



RULES AND REGULATIONS  
FOR  
PLYMOUTH WETLANDS PROTECTION  
BYLAW  
(Chapter 196 of the Town of Plymouth Bylaws)

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***RULES AND REGULATIONS  
FOR  
PLYMOUTH WETLANDS PROTECTION BYLAW  
(Chapter 196 of the Town of Plymouth Bylaws)***

**SECTION 1. INTRODUCTION**

These Rules and Regulations (hereinafter referred to as the "Regulations") are promulgated by the Town of Plymouth Conservation Commission and adopted by Town Meeting pursuant to Section V of the Town of Plymouth Wetland Protection Bylaw (hereinafter referred to as the "Bylaw"). These Regulations shall complement the Bylaw, and shall have the force of law upon their effective date.

**SECTION 2. PURPOSE**

The Bylaw sets forth a public review and decision-making process by which activities having an impact or cumulative effect upon Areas Subject to Protection under the Bylaw are to be regulated in order to ensure the protection of wetlands interests, functions and values including, but not limited to:

- public and private water supply
- groundwater and groundwater quality
- flood control
- erosion and sedimentation control
- storm damage prevention
- water pollution prevention
- wildlife habitat
- fisheries
- shellfish habitat
- endangered plant species
- agriculture and aquaculture
- recreation
- aesthetics

The purpose of these Regulations is to define and clarify that process by establishing standard definitions and uniform procedures by which the Plymouth Conservation Commission (hereinafter referred to as the "Commission") may carry out its responsibilities under the Bylaw. In instances where these Regulations are more stringent than 310 CMR 10.00, these local Regulations shall prevail (see 310 CMR 10.01 (2)).

## **SECTION 3. JURISDICTION**

### **A. Resource Areas Subject to Protection (“Resource Area”)**

1. Any freshwater wetland,  
any coastal wetland,  
any marsh,  
any meadow,  
any bog,  
any swamp,  
any bank,  
any beach,  
any dune,  
any flat,  
any vernal pool,  
any vegetated or un-vegetated wetland;
2. Any lake,  
any pond,  
any river,  
any creek,  
any stream,  
any surface water body,  
any estuary,  
or the ocean.
3. Any land under any of the water bodies set forth in Section 3A 1. and 2. above.
4. Any land subject to flooding or inundation by:  
groundwater,  
surface water,  
tidal action,  
coastal action  
or coastal storm flowage;
5. Land within 200 feet of the bank or Mean Annual High Water line of any river, stream, creek continuously flowing throughout the year toward a body of water. This area shall hereafter be called the Riverfront Area.
6. Any land within 100-feet of any area identified in Section 3 A 1 through 3 above, hereinafter referred to the “Buffer Zone Resource Area”.

### **B. Activities Subject to Regulation**

1. Any activity proposed or undertaken which will constitute removing, filling, dredging, altering any area specified in Section 3A Nos. 1 through 5 above is subject

to regulation and requires the filing of a Notice of Intent (hereinafter referred to as "Notice").

2. Any activity proposed or undertaken within the Buffer Zone Resource Area as defined in Section 3A No. 6 is subject to regulation and requires the filing of a Notice of Intent or a Request for a Determination of Applicability.
3. Any activity proposed or undertaken outside the areas specified in Section 3A above, shall not be subject to regulation unless, in the judgment of the Commission, said activity has resulted in the removing, filling, dredging, building upon, or altering a Resource Area specified in Section 3A above.
4. Any person who wishes to know whether or not a proposed activity or an area is subject to the Bylaw or regulation may, in writing, file a Request for Determination of Applicability (hereinafter referred to as a Request) with the Commission. Such a Request shall be submitted pursuant to Section VIII J of the Bylaw and Section 6 of the Regulations.

#### **SECTION 4. GENERAL PROVISIONS**

##### **1. Burden of Proof and Going Forward**

- (a) The applicant shall have the burden of going forward with credible evidence from a competent source in support of all matters asserted by the applicant in accordance with his/her burden of proof.
- (b) The applicant shall have the burden of proving by a preponderance of the evidence that the proposed work, as described in the application and presented at the public hearing, will protect the interests of the bylaw. The applicant must submit credible evidence that the proposed activity will not have unacceptable significant or cumulative effects within the protected resource areas on the identified interests. Failure to meet the Burden of Proof shall be cause for the Conservation Commission to issue a denial on the proposal and any work or activity proposed therein.

##### **2. Special Flood Hazard Regulations: Some coastal resource areas are subject to ongoing erosion, over wash and storm alteration. As such, these areas are not suitable for construction of septic systems.**

- (a) To ensure protection of all other interests of the bylaw, no new or substantially enlarged septic systems shall be allowed in FEMA V, VE, and floodway areas where there is actively shifting sand (i.e., barrier beaches and dunes). This does not apply to any other FEMA flood zones as shown on the most recent Flood Insurance Rate Map.
- (b) A new mounded septic system, although permitted under Title V, shall not be permitted in a FEMA V or VE zone. Where mounded systems are proposed

in other FEMA zones or to meet vertical groundwater setbacks, the applicant must demonstrate that construction and use of the system will not be inconsistent with protection of any interest protected under the bylaw.

- (c) Where there is an existing dwelling, septic systems may be up-graded and/or improved, including mounded systems, where otherwise they would not be permitted.

### 3. Incorporation

- (a) All of the procedures and requirements set forth in the Wetlands Protection Regulations of 310 CMR 10.00 et seq. are hereby incorporated and made a part of these regulations except where they differ from or depart from these regulations.
- (b) Where these regulations differ from the State regulations, they shall take precedence over the State regulations. The applicant should first address the regulations in 310 CMR 10.00 et seq. and then address any and all additional or differing content of the Plymouth Wetland Regulations.

### 4. Reservation

These regulations should not be construed to limit the Commission's authority under the Plymouth Wetlands Bylaw. The Commission reserves the right to act in a manner consistent with the bylaw upon any matter within its jurisdiction.

### 5. Amendments

Amendments to these regulations shall be made in the manner set forth in sections V. of the Plymouth Wetlands Bylaw.

### 6. Effective Date:

The effective date of these Rules and Regulations as Amended shall be September 14, 2010. (Also see Section 14).

### 7. Severability

Should any portion of these regulations be declared invalid by a decision of court, the legislature or other body having jurisdiction, the remainder of these regulations shall remain in full force and effect.

## SECTION 5. DEFINITIONS

The following definitions apply to the interpretation of these regulations. Unless otherwise defined herein, definitions found in 310 CMR 10.00 also shall apply to these regulations:

Abutter: Persons appearing on the Assessor's most recent valuation list as owners of property within a distance of 100' of the property lines of the lot on which the work is to be done.

Aesthetics: Retention or improvement of natural conditions, including natural lighting, sounds, odors, significant trees, and viewshed as at the time are experienced by the general public from public ways, including waterways. Activities in or within 100 feet of any resource area shall not have significant effects on aesthetic values.

Alter: To change the condition of any Area Subject to Protection under the bylaw. The term "alter" shall include, but not be limited to, the following activities when undertaken to, upon, within, or affecting resource areas protected by this bylaw:

1. Removal, excavation, or dredging of soils, sand, gravel, or aggregate materials of any kind;
2. Changing preexisting drainage characteristics, flushing characteristics, salinity distribution, sedimentation patterns, flow patterns, or flood retention characteristics, drainage or other disturbance of water level or water table;
3. Dumping, discharging or filling with any material;
4. Placing of fill, or removal of material;
5. Driving of piles or erection of buildings, placing of obstructions or objects in water (other than boats, fish, or shellfish traps, pens or trays used in conjunction with aquaculture, or aids to navigation).
6. Destruction of plant life, including cutting of trees;
7. Effecting a change in water temperature, biochemical oxygen demand, or other physical or chemical characteristics of water, and use of chemicals for plant or pest control;
8. Any activities, changes, or work, which may cause, contribute to, or tend to contribute to pollution of any Resource Area.

Applicant: The individual filing a Notice of Intent, Request for Determination of Applicability, or Request for Amended Order, or on whose behalf one is filed before the Plymouth Conservation Commission.

Area of Special Flood Hazard: is the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year. The area may be designated as Zone A, AO, AH, AE, VE or V.

Aquaculture means the growing of aquatic organisms under controlled conditions including but not limited to fin fish, shellfish, amphibians, reptiles, and seaweeds.

Area of Critical Environmental Concern means an area so designated by the Commonwealth under the Massachusetts Area of Critical Environmental Concern Program established in 1975 by the Secretary of Environmental Affairs as authorized and directed by the Legislature in order to identify and designate areas of critical environmental concern and to develop policies and regulations for their protection and use.

Bank (coastal) - See Section 10

Bank (inland) - See Section 10

Beach (barrier) - See Section 10

Beach (coastal) - See Section 10

Beach (inland) - See Section 10 (synonymous with inland bank)

Base Flood: means the flood having a one percent chance of being equaled or exceeded in any given year.

Best Available Measures means the most up-to-date technology or the best designs, measures or engineering practices that have been developed and that are commercially available.

Best Practical Measures means technologies, designs, measures, or engineering practices that are in general use to protect like or similar interests.

Bog: Areas where standing or slowly running water is near or at the surface during a normal growing season and where a plant community has a significant portion of the ground or water surface covered with Sphagnum moss (*Sphagnum*) and where the plant community is made up of a significant portion of one or more, but not limited to nor necessarily including all, of the following plants or groups of plants: aster (*Aster nemoralis*), azaleas (*Rhododendron canadense* and *R. viscosum*), bog cotton (*Eriophorum*), cranberry (*Vaccinium macrocarpon*), high-bush blueberry (*Vaccinium carymbosum*), laurels (*Kalmia augustifolia* and *K. polifolia*), leatherleaf (*Chamaedaphne calyculata*), orchids (*Arethusa*, *Calopogon*, *Pogonia*), pitcher plants (*Sarracenia purpurea*), sedges

Bordering: As long as any one Resource Area (Section 3); touches any other Resource Area, it is bordering. Coastal Resource Areas may border on freshwater Resource Areas.

Buffer Zone Resource Area: Any land within 100-feet of any area identified in Section 3 A 1 through 3 above.

Coastal High Hazard Area: means the area subject to high velocity waters, including but not limited to hurricane wave wash or tsunamis. The area is designated on a FIRM as Zone V, V1- 30, VE.

Development: means any manmade change to improved or unimproved real estate, including, but not limited to building or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations.

Dunes: An elevated resource composed of accumulations of sand and/or overwash, or may be sediment or sand deposited by artificial (human) means, usually to serve the purpose of storm damage prevention or flood control. Dunes that are undisturbed appear as hills, mounds, or ridges of sand and are typically vegetated with beach grass and shrubs. The more or less continuous ridge of dunes parallel to, and just inland of the beach, is termed the “primary dune”.

Federal Emergency Management Agency (FEMA): administers the National Flood Insurance Program. FEMA provides a nationwide flood hazard area mapping study program for communities as well as regulatory standards for the development in the flood hazard areas. Flood Boundary and Floodway Map: means an official map of a community issued by FEMA that depicts, based on detailed analyses, the boundaries of the 100-year and 500-year floods and the 100-year floodway. (in Plymouth the floodway designation is included on the FIRM.)

Flood Insurance Rate Map (FIRM): means an official map of a community on which FEMA has delineated both the areas of special flood hazard and the risk premium zones applicable to the community.

