WATER RESOURCES

KEY FINDINGS

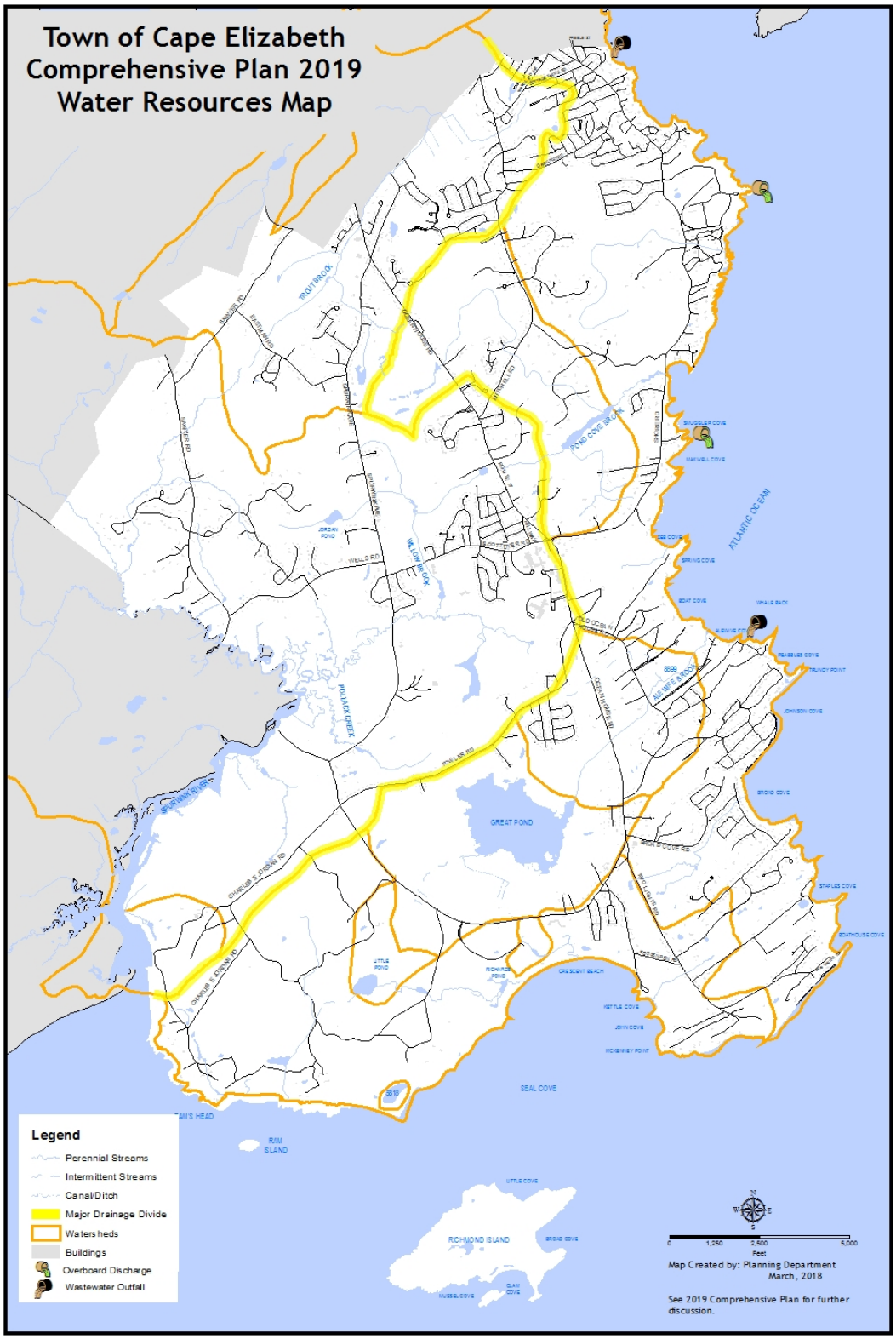
•Local Resource Protection Zoning, Shoreland Zoning and the Great Pond Watershed Overlay District provide rigorous protection of the town's water resources.

•Trout Brook~~, and~~ the Spurwink River, and Alewife Brook/Peabbles Cove merit attention to improve water quality.

•Overall, the town's rocky coastline and modern Normal High Water Line definition contribute to resiliency as sea level rise/climate change advances.

•

The land mass of Cape Elizabeth resembles a peninsula with ocean front to the east and south and riverfront along the western boundary of the town. Most of the fresh water resources are wetlands (discussed in the Natural Resources Chapter), but several fresh water bodies also exist.


Town of Cape Elizabeth
Comprehensive Plan 2019
Water Resources Map
Legend
Perennial Streams
Intermittent Streams
Canal/Ditch
Major Drainage Divide
Watersheds
Buildings
Overboard Discharge
Wastewater Outfall
ATLANTIC OCEAN
GREAT POND
SEAL COVE
RAM ISLAND
RICHMOND ISLAND
SPURWINK RIVER
POLLOCK CREEK
WILLOW BROOK
POND COVE BROOK
TROUT BROOK
0 1,250 2,500 5,000
Feet
Map Created by: Planning Department
March, 2018
See 2019 Comprehensive Plan for further discussion.

Drainage areas

The Town of Cape Elizabeth has essentially 11 drainage basins. The Town generally slopes to the south, the coastline and the Spurwink Marsh. The major drainage divide separates the eastern side of Cape Elizabeth, which drains into the Casco Bay Estuary, from the western side, which drains into the Saco Bay Estuary. The largest watershed drains into the Spurwink Marsh and extends from the northwest to the mouth of the Spurwink River (Saco Bay Estuary). The second largest basin extends from the northern boundary south to the southeast corner along the coastline (Casco Bay Estuary).

Estuarine and Coastal Waters

Maine has three classes for the management of estuarine and marine waters: SA, SB, and SC. SA waters are managed for high water quality with limited human interference allowed. No direct discharges of pollutants, including those from finfish aquaculture, are allowed in SA waters. SB waters are general-purpose waters and are managed to attain good quality water. Well-treated discharges of pollutants that have ample dilution are allowed. SC waters are managed for the lowest water quality, but they must be fishable and swimmable as well as maintain the structure and function of the biological community. Well-treated discharges of pollutants are allowed in SC waters. Each class is managed for designated uses and each has dissolved oxygen, bacteria and aquatic life standards. *Source: www.maine.gov/dep/water/coastal/index.html*

As described above, the Cape Elizabeth coastline is part of two estuaries. The southern estuary extends from Biddeford Pool, Biddeford to Dyer Point (Two Lights), Cape Elizabeth (DEP Waterbody ID 811). The state water quality rating for this segment is SB/SC and the last water quality sampling was done in 2011. This rating is due to water quality impairment from bacteria requiring a Total Maximum Daily Load Report(TMDL). The TMDL Report estimates the total maximum daily load of pollutants and maximum targets to restore water quality, as well as provide a basis for regulatory programs. The following impaired waters findings have been made by the State of Maine.

