

CHAPTER 2

WATER & NATURAL RESOURCES

This chapter of the Casco Comprehensive Plan is a portion of the Inventory and Analysis section of the plan. The purpose of this section is to provide a current status of water and natural resources within Casco and the surrounding region.

This Chapter is organized into five sections:

1. Surface Waters and Groundwater
2. Soils
3. High Value Plant and Animal Habitat
4. Threats and Protections of Water and Natural Resources
5. Environmental Protections

Surface Waters and Groundwater

[STATE REQUIREMENT: “A description of each great pond, river, surface drinking water supply, and other water bodies of local interest including: A. ecological value; B. threats to water quality or quantity; C. documented water quality and/or invasive species problems”]

Over two square miles of the town’s surface area are lakes and ponds with over 40 miles of rivers and nearly 40 miles of shoreline. Many of Casco’s lakes, ponds, streams, wetlands, aquifers, and watersheds have good to outstanding water quality, but are at risk to threats by development in the region. See water resources map in “Protect Woods, Waters, and Open Space” Big Idea section for more information.

Lakes and Ponds

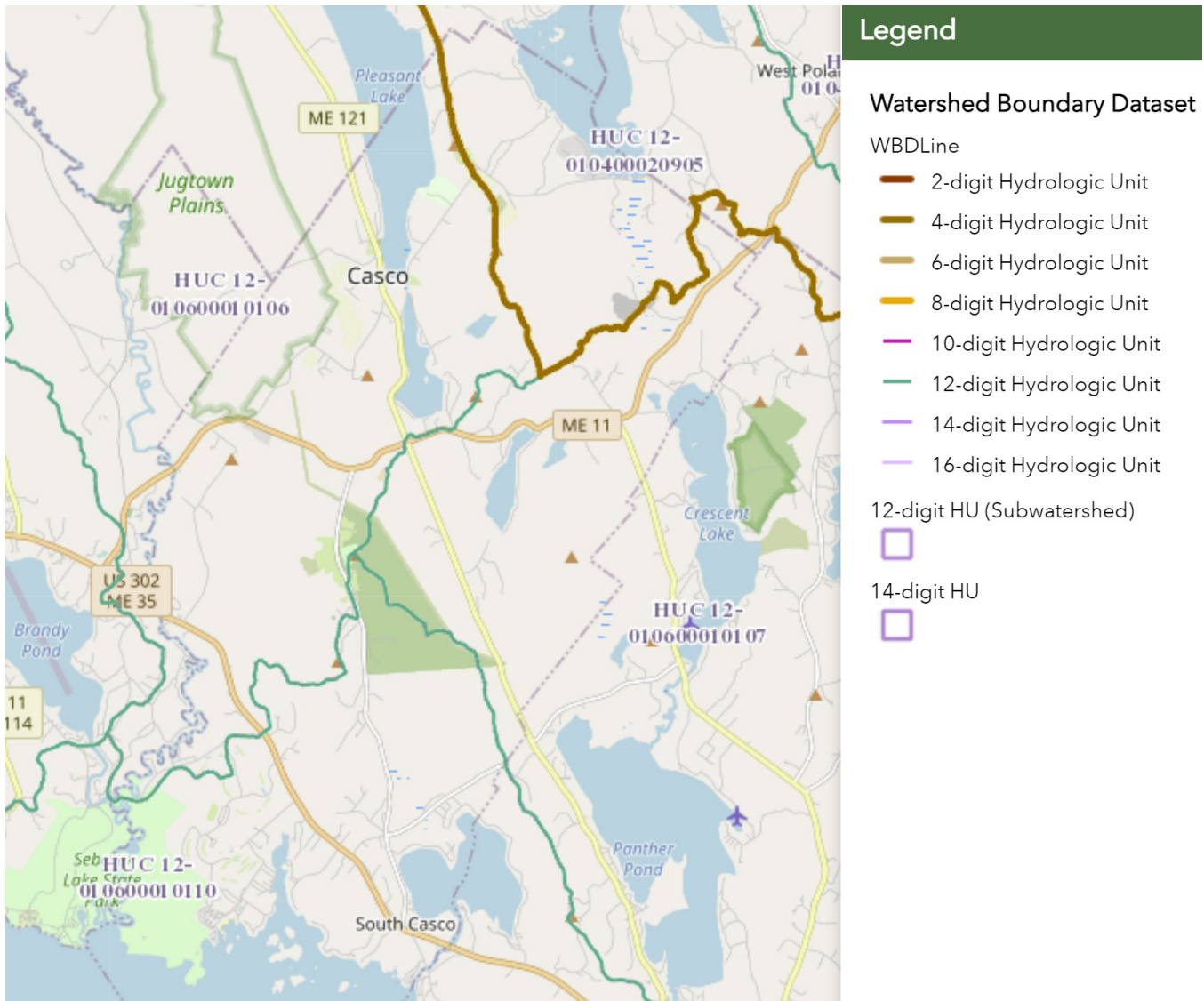
The water quality in the majority of Casco’s lakes and ponds is stellar, particularly Pleasant Lake, Sebago Lake, and Thompson Lake which are locally known as standouts. The following descriptions of Casco’s lakes and ponds include information from the Lake Stewards of Maine’s Lakes of Maine data portal about water bodies’ size, water quality, conservation and stewardship, threats, and phosphorus allocation budget (for those that apply). The watershed-per-acre phosphorus allocation budget of lakes and ponds is the amount of phosphorus from development that each acre of a lake or pond’s watershed could accept without risking a perceivable change in quality of water and is calculated by the DEP.

