GROWING AREA EU

St. Croix River; Eastport to Calais

Sanitary Survey Report

Final

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2010 - 2022

Sanitary Survey Officer signature: _____ Date:____12/7/2023_____

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Executive Summary

This is a sanitary survey report for growing areas EU written in compliance with the requirements of the 2019 Model Ordinance and the National Shellfish Sanitation Program (NSSP). This report includes a water quality review, based on water quality data collected through 2022, as well as an evaluation of all pollution sources identified between 2010 and 2022, and a re-evaluation of major pollution sources located within the boundaries of the area. There were no new actual or potential pollution sources found during this survey. Water quality has remained consistent overall with some improvement in water quality shown. One station EU 18 in Loring Cove will be reactivated as it now has access. Triennial reviews were conducted in 2013, 2016, and 2019 with the last Sanitary Survey done in 2010. The next sanitary survey is due in 2034 and the next triennial in 2025.

Description of Growing Area

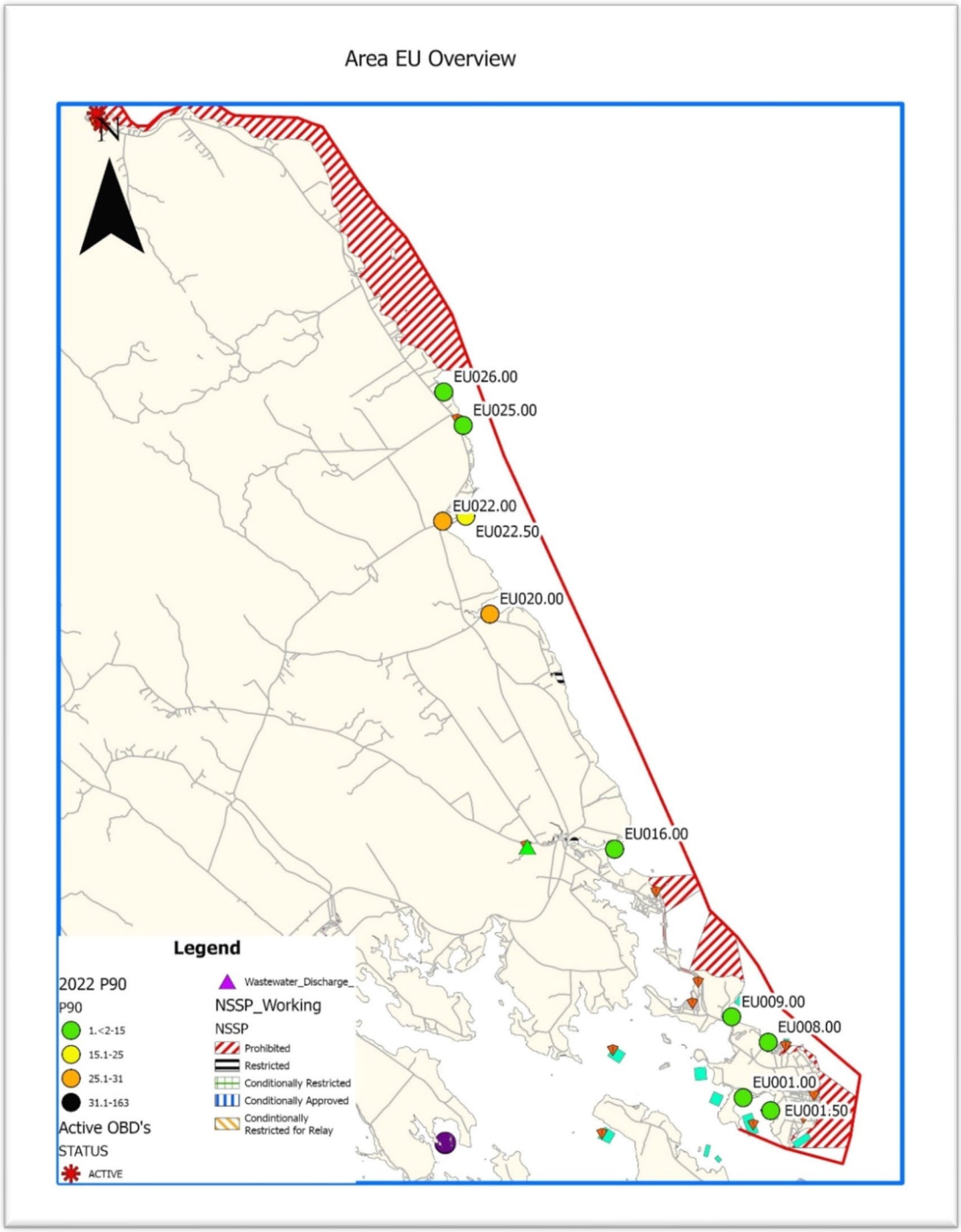
Growing Area EU encompasses approximately 43 square miles and is in Washington County, Maine. Growing area EU includes shores in the towns of Calais (population 3079), Robbinston (population 539), Perry (population 802), Pleasant Point (population 692), and Eastport (population 1288). The tides in Downeast Maine average 20 feet and tidal currents can reach speeds of three knots and greater. Development along these shores is spotty with clusters of homes separated by undeveloped land. Heavier development is found in Calais and Eastport. All dwellings within 250 feet of the shore, water conduits-ditches, or streams or pollution sources were surveyed. There are three licensed overboard discharges (OBDs). Two of these are commercial in size and also have a waste water discharge license. There are three (3) wastewater treatment facilities (WWTP) in this growing area, however the Quoddy WWTP, located in growing area ET, discharges into growing area EU. The growing area consists of five (5) prohibited areas and three (3) restricted areas. There are four (4) finfish aquaculture sites in this growing area, however only one is active and has a waste water discharge permit. They are all located in and around the Eastport area. All four are pen culture sites for finfish with salmon being the main species raised. There are no wet storage sites in this growing area.

The growing area includes the near sub-tidal waters, intertidal flats, and a zone of shore property that extends inland to a definite up-land boundary. The growing area is bounded on the east by the US/Canadian border, on the north by the Calais – St. Stephens Bridge, on the west by US Route 1, and on the south by Shackford Head, Eastport. The St. Croix River represents a significant freshwater source with a watershed of approximately 1631 square miles (USGS, Drainage areas Eastern Maine. 1982).