Category 5-B-1(a): Estuarine and Marine Waters Impaired for Bacteria Only - TMDL Required

DEP Waterbody ID	DMR Pollution Area	Segment description	Segment Size (acres)	Segment Class	Last Year Sampled	Cause	Shellfish Harvest Closure Status
811	12	Spurwink River, Prouts Neck (Old Orchard Beach, Scarborough, Cape Elizabeth)	85	SA	Current	Elevated fecal indicators	Conditionally Approved
811	12	Spurwink River, Prouts Neck (Old Orchard Beach, Scarborough, Cape Elizabeth)	5,231	SB	Current	Elevated fecal indicators	Prohibited except Conditionally Approved from Prouts Neck to McKenney Point

Source: 2016 Integrated Water Quality Report, Maine Department of Environmental Protection

The Town of Scarborough is working with the DEP as a result of water quality sampling with positive results for optical brighteners on the west bank of the Spurwink River. Because the land on the Cape Elizabeth side of the Spurwink River is mostly undeveloped, it is unlikely that activities in Cape Elizabeth are contributing to bacteria levels, but any conclusions should await the results of the TMDL.

The northern estuary extends from Dyer Point (Two Lights), Cape Elizabeth to Parker Point (west bank of Royal R.), Yarmouth (DEP Waterbody ID 804). The state water quality rating for this segment is SA/SB/SC and the last water quality sampling was done in 2012. This rating is due to water quality impairment from bacteria requiring a TMDL. The following impaired waters findings have been made by the State of Maine.

Category 5-B-1(a): Estuarine and Marine Waters Impaired for Bacteria Only - TMDL Required

DEP Waterbody ID	DMR Pollution Area	Segment description	Segment Size (acres)	Segment Class	Last Year Sampled	Cause	Shellfish Harvest Closure Status
804	13	Western Casco Bay and Islands (Cape Elizabeth, South Portland, Portland, Falmouth, Long Island, Great Chebeague Island)	841	SA	Current	Elevated fecal indicators	Prohibited
804	13	Western Casco Bay and Islands (Cape Elizabeth, South Portland, Portland, Falmouth, Long Island, Great Chebeague Island)	34,467	SB	Current	Elevated fecal indicators	Prohibited except Conditionally Approved from Waites Landing (Falmouth) to Falmouth Landing, incl. The Brothers
804	13	Western Casco Bay and Islands (Cape Elizabeth, South Portland, Portland, Falmouth, Long Island, Great Chebeague Island)	3,984	SC	Current	Elevated fecal indicators	Prohibited

Source: 2016 Integrated Water Quality Report, Maine Department of Environmental Protection

The Friends of Casco ~~It~~ Bay organization has been conducting water quality monitoring at over 37 sites around Casco Bay, including at Peabbles Cove. The monitoring site is located adjacent to the municipal wastewater outfall. Water quality at this monitoring point is rated poor, or within the bottom 31% of monitoring sites. Poor water quality is due to acidification and not high nitrogen levels.. ~~is likely that the licensed overboard discharges and wastewater outfalls may be contributing to the water quality impairment.~~

> The site at the southern end of Casco Bay looks pristine, but it exhibits some of the poorest water quality in the Bay. Stormcast seaweed washes into this small cove. During daylight hours, as seaweeds photosynthesize, they release oxygen into the water, but at night the process is reversed, the plants absorb oxygen from the water. This site is located near the Cape Elizabeth Sewage Treatment Plant discharge, as well, so nature and humans may contribute to the poor water quality at this site. It is one of the few sampling stations where our water quality monitors have to wade in to collect water samples. *Source: Interactive Health Index, Friends of Casco Bay, 2016.*

A sewer transmission pipe located adjacent to Long Point Ln had previously suffered several breaks, resulting in untreated sewage discharging into a nearby wetland which outlets into Peabbles Cove. The Portland Water District replaced

the pipe in 2016 and ongoing water quality monitoring may show some improvement.

The town has taken advantage of opportunities to improve water quality. ~~stormwater quality, as well as complying with MS4 stormwater permit~~ ~~(~~See the Public Facilities and Services Chapter for a discussion of stormwater.~~)~~

The town has an ongoing relationship with the Casco Bay Estuary Partnership (CBEP) to improve stormwater quality. Projects have included two stormwater management plans for the Town Center, one of which is now funded for implementation by the Town Center TIF (See Economy Chapter). The town has also received a culvert assessment grant from the Municipal Planning Assistance Program to evaluate 16 culverts for maintenance, capacity and habitat impacts. Partners in the project include the Wells National Estuarine Research Reserve (WNERR), the Nature Conservancy (TNC), CBEP, and the United States Department of the Interior -Fish and Wildlife Service (USFW).

No data are available regarding the water quality of the Spurwink Marsh. The bulk of the marsh is owned by the Town of Cape Elizabeth and, in Scarborough, by the Rachel Carson Wildlife Refuge. Upland of the marsh, shoreland zoning and Resource Protection Buffers virtually preclude any development near the marsh. No immediate threats to the marsh are identified.

Overboard and Wastewater discharges

There are currently four overboard and wastewater discharges permitted in Cape Elizabeth. Three of the discharges are operated for public facilities and one is a grandfathered private residence.

Overboard and Wastewater Discharge Permits				
Permit #	Name	Gallons Per Day	Discharge location and classification	Renewal Date
(WDL)#W009027	Ottawa Rd Pump Station	Unspecified	Atlantic Ocean (Danford Cove), Class SB	2019
(WDL)#W006751	Publicly owned Treatment works	Unspecified	Peabbles Cove, Class SB	2021
(WDL)#W003157*	Portland Head Light and Museum	500	Casco Bay, Class SB	2021
(WDL)#001474	Toye residential wastewater discharge	300	Smugglers Cove, Class SB	2019
*Also requires a MEPDES permit because the discharge is by a public entity				

Source: Maine Department of Environmental Protection

All current permits are required to comply with licensing requirements, which include that the discharge not lower the water quality of the receiving waters. Public sewer is not available in the locations with limited gallon per day discharge. The remaining discharges are from public wastewater treatment plants.

~~Overboard discharges are discharges of septic waste to a water body where the effluent is treated by sand filters or chlorination, but not by a leach field. Cape Elizabeth has reduced its active overboard discharges licensed by the Maine DEP from four in 2007 to 2 today. The systems discharge in Smugglers Cove, Casco Bay and the Gulf of Maine. The Town of Cape Elizabeth holds one of the licenses for its discharge at Portland Head Light.~~

~~The Town also operates two discharge points for the southern sewer treatment system. At the Treatment plan operated on Spurwink Ave, the Town has a licensed overflow discharge. The most recent report (2005) from the DEP to the Maine Legislature lists this discharge point as in compliance with license discharge parameters. The majority of the flows from the Spurwink Treatment plant are treated, dechlorinated and pumped back to Peabbles Cove, where they are discharged.~~

Water Bodies

Most of the data available about local ponds has been generated by the town and then added to the state data base. Cape Elizabeth ponds are classified GPA, which is defined by statute (38 M.R.S.A. Section 465-A). Class GPA waters are of a quality suitable for drinking after disinfection, recreation, fishing, industrial process, cooling water supply, hydroelectric power generation, navigation and habitat for fish and other aquatic life. Trophic state shall be stable or decreasing, subject to natural fluctuations and E coli levels from human origin shall not exceed a geometric mean of 29 per 100 milliliters or an instantaneous level of 194 per 100 milliliters. The table below summarizes the state data collected for Cape Elizabeth ponds.