- **Coffee Pond:** The pond has an area of 106 acres with a maximum depth of 70 feet. The pond hosts coldwater and warmwater

fisheries. There are no known invasive aquatic plant infestations. The lake has been surveyed by volunteers and professionals for invasive aquatic plants. Local stewards of the pond include the Cumberland County Soil and Water Conservation District. Although unimpaired, MDEP has listed Coffee Pond as a nonpoint source priority threatened lake watershed because of its sensitivity to additional phosphorus inputs due to the pond’s hydrology and/or threats in the watershed, including risk from new development. Coffee Pond’s direct watershed area in Casco is 452 acres and it’s per acre phosphorus allocation is .053 lb/acre/yr.

- **Crescent (Rattlesnake) Lake:** The Lake is situated mostly in Raymond with just the northern tip in Casco. It’s area is 703 acres and has 12,867 meters of shoreline and a maximum depth of 54 feet. The lake hosts coldwater and warmwater fisheries and has no known invasive aquatic plant infestations. The lake is patrolled by certified water quality monitors and invasive plant patrollers from its local stewards in the Crescent Lake Watershed Association. Crescent Lake’s direct watershed area in Casco is 904 acres and it’s per acre phosphorus allocation is .033 lb/acre/yr.
- **Dumpling Pond:** The pond has an area of 31 acres, 1,874 meters of shoreline, and a maximum depth of 14 feet. There are no known invasive aquatic plant infestations. It is listed as potentially at risk from new development. Dumpling Pond’s direct watershed area in Casco is 375 acres and it’s per acre phosphorus allocation is .054 lb/acre/yr.
- **Hog Meadow Pond:** The pond is in Casco and has an area of 18 miles and 1,455 meters

WATERBODIES & WATERSHEDS



of shoreline. There are no known invasive aquatic plant infestations. Hog Meadow Pond's direct watershed area in Casco is 135 acres and its per acre phosphorus allocation is .051 lb/acre/yr.

- **Owl Pond:** The pond has an area of 21 acres, 1,271 meters of shoreline, and a maximum depth of 15 feet. The pond hosts warmwater fisheries with no known invasive aquatic plant infestations. Local stewards of the pond include the Cumberland County Soil and Water Conservation District. Owl Pond's direct watershed area in Casco is 286 acres and its per acre phosphorus allocation is .032 lb/acre/yr.
- **Parker Pond:** The pond has an area of 167 acres, 5,700 meters of shoreline, and a maximum depth of 19 feet. The pond hosts warmwater fisheries. In 2000, variable-leaf milfoil, an invasive aquatic plant infestation, was identified in the pond, however, was eradicated in 2014 through efforts by the Pleasant-Lake Parker Pond Association. The association continues to conduct surveys and uses benthic barriers to control occasional VLM plants. Volunteers have conducted invasive aquatic plant screening surveys. Local stewards include the Cumberland County Soil and Water Conservation District and the Pleasant Lake and Parker Pond Association. Although unimpaired, MDEP has listed Parker Pond as a nonpoint source priority threatened lake watershed due to its sensitivity to additional phosphorus inputs due to the pond's hydrology and/or threats in the watershed, including risk from new development. Parker Pond's direct watershed area in Casco is 667 acres and its per acre phosphorus allocation is .038 lb/acre/yr.
- **Pleasant Lake:** The lake is split between Otisfield on the north end and Casco on the south. It has an area of 1,332 acres, 14,614 meters of shoreline, and a maximum depth of 62 feet. The lake hosts coldwater and warmwater fisheries. In 2000, variable-leaf milfoil was confirmed as an invasive infestation in the lake; however, VLM has not been observed since 2015 and is considered eradicated. There are certified water quality and invasive plant monitors active at the lake and invasive aquatic plant surveys have been conducted by both volunteers and professionals in the past. Local stewardship groups include Oxford County Soil and Water Conservation District and the Pleasant Lake and Parker Pond Association. Pleasant Lake's direct watershed area in Casco is 768 acres and its per acre phosphorus allocation is .046 lb/acre/yr.
- **Sebago Lake:** The lake is shared by the Towns of Casco, Naples, Raymond, Sebago, Standish, Windham, and Frye Island. It has an area of 29,992 acres, 6,861 meters of shoreline, and a maximum depth of 316 feet. The lake hosts coldwater and warmwater fisheries. Variable-leaf milfoil has been mapped by the Portland Water District in 12 colonies in the lake since first being discovered in 1970; the infestation is managed through Diver Assisted Suction Harvester and barriers. There are certified water quality and invasive plant monitors active at the lake and invasive aquatic plant surveys have been conducted by agency staff and volunteers in the past at nine different survey stations across the lake. Local stewardship groups include the Cumberland County Soil and Water Conservation District, Raymond Waterways, Lakes Environmental Association, and the Portland Water District. Sebago Lake's direct watershed area in Casco