Flood Insurance Study: means an examination, evaluation, and determination of flood hazards, and, if appropriate, corresponding water surface elevations, or an examination, evaluation and determination of flood-related erosion hazards.

Floodway: means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation.

Issuing Authority: In the Town of Plymouth, both under state wetland regulations and under the local bylaw, the issuing authority is the Conservation Commission, which is responsible for:

1. making and publishing rulings on Requests for Determination of the Applicability of wetlands rules and regulations (RDA's) to proposed projects, and
2. enumerating Orders of Conditions which establish parameters for projects prior to their undertaking, following the submission and review of Notices of Intent (NOI's); such parameters apply to projects in process and may include elements that are permanently attached to property deeds.

Lawfully Located Structure or Facility: Such structure is one that had a building permit and any other permit required bylaw or regulation at the time of its construction and was constructed in accordance with state and local laws and regulations or one which, by virtue of state law or local zoning bylaw, is deemed to be in compliance with applicable regulations or as to which no action may be taken to compel its removal.

Limit of Work: This limit is the boundary beyond which no work may take place. Permission of the Commission must be granted in advance for any work beyond the Limit of Work.

Lowest Floor: means the lowest floor of the lowest enclosed area (including basement or cellar). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access or storage in an area other than a basement area is not considered a building's lowest floor, PROVIDED that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of NFIP Regulations 60.3.

Mean Annual High Water Line: with respect to a river, is the line that is apparent from visible markings or changes in the character of soils or vegetation due to prolonged presence of water and which distinguishes between predominantly aquatic and predominately terrestrial land. The mean high tide line shall serve as the mean annual high water line for tidal rivers.

New Construction: means, for floodplain management purposes, structures for which the "start of construction" commenced on or after the effective date of a floodplain management regulation adopted by a community. For the purpose of determining insurance rates, NEW CONSTRUCTION means structures for which the "start of construction" commenced on or after the effective date of an initial FIRM or after December 31, 1974, whichever is later.

NFIP: National Flood Insurance Program

No touch zone: An area where no development, alteration, removal, dredging or filling is allowed.

No build zone: An area where no new structure is allowed.

Obstructions or Objects in Water means but is not limited to dams, weirs, sluice gates, jetties, groins, breakwaters, piers, docks, sea walls, bulkheads, pilings, dolphins, marine railways, slips and floats.

Ocean means the Atlantic Ocean and all contiguous waters subject to tidal action.

One-Hundred-Year Flood – see Base Flood.

Order means an Order of Conditions, Superseding Order or Final Order, whichever is applicable, issued pursuant to M.G.L. c. 131, s.40 or these regulations

Order of Conditions means the document issued by a conservation commission containing conditions that regulate or prohibit an activity under M.G.L. c. 131, s. 40 or these regulations.

Party to any proceeding means the Applicant, the Conservation Commission and, pursuant to Section 1.05, may include the owner of the site, any abutter, any person aggrieved, or any ten residents of the town of Plymouth.

Permit means the document issued by the Commission containing conditions, which regulate or prohibit an activity under the Town of Plymouth Wetlands Protection Bylaw, Section VIII and these regulations. The Commission in an appropriate case may combine the permit or other action on an application issued under these regulations with the Order of Conditions issued under the Wetlands Protection Act, M.G.L. c. 131, s. 40.

Person Aggrieved means any person who, because of an act or failure to act by the issuing authority, may suffer an injury in fact which is different either in kind or in magnitude from that suffered by the general public and which is within the scope of the interests identified in the Bylaw. Such person must specify in writing sufficient facts to allow the Conservation Commission to determine whether or not the person is in fact aggrieved.

Plans mean such data, maps, engineering drawings, calculations, specifications, schedules and other materials, if any, deemed necessary by the Conservation Commission to describe the site and the activity; to determine the applicability of the Bylaw; or to determine the impact of the proposal upon the interests identified in the Bylaw.

Pond (coastal) means Salt Pond - See Section 10

Pond (inland) means any open body of fresh water, either naturally occurring or man-made by impoundment, which is never without standing water due to natural causes, except during periods of extended drought and has a surface area of 10,000 square feet or more. For purposes of this definition, extended drought shall mean any period of four or more months during which the average rainfall for each month is 50% or less of the ten year average for that same month. Basins or lagoons which are part of waste water treatment plants shall not be considered ponds, nor shall swimming pools or other impervious man-made retention basins.

Prevention of Pollution means the prevention or reduction of contamination of surface or ground water.

Private Water Supply means any source or volume of surface or ground water demonstrated to be in any private use or demonstrated to have a potential for private use.

Protection of Fisheries means the protection of the capacity of a Resource Area:

1. to prevent or reduce contamination or damage to fish; and
2. to serve as their habitat and nutrient source.

Fish includes all species of fresh water and saltwater fin fish and shellfish.

Protection of Land Containing Shellfish means protection of the capacity of a Resource Area:

1. to prevent or reduce contamination or damage to fish; and
2. to serve as their habitat and nutrient source.

Fish includes all species of freshwater and saltwater fin fish and shellfish.

Public Water Supply means any source or volume of surface or ground water demonstrated to be in public use or approved for water supply pursuant to M.G.L. c. 111, s. 160 by the Division of Water Supply of the Department of Environmental Protection or shown to have a potential for public use.

Quorum means the majority of the duly appointed members of the Conservation Commission that when duly assembled is legally empowered to transact business

Recreation: Any leisure activity or sport taking place in, on, or within a resource area which is dependent on the resource area and its values, directly or indirectly, for its conduct and enjoyment. Recreational activities included but are not limited to the following: noncommercial fishing and shellfishing, hunting, boating, swimming, walking, painting, bird watching and aesthetic enjoyment. Structures and/or activities in or within the Buffer Zone Resource Area shall not have significant effect on public recreational values. Notwithstanding this definition, new or expanded recreational activities shall not have a significant effect on other wetland values identified in Section I of the By-law.

Remove means to take away any type of material, thereby changing an elevation, either temporarily or permanently.

Request for Determination of Applicability means a written request made by any person to the Conservation Commission for a determination as to whether a site or the proposed activity thereon is subject to the by law and these regulations.

Resource Area is synonymous with Area Subject to Protection under the Regulations, each one of which is enumerated in Section 3A of these regulations.

River: A natural flowing body of water that empties into any ocean, lake, or other river and which flows throughout the year. All water features that are shown as perennial on USGS quadrangles and which are not great ponds are included in this definition.

Riverfront Area: that land between a river's mean annual high-water line and a parallel line located two hundred feet away, measured outward horizontally from the river's mean high water line. There is no Buffer Zone Resource Area associated with riverfront areas.

Salt Marsh - See Section 10

Sedimentation Control means the prevention or reduction of the collection or concentration of sand, soil or rock fragments by the action of water, wind, ice or gravity.

Significant means plays a role. A resource area is significant to an interest identified in the Bylaw when it plays a role in the provision or protection, as appropriate, of that interest.

Special Flood Hazard Area: means an area having special flood and/or flood-related erosion hazards, and shown on the FIRM dated July 2, 1992, as Zone A, AE, or VE.

Spring Tides mean those tides which occur with new and full moons and which are perceptibly higher and lower than other tides.

Start of Construction: includes substantial improvements, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation, or the placement of a manufactured home on a foundation. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, or floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building. Except where demolition of an existing structure is involved the start of construction shall include all demolition activities.

Storm Damage Prevention means the prevention of damage caused by water from storms, including but not limited to; erosion and sedimentation; damage to vegetation, property or buildings; or damage caused by flooding, waterborne debris or waterborne ice.

Stream means a body of running water, including brooks and creeks, which move in a definite channel in the ground due to hydraulic gradient. A portion of a stream may flow through a culvert or beneath a bridge. A stream may be intermittent (i.e., does not flow throughout the year).

Structure: Something built or erected including but not limited to a building, bridge, framework or other object that has been put together from many different parts.

Vegetated Wetlands: freshwater wetlands which do or do not border on creeks, rivers, streams, ponds and lakes, and may be isolated. It is an area of at least 500 square feet where the surface or ground water, or ice is at the surface and supports a community of

wetland indicator plants. The types of freshwater wetlands are wet meadows, marshes, swamps, and bogs. They exist where soils are saturated and/or inundated by water such that they support a predominance of wetland indicator plants. The ground and surface water regime and the vegetation community which occur in each type of freshwater wetland are specified in M.G.L. c. 131 s. 40. The boundary of Vegetated Wetlands is the line within which 50% or more of the vegetation community consists of wetland indicator plants and saturated or inundated conditions exist. Wetland indicator plants shall include but not necessarily be limited to those plant species identified in the Act. Wetland indicator plants are also those classified in the indicator categories of Facultative, Facultative+, Facultative Wetland-, Facultative Wetland, Facultative Wetland+, or Obligate Wetland in the *National List of Plant Species That Occur in Wetlands: Massachusetts* (Fish & Wildlife Service, U.S. Department of the Interior, 1988) or plants exhibiting physiological or morphological adaptations to life in saturated or inundated conditions.

1. Areas containing a predominance of wetland indicator plants are presumed to indicate the presence of saturated or inundated conditions. Therefore, the boundary as determined by 50% or more wetland indicator plants shall be presumed accurate when:
  - (a) all dominant species have an indicator status or obligate, facultative wetland+, facultative wetland, or facultative wetland- and the slope is distinct or abrupt between the upland plant community and the wetland plant community;
  - (b) the area where the work will occur is clearly limited to the Buffer Zone Resource Area.
  - (c) the Conservation Commission determines that sole reliance on wetland indicator plants will yield an accurate delineation.
2. When the boundary is not presumed accurate as described in 310 CMR 10.55 (2) (c) 1a. through 1 c. or to overcome the presumption, credible evidence shall be submitted by a competent source demonstrating that the boundary of Vegetated Wetlands is the line within which 50% or more of the vegetational community consists of wetland indicator plants and saturated or inundated conditions exist. The issuing authority must evaluate vegetation and indicators of saturated or inundated conditions if submitted by a credible source, or may require credible evidence of saturated or inundated conditions sufficient to support wetland indicator plants, such evidence shall include one or more of the following:
  - (a) groundwater, including the capillary fringe, within a major portion of the root zone;
  - (b) observation of prolonged or frequent flowing or standing surface water;
  - (c) characteristics of hydric soils.
3. Where an area has been disturbed (e.g., by cutting, filling, or cultivation), the boundary is the line within which there are indicators of saturated or inundated conditions sufficient to support a predominance of wetland indicator plants, a predominance of wetland indicator plants, or credible evidence from a competent

source that the area supported or would support under undisturbed conditions a predominance of wetland indicator plants prior to the disturbance.

Vernal Pool:

1. Any confined basin or depression which, at least in most years, holds water for a minimum of two consecutive months during the spring and/or summer,
2. is free of adult predatory fish populations, and
3. provides essential breeding and rearing habitat functions for amphibian, reptile, or other vernal pool community species,
4. as well as being a source of food and water for other animals (vernal pools are extremely productive, valuable ecosystems).
5. Sites confirmed as vernal pools, according to criteria used by the Natural Heritage and Endangered Species Program (the “Program”) are to be protected as resources under the local regulations even if the Program has not certified the sites as vernal pools.

(Note: Excluded from this definition are depressions occurring in existing cultivated lawns, gardens, landscaped areas, or driveways.)