Maine Lakes Geography Morphometry

Name	Code	Area (acres)	Peri-meter (miles)	Max Depth (feet)	Total Drainage area (sq miles)	Flushing Rate (times/yr)	Trophic Category	Water Quality Statement	Invasive Plant	Fishery Management
Great Pond	5648	171	2.6	5	1	2.08	Moderate productivity	Below average	None known	Warmwater
Little Pond	5646	0.3	0.4	-	0.14	3.14	-	n/a	None known	n/a
Richards Pond	8901	1	0.2	-	0.23	-	-	n/a	None known	n/a
Unnamed pond	5818	4	0.4	-	-	-	-	-	-	-
Unnamed pond	8899	4	0.5	-	1.65	-	-	-	-	-
Unnamed pond	5820	3	0.3	-	-	-	-	-	-	-

Sources: MDEP, MDIFW, GIS coverages. Compilers P. Vaux, J. Entwood, updated through 1-24-2018

The largest fresh water body in town is Great Pond, located in the southern end of Cape Elizabeth, at a size of 171 acres. The pond is shallow (maximum depth 5 feet) and surrounded by wetlands. The pond is rated high value for wildlife habitat. Expected fish species include the American eel, Brown bullhead, Chain pickerel, Golden shiner, Largemouth bass, and Yellow perch. There is no evidence of chinese mystery snail and no invasive aquatic plants identified, although invasive aquatic plants are mapped in the nearby Pleasant Hill Pond in Scarborough (eastern corner).

Much of the abutting area is undeveloped. Roughly one half of the shoreline of Great Pond is owned by the Sprague Corporation and is not developed. There are two single-family residential neighborhoods located north of the pond that are served by individual subsurface disposal systems. Periodic water quality tests show that the water quality of Great Pond remains good.

Great Pond Water Town Water Quality Testing

DATE	1980	1996	1998	2004

WATER CLARITY	1.2	1.6	1.54	1.35
NATURAL COLOR (Measured in Standard Cobalt Units)		> 100 SPU	>100 SPU	120-130 SPU
CHLOROPHYLL-A		3.2 ppb	7.04 ppb	7.9 ppb
PH		ph 6.92	ph 6.82	ph 6.5
TOTAL ALKALINITY			9mg/l	7 mg/l
TOTAL PHOSPHORUS		26 ppb (.5 meters depth) 28 ppb (1.5 meters depth)	33 ppb	28 ppb
FECAL COLIFORM (E. coli levels <25)		LOCATIONS GP1: 43 GP2: 76 GP3: 39 GP4: 22	LOCATIONS ID 1 6 ID 2 4 ID 3 4 ID 4 4 ID 5 11 ID 6 3 ID 7 8 ID 8 1	

Source: 1996, 1998, and 2004 Water Quality Monitoring and Assessment Reports by Lake and Watershed Resource Management Associates, Turner, Maine

The general conclusion drawn from this data is that there have been no dramatic changes to the water quality of Great Pond. Absent any evidence of water quality degradation, regular water quality monitoring of Great Pond is not conducted. A discussion of the individual test parameters follows.

A low Water Clarity number, such as those for Great Pond, could be an indirect indicator of algal growth. Algal growth can occur naturally, but is often an indicator of pollution entering a water body and acting as nutrients to algae. With excessive nutrients, algae grow faster than a fish population can consume it and at the same time use up the oxygen in the water that the fish also need to survive. In the case of Great Pond, however, it is the naturally occurring color of the lake that is producing a low water clarity measurement.

Natural Color is measured to determine if high readings in other tests are due to naturally occurring characteristics or the result of recent changes to the pond. Color varies widely in Maine lakes and Great Pond has high levels of color. This is due to the humic acid leaching from the adjacent wetlands, giving the water

the appearance of tea or coffee. While low water clarity may indicate significant algal growth, high natural color actually limits algal growth because light penetration into the water, needed for algal growth, is reduced. Color levels in excess of 25 SPU result in significant reduction in light penetration.

Phosphorus is also sampled to measure potential algae production. While the phosphorus levels in Great Pond are relatively high compared to other Maine lakes, the levels are likely due to the high color levels.

Chlorophyll-a is a pigment in algal cells. Increasing levels of Chlorophyll-a in Great Pond indicate higher levels of biological production, however, this may be a typical condition for Great Pond.

Total Alkalinity and pH are measured to further indicate biological productivity. Great Pond's measurement is consistent with most Maine lakes.

Fecal coliform tests for fecal contamination. It should be noted that fecal coliform levels can be influenced by wildlife and Great Pond supports a wide range of wildlife. The testing does not indicate if the current levels of fecal coliform originate from wildlife or possible human contamination. The most recent tests show fecal coliform at well below maximum acceptable levels.

Great Pond is a popular spot for fishing, canoeing and ice skating in the winter. Public access to the pond is available on foot from Route 77 to the southeastern end of the pond and from the north from Fenway Rd. Both access points are pedestrian trails with parking available along Fenway Rd or Route 77.

The Fenway Rd access leads to a sandy area used as a boat launch. Boat racks are located near the boat launch. The boat racks are permitted by the Sprague Corporation with an easement granted to the town, which manages the boat rack program. Starting in April, 2010, boat rack storage for 32 canoes and kayaks has been offered seasonally. Boats are no longer chained to trees adjacent to the pond, preserving natural vegetation near the pond edge.

Little Pond, at a modest 0.3 acres in size, is located southwest of Great Pond on the Sprague Corporation land. No depth measurement for the pond is available. The pond is completely surrounded by private property and not accessible to the public. According to the Maine Department of Inland Fisheries and Wildlife, fish are present in Little Pond. The entire area surrounding the pond is undeveloped.

Moving south from Little Pond is an unnamed pond with the state lake code 5818. This 4 acre pond is located on the Sprague Corporation land. Based on the

recorded Master Plan for the Sprague Corporation, the land around the pond will remain predominantly undeveloped.

Moving east, Richards Pond is part of Crescent Beach State Park and also part of the Sprague Corporation lands. Richards Pond is 1 acre in size and also surrounded by land that is expected to remain undeveloped.