There are no shellfish leases or Limited Purpose Aquaculture (LPAs) permits in this growing area.

Below is the map with Pollution Area boundaries and growing area boundaries. Closures within the growing area can be found in legal notices in DMR central files on the DMR website.

Figure 1. Growing Area EU Overview Map with Active Water Stations



History of Growing Area Classification

Reclassification addendums to the sanitary survey report are in the DMR central files.

Pollution Sources Survey

Summary of Sources and Location

The growing area shoreline is divided into 2-mile segments that are identified using unique Growing Area Shoreline Survey Identification (GASSID) numbers. All properties and potential pollution sources within 250 feet of the shoreline are identified and inspected. The inspection includes a property description, physical address, location of the septic system, and any other relevant potential or actual pollution sources. A GPS point is to identify the source location(s) and the data are entered electronically in the field and stored in DMR central files.

Figure 2. Growing Area EU, Pollution Map A

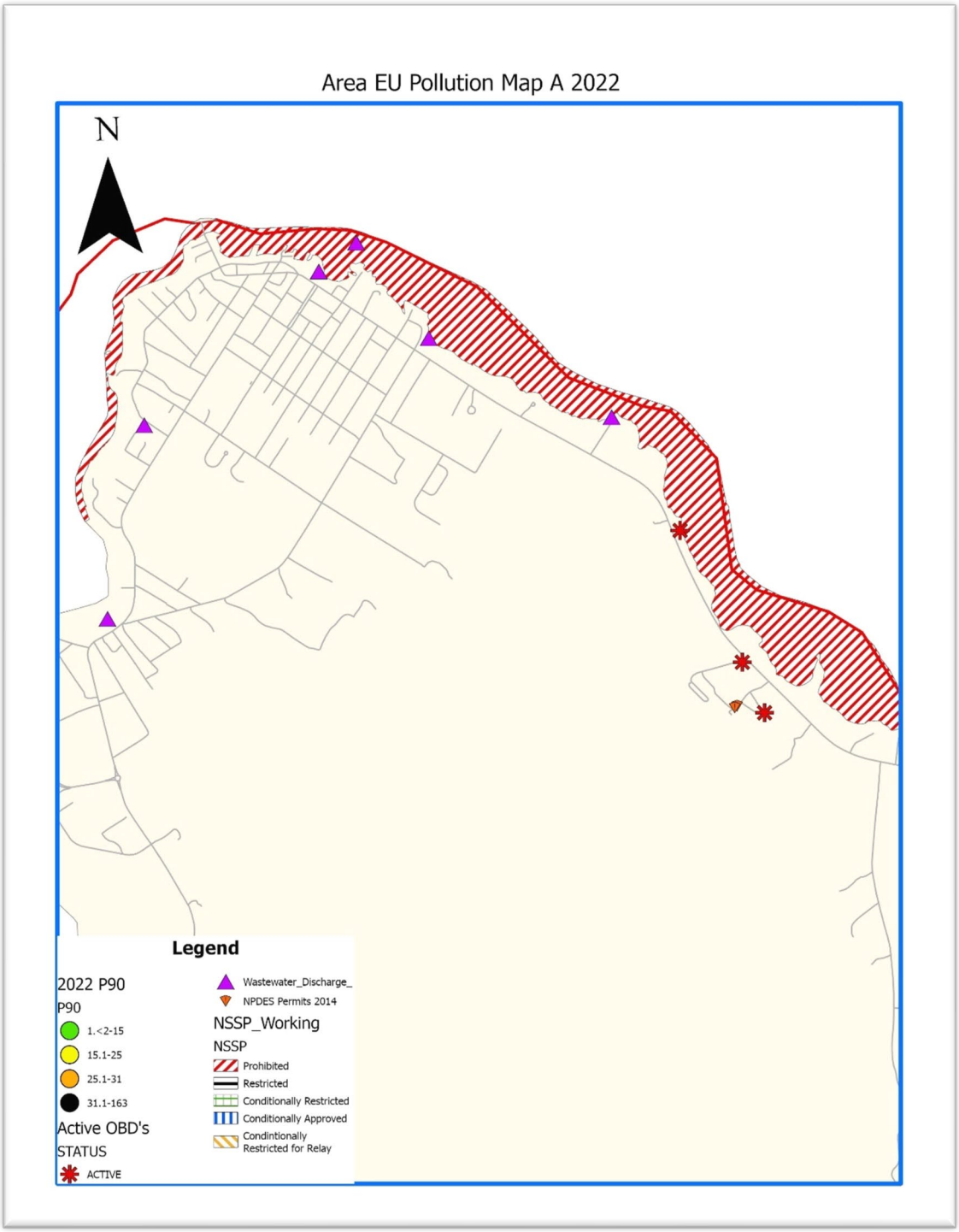


Figure 3. Growing Area EU, Pollution Map B

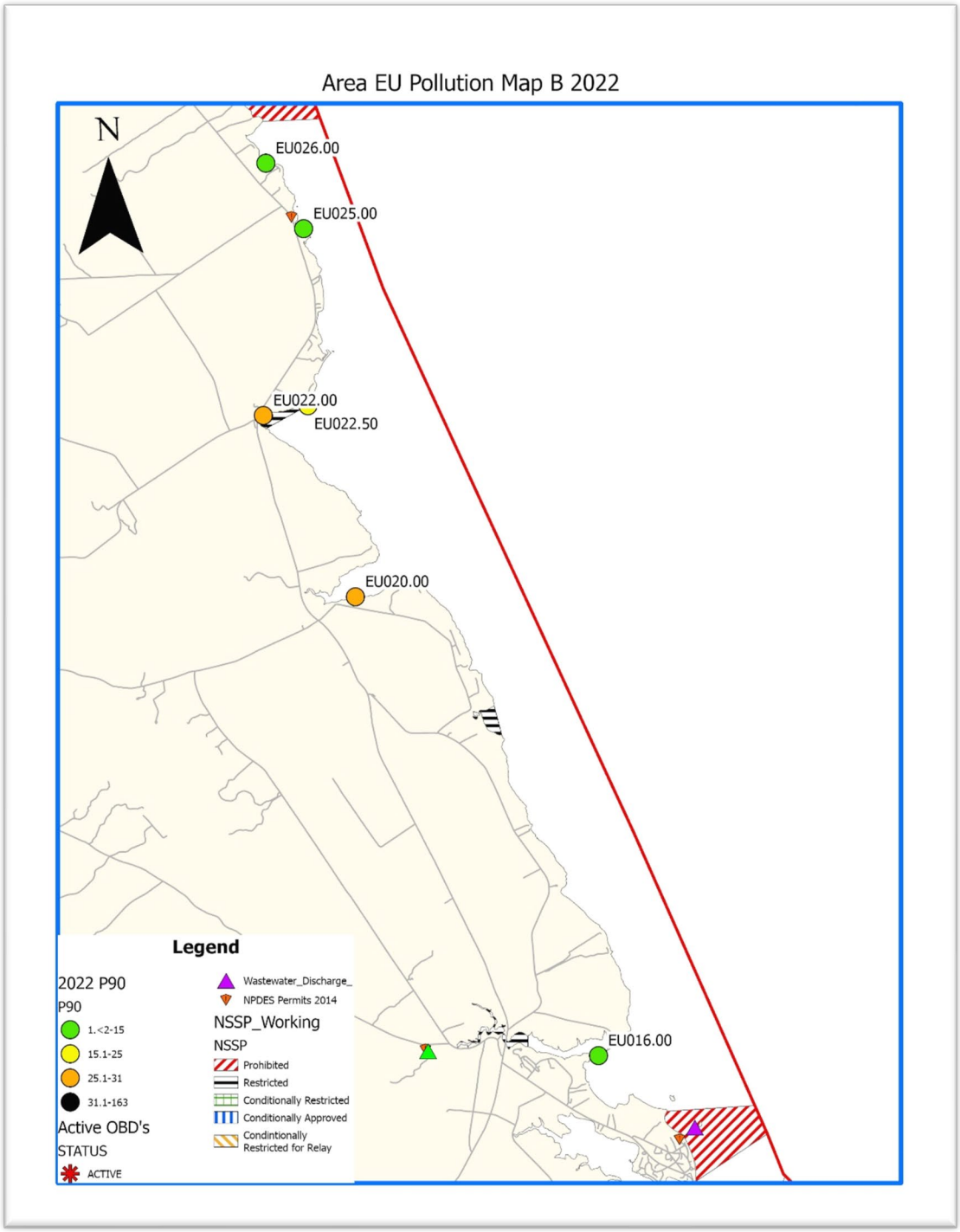
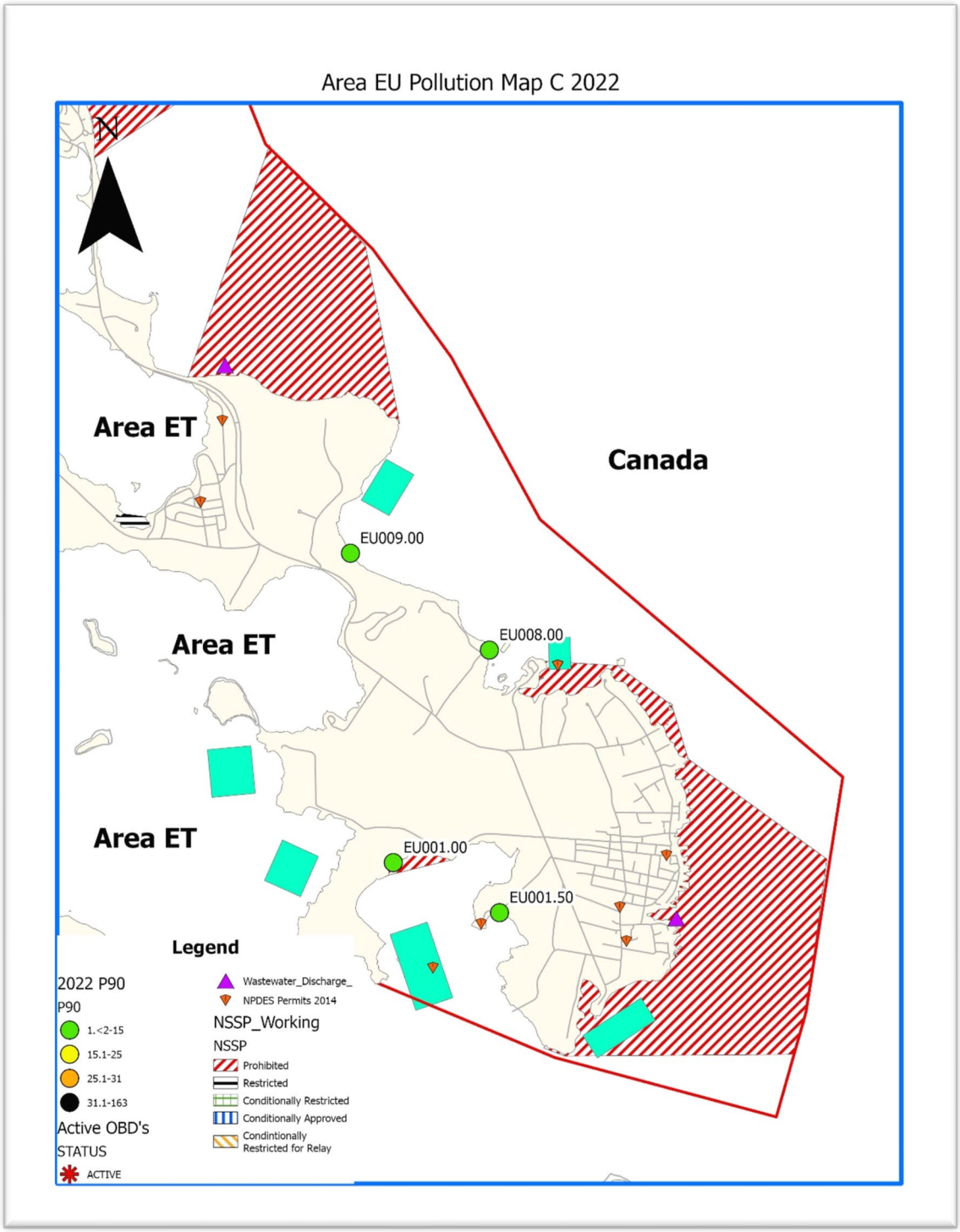


Figure 4. Growing Area EU, Pollution Map C



State and Federal Licensed Waste Discharge Permits

Overboard Discharges (OBDs)

There are 3 overboard discharges (OBDs) that discharge their treated effluent into the waters of Growing Area EU. The OBDs discharge into the waters of the St. Croix River in Calais, EU P1, (Figure 2).

