml	P90 CFU/100ml
EI082.00	A	3.6	14.4
EI083.00	A	3.3	17.4
EI084.00	A	3.1	16.3
EI086.00	A	2.2	4.5
EI087.00	A	2.5	8.9
EI089.00	P	2.4	5.3
EI091.00	CA	2.4	6.1
EI093.00	CA	2.4	6.6
EI096.00	CA	2.2	4.8
EI098.00	A	3.4	10.6
EI103.00	A	3	8
EI105.00	P	2.6	7
EI105.10	A	2.4	5.9
EI106.00	A	2.4	7.4
EI107.00	A	2.1	4.3
EI108.00	P	2.2	3.9
EI109.00	A	2.9	11.4
EI110.70	A	3.1	9.1
EI111.00	A	3.2	8.4
EI112.00	A	3.1	11.5
EI113.00	P	2.8	12.2

## Martin Cove

Martin Cove, Pollution Area 49-B(A.1), has been identified by the Frenchman Bay Shellfish Committee as a priority area for its shellfish resource (Figure 3). The cove has a long history of failing scores due to an unknown source of pollution or nonpoint source pollution in runoff. This cove is monitored by water quality station EI46 and has shown an improvement in water quality over the last three years. It now shows a P90 calculation of 20.1 CFU/100ml which meets Approved standards. Using the current P90 calculation and current shoreline survey data from 2016, this cove will be evaluated for a possible upgrade in the spring of 2017.



## Lamoine Beach

Lamoine Beach, Pollution Area 47(B.3), declined in water quality and was reclassified to Restricted in March 2015 due to water quality failing to meet the Approved standard at the end of the year in 2014 (Figure 3). This cove is monitored by water quality station EI41 and has shown an improvement in water quality over the last couple years. It now shows a P90 calculation of 13 CFU/100ml which falls within the Approved threshold. During the 2016 shoreline sanitary survey, a possible source of pollution was located, and that problem form must be addressed before the area can be evaluated for a possible upgrade.

## Trenton Seaplane Ramp

Trenton Seaplane Ramp, Pollution Area 47(B.1), was reclassified to Restricted due to water quality failing to meet the Approved standard (Figure 2, Figure 6). This area is monitored by water quality stations EI37 and EI36. These stations have shown an improvement in water quality over the last couple of years. They now show P90 calculations that fall within the Approved threshold. There are currently four potential sources of pollution associated with this closure area, and these problem forms must be addressed before the area can be evaluated for a possible upgrade.

## Shoreline Sanitary Survey

The most recent sanitary survey was completed in 2016 which included 14 new problem forms in Growing Area EI, resulting in four new Prohibited areas. There are nine outstanding problem forms in the region from previous years. Problem forms need to be completed and issues resolved if necessary before areas can be considered for upgrades.

**Table 2:** Problem forms submitted to towns

Town	Outstanding Old Problem Forms	Outstanding New Problem Forms	Outstanding Access Denied
Gouldsboro	2	1	
Franklin	3	1	1
Trenton	4		
Lamoine		6	4
Hancock		3	5
Bar Harbor		2	5
Winter Harbor		1	1
Sullivan			5
<b>TOTALS</b>	<b>9</b>	<b>14</b>	<b>21</b>

## Watershed Stream Data

Stream sampling occurs as a part of our annual field sampling plan and as part of special studies as seen necessary along the coastline. This year DMR water quality samplers collected 18 regular stream samples (Table 3), 28 stream samples as a part of the Trenton Seaplane Ramp study (Table 4), and a few miscellaneous pollution source investigation samples.



**Table 3:** Regular stream sampling 2016. Samples >100 CFU/100ml are highlighted in red.

Date	Location ID	Score CFU/100ml
5/11/2016	EI001-160	2
8/8/2016	EI001-160	60
5/11/2016	EI005-164	44
5/11/2016	EI011-167	4
8/8/2016	EI011-167	1.9
5/11/2016	EI013-171	1.9
6/29/2016	EI031-177	152
6/7/2016	EI031-177	500
6/29/2016	EI033-178	66

Date	Location ID	Score CFU/100ml
6/29/2016	EI043-184	24
6/29/2016	EI054-192	50
6/29/2016	EI054-193	16
6/29/2016	EI057-194	76
6/29/2016	EI062-203	38
6/29/2016	EI070-207	104
6/29/2016	EI074-209	122
6/29/2016	EI085-181	1.9
4/26/2016	EI085-181	380