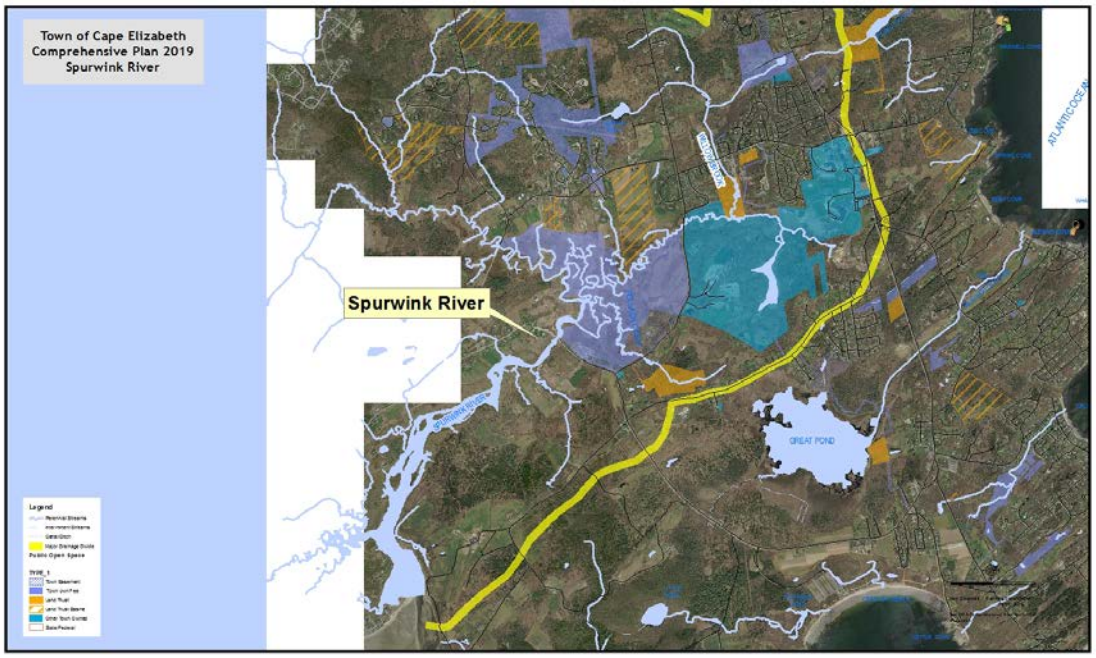
Moving north along the coast and in the Alewife Brook wetland complex is unnamed pond 8899. This pond is 4 acres in size. The northern boundary of the pond is adjacent to private conservation land. Near the coast, the pond abuts a residential neighborhood. The southern boundary of the pond abuts agricultural land.

Jordan Pond, with a state lake code of 5820, is located north of Wells Rd on the Jordan farm. The pond is acres in size and town owned conservation land is located west and southwest of the pond.

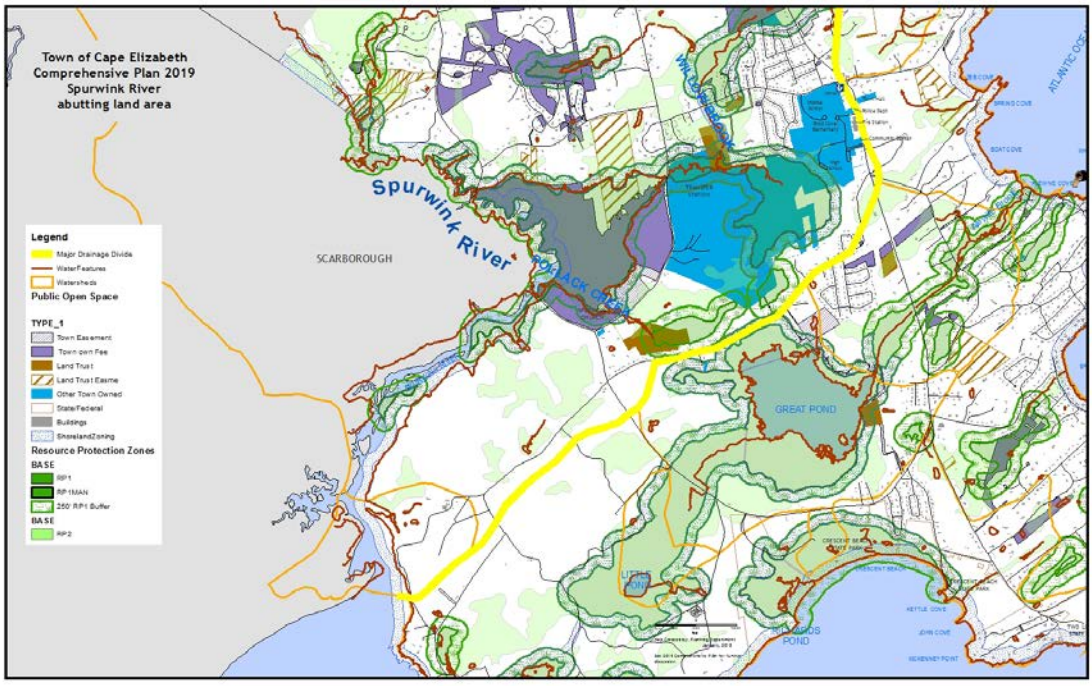
Several smaller ponds are scattered throughout the Town and almost all are adjacent to wetlands. Several ponds are remnants of Cape Elizabeth's farming past, originally created as irrigation ponds, but now are picturesque additions to the landscape and functional components of the area's drainage.

Rivers and Streams

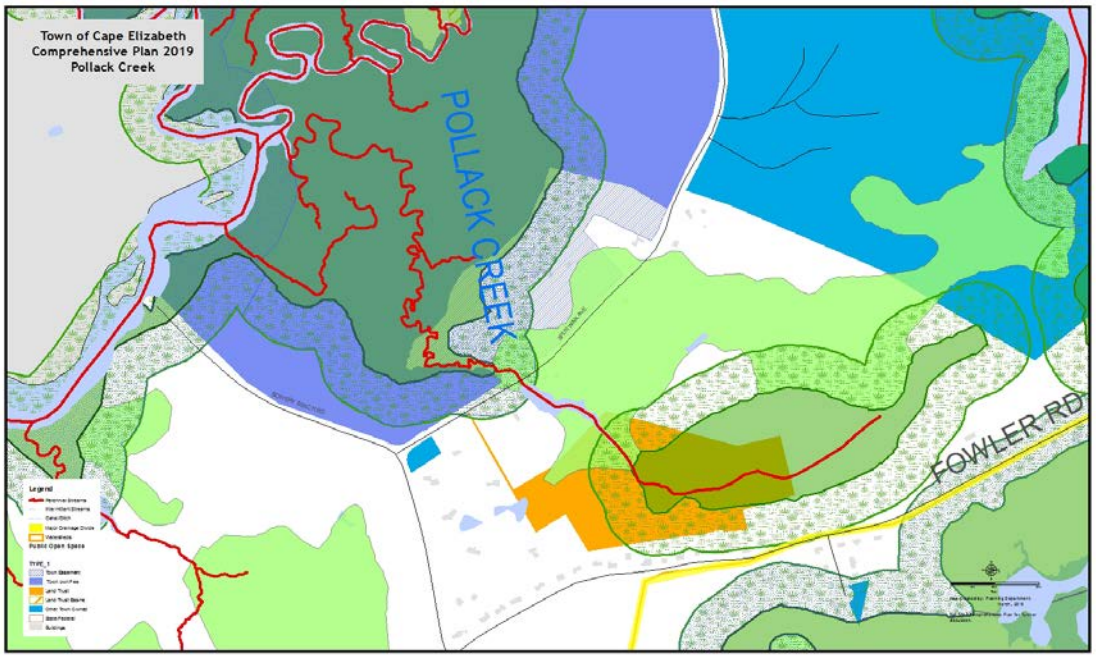
The most significant river in Cape Elizabeth is the Spurwink River, which is the western boundary of the Town. It drains south and through the Spurwink Marsh.