An overboard discharge (OBD) is the discharge of wastewater from residential, commercial, and publicly owned facilities to Maine's streams, rivers lakes, and the ocean. Commercial and residential discharges of sanitary waste have been regulated since the mid-1970s when most direct discharges of untreated waste were banned. Between 1974 and 1987 most of the "straight pipes" were connected to publicly-owned treatment works or replaced with standard septic systems. Overboard discharge treatment systems were installed for those facilities that were unable to connect to publicly-owned treatment works or were unable to install a septic system because of poor soil conditions or small lot sizes.

All overboard discharge systems include a process to clarify the wastewater and disinfect it before discharge. There are two general types of treatment systems; mechanical package plants and sand filters. Sand filter systems consist of a septic tank and a sand filter. In such systems, the wastewater is first directed to a holding tank where the wastewater solids are settled out and undergo partial microbial digestion. The partially treated wastewater then flows from the tank into a sand filter, consisting of distribution pipes, layers of stone and filter sand, and collection pipes within a plastic liner. The wastewater is biologically treated as it filters down through the sand and is then collected and discharged to a disinfection unit. Mechanical package plants consist of a tank, where waste is mechanically broken up, mixed and aerated; mechanical systems require electric power and must have an operating alarm on a separate electrical circuit that will activate if the treatment unit malfunctions due to a power failure. The aerated treated wastewater is held in a calm condition for a time, allowing for solids to settle and for the waste to be partially digested by naturally occurring bacteria. The clarified water from the tank is then pumped off the top into a disinfection unit. There are two types of disinfection units, UV and chlorinators (most common). In a chlorinator, the treated water contacts chlorine tablets and remains in a tank for at least 20 minutes where bacteria and other pathogens are killed. The treated and disinfected water is discharged from the disinfection unit to below the low water mark of the receiving waterbody (the ocean, a river, or a stream) via an outfall pipe.

OBDs are licensed and inspected by the Maine Department of Environmental Protection. At each inspection, DEP looks for tags on each treatment unit identifying the service contractor and the last date of service. If an OBD is not properly maintained, or if the OBD malfunctions, it has the potential to directly discharge untreated wastewater to the shore; therefore, preventative closures are implemented surrounding every OBD located in the growing area EL (Table 1). The size of each closure is determined based on dilution, using the permitted flow rate of the OBD (in gallons per day, GPD), and the mid-tide depth of the receiving water that each OBD discharges to; the fecal concentration used for this dilution calculation is $1.4X10^5$ FC /100 ml. All current closures are of adequate size to protect public health.

Table 1. Overboard Discharges (OBDs).

Pollution Area (Section)	OBD ID	Location	Receiving Waterbody	FLOW (gpd)	Acres Needed for Closure	Current Prohibited Acreage
P1	1339	Calais	St. Croix	10500	107	5000
P1	2375			13000	133	
P1	2860			390	4	

National Pollutant Discharge Elimination System (NPDES)

Table 2. NPDES Permitted Discharges

Pollution Area	Permit ID	Type	Facility	Water Body
EU Approved	MEG130028	aquaculture	Cooke Aquaculture	Broad Cove
P4	ME0100200	WWTP	Eastport	Eastport
P3	ME0102148	WWTP	Quoddy	St. Croix River
P2	ME0100773	WWTP	Pleasant Point	St. Croix River
P1	ME0100129	WWTP	Calais	St. Croix River
R3	ME0102211	process water	Boyden Stream	Little River
P1	ME0102831	OBD	Washington County Community College	St. Croix River
P1	ME 0102765	OBD	Calais High School	St. Croix River

WWTP

There are three wastewater treatment plants (WWTP/WWTF) in the growing area EU, however the Quoddy facility, located in growing area ET, discharges into growing area EU. Since 2017 the WWTP inspection reports have been available in DMR central files. The facilities are in Eastport, Quoddy Village, Pleasant Point, and Calais. They all discharge into the St. Croix River. All the prohibited zones associated with these plants are larger than the calculated dilution zone for the effluent.

Pollution P1 Calais WWTP: There is no conditional area associated with this plant. The current prohibited area is approximately 5000 acres. Based on the max flow through the plant of 5.87 MGD (this includes the additional licensed CSO flow of 1.5 MGD monthly max chlorinated stormwater bypass flows), a bacterial loading of 140,000 fc/100ml and a receiving water average depth of 60 feet 3000 acres of dilution zone is required. The current zone of 3350 acres is adequate for this facility. Also included in this prohibited area are three OBDs listed in Table 2. These OBDs require a 244-acre dilution zone and this acreage is included within the WWTP prohibited zone.

Pollution Area EU P2 Pleasant Point WWTP: There is no conditional area associated with this plant. Based on an average monthly flow of 150,000 GPD a loading of 140,000 FC/100ml in effluent before chlorination and an average depth of 20 feet for the receiving water 222 acres are needed for dilution. The current Prohibited area for this facility is 235 acres.

Pollution Area P3 Quoddy Village WWTP: There is no conditional area associated with this plant. The current Prohibited area is 452 acres. This plant discharges only at high tide. The dilution area required for this plant is 307 acres. This calculation is based on the permitted monthly average flow of 0.050 MGD, a loading of 140,000 fc/100ml, and receiving water depth of 5 feet.

Pollution Area P4 Eastport WWTP: There is no conditional area associated with this plant. Based on a permitted monthly average flow of 0.82 MGD, 140,000 FC/100ml in effluent before chlorination, and an average depth of 75 feet for the receiving water a dilution of area of 335 acres is required. The current closure is approximately 940 acres.