**Table 4:** Trenton Seaplane Ramp study stream sampling 2016 (Figure 6). Samples >100 CFU/100ml are highlighted in red.

Date	Location ID	Score CFU/100ml
5/23/16	T-PS 1	13
7/25/16	T-PS 1	1700
7/28/16	T-PS 1	1340
9/21/16	T-PS 1	660
11/30/16	T-PS 1	280
5/23/16	T-PS 2	1.9
7/25/16	T-PS 2	1700
9/21/16	T-PS 2	640
11/30/16	T-PS 2	240
5/23/16	T-PS 3	1.9
7/25/16	T-PS 3	740
9/21/16	T-PS 3	156
11/30/16	T-PS 3	78
5/23/16	T-PS 4	44

Date	Location ID	Score CFU/100ml
7/25/16	T-PS 4	300
9/21/16	T-PS 4	1700
11/30/16	T-PS 4	76
5/23/16	T-PS 5	12
7/25/16	T-PS 5	560
9/21/16	T-PS 5	78
11/30/16	T-PS 5	300
7/25/16	T-PS 6	1700
7/28/16	T-PS 6	1700
9/21/16	T-PS 6	580
11/30/16	T-PS 6	140
7/28/16	T-PS 7	880
9/21/16	T-PS 7	1700
11/30/16	T-PS 7	180



## Recommendations

- Address outstanding problem forms and existing sources of pollution (Table 2).
- Water quality stations that are declining in water quality:
  - EI39 – Jordan River, Lamoine
    - A new investigatory water quality station will be added at the mouth of the Jordan River and placed on accelerated sampling for the 2017 sampling season to help defend a smaller potential closure if sample score trends continue to decline.
  - EI74 – Hog Bay, Franklin
    - Hog Bay will be evaluated for a downgrade and whether a conditional area management plan is appropriate for this area. A new investigatory water quality station will be added and placed on accelerated sampling for the 2017 season to try to reduce a potential closure area.

## Progress and Communications

- The Growing Area Scientist I will present this information at the Frenchman Bay Shellfish Committee Meeting on January 18, 2017.