is 8707 acres and it's per acre phosphorus allocation is .047 lb/acre/yr.

- **Thomas Pond:** The pond is in Casco on the west side and in Raymond on the east. It has an area of 533 acres, 85 meters of shoreline, and a maximum depth of 64 feet. The lake hosts coldwater and warmwater fisheries. There are no known invasive aquatic plant infestations. There are certified water quality and invasive plant monitors active at the lake and invasive aquatic plant surveys conducted principally by volunteers. Although unimpaired, MDEP has listed Tomas Pond as a nonpoint source priority threatened lake watershed due to its sensitivity to additional phosphorus inputs due to the pond's hydrology and/or threats in the watershed, including risk from new development. Additionally, Thomas Pond feeds into Sebago Lake meaning contamination in the Pond has the potential to affect the quality of drinking water. Local stewardship groups include the Cumberland County Soil and Water Conservation District. Thomas Pond's direct watershed area in Casco is 2159 acres and it's per acre phosphorus allocation is .021 lb/acre/yr.
- **Thompson Lake:** Only the southernmost tip of the lake is in Casco, the rest is split between the Towns of Poland, Otisfield, and Oxford. The lake has an area of 4,419 acres, 47,925 meters of shoreline, and a maximum depth of 121 feet. The lake hosts coldwater and warmwater fisheries. Variable-leaf milfoil was identified in 1975 in the southernmost portion of the lake known as "the Heath." The infestation is managed by diver assisted suction harvesters and barriers. There are certified water quality and invasive plant monitors active at the lake and invasive aquatic plant surveys have been conducted by agency staff and volunteers

at five different survey stations. Local stewardship groups include Oxford County Soil and Water Conservation District and the Thompson Lake Environmental Association. Thompson Lake's direct watershed area in Casco is 2574 acres and it's per acre phosphorus allocation is .031 lb/acre/yr.

- **Panther & Nubble Ponds:** While located in Raymond, Nubble Pond's direct watershed area in Casco is 187 acres and its per acre phosphorus allocation is .035 lb/acre/yr. Also in Raymond, Panther Pond's direct watershed area in Casco is 2139 acres and it's per acre phosphorus allocation is .037 lb/acre/yr.

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Rivers

Class AA is the highest classification of waters. It applies to waters which are outstanding natural resources and which should be preserved because of their ecological, social, scenic or recreational importance. Class A is the second highest classification. It applies to waters suitable for the designated uses of drinking water after disinfection; fishing; agriculture; recreation in and on the water; industrial process and cooling water supply; hydroelectric power generation; navigation; and as habitat for fish and other aquatic life. The classifications of Casco's rivers as identified on MDEP's list of nonpoint source priority watersheds are as follows:

- **Mill Brook:** At the confluence with Crooked River, the DEP has labeled 2.28 miles of Mill Brook (also known as Mile Brook) a class B impaired stream due to wastewater outfalls and Benthic Macroinvertebrates.
- **Robinson Brook:** Classified A
- **Edwards Brook:** Classified A
- **Meadow Brook:** Classified A (*Staples Brook,*