Residential

All residential pollution sources are reported to the local plumbing inspector (LPI). Once the system has been documented as being fixed, staff members from DMR can re-assess the water quality data and shoreline survey information to determine if the area is safe for shellfish harvest. No malfunctioning residential problems were found during this survey.

Industrial Pollution

There is no heavy industrial activity in the growing area such as chemical plants, steel mills, shipyards, or refineries. None of the small industries (small boat builders and boat storage yards) were identified as known pollution sources during the 2022 survey. All the shellfish areas adjacent to the businesses meet their present area classifications. Small individual storage tanks for gasoline and diesel were noted at five locations in the growing area. These tanks are near the shore. Tanks have containment walls and booms in the event of an accidental leak in the tank or spillage when unloading. The oil response team from the Maine DEP contacts Maine Marine Resources when a spill occurs, and a decision will be made on whether a shellfish closure is necessary.

Marinas

The marina community in Maine only operates for a portion of the year due to adverse winter weather conditions. The management of marinas in Maine allows for shellfish growing areas to be available to harvesters, for at least a portion of the year, to direct market harvest by utilizing conditional area management plans.

The largest mooring field is in downtown Eastport and is currently located in the WWTP dilution zone. This mooring field contains workboats only (lobster boats, trawling vessels). Because these types of workboats are day use, are not lived on, and are unlikely to have marine sanitation devices ("heads") they are not considered a health risk of discharged septic waste nor is a marina closure area necessary.

Table 3. EU Mooring Fields

Town	Name	# Of boats	Operating Dates	Comments
Eastport	Town dock	25	year-round (May-Oct most boats)	Current Prohibited Area EU P4
Perry	Gleason Cove	10	year-round (May-Oct most boats)	<20 boats
Robbinston	Town landing	6	year-round (May-Oct most boats)	<10 boats

Stormwater

Stormwater runoff is generated when precipitation from rain and snowmelt events flows over land or impervious surfaces and does not percolate into the ground. As the runoff flows over the land or impervious surfaces (paved streets, parking lots, and building rooftops), it accumulates debris, chemicals, sediment, or other pollutants that could adversely affect water quality if the runoff is discharged untreated (US EPA 2009). Thus, stormwater pollution is caused by the daily activities of people within the watershed. Currently, polluted stormwater is the largest source of water quality problems in the United States.

The primary method to control stormwater discharges is the use of best management practices (BMPs). Also, most major stormwater discharges are considered point sources and require coverage under an NPDES permit. In 1990, under the authority of the Clean Water Act, the U.S. EPA promulgated Phase I of its stormwater management program, requiring permitting through the National Pollution Discharge Elimination System (NPDES). The Phase I program covered three categories of discharges: (1) "medium" and "large" Municipal Separate Storm Sewer Systems (MS4s) generally serving populations over 100,000, (2) construction activity disturbing 5 acres of land or greater, and (3) ten categories of industrial activity. In 1999, US EPA issued Phase II of the stormwater management program, expanding the Phase I program to include all urbanized areas and smaller construction sites.

Although it is a federal program, EPA has delegated its authority to the Maine DEP to administer the Phase II Small MS4 General Permit. Under the Small MS4 GP, each municipality must implement the following six Minimum Control Measures: (1) Public education and outreach, (2) Public participation, (3) Illicit discharge detection and elimination, (4) Construction site stormwater runoff control, (5) Post-construction stormwater management, and (6) Pollution prevention/good housekeeping. The permit requires each city or town to develop a draft Storm Water Management Plan that establishes

measurable goals for each of the Minimum Control Measures. The City or Town must document the implementation of the Plan, and provide annual reports to the Maine DEP. Currently, the discharge of stormwater from 30 Maine municipalities is regulated under the Phase II Small MS4 General Permit however, no municipalities located within the boundaries of growing area EL fall under these regulations. Additionally, the Maine Storm Water Management Law provides stormwater standards for projects located in organized areas that include one acre or more of disturbed areas (Maine DEP 2009).

The only stormwater collection system in Growing Area EU is in the downtown Eastport area. This area is located within Prohibited Area EU P4.

Non-Point Pollution Sources

Non-point source (NPS) pollution is water pollution affecting a water body from diffuse sources, such as polluted runoff from agricultural areas draining into a river, significant rainfall, high river flows, or astronomical high tides. Nonpoint source pollution can be contrasted with point source pollution, where discharges occur to a body of water at a sole location, such as discharges from a chemical factory, urban runoff from a roadway storm drain, or ships at sea. NPS may derive from various sources with no specific solution to rectify the problem, making it difficult to regulate. Freshwater streams, drainage from rainstorm runoff, and tidal creeks are the major source of non-point discharge into growing area EU. A total of 48 samples were taken from freshwater streams during the review period. (Table 4, Figure 5 & 6).

Table 4. Stream Samples in Growing Area EU 2016-2019; Scores > 163 CFU/100ml are highlighted in yellow.

Pollution Area	Stream ID	Sample date	Score
P5	EU001-422	30-Sep-19	4
		27-Aug-19	260
		01-Jul-19	110
		05-Jun-19	24
		20-May-19	5.5
		06-May-19	1.9
		17-Apr-19	2
Approved	EU001-423	17-May-16	200
		21-Oct-19	18
		30-Sep-19	24
		27-Aug-19	36
		01-Jul-19	280
R3	EU012-426	05-Jun-19	28
		20-May-19	15

Pollution Area	Stream ID	Sample date	Score
		06-May-19	7.3
		17-Apr-19	14
		06-Jun-16	300
		17-May-16	6
Approved	EU013-427	21-Oct-19	18
		30-Sep-19	4
		01-Jul-19	136
		05-Jun-19	28
		06-May-19	4
		17-Apr-19	1.9
		06-Jun-16	840
		17-May-16	1.9
R2	EU015-428	21-Oct-19	8
		30-Sep-19	10
		27-Aug-19	8
		01-Jul-19	116
		05-Jun-19	29
		20-May-19	72
		06-May-19	1.9
		17-Apr-19	1.9
		06-Jun-16	1700
		17-May-16	24
Approved	EU015-431	21-Oct-19	16
		30-Sep-19	4
		27-Aug-19	8
		01-Jul-19	72
		05-Jun-19	28
		20-May-19	260
		06-May-19	9.1
		17-Apr-19	7.3
		24-Oct-16	31