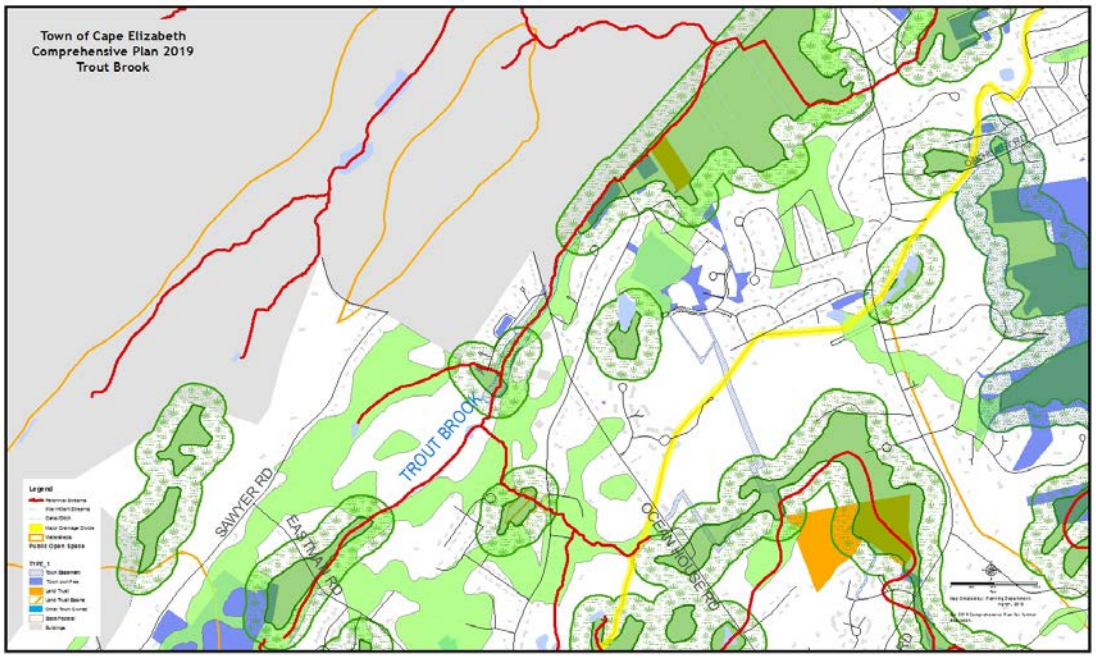
The Spurwink River estuary has an impaired state water quality rating discussed above (See Estuaries). Most of the Cape Elizabeth and Scarborough sides of the river are sparsely developed. As depicted on the map below, the Sprague Corporation and the Town of Cape Elizabeth own almost all of the land immediately abutting the river in Cape Elizabeth, predominantly saltwater marsh. The map depicts Resource Protection Zoning in shades of green. Publicly owned and preserved land is show in all other colors. All of the banks of the river are protected by Shoreland Zoning, and most of the marsh is publicly owned and protected by Resource Protection Districts.



Pollack Creek is located northwest of the Spurwink Church (intersection of Spurwink Ave and Bowery Beach Rd). Additional information about the creek has been developed as part of the replacement of a pedestrian bridge connecting greenbelt trails on its northern and southern banks. Pollack Creek is tidally influenced almost to the Spurwink Ave crossing, and naturally vegetated on both banks. Much of the abutting land to the creek is protected as conservation land.



Trout Brook is located along the northeastern Cape Elizabeth/South Portland boundary, where most of the abutting land is densely developed. The state water quality classification for Trout Brook is Class C. Trout Brook has been identified as an urban impaired watershed. The impairment code 4A has been assigned, with impairment of benthic-macroinvertebrates bioassessments (streams) and habitat assessment (streams). ~~The portion of Trout Brook located in Cape Elizabeth is currently listed as Class B, and is designated as not meeting State water quality standards. The South Portland section is classified as Class C, also not meeting standards.~~



Because of its status as an urban impaired watershed, Trout Brook has benefited from several planning efforts jointly undertaken by the City of South Portland and the Town of Cape Elizabeth. Assessments have included a watershed assessment in 2003, Watershed based management plan in 2012, a Phase I 319 implementation grant in 2012 and a Phase II 319 implementation grant in 2016.~~An assessment of the Trout Brook abutting land uses, followed by a management plan and several watershed improvement grants have been conducted.~~

The Town established a ~~(beginning in 2014) manages a Department of Environmental Protection (DEP) approved~~ Community Fee Utilization Plan (CFUP) for the Trout Brook watershed in 2014 following Maine Department of Environmental Protection (DEP) approval. The CFUP~~is program~~ allows the town to collect state mandated fees from new development to be applied to watershed improvements. The town collected $25,000 from the Eastman Meadows development. The fees were used as a cash match for the $180,000 watershed improvement grant (Phase II 319 Implementation grant referenced above). The grant included water quality testing and improvements to improve the water quality of runoff entering the brook. Stabilization of the brook banks near Route 77, treatment of runoff from an abutting parking lot and agricultural uses were some of the efforts funded by the grant. The 2016 final report concluded that "over 1 ton of sediment, 51 pounds of phosphorus and 550 pounds of nitrogen is

no longer flowing into Trout Brook annually due to the BMP's installed at five abatement sites."

Alewife Brook is the outlet for Great Pond and drains eastward to the Atlantic Ocean. The state water quality classification for Alewife Brook is Class B. Almost the entire "corridor" of Alewife Brook is bounded by wetlands and consequently not developed. The section of the brook located between Route 77 and Old Ocean House Rd is adjacent to a working farm. Alewife Brook has been mapped as a marsh migration corridor (*Source: Casco Bay Estuary Partnership 2013).* The Brook is also documented to contain Snapping turtles (*Source: Alewife Brook River Herring Monitoring 2016, Casco Bay Estuary Project*), Pickerel (*Source: Alewife Brook River Herring Monitoring 201, Casco Bay Estuary Project 5),* American Eel (Source; *Fish Passage Monitoring Report Spring 2009 from the Maine Department of Transportation*), Rainbow Smelt (*Source: Final Report: Alewife Brook Reconnaissance-Level Connectivity Assessment, Stantec, 2016*), and its namesake Alewives (detailed below).