Rolfe Brook in Raymond)

- **Lord Brook:** Classified A (*Ring Brook, Sucker Brook*)
- **Lilly/Lily Brook:** Classified AA (*connects Parker Pond and Pleasant Lake*)
- **Decker Brook:** Classified AA
- **Songo River:** Classified A. Variable-leaf milfoil was first identified in the Songo River in 2004 when it was found above and below the lock. Until 2015, the infestation was managed through benthic barriers, hand removal, and a suction harvester. Since 2016, the infestation has been scattered and regrowth is managed by hand removal and barriers. Management efforts are led by the Lakes Environmental Association.
- **Crooked River:** Classified AA
- **Rolfe Brook:** Classified A
- **Dingley Brook:** Classified A

No streams in Casco are listed on MDEP's list as impaired nor threatened.

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Groundwater/Aquifers

Groundwater is water that lies below the water table, saturating the soil and filling in the pores and fractures in the bedrock. Groundwater is recharged by precipitation that seeps into the ground. The bodies of rock and sediment saturated with groundwater are called aquifers. Aquifers can be confined if they have a layer of impenetrable rock or clay covering them, or unconfined if they lie below a permeable layer of soil. The two main dangers to groundwater are depletion and contamination. Depletion occurs when groundwater is used faster than it can be recharged through rainfall. Groundwater can

can occur from agricultural runoff that includes pesticides and herbicides, leaking septic tanks, and improper storage of waste and chemicals in landfills. Although groundwater is naturally filtered as it moves through the ground, this process may not be enough to remove all of the unnatural contaminants. Uncontaminated groundwater is particularly important to communities like Casco that rely on wells to supply household water as wells are direct points of discharge for aquifers.

Significant aquifers in Casco as identified in the Watershed Map compiled by Maine Department of Environmental Protection, Division of Environmental Assessment, 2021 include:

- Along the Crooked River which divides Casco and Naples at 10-50 gallons per minute with a smaller portion at over 50 gallons per minute. This smaller portion has been highlighted as having land use risk on high yield sand and gravel aquifers.
- Small portions of land off of Crescent Lake, Thomas Pond, and Thompson Lake are aquifers of 10-50 gallons per minute.

Casco's aquifers are generally in good condition. In town code, they are protected by an Aquifer Protection Overlay District meant to "protect Casco's underground water supply by restricting uses and activities on land overlying aquifers and aquifer recharge areas." In the protection area, there are additional prohibited uses including but not limited to: uncontained manure storages, storage of hazardous materials, restaurants, and truck facilities. When more restrictive than those of the underlying zone, Aquifer Protection standards are applied. The most notable recent contamination of the groundwater in Casco was in the spill on Tenney Hill discovered in the early 2000s.



Watersheds

Waters designated nonpoint Source (NPS) priority watersheds by Maine DEP include both waters already impaired or potentially threatened by NPS pollution. Many of Casco's watersheds are on the threatened NPS priority list.

- **Sebago Watershed:** Much of Casco lies within the Sebago Watershed. The watershed is 224.67 square miles and has outstanding water quality and is part of the public water system for Portland. The Sebago watershed has been identified by the U.S. Forest Service as at a high risk of losing forestland to development. According to Sebago Clean Waters, a advocacy collaborative of nine organizations and the Portland Water District, 84% of the 234,000 acres of watershed is forested. The forest helps keep the water of the region clean through filtration.
- **Thompson Lake Watershed:** A small portion of Thompson Lake Watershed is in Casco with the rest in neighboring Otisfield, Oxford and Poland. The watershed is 41.71 square miles with outstanding, although sensitive, water quality and is designated threatened by DEP.
- **Pleasant Lake Watershed:** A small portion of Pleasant Lake Watershed lies in Casco along

with Otisfield. It's area is 7.66 square miles and has outstanding, but threatened, water quality as well as supports a fish hatchery.

- **Parker Pond Watershed:** This watershed is wholly contained in Casco with an area of 1.93 square miles. The water quality is sensitive and the watershed is designated threatened.
- **Crescent Lake Watershed:** This watershed lies in Casco and Raymond at 7.42 square miles. The water quality of the watershed is sensitive and is designated threatened.
- **Thomas Pond Watershed:** This watershed is in Casco and Raymond with 5.28 square miles. The water quality is sensitive and the watershed is designated threatened.
- **Coffee Pond Watershed:** This watershed lies completely within Casco and is 0.88 square miles. The water quality of the watershed is sensitive and is designated threatened.