Pollution Area	Stream ID	Sample date	Score
		17-Aug-16	1700
		06-Jun-16	1700
		17-May-16	8

Figure 5. EU Stream

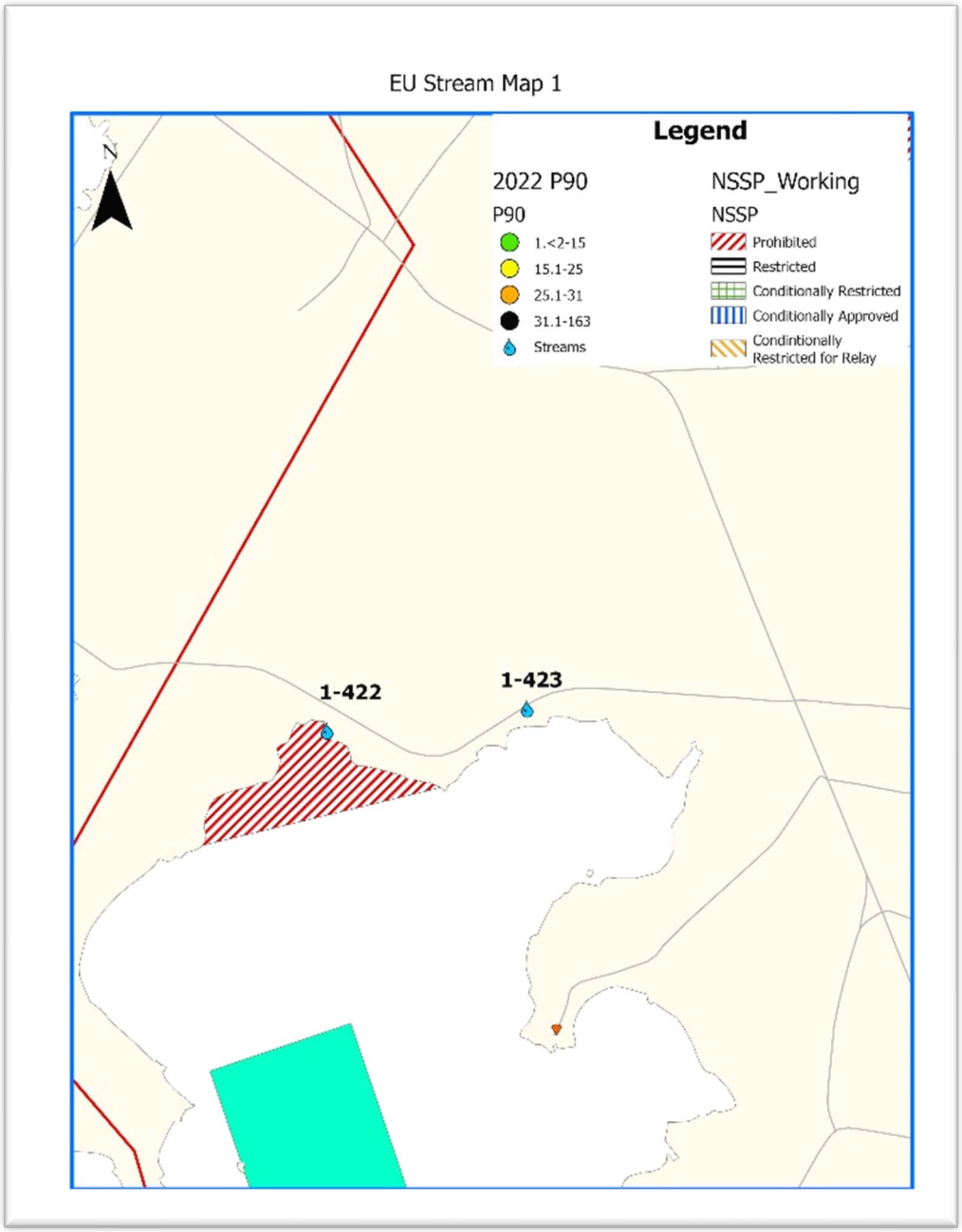
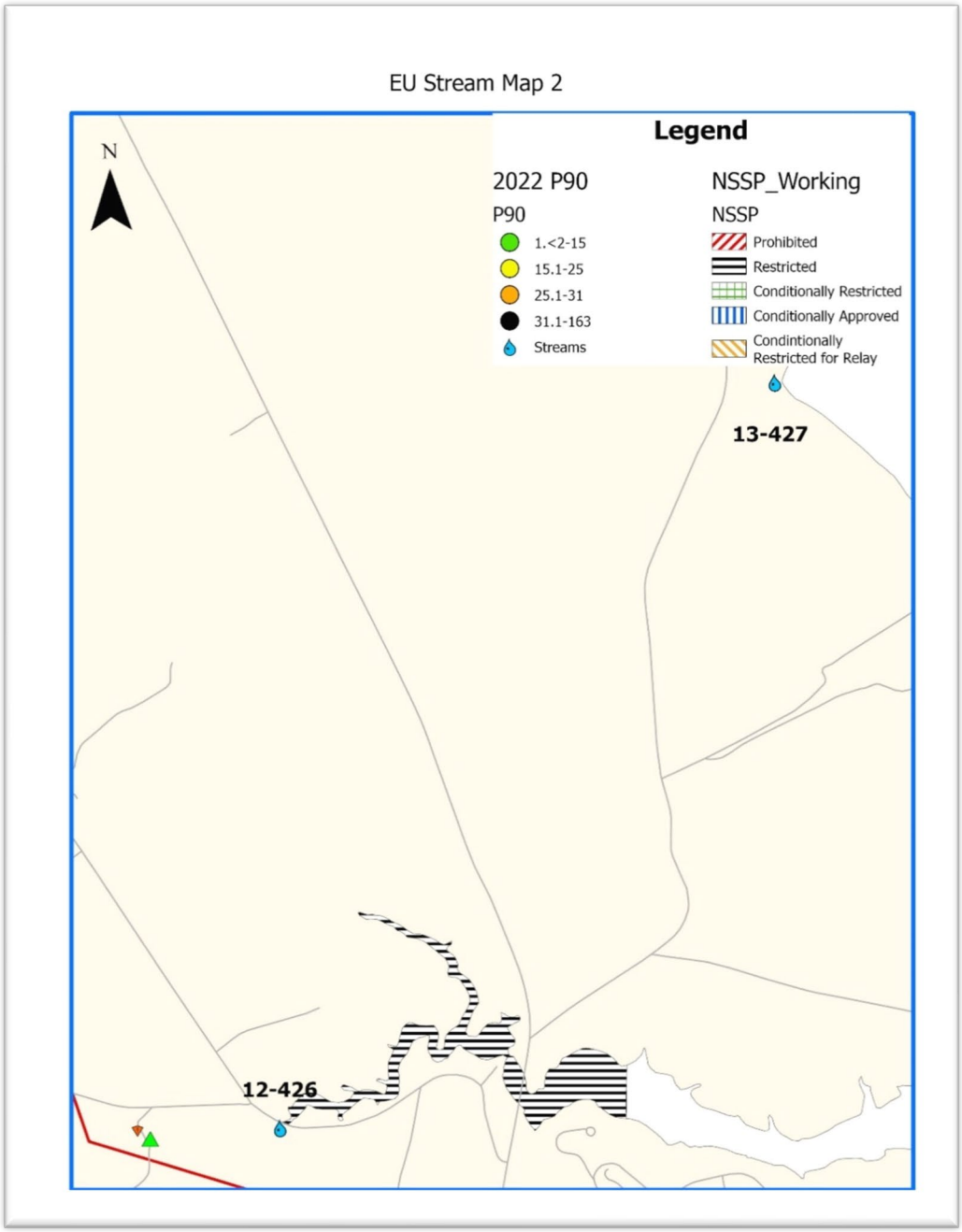