Watercourse means a stream wholly or partially man-made.

Wet Meadow - See Section 10

Wetlands: Resource areas specified in Section 3A.

Wildlife: All non-domestic animals, both vertebrate and invertebrate, and the habitat required by these animals for nesting, cover, and food; including but is not limited to species listed by state and federal agencies as endangered, threatened, or of special concern. The preservation of indigenous vegetation, including dead trees and dense understory, is essential to the support (i.e. cover, food, nesting) of wildlife populations.

Zone A means the 100-year floodplain area where the base flood elevation (BFE) has not been determined. To determine the BFE, use the best available federal, state, local, or other data.

Zone AE on the FIRM dated July 2, 1992, means the 100-year floodplain where the base flood elevation has been determined.

Zone AH and Zone AO means the 100-year floodplain with flood depths of 1 to 3 feet. Zone X is areas identified in the community Flood Insurance Study as areas of moderate or minimal flood hazard.

Zone VE means a special flood hazard area along a coast subject to inundation by the 100-year flood with additional hazards due to velocity (wave action). Base flood elevations have been determined.

## **SECTION 6. PROCEDURES**

### **A. General**

1. Time Periods: All time periods of ten days or less specified in the Bylaw and the Regulations shall be computed using business days only. In the case of a Determination or Application for Permit, such period shall commence on the first day after the date of issuance and shall end at the close of business on the tenth business day thereafter. All other time periods specified in the Bylaw and the Regulations shall be computed on the basis of calendar days, unless the last day falls on a Saturday, Sunday or legal holiday, in which case the last day shall be the next business day following.
2. Where the Bylaw states that particular action (except receipt of a Request for Determination, Notice or other request submitted) is to be taken by the Commission, that action is to be taken by more than half the members present at a meeting of at least a quorum. A quorum is defined as a majority of the members then in office. Where the Bylaw states that a permit or notification shall be issued by the Commission, that action is to be taken by a majority of the members then in office, who need not convene as a body in order to sign said permit or notification, provided they met pursuant to the open meeting law, G.L.M. c. 39, s. 23A-23C, when voting on the matter.
3. Where the Bylaw states that the Commission is to receive a Request for Determination, Notice, or other request submitted, such documents and/or requests shall be deemed to be received if they are presented at a Commission meeting or submitted to the Commission or the staff at its office during the Commission's regular business hours.

### **B. Determinations of Applicability**

1. Requests for Determination of Applicability
  - (a) Any person who desires a determination as to whether the Bylaw applies to a site or to an activity that may affect an Area Subject to Protection Under the Bylaw, may submit to the Commission by certified mail or hand delivery a Request for Determination of Applicability.
  - (b) Any person filing a Request for Determination with the Commission at the same time shall provide a list of abutters of the property, as defined by Section 4 of the Regulations.

- (c) The applicant shall send written notification of the hearing to the abutters on this list. The Commission, at the expense of the applicant, shall publish the notice of the hearing in a newspaper of general circulation in Plymouth. In addition notice shall be given in accordance with the open meeting law, G.L.M. c. 39, s. 23B.
- (d) The Commission in an appropriate case may accept as the Request for Determination and plans under this Bylaw, the Request for Determination and plans filed under the Wetlands Protection Act, G.L.M. c. 131, s. 40.

## 2. Submittal Requirements:

- (a) A completed Request for Determination of Applicability form, dated and signed by the applicant or representative
- (b) Definitive plans, hand drawn or engineered (as required), dated and signed by the applicant or engineer, respectively
- (c) Locus plan: 8 1/2" x 11" section from a U.S.G.S. quadrangle map with the project circled
- (d) Appendix A (if applicable) if in an endangered species area (not including plants)
- (e) A list of abutters to be notified of the hearing
- (f) A signed property access authorization form
- (g) The correct fee for advertisement of the notice in a Plymouth newspaper
- (h) The correct fee for abutter notification
- (i) The correct filing fee
- (j) Two copies of all forms and 5 copies of all plans submitted

## 3. Determination of Applicability

- (a) Within thirty days (30) after the date of receipt of a Request for Determination the Commission shall hold a public hearing on the request.
- (b) At the public hearing the Commission will determine:
  - (i.) Positively: that the area and the activity proposed thereon are subject to protection under the Bylaw and that the activity is deemed to affect one or more of the interests protected in the Bylaw, or
  - (ii) Negatively: that the area in which the proposed activity is to take place is not subject to protection under the Bylaw or that the proposed activity is not deemed to affect one or more of the interests protected by the Bylaw.
- (c) The Determination shall be signed by a majority of the Commission and shall be sent by the Commission to the person making the Request within 30 days of the close of the public hearing or any continuance thereof.
- (d) Absent evidence of material change of conditions at a site a Determination shall be valid for three years from date of issuance.
- (e) In the event of a positive Determination, an Application for a Notice shall be filed and all of the procedures set forth in Section 6C (below) shall apply.

## **C. Order of Conditions**

### 1. Notice of Intent

- (a) Any person who proposes to do work that will remove, fill, dredge, build upon or alter any Area Subject to Protection Under the Bylaw shall submit, by certified mail or hand delivery, a Notice of Intent and other application materials in accordance with the submittal requirements in this section, Guidelines for Completing Applications for Permits provided in Section 8 (b) and the General Instructions for Permits provided for in 310 CMR 10.00.
- (b) Any person filing a Notice of Intent with the Commission under the Bylaw at the same time shall provide a list of abutters as defined in Section 5 of the Regulations.
- (c) Written notification of the hearing shall be sent by the applicant to the abutters on this list; The Commission, at the expense of the applicant, shall publish the notice of the hearing in a newspaper of general circulation in Plymouth. In addition, notification shall be given in accordance with the open meeting law, M.G.L. c. 39, s. 23B.
- (d) The Commission in an appropriate case may accept as the Notice of Intent and plans under this Bylaw the Notice of Intent and plans filed under the Wetlands Protection Act, M.G.L. c. 131, s. 40.
- (e) Submittal Requirements:
  - (i) A completed Notice of Intent form, dated, signed by the applicant or representative
  - (ii) Definitive plans, hand drawn or engineered (as required), dated, signed by the applicant or engineer, respectively
  - (iii) Locus plan: 8 1/2" x 11" section from a U.S.G.S. quadrangle map with the project area circled
  - (iv) Appendix A form (if applicable), if in an endangered species area (not including plants).
  - (v) A list of abutters to be notified of the hearing place and time
  - (vi) A signed property access authorization form
  - (vii) The filing fee calculation worksheet with correct fee amount
  - (viii) The correct fee for advertisement of the notice in a newspaper of general circulation in Plymouth
  - (ix) The correct fee for abutter notifications
  - (x) The correct filing fee
  - (xi) Two copies of all forms and 5 copies of all plans submitted
- (f) Upon receipt of the application materials referred to in Section 6 C (1) above the Commission shall issue a file number. The designation of a file number shall not imply that the plans and supporting documents have been judged adequate for the issuance of a Permit but only that copies of the minimum submittal requirements contained in the General Instructions have been filed. A sign of not less than two square feet or more than three square feet in size shall be displayed at the site bearing the words "Plymouth Conservation Commission, File Number \_\_\_\_\_".

- (g) In the event that only a portion of a proposed project or activity lies within an Area Subject to Protection Under the Bylaw, all aspects of the project must be described in the detail called for by the Guidelines and General Instructions of 310 CMR 10.00, provided also that in such circumstances the Notice shall also contain description and calculation of peak flow and estimated water quality characteristics of discharge from a point source (both closed and open channel) when the point of discharge falls within an Area Subject to Protection Under the Bylaw.
- (h) Notwithstanding the foregoing, when the Commission has determined that an activity outside the Areas Subject to Protection under the Bylaw has in fact altered an Area Subject to Protection under the Bylaw, it may require such plans, supporting calculations, and other documentation as are necessary to describe the entire activity.

## 2. Incomplete Notice of Intent

- (a) If the Commission determines that a Notice of Intent is incomplete or improper, it shall notify the applicant within thirty (30) days of the date of receipt. A Notice of Intent may be considered incomplete for the following reasons, but shall not be limited to:
  - (i) The procedures in Section 6 C(1) of the Guidelines (Section 8), or the
  - (ii) General Instructions of 310 CMR 10.00 have not been followed; or
  - (iii) Zoning review has not been completed by the Zoning Agent; or
  - (iv) A Special Permit or Variance from the Zoning Board of Appeals is required and has not been applied for.
- (b) The Commission, at its discretion, may:
  - (i) Return the entire filing, in which case all required time periods for processing that submitted Notice of Intent shall be suspended.
  - (ii) Require that additional information or materials be submitted within a specified time period, which shall be no longer than the date of the scheduled Public Hearing.
  - (iii) Continue a Public Hearing, at the applicant's expense, for a period to be determined by the Commission.
  - (iv) Hold a hearing and issue an Order of Conditions prohibiting the project. The Permit or Order shall specify the information which is lacking and why it is necessary.

## 3. Order of Conditions (same as permit or decision)

- (a) Within thirty (30) days of the close of the Public Hearing, the Commission shall issue its decision, in writing, to the applicant.
- (b) If the Permit is issued, it shall impose such conditions as are necessary for the protection of one or more of the interests identified in the Bylaw. The Permit shall prohibit any work or portion thereof that cannot be conditioned to protect said interests. The Permit shall impose conditions upon work or the portion

thereof that will in the judgment of the Commission, result in the removing, dredging, filling, building upon or altering an Area Subject to Protection Under the Bylaw. The Permit shall impose conditions setting limits on the quantity and quality of discharge from a point or non-point source both closed and open channel when said limits are necessary to protect the interests identified in the Bylaw.

- (c) The Commission may deny a permit and said denial shall be for one or more of the following reasons:
  - (i) For failure to meet the requirements of the Bylaw;
  - (ii) For failure to submit necessary information or plans requested by the Commission;
  - (iii) For failure to meet design specifications, performance standards or other requirements, including submittal requirements, in these Regulations;
  - (iv) For failure to avoid or prevent unacceptable or cumulative effects upon the wetland values protected by the Bylaw;
  - (v) Where no conditions are adequate to safeguard the health, safety or welfare of individuals of the Town or the wetland values by the Bylaw.
- (d) A Permit shall be valid for three (3) years from the date of its issuance. The Order may be extended for one or more periods of up to three years each by a majority vote of the Commission. An extension must be requested thirty (30) days prior to the expiration date of the Permit.
- (e) The Permit shall be signed by a majority of the Commission and shall be sent by certified mail or hand delivered to the applicant.
- (f) A copy of the plans describing the work and the Permit shall be kept on file by the Commission and shall be available to the public at reasonable hours.
- (g) Prior to the commencement of any work permitted or required by the Order of Conditions or Permit, the Permit shall be recorded in the Plymouth County Registry of Deeds or Land Court for the district in which the land is located within the chain of title of the affected property. In the case of recorded land, the Permit shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of registered land, the Permit shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is to be done. Certification of recording shall be sent to the Commission on the form at the end of the Permit. If work is undertaken without the applicant first recording the Permit, the Commission may issue an Enforcement Order or may itself record the Permit at the expense of the applicant.
- (h) The Commission may, for cause, revoke or modify a Permit issued under this Bylaw after public notice and public hearing, and notice to the holder of the Order of Conditions or Permit.
- (i) The Commission in an appropriate case may combine the Permit or other action on a Notice issued under the Bylaw with the Order of Conditions issued under the Wetlands Protection Act, G.L.M. c. 131, s. 40.