Deforestation of the watersheds, as a result of development (including clearing for installation of large solar farms), was expressed as a concern. Residents identified protection of the watershed as having direct correlation to the health of the lakes.

Soils

The Natural Resources Conservation Service of the USDA rates soils by type and use. Soils defined as prime farmland soils are those that are well suited to producing food crops. Casco's prime farmlands are mostly located where farming occurred in the past.

The largest concentrations are located in the following areas:

- Along Mayberry Hill from the Otisfield town line and extending down the Heath Road.
- West of Casco Village, primarily along Leach Hill and the Fountain Hill Road.
- Between Pike's corner and Parker Pond.
- Along Route 85 south of Webb's Mills.
- Along Quaker Ridge.
- Along the Riggs Road in South Casco.

Other soils are also considered suited for use as farmland, even though they are not classified as "prime". The main concentration of these additional soil types is found south of Pike's Corner and from there runs west-southwest to the west side of Tenney Hill. Other smaller clusters, for the most part, are adjacent to prime farmland soils. Agricultural soils have been mapped at a large scale and are available for viewing at the Casco Town Hall. (Excerpt from 2003 Comprehensive Plan).

High Value Plant and Animal Habitat

Much land in Casco serves as important natural spaces for plants and animal habitats. The following lists some notable areas of concern by the Department of Inland Fisheries and Wildlife:

- At Owl Pond, the Scarlet Bluet is identified as a species of special concern and the New England Bluet is identified as a species of conservation need.
- On the Poland-Casco border off of Route 11, the Fern-leaved False Foxglove is identified as a species of special concern.
- Around Route 121 West of Coffee Pond and at the Raymond-Casco border North of Panther Pond, the Great Blue Heron is identified as a species of special concern.
- At the Raymond-Casco border East of Coffee Pond, the Department of Inland Fisheries and Wildlife has reported Summer Grape as a threatened species, Purple Clematis as a species of special concern, and found areas of an Oak-Pine Woodland and Enriched Northern Hardwood Forest.
- Along the Crooked River, the Pygmy Snaketail is identified as a species of special concern.

See the Environmental Systems map for more information on high value plant and animal habitat locations.

Threats and Protections of Water and Natural Resources

**See Environmental Protections in the Regulatory Framework of Comprehensive Plan.*

[STATE REQUIREMENT: “Are there point sources (direct discharges) of pollution in the community? If so, is the community taking steps to eliminate them?”]

Between 1969 and 1980, Portland-Bangor Waste Oil operated a waste oil collection and storage facility in Casco at Tenney Hill. The oil, some of which was contaminated with lead and solvents, leached into the soil and groundwater at the site, leading to a DEP investigation from 2001 to 2003 which estimated that 58,000,000 gallons of groundwater below the site are contaminated and that the natural degradation will take more than 100 years. The site has added hazard in its position in the Crooked River watershed. The DEP designated the site as a State “uncontrolled hazardous substance site.” Following the decision, Casco was granted \$500,000 from the Waste Motor Oil Disposal Site Remediation Program funds for natural resource damages in the loss of use of groundwater at the site. The DEP determined that it was not feasible to decontaminate the groundwater so drinking water extraction from the area has been limited and the funds granted were to be allocated to local projects to protect groundwater from pollution. The funds continue to be available for low-income Casco residents to replace failing septic systems. However, according to the CEO, few residents have taken advantage.

Other point-source pollution concerns by staff include motorized boats and old septic systems and by Loon Echo Land Trust include short-term rentals on the waterfront.

[STATE REQUIREMENT: “Are there non-point sources of pollution? If so, is the community taking steps to eliminate them?”]

Some of Casco’s waters have the potential to be threatened by non-point source pollution. For individual assessments of water bodies, see descriptions above. Pollution monitoring and enforcement is handled by the local Code Enforcement Officer, Portland Water District (for Sebago Lake), and the DEP. In order to protect the water resources in and surrounding Casco, the public works department uses a minimal amount of salt on the roads. Although the amount of salt used has increased slightly in recent years, Casco still uses less than surrounding towns.

Although community members have noted that Casco rarely takes steps beyond requirements set by other regulating bodies to eliminate non-point sources of pollution, they have expressed a desire for educational programming to increase awareness about water resource protection. During public design week, community members suggested involving Lakes Environmental Association in schools and creating a summer environmental education program for kids who would then work to spread information to adults in Casco.

[STATE REQUIREMENT: “Do public works crews and contractors use best management practices to protect water resources in their daily operations (e.g. salt/sand pile maintenance, culvert replacement street sweeping, public works garage operations)?”]