Figure 6. EU Stream Map 2



Agricultural Activities

There are no large-scale agriculture activities in growing area EU. Pollution from small agriculture operations can be introduced into the growing area as nonpoint source pollution is transported by runoff from large rainfall or snowmelt events. Smaller farms are encouraged to follow best management practices to help avoid the effects animal waste and agricultural pollutants can have on water quality. No small farm activity is impacting shellfish harvest areas in Growing Area ER.

Domestic Animals and Wildlife Activity

The salt marshes and mudflats of the growing area provide valuable habitat to a variety of wildlife. Commonly observed bird species include a variety of gulls, sea and inland ducks, cormorants, geese, great blue herons, egrets, swans, and others. Mammals living within the growing area include dogs, cats, whitetail deer, muskrats, squirrels, chipmunks, rabbits, moles, mice, bats, shrews, weasels, skunks, raccoons, and others. Maine Inland Fish and Wildlife surveys indicate that migratory waterfowl numbers begin to increase in the early autumn months, and typically peak in late fall or early winter. Although large numbers of birds can, in theory, pose a threat to the growing area's water quality, such occurrences are very difficult to document.

Recreation Areas (beaches, trails, campgrounds, etc.)

The concern for actual or potential pollution from recreational areas is because many of them allow dogs and some have bathroom facilities. Activities in the recreational areas may contribute to water quality problems by placing added pressure on the watershed. For instance, they may contribute to erosion (trails, building footbridges, etc.), dog waste not picked up may accumulate and wash off after rainfall, new trails may be put into areas that didn't have human activity before and they may put added pressure on wildlife to congregate in other places where we may see water quality decline.

Growing area EU is primarily a rural area with recreation areas limited to small-town parks with no septic facilities. Although there are a few gravel beaches in the area, swimming in the ocean in this area is relatively rare, as the water temperatures rarely exceed 65°F. Recreation areas in the EU are not considered to be impacting shellfish harvest areas.

Hydrographic and Meteorological Assessment

Tides

Coastal Maine experiences a mixed, semi-diurnal tide, with diurnal inequalities that are more pronounced on spring tides. Except for very few isolated areas with extensive saltwater marshes, tides are not considered to be contributors to fecal contamination. The National Oceanic and Atmospheric Administration data for a station at Eastport indicate a mean tidal range of 18.35 ft. The mean tidal range for most of Maine is 9 feet to 13 feet. Unlike areas with small diurnal tides, this extreme volume exchange results in significant bacterial dilutions. Currents in the area are predominantly driven by the tides.

Rainfall

The mean annual precipitation in the growing area EU is approximately 44 inches and the precipitation is not evenly distributed throughout the year. The wettest months are generally April and November while August is typically the driest month. Much of the precipitation in the winter comes as snow and may affect runoff rates in spring upon melting. Flood closures are implemented when areas receive greater than two inches of rainfall in a twenty-four-hour period. Rainfall is monitored by numerous rain gauges located along the entire Maine coast and reported primarily through the Weather Underground website. Some areas of Maine have documented fecal influences resulting from rainfall of greater than one inch in a twenty-four-hour period. These areas are considered rainfall conditional areas and are Conditionally Approved based on the one-inch closure trigger. No rainfall areas have been identified in the growing EU.

Maine DMR is working collaboratively with the University of Maine on a statewide coastal project determining how various watershed characteristics influence fecal contamination of marine waters during rainfall events. This research clusters watershed based on similar characteristics and then models how rainfall and associated pollution are distributed. The model is being refined to incorporate margin watershed influences.

Winds

Migratory weather systems cause winds that frequently change in strength and direction. Gulf of Maine winds are generally westerly but often take on a northerly component in winter and a southerly one in summer. The strongest winds are generated by lows and cold fronts in fall and winter and by fronts and thunderstorms during spring and summer. Extreme winds are usually associated with a hurricane or severe nor' easter and can reach 125 knots. In Maine, the wind is not a contributor to fecal pollution because marine currents are primarily influenced by the size and duration of the normal tidal cycle.