- (j) Appeal: The decision of the Commission may be appealed according to the provisions of the Massachusetts General Laws.

**D. Public Hearings for a Request or Notice**

1. A public hearing on a Notice or Request shall be held by the Commission within thirty (30) days of receipt of the minimum submittal requirements set forth in Section 8 of the Regulations and shall be advertised at the expense of the applicant seven (7) working days prior to the hearing in a newspaper of general circulation in the Town of Plymouth and in accordance with the requirements of the open meeting law, G.L.M. c. 39, s. 23B. Notice of the hearing shall be mailed by the Commission to the applicant, and to all abutters, as per Section 6 of the Regulations and Section VIII of the Bylaw.
2. The public hearing generally shall be conducted as follows. However, the order and conduct of any hearing is subject to the Commission's discretion.
  - (a) The chairman, or vice-chairman, or a designated public hearing officer, (hereinafter referred to as hearing office), shall call the meeting to order, and shall read the notice as published.
  - (b) The applicant and/or representative (hereinafter referred to as applicant) shall make a presentation of the proposed project. In the absence of the applicant, the hearing officer may opt to:
    - (i) Delay action until later in the hearing, or
    - (ii) Continue the hearing to another date, or
    - (iii) Act on the Request or Notice without a presentation.
  - (c) The Commissioners shall question the applicant.
  - (d) The Conservation Agent and other assistant members to the Commission (Consultants) shall question the applicant, through the hearing officer.
  - (e) Questions from other town boards shall be addressed to the applicant, through the hearing officer.
  - (f) Questions from the public to the applicant shall be addressed, through the hearing officer.
  - (g) The hearing officer shall have the option, if applicable, to amend or modify the above outlined procedures.
  - (h) The hearing shall then be continued or closed by vote of the Commission. Any changes in the plans or the proposed work made by the applicant during the course of the public hearings shall be submitted in the form of a revised plan and shall be filed by the applicant with the Commission. The Commission may require that all boards and agencies be allowed to review said changes prior to the closing of the public hearing. In the event of a minor change in the plan which the Commission deems should not prevent closure of the public hearing, two (2) copies of the revised plan shall be submitted to the Conservation Office prior to the issuance of an Order of Conditions, unless the Commission opts to request such plan in the Order of Conditions. The applicant shall send two (2) copies of the final revised plan to DEP if the plan

is intended to apply to a Request, Notice, or Certificate under both the Bylaw and G.L.M. c. 131, s. 40.

3. Public hearings may be continued as follows:

- (a) Without the consent of the applicant to a date certain, for reasons stated at the hearing, which may include receipt of additional information offered by the applicant or others, information and plans required of the applicant, deemed necessary by the Commission in its discretion, or comments and recommendations of other local or state boards and officials;
- (b) With the consent of the applicant, to an agreed-upon date, which shall be announced at the hearing; or
- (c) With the consent of the applicant for a period not to exceed thirty (30) days after the submission of a specified piece of information or the occurrence of a specified action. The date, time and place of said continued hearing shall be publicized at the expense of the applicant in accordance with the Bylaw, and notice shall be sent to any person at the hearing who so requests in writing.

**E. Forms**

Applicants must use forms provided by the Commission. Forms under the Bylaw or Regulations may be combined with those of the Wetlands Protection Act G.L.M. c. 131, s. 40, and 310 CMR 10.00 Regulations or used separately. In either case, the Commission may create, amend or modify such forms and adopt them under the Bylaw or Regulations at a public hearing.

**F. Extension of Permits**

- 1. The Permit may be extended for one or more periods of up to three years each by a majority vote of the Commission. Requests for extension shall be made to the Commission in writing at least thirty (30) days prior to the expiration of the Permit.
- 2. The issuing authority may deny the request for an extension and require the filing of a new Notice of Intent for the remaining work in the following circumstances:
  - (a) When work is not completed or commenced to the satisfaction of the Commission within three (3) years of the issuance of the Permit;
  - (b) Where new information, not available at the time that the Order of Conditions was issued, has become available and indicates that the Permit is not adequate to protect the interests identified in the Bylaw;
  - (c) Where incomplete work is causing damage to the interests identified in the Bylaw; or
  - (d) Where work has been done in violation of the Permit or these Regulations.
- 3. If issued by the Commission, the Extension Permit shall be signed by a majority of the Commission.

4. The Extension Permit shall be recorded in the Land Court or the Plymouth County Registry of Deeds, whichever is appropriate. Certification of recording shall be sent to the Commission, on the form at the end of the Extension Permit. If work is undertaken without the applicant so recording the Extension Permit, the Commission may issue an Enforcement Order in order to ensure compliance or stop work as necessary or record the extension at the applicant's expense.

#### **G. Certificate of Compliance**

1. Upon completion of the activity described in the Notice of Intent in accordance with the Order of Conditions, the applicant or his or her successor in interest shall request the Commission issue, in writing, a Certificate of Compliance stating that the work has been satisfactorily completed in compliance with all conditions set forth in the Order of Conditions. If the original Notice required engineered plans, said request, if required by the Commission, shall be accompanied by an as-built plan certified by a professional engineer, registered in the Commonwealth, certifying that the work conforms to the plans, or specifying how the completed work differs from that shown on the submitted plans. The Certificate of Compliance shall be signed by a majority of the Commission.
2. Prior to the issuance of a Certificate of Compliance, a site inspection shall be made by the Commission.
3. If the Commission determines, after review and inspection, that the work has not been done in compliance with the Order of Conditions, or that the project deviates significantly and is impacting an interest of the Bylaw, it may refuse to issue a Certificate of Compliance.
4. A Certificate of Compliance may be issued in the above case, if the applicant either:
  - (a) Corrects the deviation; or
  - (b) Scales down the project; or
  - (c) Restores the area affected to pre-existing conditions; or
  - (d) Shows the Commission, to its satisfaction, that the deviation from the Order of Conditions has not impacted an interest of the Bylaw.
5. If the Permit contains conditions that continue past the completion of the work, such as maintenance or monitoring, the Certificate of Compliance shall specify which, if any, of such conditions shall continue. The Certificate shall also specify to what portions of the work it applies, if it does not apply to all the work regulated by the Permit.
6. The Certificate of Compliance shall be recorded in the Land Court or the Plymouth County Registry of Deeds, whichever is appropriate. Certification of recording shall be sent to the Commission on the form at the end of the Certificate of Compliance.

## **H. Enforcement Orders**

1. When the Commission determines that an activity is in violation of the Bylaw, these Regulations or a Final Order, the Commission may issue an Enforcement Order. Violations include, but are not limited to:
  - (a) Failure to comply with a Final Order, such as failure to observe a particular condition or time period specified in the Order;
  - (b) Failure to complete work described in a Final Order, when such failure causes damage to the interests identified in the Bylaw; or
  - (c) Failure to obtain a valid Final Order, or Extension Permit, prior to conducting an Activity Subject to Regulation Under the Bylaw as defined in Section 3 B of the Regulations; or
  - (d) Failure to record the Order of Conditions, or Extension Permit, when they are issued as applicable.
  
2. The Commission may also use any of the enforcement measures, as listed in Section XI of the Bylaw. These include, but are not limited to:
  - (a) Any person who violates any provision of the Bylaw Regulations thereunder, or Permits issued thereunder, shall be punished by a fine as provided for in G.L.M. c. 40, s. 21. Each provision of the Bylaw, Regulations, or Permit violated shall constitute a separate offense. This fine may be in addition to any levied under the Wetlands Protection Act, G.L.M. c. 131, s. 40. The fine for each offense under non-criminal disposition shall be fifty (\$50) dollars per day.
  - (b) Any person who purchases, inherits or otherwise acquires real estate upon which work has been done in violation of the provisions of this Bylaw or in violation of any Permit issued pursuant to this Bylaw shall forthwith comply with any such order or restore such land to its condition prior to any such violation; provided, however, that no action, civil or criminal, shall be brought against such person unless commenced within three (3) years following the date of acquisition of the real estate by such person.

## **SECTION 7. FEES**

### **A. Purpose**

The purpose of the fee system is to defray the costs of administering the Bylaw, provide engineering and consultants services, requests for action from the Commission, or to secure and ensure satisfactory performance of work required by any Permit.

### **B. Authority**

1. The filing fee schedule and abutter notification fees are promulgated pursuant to Sections V and VIII of the Bylaw.

2. The project review mechanism of Section VIII of the Bylaw is enabled by Chapter/Article XIII of the Town Bylaws, as amended.
3. The escrow account, performance bond, or other security mechanism used to ensure satisfactory performance of work is detailed in G.L.M. c. 41, s. 81U.

### **C. Filing Fee Schedule**

#### 1. Procedure

##### (a) Time of Payment

At the time of submission of a Notice of Intent, Request for Determination, or request for Certificate of Compliance, Extension Permit the applicant shall pay a filing fee specified below. This fee is in addition to any required by the Wetlands Protection Act, G.L.M. c. 131, s. 40, unless a fee is presently being used, in which case only the state fee will be collected.

##### (b) Waivers of Fee

- (i) The fee shall only be applied once for projects under both the G.L.M. 131, s. 40 and the Bylaw.
- (ii) The Commission shall waive this filing fee for a Notice, Request, or other request for action filed by a government agency.

##### (c) Disputes over Filing Fees

- (i) Whenever the Commission determines that an inadequate fee has been paid, the time period for the Commission to act shall be stayed until the balance of the fee is paid.
- (ii) If the applicant disputes all or a part of the balance of the fee, the Commission, if in agreement, shall refund the money owed to the applicant.
- (iii) In lieu of paying any disputed amount of the filing fee under a Notice, the applicant may file a Request for Determination.
- (iv) The applicant may appeal pursuant to the Massachusetts General Laws.
- (v) In any case, the applicant may bring the matter to the Commission at a regular meeting, prior to filing an application or other request for Commission approval.

##### (d) Amendments

These fees may be amended as allowed under Section V of the Bylaw.

#### 2. Filing Fee Schedule

The fee amounts for each category or project shall be listed in the "Plymouth Wetlands Bylaw Filing Fee Schedule", as amended, and as adopted pursuant to Section V of the Bylaw. Copies shall be available at the Conservation Office. The fee schedule shall apply and shall be used to calculate all fees (exclusive of design review fees by expert engineers and consultants) and shall be paid at the time that an application or other request for Commission approval is filed with the Commission.