Town staff follow the Department of Environmental Protection rules for the quantity of salt used on streets. Staff also engage in online training for best practices. Casco employs a contractor to replace problematic culverts on driveway entrances and those that need to be increased in size.

[STATE REQUIREMENT: “Are there opportunities to partner with local or regional advocacy groups that promote water resource protection? Is there current regional cooperation or planning underway to protect shared critical natural resources? Are there opportunities to partner with local or regional groups?”]

There are volunteer groups monitoring water quality and stewardship groups active in the region including Sebago Clean Waters, Loon Echo Land Trust, Lake Stewards of Maine, Maine Lakes, and the Maine Department of Environmental Protection Lakes Program. The abundant number of water protection and other natural resource protection organizations in the Lakes Region shows ample opportunity to partner with local groups. It also indicates a level of volunteership in the community and willingness to take action.

There are many non-profit organizations that work throughout the Lakes Region to protect water and forestry resources. See notes above, and the chapter on Recreation for more information on regional cooperation for conservation of trails and open spaces.

[STATE REQUIREMENT: “A summary of past and present activities to monitor, assess, and/or improve water quality, mitigate sources of pollution, and control or prevent the spread of invasive species.”]

Volunteer organizations actively monitor most lakes and ponds. Lake Stewards of Maine (LSM) is one of the leading organizations in promoting lake stewardship and is the primary source of lake data in Maine; LSM trains, certifies and provides technical assistance to monitor the lakes for water quality and identify invasive aquatic plant and animal infestations. LSM publishes data for each lake on their website. Some of Casco’s lakes have their own specific stewardship groups such as the Crescent Lake Watershed Association, the

Thompson Lake Environmental Association, and the Pleasant Lake and Parker Pond Association. The Pleasant Lake/Parker Pond Association was established in the 1960s to address receding water levels of the time and later to monitor the purple loosestrife found in the water. Community members noted during the public design week that the lakes associations are important to protecting the lakes but that there should be additional efforts for conservation outside of the lakes themselves such as connection to land conservation and the conservation of watersheds more generally.

Sebago Clean Waters (SCW) is a collaborative of environmental nonprofits, including the Loon Echo Land Trust which was a founding member, and the Portland Water District. SCW works to increase the pace of forest conservation in the Sebago watershed, which makes up a significant part of Casco, in order to preserve the water quality of Sebago Lake. As the forest helps to filter water, the conservation of forestland is SCW’s primary methodology of source water protection in the region. SCW was recently awarded an \$8mil grant from the State’s Natural Resources Conservation Service’s Regional Conservation Partnership Program, \$5mil of which is to be used for conservation easements. In addition to direct conservation, the collaborative commissioned a research study in 2018 on the market-value of the ecosystem services that conserved lands provide in the watershed.

To address erosion around lakes across Maine, Maine Lakes, a non-profit dedicated to protecting Maine’s lakes and ponds, partners with local lake associations to create the LakeSmart education and reward program. LakeSmart is a voluntary program in which lakeside homes are evaluated by trained volunteers and homeowners are

given individualized suggestions on how to improve. Education provided includes practices for landscaping that minimizes erosion along the shoreline and into the lakes. Homeowners whose properties are determined to be lake-friendly receive the LakeSmart Award which includes two signs that can be posted at the waterfront and driveways.

The Lakes Environmental Association (LEA) is a nonprofit that aims to protect the water and watersheds in the Greater Sebago Lakes Region through advocacy, action, and scientific analysis. Previous actions taken by LEA include helping to begin the milfoil program, blocking a nuclear waste dumping facility near Sebago Lake, and increasing enforcement of Maine's environmental protection laws.

[STATE REQUIREMENT: “A description of the location and nature of significant threats to aquifer drinking water supplies.”]

[STATE REQUIREMENT: “Are any of the community’s critical natural resources threatened by development, overuse, or other activities?”]

Waterfront development continues to threaten watersheds but residents want to take an active approach to conserving open space in order to protect the watershed. There is concern with the villages located close to lakes and the impact future development may have. However, during design week, residents indicated the importance of preserving natural areas and concentrating development to minimize impact to the lakes and watershed. Unrestricted development around the lakes presents the greatest threat compared to dense development in village centers.

There is debate about how to preserve Casco's open space with the minimum lot size ordinance. With the current minimum lot size, a subdivision

is required to take up more space than is always needed, making density difficult to implement. The requirement for more land threatens the current open space and forested lands to future development.