River Discharge

Streamflow in Maine exhibits seasonal variation, with the highest flows occurring in the spring (due to snowmelt, spring rains, and low evapotranspiration) and the mid-to-late fall (due to fall rains and low evapotranspiration). The St. Croix River is the major river system in the growing area EU. According to

the USGS, the St. Croix River drainage is approximately 1500 sq miles. Many small streams discharge into the growing area and these streams are discussed in the section about nonpoint source pollution.

Hydrographic Influence

Water circulation in the EU is dominated by tides and influenced by river discharge. The tidal range in Eastport is almost 20 feet. Tides are caused by the gravitational effects of the moon and sun on the ocean; other influences are heavy rainfall, low barometric pressure, and strong onshore winds which will increase tides. Tide levels fluctuate during the month based on the positions of the sun, moon, and earth. These fluctuations and the speed and direction of the tidal currents constantly change during a tidal cycle. Tidal currents have the greatest energy when water is pushed in and out of bays and channels during the highest and lowest tide levels. Growing area EU is subject to a semidiurnal tidal cycle with two high tides and two low tides per day. The tidal cycle is 12 hours and 25 minutes long so high and low tides are 50 minutes later each day.

Water Quality Studies

Map of Sampling Stations

Most marine fecal pollution in Maine waters comes from non-point sources. DMR uses Systematic Random Sampling (SRS) to monitor this influence and uses a pre-established schedule at an adequate frequency to capture all meteorological, hydrographic, and/or other pollution events that trigger non-point pollution contribution. Using SRS will detect intermittent and unfavorable changes in water quality and the program accepts the estimated 90th percentile (P90) as the standard to measure the variance of a data set.

There are presently 10 active water sampling sites in Growing Area EU. It is recognized that access, icing, and safety considerations prevent some stations from being sampled on scheduled dates. Currently, all stations in Growing Area ER meet their current NSSP classification standard.

Water Quality Discussion and Classification Determination

P90s for all active stations with a minimum of 30 samples were calculated and all stations meet their classification standards (Table 5). The percent change in P90 from 2021 to 2022 was calculated and only two stations EU 20 and 22 showed a substantial increase in the P90 score (Table 6). Overall, the water quality in the growing area appears to be remaining consistent.

Table 5. P90 calculations for stations with a minimum of 30 samples. Geomeans and P90s not meeting current classifications are highlighted in red. CA P90s are using open-period data only

Station	Class	Count	GM	SDV	MAX	P90	Min_Date
EU001.50	A	30	3	0.42	148	10.7	8/21/2018
EU008.00	A	30	2.3	0.29	36	5.5	8/21/2018
EU009.00	A	30	2.9	0.37	36.4	8.9	8/21/2018
EU016.00	A	30	2.7	0.41	130	9.6	8/21/2018
EU020.00	A	30	4.1	0.64	980	27.6	1/7/2019
EU022.50	A	30	3.9	0.59	760	22.4	8/21/2018
EU025.00	A	30	3.1	0.42	46	11	8/21/2018
EU026.00	A	30	3	0.42	68	10.8	8/21/2018
EU001.00	P	30	2.2	0.16	6	3.7	8/21/2018
EU022.00	R	30	5	0.56	86	26.4	8/21/2018

Table 6. Percent change in P90 2020-2021; Positive numbers show a decline negative numbers indicate an improvement

Station	2022 P90	2021 P90	% Change
EU001.50	10.7	8.1	0.320988
EU008.00	5.5	5.7	-0.03509
EU009.00	8.9	8.4	0.059524
EU016.00	9.6	10.1	-0.0495
EU020.00	27.6	11.8	1.338983
EU022.50	22.4	13	0.723077

EU025.00	11	7.2	0.527778
EU026.00	10.8	10.4	0.038462
EU001.00	3.7	4	-0.075
EU022.00	26.4	16.6	0.590361

Emergency Closures: The reports summarizing emergency closures such as flood and biotoxin closures for the entire state are in the DMR central files.

Reclassifications: Reclassification addendums to the sanitary survey report are in the DMR central files.

CAMP Reviews, Inspection Reports, and Performance Standards
There is no CAMP for this growing area.

Recommendation for Future Work

No stations in the growing area EU required a downgrade due to the end of the year 2022 P90 scores.

Table 7. Count table of samples collected in growing area EU during the 2022 season.

Station	Class	Closed	Open	Samples Needed	Comments
EU001.00	P	8		0	WWTP Zone
EU001.50	A		8	6	
EU008.00	A	3	8	6	Flood
EU009.00	A		8	6	
EU016.00	A	3	8	6	Flood
EU020.00	A		8	6	
EU022.00	R		8	6	
EU022.50	A		8	6	
EU025.00	A	3	8	6	Flood
EU026.00	A		8	6	

References

National Shellfish Sanitation Program: Guide for the Control of Molluscan Shellfish, 2017 Revision;

Tide and Wind data, GOMOSS Internet site, West Penobscot Bay Buoy, 2001-2003.

Climatic and hydrographic information, US Coast Guard Coastal Pilot, 2005 edition

U.S. Food and Drug Administration (2001). Applied Concepts in Sanitation Surveys of Shellfish Growing Areas: Course #FD2042 (Training Manual), Volumes I and II.

Town information, 2007-2008 Maine Municipal Directory, Maine Municipal Association, Augusta, Maine 04330

Licensed discharge information, Maine Department of Environmental Protection, Augusta, Maine

Data Layers, Maine Office of GIS, Augusta, Maine

Rainfall data, National Weather Service, Caribou, Maine

Maine Combined Sewer Overflow 2016 Status Report, Maine Department of Environmental Protection, April 2017

Appendix A.

Key to Water Quality Table Headers
Station = water quality monitoring station
Class = classification assigned to the station; Prohibited (P), Restricted (R), Conditionally Restricted (CR), Conditionally Approved (CA), Approved (A), and Investigative (X).
Count = the number of samples evaluated for classification must be a minimum of 30.
GM = means the antilog (base 10) of the arithmetic mean of the sample result logarithm (base 10).
SDV = standard deviation
Max = maximum score of the 30 data points in the count column
P90 = 90th percentile, the Approved standard is 31, Restricted standard is 163
Min_Date = oldest date sampled included in the calculations.