#### **D. Consultant and/or Design Review Fees**

1. In addition to any filing fee imposed, the Conservation Commission may impose reasonable fees for the employment of outside consultants, for specific expert services deemed necessary by the Commission to come to a final decision on an application submitted to the Conservation Commission pursuant to the requirements of the Wetlands Protection Act (GL Ch. 131 § 40), the Plymouth Wetlands Protection Bylaw, Conservation Commission Act (GL Ch. 40 § 8C), as provided by GL Ch. 44 § 53G, bylaw or regulation, as they may be amended or enacted from time to time.
2. Funds received by the Conservation Commission pursuant to these rules shall be deposited with the town treasurer who shall establish a special account for this purpose. Expenditures from this special account may be made at the direction of the Conservation Commission as provided in GL Ch. 44 §53G. Expenditures from this account shall be made only in connection with the review of a specific project or projects for which a consultant fee has been collected from the applicant.
3. Fee Waivers  
The Commission may waive this design review fee for an application filed by a government agency. The Conservation Commission may waive or reduce any Consultant Fee, if, in the opinion of the Board, unusual circumstances exist regarding the subject property or the applicant.
4. Schedule of Project Review Fees  
The following schedule applies to the types of applications to the Conservation Commission set forth below. This schedule supersedes all previous schedules as they may have appeared in the Wetlands By-Laws and any listings, which may have been compiled from time to time for the benefit of applicants. Where more than one type of application has been submitted for Conservation approval, only the largest of the applicable Project Review Fees shall be collected for deposit into the 53G Account, and not the sum of those fees. The following applications may require an initial consultant fee of \$3,500 charged to reimburse the Commission for reasonable costs and expenses:
  - (a) New coastal revetment or coastal engineering structures
  - (b) Wetland alteration and replication
  - (c) Wetland boundary delineation/ confirmation of ten acres or more
  - (d) Other project's as determined by the Commission
5. Specific consultant services may include but are not limited to processing said applications and requests, copying plans and technical submittals for further review, contracting for professional services, wetland survey and delineation, hydro geologic and drainage analysis, wildlife habitat, shellfish, and fisheries evaluation, and environmental or land use law.
6. Replenishment

When the balance in an applicant's 53G Account falls below twenty-five percent (25%) of the initial Project Review Fee, as imposed above, the Conservation Commission shall consider whether to require a supplemental Project Review Fee to cover the cost of the remaining project review.

7. Inspection Phase

After receiving Conservation approval, the Commission may require a Supplemental Project Review Fee for the purpose of ensuring the availability of funds during the inspection phase of the review process.

8. Handling of Project Review Fees

The Project Review Fee is to be deposited into a special account as set forth in M.G.L. Ch. 44, §. 53G.

- (a) Outside consultants retained by the Conservation Commission to assist in the review of an application shall be paid from this account.
- (b) Project Review Fees shall be turned over to the Town Treasurer by the Conservation Commission for deposit into a 53G Account.
- (c) A copy of the latest statement from the banking institution handling the 53G Account shall be forwarded from the office of the Town Treasurer to the Conservation office as soon as it is received for timely and accurate accounting.
  - (i) The applicant may request an accounting of an applicant's funds held in the 53G Account at any time.
  - (ii) Conservation Commission shall respond to the request in a timely fashion.
  - (iii) This accounting shall include the following information:
    - a. The latest statement from the banking institution handling the account, which should include an accurate, accumulated interest portion to the closing date of the statement if such statements are subdivided into individual applicants' accounts. Otherwise, a statement of principal and interest, prepared by the office of the Conservation Commission, based on the latest statement from the banking institution.
    - b. A report of all checks authorized for issuance since that last banking statement.
- (d) An applicant may request an estimate of bills pending from consultants for work completed, or in progress, but not yet invoiced.
- (e) Excess fees in the 53G Account shall be returned to the applicant or the applicant's successor in interest, at the conclusion of the review process, as defined below. For the purpose of this section, any person or entity claiming to be an applicant's successor in interest shall provide the Commission with documentation establishing such succession in interest.

9. Delinquent Accounts

The following rules apply to fees owed to the Conservation Commission by applicants:

Monthly Interest Charge: All fees past due by one month from the date of invoice shall be subject to a monthly interest charge based upon an annual interest rate of 14%.

Costs of Collection: All costs of collection associate with past due accounts shall be borne by the applicant.

Current Delinquents: All applicants owing fees to the Conservation Commission at the time of any amendment to these provisions of the regulations shall be sent the following:

- (a) A duplicate notice of the amount past due.
- (b) A copy of the applicable sections of these regulations with all amendments clearly indicated.
- (c) Notice of a 30-day grace period before the commencement of any changes in interest rates or charges.

## **SECTION 8. PERFORMANCE BOND**

### **A. Security**

1. The Commission may require the establishment of an escrow account or other security running to the municipality, and sufficient as to form and surety in the opinion of the Commission's Counsel, to secure faithful and satisfactory performance of work required by any permit, in such sums and upon such conditions as the Commission may require. Notwithstanding the above, the amount of such escrow account or security shall not exceed the estimated cost including inflation of the work required or the restoration of affected lands and properties if the work is not performed as required, whichever is greater. The Permit conditions shall be observed and/or performed before any lot may be conveyed other than by mortgage deed.
2. For replication projects, the applicant shall provide an escrow bond, as outlined in Section IX of the By-laws, for the duration of a monitoring program plus one (1) year to cover correction of any deficiencies revealed by the program. Said bond shall, at a minimum, be equal to the initial cost of the replication.

## **SECTION 9. GUIDELINES (FOR FORMS AND PLANS)**

### **A. Minimum Submittal Requirements for Applications**

1. Request for Determination
  - (a) Refer to Section 6B of the Regulations
  - (b) Follow these Guidelines (as they apply)
2. Notice of Intent

- (a) Refer to Section 6C of these Regulations
  - (b) Follow these Guidelines (as they apply)
- 3. Extension Permit
  - (a) Refer to Section 6F
- 4. Certificate of Compliance
  - (a) Refer to Section 6G
  - (b) Follow these Guidelines (as they apply)

**B. Standards (for completeness of Forms and Plans)**

1. General

Forms and Plans shall describe the proposed activity and its effect on wetlands, flooding, and off site runoff. The following items are set out as a minimum standard, and are not intended to be a complete and final presentation as to what the form or plan should include. The applicant may submit, or be required to submit, to the Commission any further information which will assist in the review and which is deemed necessary to determine the proposed effect on the interest protected by this Bylaw. All applications should include the original material and one (1) copy. All forms, plans, drawings, sketches, and calculations shall be dated, and signed by the person(s) responsible for their preparation. Plans and drawings involving the practice of surveying or engineering shall be stamped and signed by the appropriate (emphasis added) design professional(s) who shall be registered in the Commonwealth of Massachusetts. Note: For additional information on applications and plan guidelines, consult the General instructions for completing the "Notice of Intent" form, 310 CMR 10.99 of the Wetlands Protection Act Regulations. The Plymouth Conservation Commission reserves the right to request additional narrative information on the forms or other information on the plans.

2. Forms – Narrative:

- (a) A discussion of the proposed activity and its impacts on the wetlands functions and values (or interests) as provided for in Section I of the Bylaw and Section 2 of these Regulations must be provided. Section 10 and 11 of these Regulations lists several of the interests and some of the Performance Standards which must be addressed. One word answers such as "none" or "minimal" may not be accepted. If the applicant contends that there will be no effect on the interests which the Bylaw protects, the applicant must demonstrate to the Commission's satisfaction why there will be no effect.
- (b) Failure to provide any of the above items may result in delays and possible rejection of the Notice or Request.

3. Forms – Format:

- (a) Plans shall be of adequate size, scale and detail to completely and accurately describe the site and the work proposed. The following guidelines are provided to encourage uniformity:
  - (1) Sheet sizes:

- Maximum 24" x 36".
- Where more than one sheet is required to describe the proposed work, provide an additional sheet indexing all other sheets and showing a generalized composite of all work proposed within the Resource Areas.

(2) Scale:

- Not more than 1" = 50' (1" = 40" is recommended).
- Where plans are reduced, display graphical scales.

(3) Margins:

- For 8.5" x 11" plans, at least 1" left margin for binding, and all other margins at least 1/2"
- For plans larger than 8.5" x 11", at least a 2" left margin for binding and all other margins at least 1/2"

(4) Title Block:

- Included on all plans.
- Located at the lower right-hand corner, oriented to be read from the bottom when bound at the left margin.
- Include original date, all revision dates, and nature of each revision (inclusive).
- Applicant's name.
- Plat and lot number.

- (5) All revisions shall be demarcated by clouding and copies of such changes shall be given by the applicant to all other Boards (if applicable).

4. Information

Plans shall contain the following information, which shall be identified and referenced in a legend, to be included only as applicable, and subject to amendment, waiver or exemption by the Commission.

(a) North arrow.

(b) Contour Lines.

- Existing contour lines: broken lines shall be used; the contour interval of such shall be no greater than two feet, up to and beyond the abutters' property lines, as necessary to identify the resource area and upland slopes.
- Proposed contour lines: solid lines shall be used; the contour interval of such shall be no greater than two feet up to and beyond the abutters' property lines, as necessary to identify the resource area and upland slopes.

(c) Resource areas.

- The vegetated wetland line (indicating type of resource, consecutively numbered and flagged), shall be delineated by color on the plans to be presented at any public hearing.
  - Edge of all resource areas and wetlands, and flood plains shall be clearly identified by lines of different colors on the plans to be presented at any public hearing.
  - Water bodies, including vernal ponds, shall be clearly identified by color on the plans to be presented at any public hearing.
  - Resource areas to be altered in any way shall be clearly identified including cross section showing existing and proposed replication area slopes, elevations, bank and bottom conditions. Cross section areas shall be indicated on the plans.
- (d) Include location, type and elevation of benchmark used for survey (NGVD elevations are recommended).
- (e) Structures, etc.
- Existing stone walls, buildings, rock ridges and out-croppings should be indicated.
  - Location, extent and area of all existing and proposed stockpiles of fill, structures, roadways, paved areas, septic systems, wells, tanks and utility or right of way easements, soil logs for septic systems and detention areas (including water table and aquifer flow directions).
  - Proposed lowest elevations for cellars or floors.
- (f) Indicate locations, details of erosion and sedimentation control devices (i.e. - silt fences, haybales, etc.) and the distance from the resource areas and structure or activity on the plan.
- (g) Outward limits of work or activity, if different from the haybales or silt fence line, will be designated via proposed staked, and/or flagged areas, or construction fence.
- (h) Vegetated buffer of naturally occurring plant material along all wetlands and water bodies.
- (i) The following NOTE should be included on the plan: "Attention: The work proposed on this plan is allowed by an Order of Conditions issued by the Plymouth Conservation Commission which includes strict standards and requirements. No work is to proceed until the contractor has reviewed and agreed to abide by all conditions therein by notation on said plan."
- (j) In addition to a top (or plan) view, the Commission recommends that a cross sectional plan view be submitted showing all relative elevations (proposed and existing) and distances to the resource area.
- (k) A color scheme is to be outlined on the plan for all markers or flags on the site.
- (l) Additional requirements: The Commission may require additional information which it deems relevant to any review under the Bylaw and the Regulations including, but not limited to:
- Existing and proposed location, rim elevation and invert elevation of all catch basins, drains, culverts and other drainage structures immediately upstream and downstream of the site, as well as on-site.

- Include proposed on-site pollution control devices, such as oil absorption pillows, hooded catch basins, flow dissipaters, detention basins with baffled headwall, gas traps, retention basins and vegetative buffers.
- The drainage basin in which the site is located should be delineated on the locus plan as well as any municipal water supply well within that drainage basin.
- Calendar dates and locations of measurements and samplings including but not limited to groundwater tests, soil borings, habitat evaluations and water testing.
- Indicate soil characteristics in representative parts of property as identified in the Plymouth County Soil Conservation Survey.