## Appendix

**Figure 1:** Map of Growing Area EI Overview Map; Detailed maps below denoted by large letters A-D

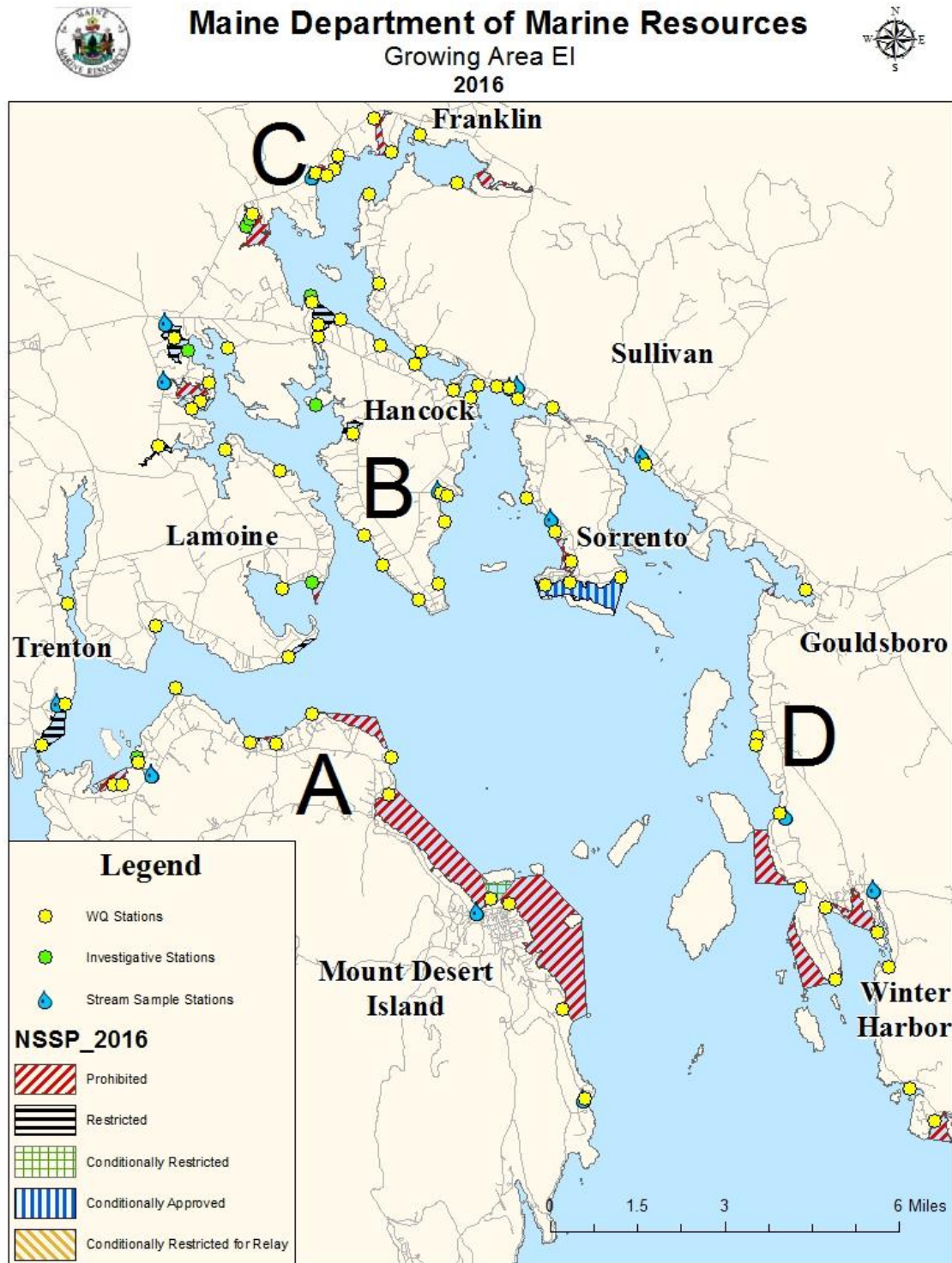