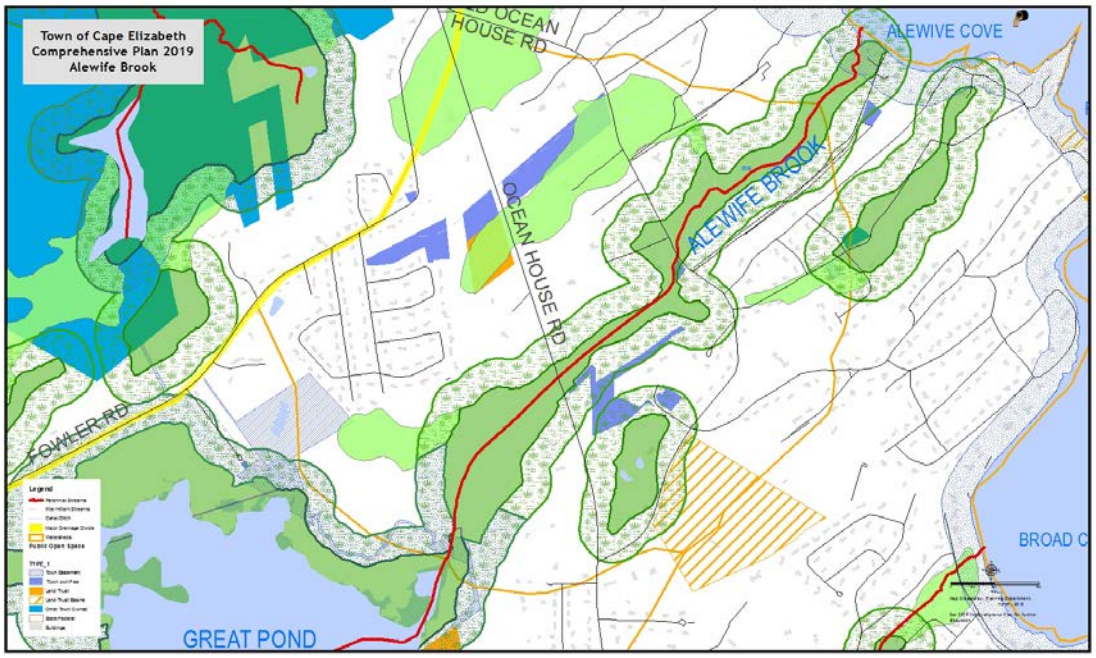
Alewife Brook Alewife counts*:

Year	2009	2015	2016	2017
Count	57	32	41	20**

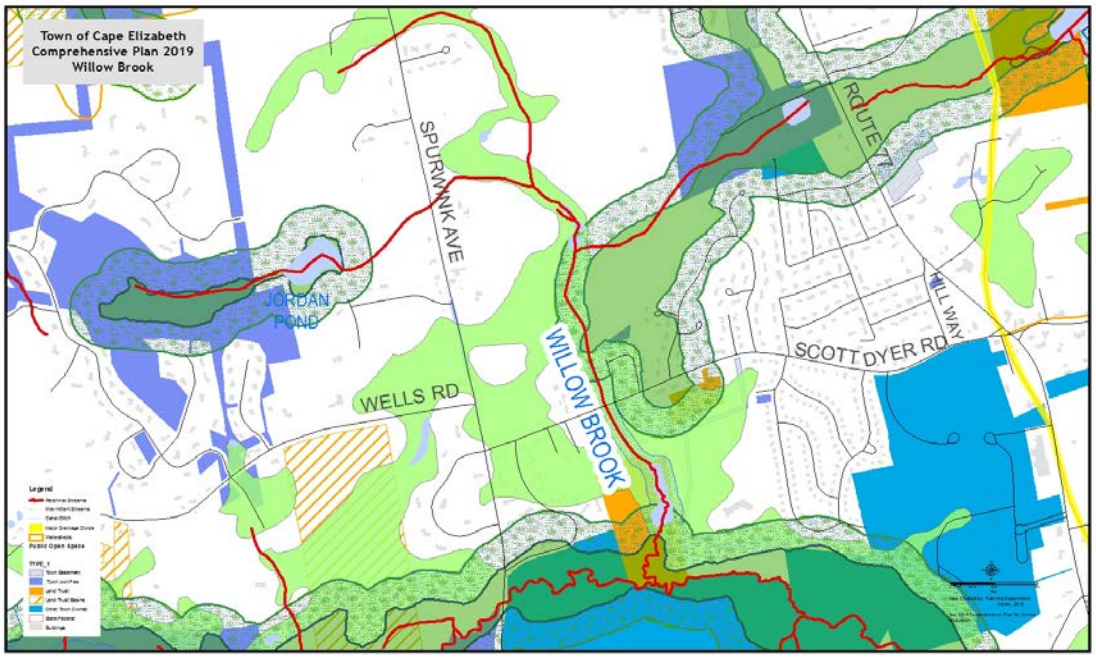
Source: Alewife Brook River Herring Monitoring 2015-2017 from the Casco Bay Estuary Partnership, Fish Passage Monitoring Report Spring 2009 from the Maine Department of Transportation

* These counts should not be used to estimate run size / population
** Monitoring halted early in the run

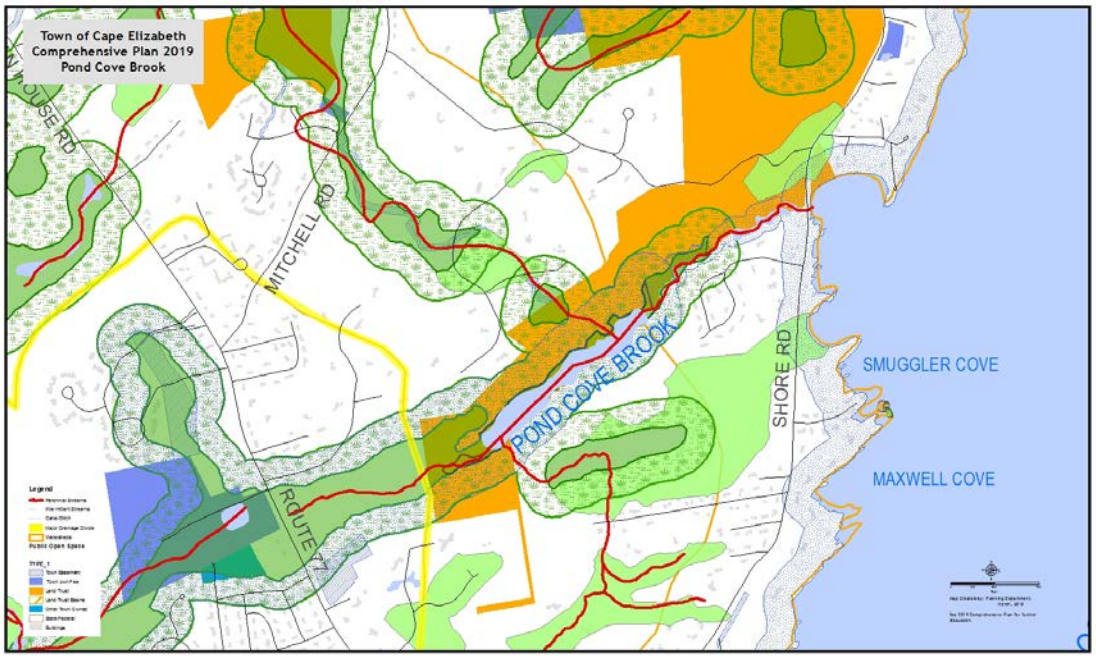
There is also a rock dam across Alewife Brook located between Old Ocean House Rd and the Atlantic Ocean. The dam may need maintenance to avoid functioning as a barrier during alewife runs. It is protected by a combination of Shoreland Zoning and Resource Protection District restrictions. The brook is also part of the Special Flood Hazard area (See Natural Resources Chapter).