5. Calculations/Technical Data  
(reserved)

**C. Field Requirements**

Prior to the Commission's pre-hearing onsite inspection, the following onsite preparation requirements shall apply unless amended, waived or exempted by the Commission:

1. The wetland or resource boundary or bordering vegetated wetland (BVW) line shall be delineated by consecutively numbered, initialed flags or stakes at intervals of no greater than 50'; each flag or stake number being incorporated on the submitted plan. All wetlands resources are to be flagged or staked.
2. All flags or stakes delineating the BVW or other resource area shall remain in place until a Certificate of Compliance is issued by the Commission.
3. Stakes or flags are to be used to indicate the proposed road and driveway; house, garage and deck corners; other proposed structures and septic systems; and the limits of work including landscaping and grading. They also must correspond to the plan submitted.
4. The applicant shall delineate the limit of filling line on the site by means of easily identifiable stakes in the ground.
5. All staked and flagged areas are to be distinctly colored and readily visible. The Commission recommends the following:
  - Florescent orange flags for the delineation of the resource area boundary or the bordering vegetated wetland (BVW) line.
  - Florescent yellow flags or stakes to designate the outward limits of excavation, activity, or disturbance to the area. Yellow flags may also be used to mark the haybale line if both are identical and haybales have not been installed.
  - Blue flags or stakes to mark the corners or limits of houses, garages, decks, septic systems, driveway, roads, etc.
6. When erosion control is necessary, sediment barriers are to be installed (prior to construction) but do not need to be installed prior to the applicant's hearing and the

Commission's on site inspection. Barriers shall include, but not be limited to double staked haybales properly secured and back filled, or sediment filter fabric staked and properly back filled or toed in. Where the slope is 2:1 or greater, snow fence may need to be installed upgradient of the sediment barriers to protect them.

7. A haybale/silt fence combination is recommended for surrounding sediment stockpiles, steep slopes or large areas of unstable areas. Sediment barriers are to remain in place and maintained until a Certificate of Compliance is issued by the Commission.
8. The applicant, project engineer(s) or contractor(s) are responsible for complying with the requirements set forth in Section 8 A. of the Regulations.
9. The Plymouth Conservation Commission reserves the right to request additional information or action at the site, if applicable to the project.
10. Failure to comply with the requirements may result in a continued hearing or enforcement action.

## **SECTION 10: ADDITIONAL REGULATIONS FOR COASTAL AND INLAND WETLANDS**

### **PART I - REGULATIONS FOR COASTAL WETLANDS**

#### **A. Land Under The Ocean**

##### 1. Preamble

Land under the ocean is likely to be important to the protection of wildlife, marine fisheries and, where there are shellfish, to the protection of land containing shellfish. Near-shore areas of land under the ocean are likely to be important to storm damage prevention and flood control.

Land under the ocean provides feeding areas, spawning and nursery grounds and shelter for many coastal organisms related to marine fisheries.

Near-shore areas of land under the ocean help reduce storm damage and flooding by diminishing and buffering the high energy effects of storms. Submerged sand bars dissipate storm wave energy. Such areas provide a source of sediment for seasonal rebuilding of coastal beaches and dunes.

The bottom topography of Near-shore areas of land under the ocean is important to storm damage prevention or flood control.

Water circulation, distribution of sediment grain size, water quality, fin fish and shellfish habitat are factors critical to the protection of marine fin and shell fisheries.

##### 2. Definitions

- (a) "Land Under The Ocean" means land extending from the mean low water line seaward to the boundary of Plymouth's jurisdiction,
  - (b) "Near-shore Areas" of land under the ocean means that land extending from the mean low water line to the seaward limit of Plymouth's jurisdiction.
3. Improvement dredging for navigational purposes affecting land under the ocean shall be designed and carried out using the best available measures so as to minimize adverse effects caused by changes in:
- (a) bottom topography which will result in increased flooding or erosion caused by an increase in the height or velocity of waves impacting the shores;
  - (b) sediment transport processes which will increase flood or erosion hazards by affecting the natural replenishment of beaches;
  - (c) water circulation which will result in an adverse change in flushing rate, temperature or turbidity levels; or
  - (d) marine productivity which will result from the suspension or transport of pollutants, the smothering of bottom organisms, the accumulation of pollutants by organisms or the destruction of habitat or nutrient source areas.
4. Maintenance dredging for navigational purposes affecting land under the ocean shall be designed and carried out using the best available measures so as to minimize adverse effects caused by changes in marine productivity which will result from the suspension or transport of pollutants, increases in turbidity, the smothering of bottom organisms, the accumulation of pollutants by organisms, or the destruction of habitat or nutrient source areas.
5. Projects not included in paragraphs 3 or 4 above which affect Near-shore Areas of land under the ocean shall not cause adverse effects by altering the bottom topography so as to increase storm damage or erosion of coastal beaches, coastal banks, coastal dunes, or salt marshes.
6. Projects not included in paragraph 3 above which affect land under the ocean shall be designed and performed so as to cause no adverse effects on wildlife, marine fisheries or shell fisheries caused by:
- (a) alterations in water circulation;
  - (b) destruction or diminution in the quality, quantity, vitality or productivity of eelgrass (*Zostera marina*) beds or other forms of submerged aquatic vegetation;
  - (c) alterations in the distribution of sediment grain size; or
  - (d) changes in water quality, including, but not limited to, unnatural fluctuations in the level of dissolved oxygen, temperature or turbidity, or the addition of pollutants.

## **B Coastal Beaches (and Tidal Flats)**

### 1. Preamble

Coastal beaches, which are defined to include tidal flats, are significant to wildlife, storm damage prevention and flood control. In addition, tidal flats are likely to be important to the protection of wildlife, marine fisheries, and, where there are shellfish, to land containing shellfish.

Coastal beaches dissipate wave energy by their gentle slope, their permeability and their granular nature, which permit changes in beach form in response to changes in wave conditions.

Coastal beaches serve as a sediment source for dunes and sub tidal areas. Steep storm waves cause beach sediment to move offshore, resulting in a gentler beach slope and greater energy dissipation. Less steep waves cause an onshore return of beach sediment, where it will be available to provide protection against future storm waves.

A coastal beach at any point serves as a sediment source for coastal areas down drift from that point. The oblique approach of waves moves beach sediment alongshore in the general direction of wave action. Thus, the coastal beach is a body of sediment which is moving along the shore.

Coastal beaches serve the purposes of storm damage prevention and flood control by dissipating wave energy by reducing the height of storm waves, and by providing sediment to supply other coastal features, including coastal dunes, land under the ocean and other coastal beaches. Interruptions of these natural processes by manmade structures reduce the ability of the coastal beach to perform these functions.

Tidal flats are likely to be important to the protection of marine fisheries because they provide habitats for marine organisms, such as polychaete worms and mollusks, which in turn are food sources for fish.

Tidal flats are also sites where organic and inorganic materials may become entrapped and then returned to the photosynthetic zone of the water column to support algae and other primary producers of the marine food web.

Land within the Buffer Zone Resource Area of a coastal beach or tidal flat is likely to be important to the protection and maintenance of coastal beaches and tidal flats, and therefore to the protection of the wetland values which these areas contain.

The following characteristics of coastal beaches are critical to the protection of marine fisheries.

- (a) distribution of sediment grain size;
- (b) water circulation;

- (c) water quality; and
- (d) relief and elevation.

The following characteristics of coastal beaches are critical to storm damage prevention or flood control:

- (a) volume (quantity of sediments) and form; and
- (b) the ability to respond to wave action.

## 2. Definitions

- (a) "Coastal Beach" means unconsolidated sediment subject to wave, tidal or coastal storm action which forms the gently sloping shore of a body of salt water and includes tidal flats. Coastal beaches extend from the mean low water line landward to the dune line, coastal bank line or the seaward edge of existing manmade structures when these structures replace one of the above lines, whichever is closest to the ocean.
- (b) "Tidal Flat" means any nearly level part of a coastal beach which usually extends from the mean low water line landward to the more steeply sloping face of the coastal beach or which may be separated from the beach by land under the ocean.

## 3. Any activity which is allowed on a coastal beach or tidal flat or within its Buffer Zone Resource Area shall not have an adverse effect on the coastal beach or tidal flat by:

- (a) affecting the ability of waves to remove sand from the beach or tidal flat;
- (b) disturbing the vegetative cover, if any, so as to destabilize the beach or tidal flat;
- (c) causing any modification of the beach or tidal flat form that would increase the potential for storm or flood damage;
- (d) interfering with the natural movement of the beach or tidal flat;
- (e) causing artificial removal of sand from the beach.

## **C. Coastal Dunes**

### 1. Preamble

All coastal dunes are likely to be important to storm damage prevention or flood control. All coastal dunes on barrier beaches and the coastal dune closest to the coastal beach in any area are significant to storm damage prevention or flood control.

Coastal dunes aid in storm damage prevention and flood control by supplying sand to coastal beaches. Coastal dunes protect inland coastal areas from storm damage and flooding by storm waves and elevated sea levels because such dunes are higher than the coastal beaches which they border. In order to protect this function, coastal dune volume must be maintained while allowing its shape to conform to natural wind and water flow patterns.

Vegetative cover contributes to the growth and stability of coastal dunes by providing conditions favorable to sand deposition.

On retreating shorelines, the ability of coastal dunes bordering a coastal beach to move landward at the rate of shoreline retreat allows these dunes to maintain their form and volume.

Land within the Buffer Zone Resource Area of a coastal dune is likely to be significant to the protections and maintenance of coastal dunes, and therefore to the protection of the wetland values which these areas contain.

The following characteristics of coastal dunes are critical to storm damage prevention or flood control:

- (a) the ability of the dune to erode in response to coastal beach conditions;
- (b) dune volume;
- (c) dune form, which must be allowed to be changed by wind and natural water flow;
- (d) vegetative cover; and
- (e) the ability of the dune to move landward or laterally.

## 2. Definition

"Coastal Dune" means any hill, mound or ridge of sediment landward of a coastal beach, deposited by wind action, storm over wash or artificial means.

- 3. Any activity which is allowed on a coastal dune or within 100 feet of a coastal dune shall not have an adverse effect on the coastal dune by:
  - (a) affecting the ability of waves to remove sand from the dune;
  - (b) disturbing the vegetative cover so as to destabilize the dune;
  - (c) causing any modification of the dune form that would increase the potential for storm or flood damage;
  - (d) interfering with the landward or lateral movement of the dune; or
  - (e) causing artificial removal of sand from the dune.
- 4 The following projects may be permitted, provided they adhere to the provisions of paragraph 3 above:
  - (a) elevated pedestrian walkways designed to minimize disturbance to vegetative cover;
  - (b) fencing and other devices designed to increase dune development;
  - (c) plantings compatible with the natural vegetative cover; or
  - (d) nourishment deemed helpful to dune stabilization or development.

## **D. Barrier Beaches**

### 1. Preamble

Barrier beaches are important to wildlife, storm damage prevention and flood control and are likely to be significant to the protection of marine fisheries and, where there are shellfish, to the protection of land containing shellfish.

Barrier beaches protect landward areas because they provide a buffer to storm waves and to sea levels elevated by storms.

Barrier beaches protect from wave action such highly productive areas as salt marshes, estuaries, lagoons, salt ponds and freshwater marshes and ponds, which are in turn important to marine fisheries.