Environmental Protections

[STATE REQUIREMENT: “How are groundwater and surface water supplies and their recharge areas protected?”]

As part of the Town of Casco Code's water protections, groundwater and surface water supplies and recharge areas are considered in most zoning cases. The code defines groundwater inclusive of subsurface water present in aquifers as well as recharge areas. Throughout, the code prohibits activities that store or discharge inadequately treated material such that they may run off or seep into and pollute surface or groundwater to be harmful to human, animal, or aquatic life. Activities are restricted to where they may be geographically in relation to the water table and aquifers. (§ 215-5.34; § 215-9.32; § 215-7.5; § 210-8.1; § 215-4.10; § 62-8; etc.)

Replacement or installation of a new septic system within 200 feet of Sebago Lake requires a permitting process with the Portland Water District. Although Casco residents drinking water comes from private wells, Sebago Lake provides water for Greater Portland.

[STATE REQUIREMENT: “A summary of existing lake, pond, river, stream, and drinking water protection and preservation measures, including local ordinances.”]

Streams and Wetlands Protection

The following is required for properties located within the Streams and Wetlands Protection District::

§ 215-4.8 Streams and Wetlands Protection District (SW). [Amended 3-9-1991 by Art. 157; 9-28-1991 by Art. 16; 6-12-2013 by Art. 27; 9-24-2014 by Art. 4] A. Intent. To protect the water quality of streams and brooks that flow into Crooked River and Casco's lakes and ponds and of significant wetland areas not protected under shoreland zoning. Buffering these areas will help protect them from the adverse impacts of development or environmental occurrences and maintain the high quality of Casco's larger water bodies. Toward the achievement of these purposes, the following minimum standards are established. B. Applicability. These standards shall apply to all land areas within 75 feet, horizontal distance, of the normal high-water line of any stream or wetland of special significance as defined, exclusive of ponds and rivers protected under shoreland zoning. C. Permitted uses. (1) The following uses are permitted: (a) Recreational uses not requiring structures. (2) The following uses require Reviewing Authority review: (a) Timber harvesting that complies with shoreland protection performance standards herein. (b) Road and driveway crossings where necessary to provide access to lots. (3) All other uses are prohibited. D. Space standards. (1) None; no structures permitted. (2) Areas within the Streams and Wetlands Protection District composed of buildable land, as defined herein, may be included in determining the net residential area of contiguous land under the same ownership that lies outside the Streams and Wetlands Protection District.

Shoreland Zoning

The following establishes the Shoreland Zoning District:

§ 215-9.1 Purposes. The purposes of this article are to further the maintenance of safe and healthful conditions; to prevent and control water pollution;

to protect fish spawning grounds, aquatic life, bird and other wildlife habitat; to protect buildings and lands from flooding and accelerated erosion; to protect archaeological and historic resources; to protect freshwater wetlands; to control building sites, placement of structures and land uses; to conserve shore cover, and visual as well as actual points of access to inland waters; to conserve natural beauty and open space; and to anticipate and respond to the impacts of development in shoreland areas.

§ 215-9.5 Applicability. A. This article applies to all land areas within 250 feet, horizontal distance, of the normal high-water line of any great pond or river; within 250 feet, horizontal distance, of the upland edge of a freshwater wetland; and within 130 feet, horizontal distance, of the normal high-water line of a stream. B. This article also applies to any structure built on, over or abutting a dock, wharf or pier, or other structure extending beyond, or located below, the normal high-water line of a water body or within a wetland.

§ 215-9.3 Shoreland Districts and Shoreland Zoning Map. A. Shoreland Districts. The Shoreland Districts, as established by this chapter in Article 4, § 215-4.1, are: (1) Resource Protection (RP). (2) Limited Residential/Recreational (LRR). (3) Limited Commercial/Residential (LCR). (4) Stream Protection (SP). (5) Watershed (WS).

Aquifer Protection

The following apply to the Aquifer Protection Overlay District:

§ 215-4.10 Aquifer Protection Overlay District (AP). A. Intent. To protect Casco's underground water supply by restricting uses and activities on land overlying aquifers and aquifer recharge areas. Toward the achievement of this purpose, the following minimum standards are established.