Figure 2: Map of Growing Area EI; Map A

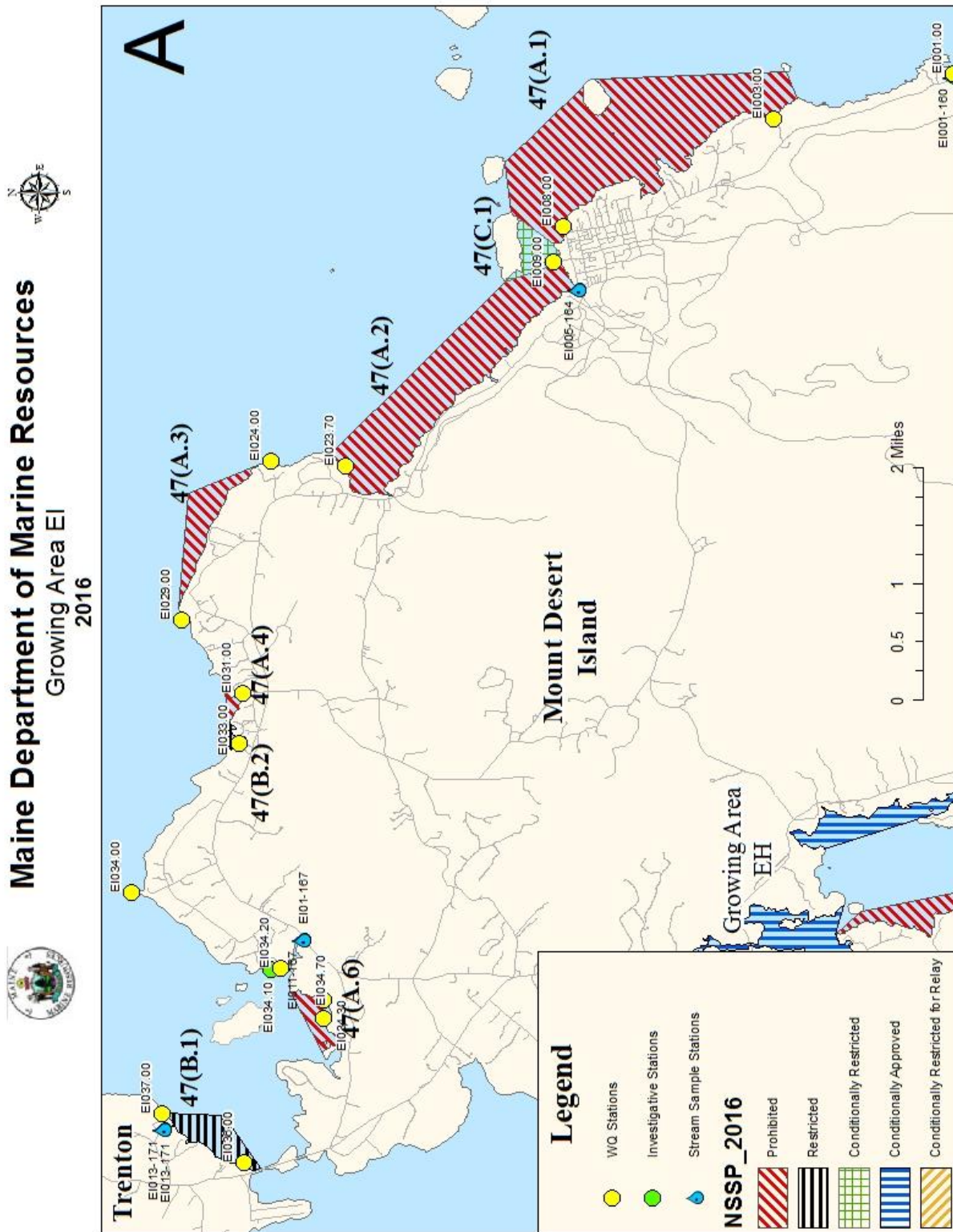




Figure 3: Map of Growing Area EI; Map B