Barrier beaches are maintained by the alongshore movement of beach sediment caused by wave action. The coastal dunes, beaches and tidal flats of a barrier beach are made up of sediment supplied by wind action, storm wave over wash and tidal inlet deposition. Barrier beaches in Massachusetts undergo a landward migration caused by the landward movement of sediment by wind, storm wave migration and tidal current processes. The continuation of these processes maintains the volume of the land form which is necessary to carry out its storm and flood buffer functions.

Barrier beaches are significant to storm damage prevention and flood control, and the characteristics of coastal beaches, tidal flats and coastal dunes listed in Sections 2.02(1) and 2.03(1) and their ability to respond to wave action, including storm over wash sediment transport, are critical to the protection of the wetlands values of barrier beaches identified above.

### 2. Definition

"Barrier Beach" means a narrow low-lying strip of land generally consisting of coastal beaches and coastal dunes extending roughly parallel to the trend of the coast. It is separated from the mainland by a narrow body of fresh, brackish or saline water or a marsh system. A barrier beach may be joined to the mainland at one or both ends.

3. The provisions of Coastal beach and Dune above shall apply to the coastal beaches and to all coastal dunes which make up a barrier beach.

## **E. Coastal Banks**

### 1. Preamble

Coastal banks are likely to be important to storm damage prevention and flood control. Coastal banks that supply sediment to coastal beaches, coastal dunes and barrier beaches are important to storm damage prevention and flood control. Coastal

banks that, because of their height, provide a buffer to upland areas from storm waters are significant to storm damage prevention and flood control. A particular coastal bank may serve both as a sediment source and as a buffer, or it may serve only one role.

Coastal Banks composed of unconsolidated sediment and exposed to wave action serve as a major source of sediment for other coastal land forms, including beaches, dunes and barrier beaches. The supply of sediment is removed from banks by wave action. It is a naturally occurring process necessary to the continued existence of coastal beaches, coastal dunes and barrier beaches which, in turn, dissipate storm wave energy, thus protecting structures and coastal wetlands landward of them from storm damage and flooding.

Coastal banks, because of their height and stability, may act as a buffer or natural wall, which protects upland areas from storm damage and flooding. While erosion caused by wave action is an integral part of shoreline processes and furnishes important sediment to down drift land forms, erosion of a coastal bank by wind and rain runoff, which plays only a minor role in beach nourishment, should not be increased unnecessarily. Therefore, disturbances to a coastal bank which reduce its natural resistance to wind and rain erosion cause cuts and gullies in the bank, increase the risk of its collapse, increase the danger to structures at the top of the bank, and decrease its value as a buffer.

Vegetation tends to stabilize a coastal bank and reduce the rate of erosion due to wind and rain runoff. Any project permitted on a coastal bank should incorporate, when appropriate, elevated walkways.

## 2. Definition

A Coastal Bank means the seaward face or side of any elevated land form, other than a coastal dune, which lies at the landward edge of a coastal beach, land subject to tidal action or storm flooding, or other wetland. Any minor discontinuity of the slope notwithstanding, the top of the bank shall be the top of the face of the bank above the relevant 100-year flood plain elevation.

(The 100-year flood plain elevation shall be taken from the Flood Insurance Rate Maps, prepared by the National Flood Insurance Program for the Town of Plymouth, dated December 19, 2006 or as most recently amended including Zones A, AO, AH, A1-A30, A99, V, and V1-V30.)

3. Any activity which is allowed on a coastal bank or within the Buffer Zone Resource Area of a coastal bank shall comply with the following regulations:
  - (a) No new bulkhead, revetment, seawall, groin or other coastal engineering structure shall be permitted on or within 100 feet of a coastal bank, except that such a coastal engineering structure shall be permitted when required to prevent storm damage to buildings constructed prior to August 10, 1978 or

constructed pursuant to a Notice of Intent (issued under MGL 131, section 40) filed prior to August 10, 1978, including reconstruction of such buildings subsequent to the effective date of these regulations, provided that the following requirements are met:

- (b) a coastal engineering structure or modification thereto shall be designed and constructed so as to minimize, using best available measures, adverse effects on adjacent or nearby coastal beaches due to changes in wave action, and
  - (c) the applicant demonstrates that no method of protecting the building other than the proposed coastal engineering structure is feasible.
  - (d) protective planting designed to reduce erosion may be permitted.
  - (e) the applicant provides sufficient evidence that the building was constructed pursuant to a Notice of Intent filed before August 10, 1978.
4. Any project on a coastal bank or within the Buffer Zone Resource Area of the top of a coastal bank, other than a structure permitted under paragraph 3 above, shall not have an adverse effect due to wave action on the movement of sediment from the coastal bank to coastal beaches or land subject to tidal action or flooding, and shall not have an adverse effect on the stability of a coastal bank.
  5. The Permit and the Certificate of Compliance for any project within the Buffer Zone Resource Area of the top of a coastal bank permitted by the Conservation Commission under this Bylaw shall contain the specific condition: "The Wetlands Regulations, promulgated under the Plymouth Wetlands Protection Bylaw requires that no coastal engineering structure, such as a bulkhead, revetment, groin, or sea wall shall be permitted on or within 100 feet the top of a coastal bank at any time in the future to protect the project allowed by this permit:".

## **F. Salt Marshes**

### 1. Preamble

Salt marshes are important to the protection of wildlife, marine fisheries, where there are shellfish, to protection of pollution, and are likely to be significant to storm damage prevention and ground water supply.

A salt marsh produces large amounts of organic matter. A significant portion of this material is exported as detritus and dissolved organics to estuarine and coastal waters, where it provides the basis for a large food web that supports many marine organisms, including fin and shell fish. Salt marshes also provide a spawning and nursery habitat for several important estuarine forage fin fish.

Salt marsh plants and substrate remove pollutants from surrounding waters. The network of salt marsh vegetation roots and rhizomes bind sediments together.

The sediments absorb chlorinated hydrocarbons and heavy metals such as lead, copper and iron. The marsh also retains nitrogen and phosphorus compounds.

The underlying peat also serves as a barrier between fresh groundwater landward of the marsh and the ocean, thus helping to maintain the level of groundwater.

Salt marsh cord grass and underlying peat are resistant to erosion and dissipate wave energy, thereby providing a buffer that reduces wave damage.

Land within the Buffer Zone Resource Area of a salt marsh is likely to be significant to the protection and maintenance of salt marshes, and therefore to the protection of the wetland values these areas contain.

The following characteristics of salt marshes are critical to one or more of the wetland values above:

- (a) the growth, composition and distribution of salt marsh vegetation;
- (b) the flow and level of tidal and fresh water; and
- (c) the presence and depth of peat.

## 2. Definitions

- (a) "Salt Marsh" means a coastal wetland that extends landward up to the highest Spring Tide line of the year, and is characterized by a plant community consisting of, but not limited to, 40% or more of any of the following species: Salt Meadow Cord Grass (*Spartina patens*); Salt Marsh Cord Grass (*Spartina alterniflora*); Spike Grass (*Distichlis spicata*); Sea Lavender (*Limonium nashii*); Seaside Plantago (*Plantago juncooides*); Aster (*Aster subulatus*); Sea-Blite (*Suaeda maritima*); Black-grass (*Juncus gerardi*); Samphire (*Salicornia europaea*); Glasswort (*S. bigelovii*); Reed (*Phragmites communis*); Saltmarsh Bulrush (*Scirpus robustus*); or Cattails (*Typha* spp.).
- (b) "A Spring Tide" means the tide of the greatest amplitude during the approximately 14-day tidal cycle which occurs at or near the time when the gravitational forces of the sun and the moon are in phase (new and full moons).

## 3. Any activity which is allowed on a salt marsh or within the Buffer Zone Resource Area of a salt marsh shall comply with the following regulations:

- (a) A proposed project in a salt marsh, on lands within the Buffer Zone Resource Area of a salt marsh, or in a body of water adjacent to a salt marsh shall not destroy any portion of the salt marsh or its substratum and shall not have an adverse effect on the productivity of the salt marsh. Alterations in growth, distribution and composition of salt marsh vegetation shall be considered in evaluating adverse effects on productivity. The landward approach to a structure sited on or near a salt marsh should minimize any adverse impact on the vegetation in the marsh. This section shall not be construed to prohibit the harvesting of salt hay.
- (b) Notwithstanding the provisions of paragraph 3.(a) above, a small project within a salt marsh, such as an elevated walkway or other structure which has no adverse effects other than blocking sunlight from the underlying vegetation

for a portion of each day, may be permitted if such a project complies with all other applicable requirements of these regulations.

- (c) Notwithstanding the provisions of paragraph 3 (a) above, a project which will restore or rehabilitate a salt marsh may be permitted; provided, however, that this section shall not be construed to allow the alteration of one salt marsh on a given site by or contingent upon the creation or restoration of another.

## **G. Land Under, or Within the Buffer Zone Resource Area of, Salt Ponds**

### 1. Preamble

Land under salt ponds is important to the protection of marine fisheries and wildlife, and, where there are shellfish, to the protection of land containing shellfish.

Land under salt ponds provides an excellent habitat for marine fisheries. The high productivity of plants in salt ponds provides food for shellfish, crustaceans, and larval and juvenile fish. Salt ponds also provide spawning areas for shellfish and are nursery areas for crabs and fish.

Characteristics of salt ponds critical to the protection of the wetland values above are as follows:

- (a) water circulation;
- (b) distribution of sediment grain size;
- (c) freshwater inflow;
- (d) productivity of plants; and
- (e) water quality.

### 2. Definition

"Salt Pond" means a shallow enclosed or semi-enclosed body of saline water that may be partially or totally restricted by barrier beach formation. Salt ponds may receive freshwater from small streams emptying into their upper reaches and/or small springs in the salt pond itself.

### 3. Any activity which is allowed on and under a salt pond or within the Buffer Zone Resource Area of the bank or a salt pond shall comply with the following regulations:

- (a) Any project on land under a salt pond, on land within the Buffer Zone Resource Area of the mean high water line of a salt pond, or on land under a body of water adjacent to a salt pond shall not have an adverse effect on the marine fisheries or shellfish habitat of such a salt pond caused by:
  - (i) alterations of water circulation;
  - (ii) alterations in the distribution of sediment grain size and the relief or elevation of the bottom topography;
  - (iii) modifications in the flow of fresh and/or salt water;
  - (iv) alterations in the productivity of plants, or
  - (v) alterations in water quality including, but not limited to, other than normal

fluctuations in the level of dissolved oxygen, nutrients, temperature or turbidity, or the addition of pollutants.

4. Notwithstanding the provisions of paragraph 3 (a) above, activities specifically designed and intended to maintain the depth and the opening of a salt pond to the ocean in order to maintain or enhance marine fisheries or for the specific purpose of fisheries management, may be permitted at the sole discretion of the Commission.

## **H. Land Containing Shellfish**

### 1. Preamble

Land containing shellfish is found within certain of the areas under the jurisdiction of the Bylaw. Shellfish are also specifically one of the wetland values in the Bylaw. The purpose of this section is to identify those areas likely to contain shellfish and to establish regulations for projects which will affect such land.

Land containing shellfish is important to the protection of marine fisheries as well as to the protection of the interest of land containing shellfish.

Shellfish are a valuable renewable resource. The maintenance of productive shellfish beds not only assures the continuance of shellfish themselves, but also plays a direct role in supporting fish stocks by providing a major food source. The following characteristics of land containing shellfish are critical to the protection of wetland values contained by such areas:

- (a) shellfish;
- (b) water quality;
- (c) water circulation; and
- (d) the natural relief, elevation or distribution of sediment grain size of such land.