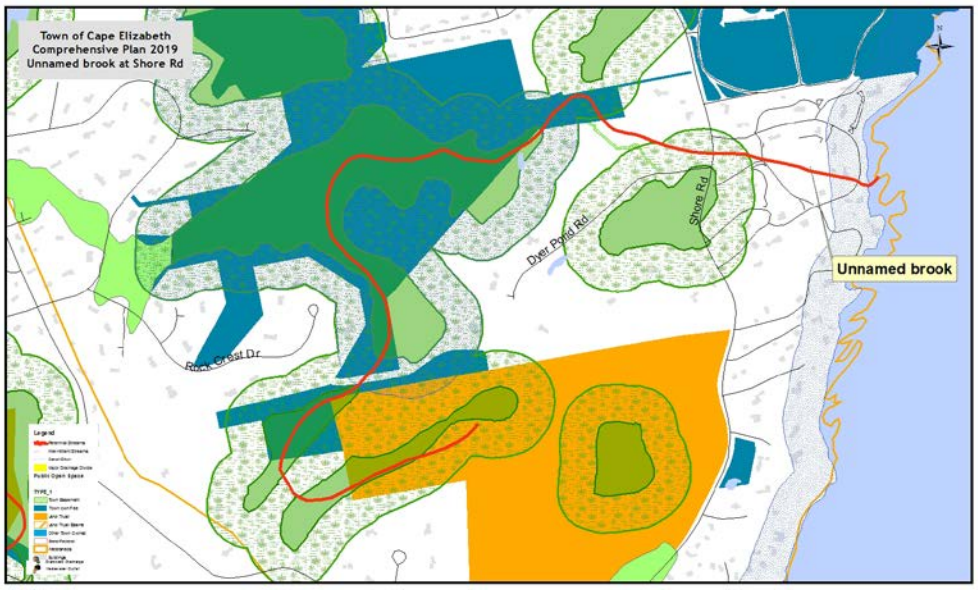
Willow Brook is located on the western end of Scott Dyer Rd.~~.~~ ~~The~~ brook extends from wetlands located behind Lions Field (off Ocean House Rd) southward, crossing Scott Dyer Rd and outletting into the Spurwink River. The state water quality classification for Willow Brook is Class B. The northern end of Willow Brook abuts a neighborhood on the east side. Some additional development abuts the brook south of Scott Dyer Rd, but much of the abutting land is undeveloped.



Pond Cove Brook is equidistant between southern ends of Shore Rd and Mitchell Rd is a wetland and stream complex that outlets to the Atlantic Ocean at Pond Cove. The state water quality classification for Pond Cove Brook is Class B. Significant amounts of this Pond Cove Watershed remain undeveloped. The Cape Elizabeth Land Trust, with funding support from the Town of Cape Elizabeth and the Land for Maine's Future Fund has put much of the watershed into conservation.



Further north between Shore Rd and Mitchell Rd, in the area of Dyer Pond, is an unnamed brook that drains through the Delano Park neighborhood before outletting to the Atlantic Ocean. The headwaters of this brook are located in permanently protected Town open space. As part of the Dyer Pond subdivision approval, the brook was fitted with a weir to control flows and flooding of the Delano Park neighborhood downstream. The Town maintains the weir and downstream flooding has not occurred with the development of the subdivision.



All of the above streams support fish according to the Maine Department of Inland Fisheries and Wildlife.

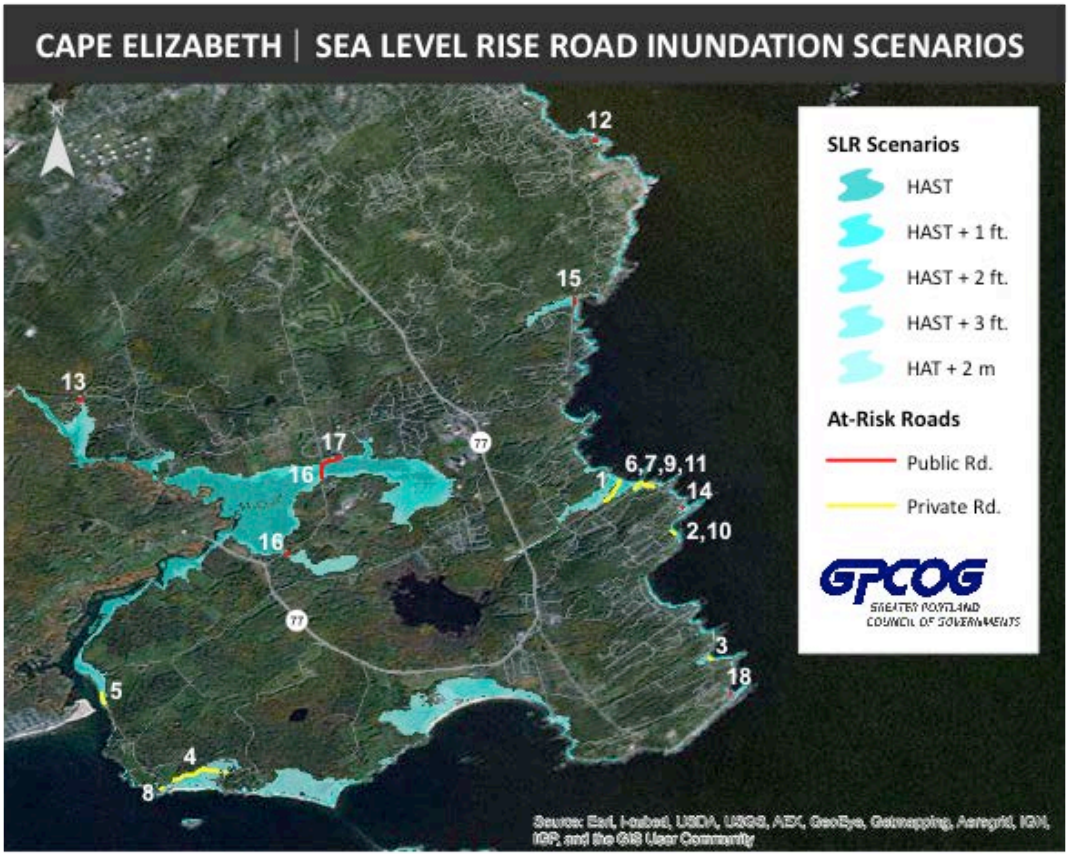
Aquifers

No significant gravel aquifers are located in Cape Elizabeth.