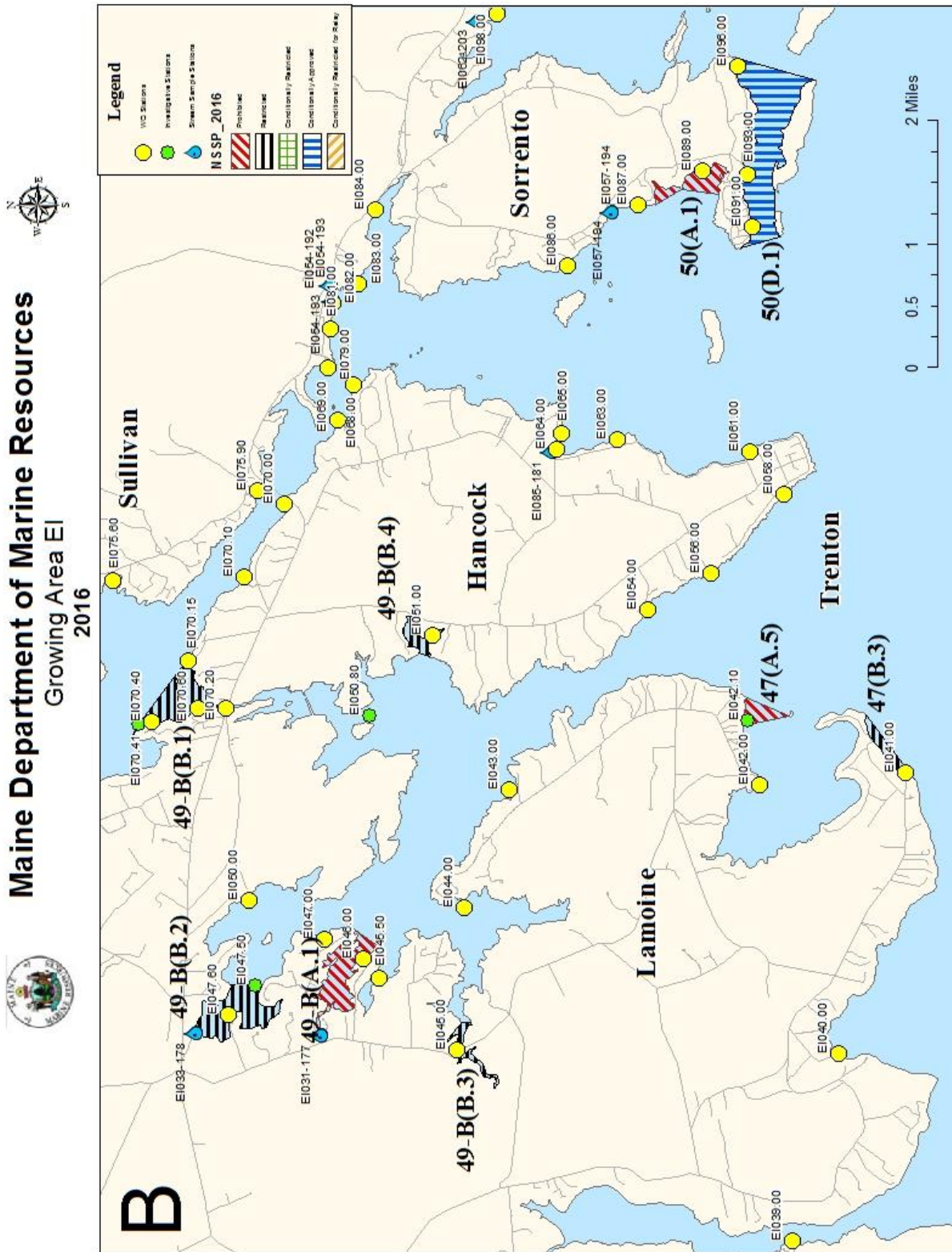






Figure 4: Map of Growing Area EI; Map C

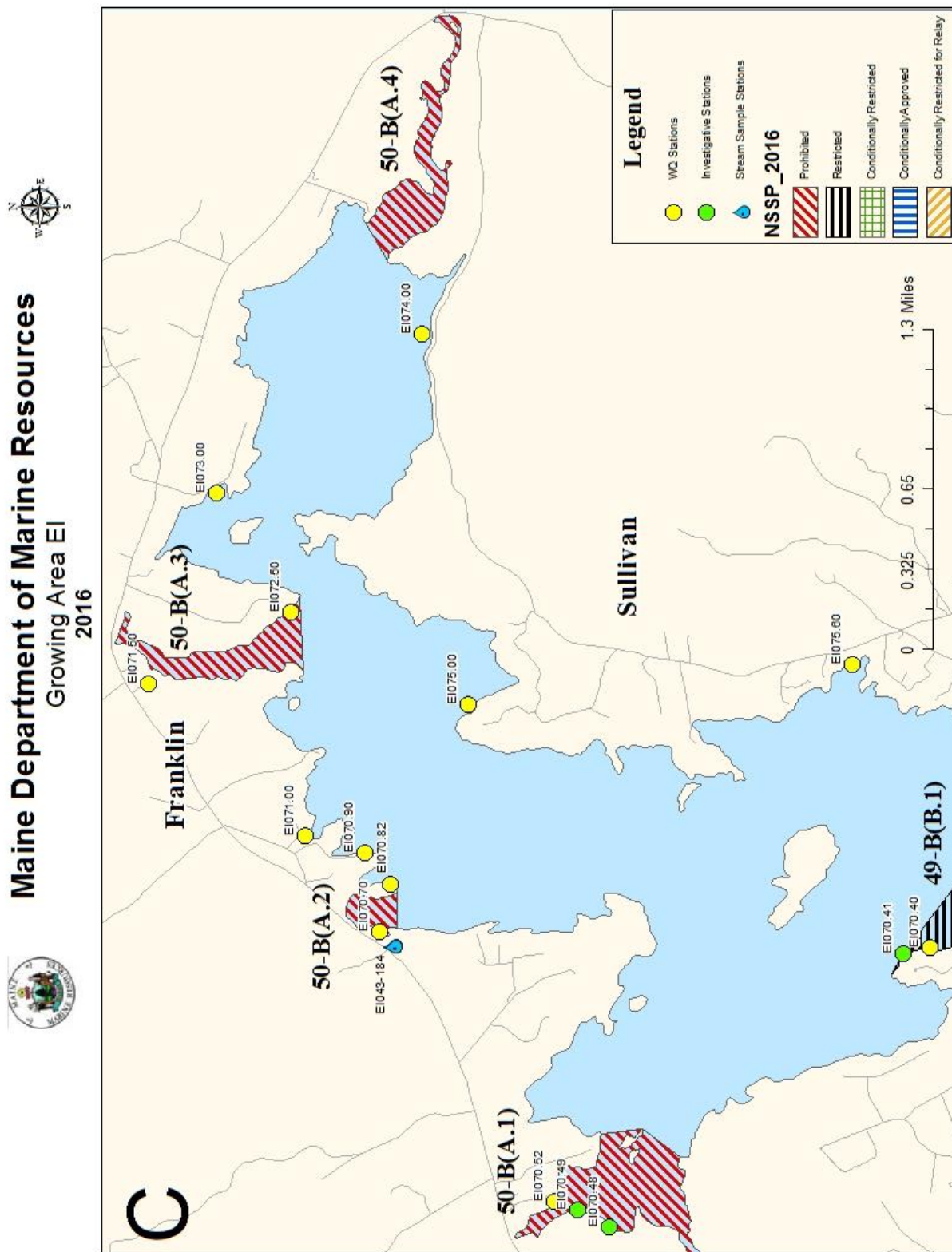