B. Permitted uses. Same as underlying district (subject to site plan review where indicated) except for prohibited uses listed herein. C. Prohibited uses. (1) Dwelling, multiplex, and PRDs. [Amended 6-14-2017 by Art. 27] (2) Engineered sewerage systems. (3) Industrial and manufacturing uses, including light industrial uses. (4) Outdoor storage. (5) Uncontained salt and sand piles. (6) Uncontained manure storage. (7) Storage of hazardous materials. (8) Junkyards. (9) Restaurants. (10) Hotels. (11) Motor vehicle service stations. [Amended 6-14-2017 by Art. 27] (12) Motor vehicle repair garages. [Amended 6-14-2017 by Art. 27] (13) Truck facilities. (14) Construction services. D. Space standards. When more restrictive than those of the underlying zone, the following space standards shall be applied: (1) Minimum lot size: 120,000 square feet. (2) Minimum road frontage: 300 feet. (3) Maximum impervious surface to lot area: 10%. (4) Maximum building height: 35 feet. E. Other standards. (1) All spreading or disposal of manure shall conform to the Best Management Practices handbook published by Maine Department of Agriculture, 1988, and subsequent revisions. (2) Erosion and sedimentation shall be minimized by adherence to erosion control management practices contained in the Environmental Quality Handbook, 1986, published by the Maine Soil and Water Conservation Commission, and periodically amended. F. Appeal. Owners who contest the placement of their property in the Aquifer Protection District may appeal to Planning Board for map change in accordance with the procedures of § 215-3.3 of this chapter. In all cases, the burden of proof shall be on the owner to demonstrate that his property should not be included within the Aquifer Protection District.

Performance Standards

The following are required performance standards:

§ 215-5.31 Stormwater quality and phosphorous control. [Added 6-10-2015 by Art. 29] A. Applicability. This section shall apply to all development, construction, alteration or building on lots, where any portion of the lot is within 250 feet of a great pond, as measured from the normal high-water line, or 100 feet of a perennial stream, as identified on a United States Geological Survey map. Projects that must meet this standard include but are not limited to: (1) All lots subject to site plan review, including any additions, modifications, or new commercial, retail, industrial, institutional and/or recreational structures and uses that have not received prior approval by the Planning Board that included a phosphorus export analysis or a stormwater plan that meets the applicable requirements of 06-096 CMR Chapter 500, Stormwater Management, as amended. [Amended 6-14-2017 by Art. 27] (a) All such lots subject to Article 7, Site Plan Review, shall conform to the requirements of § 215-7.4, Submission requirements, Subsection A(3), and § 215-7.5, Criteria and standards, Subsection A(5), Surface water drainage, in addition to the provisions of this section. (b) Except for minor developments and minor modifications, for which Planning Board approval is not required and the Reviewing Authority may approve, all projects subject to site plan review shall submit a phosphorus export analysis and calculations based on Phosphorus Control in Lake Watersheds: A Technical Guide to Evaluating New Development (latest edition), issued by the Maine Department of Environmental Protection (DEP). Minor developments and minor modifications subject to Reviewing Authority review only shall use the point system in Subsection B(1). (2) New residential structures

and uses that have not received prior approval by the Planning Board that included a phosphorus export analysis or a stormwater plan that meets the requirements of 06-096 CMR Chapter 500, Stormwater Management, as amended. [Amended 6-14-2017 by Art. 27] (3) Expansions of existing single-family structures and duplexes, new accessory structures associated with single-family structures and duplexes, or extensions of more than 150 linear feet of existing driveways, any of which individually or cumulatively increase the impervious area on the lot by 1,500 square feet or more.

§ 215-5.34 Water quality protection. No activity shall store, discharge or permit the discharge of any treated, untreated, or inadequately treated liquid, gaseous, or solid materials of such nature, quantity, obnoxiousness, toxicity, or temperature, such that they will run off, seep, percolate, or wash into surface water or groundwater so as to contaminate, pollute, or harm such waters or cause nuisances, such as objectionable shore deposits, floating or submerged debris, oil or scum, color, odor, taste, or unsightliness, or be harmful to human, animal, plant, or aquatic life.

Are local shoreland zone standards consistent with state guidelines and with the standards placed on adjacent shorelands in neighboring communities? Are land use ordinances consistent with applicable state law regarding critical natural resources?

[STATE REQUIREMENT: “Are local shoreland zone standards consistent with state guidelines and with the standards placed on adjacent shorelands in neighboring communities? Are land use ordinances consistent with applicable state law regarding critical natural resources?”]

[STATE REQUIREMENT: “What regulatory and non-regulatory measures has the community taken or can the community take to protect critical natural resources and important natural resources?”]

Casco has adopted the state guidelines for shoreland zoning. Also included in the Code are measures for erosion and sediment control, timber harvesting, and vegetation clearance.