Regulatory Protection

The Town of Cape Elizabeth has adopted Shoreland Zoning protection that has most recently been deemed consistent with State Mandatory Shoreland Zoning requirements on October 20, 2009. This includes a 250' shoreland overlay district along the coastline (Atlantic Ocean), rivers, and ponds, and a 75' shoreland overlay district along major streams.

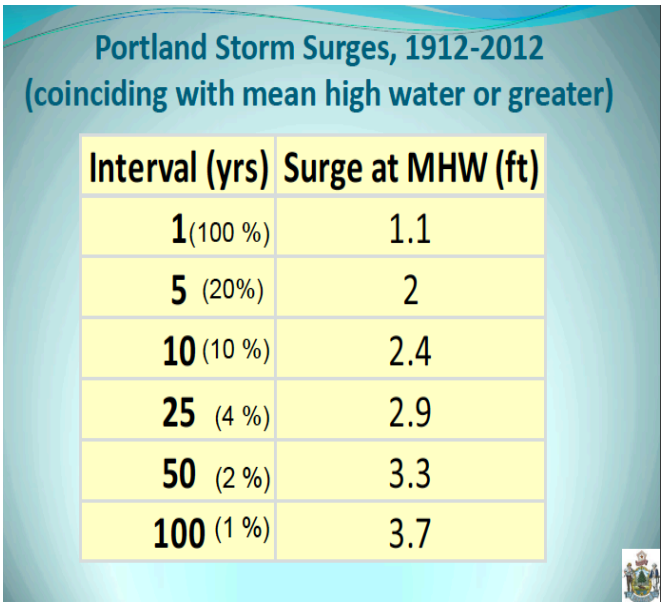
In 2014, the town adopted a new "normal high water" definition intended to make the town more resilient to sea level rise. The map below predicts areas of inundation assuming up to 2 meters of sea level rise above Highest Astronomical Tide.



Label	Street Name	Road Class	HAT+2m	HAST+3ft.	HAST+2ft.	HAST+1ft.	HAST+0ft.	Risk	Priority
1	Alewife Cove Rd.	Private	1,015 ft.	625	31	0	0	Medium	Low
2	Algonquin Rd.	Private	15	0	0	0	0	Low	Low
3	Cunner Ln.	Private	102	0	0	0	0	Low	Low
4	Little Pond Ln.	Private	1,513	0	0	0	0	Low	Low
5	Lower River Rd.	Private	493	463	69	0	0	Medium	Low
6	Peabbles Cove Rd.	Private	327	0	0	0	0	Low	Low
7	Ram Light Ln.	Private	104	0	0	0	0	Low	Low
8	Rams Head Rd.	Private	23	0	0	0	0	Low	Low
9	Shipwreck Cove Rd.	Private	357	0	0	0	0	Low	Low
10	Surf Side Ave.	Private	26	0	0	0	0	Low	Low
11	Tucker Ln.	Private	37	0	0	0	0	Low	Low
12	Garden Ln.	Local	182	182	0	0	0	Low	Low
13	Park Cir.	Local	57	0	0	0	0	Low	Low
14	Reef Rd.	Local	60	0	0	0	0	Low	Low
15	Shore Rd.	Local	272	0	0	0	0	Medium	High
16	Spurwink Ave.	Local	740	335	204	21	0	High	High
17	Starboard Dr.	Local	577	431	118	0	0	Medium	Medium
18	Two Lights Rd.	Local	6	0	0	0	0	Low	Low
--	*Totals*	--	*4,892 ft.*	*2,036 ft.*	*422 ft.*	*21 ft.*	*0 ft.*	--	--

SLR-Sea Level Rise / HAT-Highest Annual Tide / HAST-Highest Astronomical Tide / SLR data provided by Maine Geological Survey / "Risk" and "Priority" columns are highly subjective and should be treated as such / Map created by GPCOG, January, 2015.

Based on sea level rise predictions, the town added 3 vertical feet to the point where minimum shoreland zoning setbacks must be measured. As shown on the chart below, this increases the town's resiliency to the range of the 25-50 year storm.



The town has adopted local wetland regulations that establish 100' - 250' wide buffers around water bodies of at least 1 acre in size. Finally, Great Pond is protected with a Great Pond Watershed Overlay District, which minimizes the amount of area that can be stripped of vegetation at one time. These regulations work together to create natural vegetated buffers to protect water resources.

There is limited water quality data available for water bodies in Cape Elizabeth. As growth continues, buffering requirements adjacent to water resources require that new development must be set back from water resources. The buffers also protect water resources by filtering storm water before it enters water bodies and streams. ~~Although water quality testing has been limited, all of the testing done continues to suggest that existing local, state and federal regulations are protecting water quality even when new development occurs.~~

Water Resources Goals

Goal 1: The Town should retain and promote compliance with existing land use and permit regulations. ~~its local Shoreland Zoning and Great Pond Watershed Overlay District regulations that require preservation of vegetated buffers and restrict activity in shoreland areas, resulting in no degradation of adjacent water bodies.~~

Recommendations

1. Retain the Great Pond Watershed Overlay District, Resource Protection District and Shoreland Zoning District regulations.

2. Maintain compliance with overboard discharge and wastewater discharge permitting.

~~2. Take advantage of new technologies and funding opportunities to eliminate the remaining overboard discharges.~~

~~3. Partner with the Town of Scarborough on water quality sampling, strategies, and implementation of the TMDL report to improve the water quality of the Spurwink River Estuary.~~

~~4. Investigate, in cooperation with private land owners, adopting names for unnamed bodies of water to aid in public awareness.~~

Goal 2: The Town should initiate and partner with others assessment projects to improve existing water quality. ~~Continue to partner with the City of South Portland on implementation of the Management Plan for the Trout Brook urban impaired watershed.~~

Recommendations

3. Partner with the Town of Scarborough on water quality sampling, strategies, and implementation of the TMDL report to improve the water quality of the Spurwink River Estuary.

4~~5~~. Continue, in partnership with the City of South Portland, implementation of the Trout Brook Management Plan.

5. Perform a comprehensive assessment of the Alewife Brook/Peabbles Cove water complex. The assessment, at a minimum, should include water quality testing of the brook, evaluation of siltation impacts on the brook, more in-depth assessment of Peabbles Cove water quality, evaluation of alewives migration, and an infrastructure assessment of the existing dam.

6. Establish a town water quality monitoring program for significant water bodies that includes a consistent set of testing parameters and centrally located data compilation to facilitate rapid identification of water quality impairment.

7. Assign names to significant unnamed water bodies and streams.