Figure 5: Map of Growing Area EI; Map D

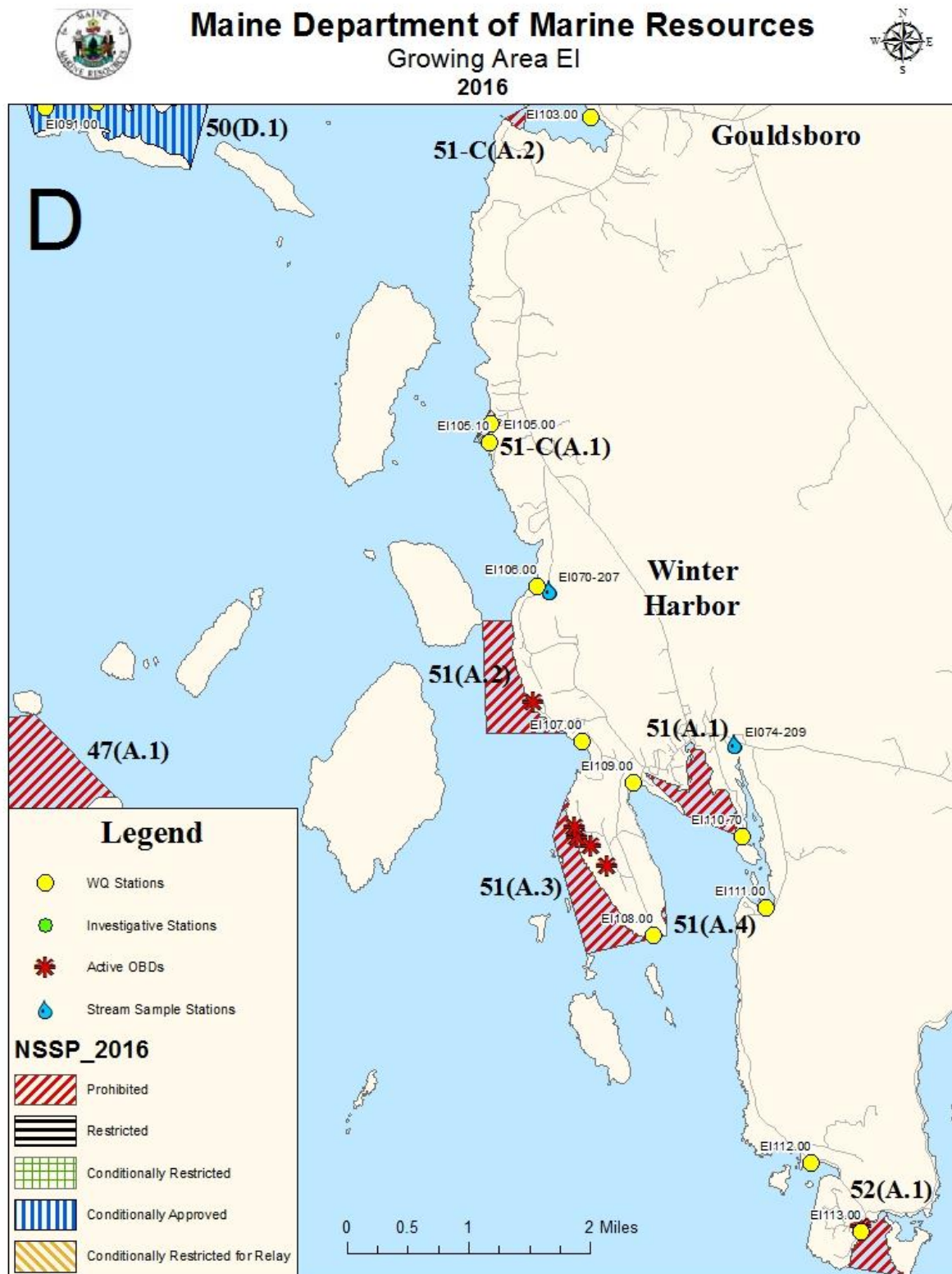






Figure 6: Map Trenton Seaplane Ramp Stream Study