### 2. Definitions

- (a) "Land Containing Shellfish" means land under the ocean, tidal flats, salt marshes and land under salt ponds when any such land contains shellfish.
- (b) "Shellfish" means the following species: Bay scallop (*Argopecten irradians*); Blue mussel (*Mytilus edulis*); Ocean quahog (*Arctica islandica*); Oyster (*Crassostrea virginica*); Quahog (*Mercenaria mercenaria*); Razor clam (*Ensis directus*); Sea clam (*Spisula solidissima*); Sea scallop (*Placopecten magellanicus*); Soft shell clam (*Mya arenaria*); Lobster (*Homarus americanus*); Grass shrimp (*Palaemonetes* sp.); Sand Shrimp (*Crangon septemspinosa*); Blue crab (*Callinectes sapidus*); Green crab (*Carcinides maenas*); Fiddler crab (*Uca* sp.); Rock crab (*Cancer irroratus*).

3. Except as provided in paragraphs 4 and 5 below, any project on land containing shellfish shall not adversely affect such land or marine fisheries by a change in the productivity of such land caused by:

- (a) alterations of water circulation;
  - (b) alterations in relief elevation;
  - (c) the compacting of sediment by vehicular traffic;
  - (d) alterations in the distribution of sediment grain size;
  - (e) alterations in natural drainage from adjacent land; or
  - (f) changes in water quality, including, but not limited to, unnatural fluctuations in the levels of salinity, dissolved oxygen, nutrients, temperature or turbidity or the addition of pollutants.
4. Except in Areas of Critical Environmental Concern, the Conservation Commission may, after consultation with the Shellfish Constable, permit shellfish to be moved from such an area under the guidelines of and to a suitable location approved by the state Division of Marine Fisheries, in order to permit a proposed project on such land. Any such project shall not be commenced until after the moving and replanting of the affected shellfish has been completed.
  5. Notwithstanding paragraph 3 above, projects approved by said DMF that are specifically intended to increase the productivity of land containing shellfish may be permitted in the discretion of the Conservation Commission. Aquaculture projects approved by the appropriate local and state authorities may also be permitted in the discretion of the Conservation Commission.

**I. Banks of or Land Under the Ocean, Ponds, Streams, Rivers, Lakes, or Creeks that Underlie an Anadromous/Catadromous Fish Run**

1. Preamble

The banks of and land under the ocean, ponds, streams, rivers, lakes or creeks that underlie an anadromous/catadromous fish run are important to the protection of marine fisheries and wildlife. Land within the Buffer Zone Resource Area of such banks is likely to be significant to the protection and maintenance of these banks, and therefore to the protection of the wetlands values these areas contain.

The following characteristics of a fish run, or the land under the ocean or pond, stream, river, lake or creek that underlies a fish run are critical to the protection of those areas:

- (a) the fish;
  - (b) accessibility of spawning areas;
  - (c) the volume or rate of flow of water within spawning areas and migratory routes; and
  - (d) spawning and nursery grounds.
2. Definitions
    - (a) "Anadromous Fish" means fish that enter fresh water from the ocean to spawn, such as alewives, shad and salmon.

- (b) Catadromous Fish" means fish that enter salt water from fresh water to spawn, such as eels.
  - (c) "Anadromous/Catadromous Fish Run" means that area within estuaries, ponds, streams, creeks, rivers1 lakes or coastal waters which is the spawning or feeding ground or passageway for anadromous or catadromous fish. Such fish runs shall include those areas which have historically served as fish runs and are either being restored or are planned to be restored at the time an Application for permit is filed.
- 3 Any activity which is allowed on the bank of a fish run, land under a fish run, or land within the Buffer Zone Resource Area of a fish run shall comply with the following regulations:
- (a) Any project on such land or bank shall not have an adverse effect on the fish run by:
    - (i) impeding or obstructing the migration of the fish;
    - (ii) changing the volume or rate of flow of water within the fish run; or
    - (iii) impairing the capacity of spawning or nursery habitats necessary to sustain the various life stages of the fish.
  - (b) Disposal of dredge material or filling in a fish run shall be prohibited.

**J. Land Subject to Coastal Storm Flowage**

1. Preamble

Land subject to coastal storm flowage - including coastal beaches, salt marshes, banks, barrier beaches, salt ponds, dunes, land containing shellfish, land under the ocean1 and banks of and land underlying fish runs - is important for the protection of public and private water supply, groundwater and groundwater quality, flood control1 erosion and sedimentation control, storm damage prevention, water pollution prevention, wildlife and wildlife habitat, fisheries, and shellfish.

The wetlands values of specific resource areas1 including those identified above, that lie within the area of land subject to coastal storm flowage and are otherwise addressed in the Bylaw and the regulations promulgated thereunder are incorporated in this section by reference.

Land subject to coastal storm flowage has the potential to do Plymouth a great service. In the 25 years or so that the town has escaped being hit by a significant hurricane, the protective values of the flood plain includes land that lies at the margin between upland and land subject to average coastal wind - and water-driven processes. When coastal conditions are not the norm - during extreme high tides and hurricanes, for example - the ability of the land to absorb flood waters, to buffer more inland areas from flood and wave damage, is important.

Filling of land subject to coastal storm flowage is likely to cause displacement of flooding effects to other areas of the town.

Since the flood plain contains areas (as well as other wetland resources) in which the water table is close to the surface during a coastal storm, pollutants in the flood plain, including the contents of septic systems and fuel tanks, are likely to affect public and private water supply, groundwater quality, wildlife and wildlife habitat, fisheries and shellfish.

Storm damage prevention, as one of the interests protected under the Bylaw, also comes into play in the flood plain. Direct and collateral damage to manmade structures in the flood plain area caused by wave impacts and inundation by flood waters, and storm-driven debris.

## 2. Definitions

(a) "Land Subject to Coastal Storm Flowage" shall mean that land subject to tidal water or flooding and are further delineated as the 100-year flood plain (Zones, A, AO, AH, A1-A30, A99, V, and V1-V30 on the Flood Insurance Rate Maps, prepared by the National Flood Insurance Program for the Town of Plymouth, dated December 19, 2006 or more recently amended).

## 3. Any activity which is permitted on land subject to coastal storm flowage shall not have an adverse effect on the interests protected by the Bylaw by:

- (a) reducing the ability of the land to absorb and contain flood waters.
- (b) reducing the ability of the land to buffer more inland areas from flooding and wave damage.
- (c) displacing or diverting flood waters to other areas.
- (d) Causing, or creating the likelihood of, damage to other structures of land within the flood plain as debris (collateral damage).
- (e) causing ground, surface or saltwater pollution triggered by coastal storm flowage.

## SECTION 10. (CONT'D)

### PART II - FOR INLAND WETLANDS

#### A. Inland Banks (Naturally Occurring Banks and Beaches)

##### 1. Preamble

Banks are likely to be significant to wildlife, public or private water supply, to ground water supply, to flood control, to storm damage prevention, to the prevention of pollution and to the protection of fisheries. Where Banks are composed of concrete, asphalt or other artificial impervious material, said Banks are likely to be significant to flood control and storm damage prevention.

Banks are areas where ground water discharges to the surface and where, under some circumstances, surface water recharges the ground water.

Where Banks are partially or totally vegetated, the vegetation serves to maintain the Bank's stability, which in turn protects water quality by reducing erosion and siltation.

Banks act to confine flood waters during most Storms, preventing the spread of water to adjacent land.

Land within the Buffer Zone Resource Area of a bank is likely to be significant to the protection and maintenance of the bank, and therefore to the protection of the interests which these resource areas serve to protect.

##### 2. Definitions, Critical Characteristics and Boundary

- (a) A Bank is the portion of the land surfaces which normally abuts and confines a water body. A Bank may be partially or totally vegetated, or it may be comprised of exposed soil, gravel, stone or sand.
- (b) The physical characteristics of a Bank, as well as its location, as described in the foregoing subsection 1 are critical to the protection of the interests specified in subsection 1.
- (c) The upper boundary of a Bank is the first observable break in the slope above the mean annual flood level. The lower boundary of a Bank is the mean annual low level.

##### 3. Any proposed work, permitted by the Commission, on a bank or within the Buffer Zone Resource Area of the upper boundary of a bank, shall not impair the following:

- (a) the physical stability of the bank;
- (b) the water carrying capacity of the existing channel within the bank;
- (c) ground water and surface water quality; and
- (d) the capacity of the bank to provide breeding habitat, escape cover and food for fisheries.

## **B. Vegetated Wetlands (Wet Meadows, Marshes, Swamps, and Bogs)**

### 1. Preamble

Vegetated Wetlands are likely to be significant to wildlife, public or private water supply, to ground water supply, to flood control, to storm damage prevention, to prevention of pollution, to the protection of fisheries, and to the protection of shellfish.

The plant communities, soils and associated low, flat topography of Vegetated Wetlands remove or detain sediments, nutrients (such as nitrogen and phosphorous) and toxic substances (such as heavy metal compounds) that occur in runoff and flood waters.

Some nutrients and toxic substances are detained for years in plant root systems or in the soils. Others are held by plants during the growing season and released as the plants decay in the fall and winter. This latter phenomenon delays the impacts of nutrients and toxins until the cold weather period, when such impacts are less likely to reduce water quality.

Vegetated Wetlands are areas where ground water discharges to the surface and where, under some circumstances, surface water discharges to the ground water.

The profusion of vegetation and the low, flat topography of Vegetated Wetlands slow down and reduce the passage of flood waters during periods of peak flows by providing temporary flood water storage, and by facilitating water removal through evaporation and transpiration. This reduces downstream flood crests and resulting damage to private and public property. During dry periods the water retained in Vegetated Wetlands is essential to the maintenance of base flow levels in rivers and streams, which in turn is important to the protection of water quality and water supplies.

Wetland vegetation provides shade that moderates water temperatures important to fish life. Wetlands flooded by adjacent water bodies and waterways provide food, breeding habitat and cover for fish. Fish populations in the larval stage are particularly dependent upon food provided by overbank flooding which occurs during peak flow periods (extreme storms), because most river and stream channels do not provide quantities of the microscopic plant and animal life required.

Wetland vegetation supports a wide variety of insects, reptiles, amphibians, mammals and birds which are a source of food for important game fish. Bluegills (*Lepomis macrochirus*), pumpkin seeds (*Lefomis gibbosus*), yellow perch (*Perca flavescens*), rock bass (*Ambloplites rupestris*) and all trout species feed upon nonaquatic insects. Largemouth bass (*Micropterus salmoides*), chain pickerel (*Esox Niger*) and northern pike (*Esox lucius*) feed upon small mammals, snakes, nonaquatic insects, birds and amphibians.

Vegetated Wetlands, together with land within the Buffer Zone Resource Area of a vegetated wetland, serve to moderate and alleviate thermal shock and pollution resulting from runoff from impervious surfaces which may be detrimental to wildlife, fisheries, and shellfish downstream of the vegetated wetland.

The maintenance of base flows by vegetated wetlands is likely to be significant to the maintenance of a proper salinity ratio in estuarine areas downstream of the vegetated wetland. A proper salinity ratio, in turn, is essential to the ability of shellfish to spawn successfully and therefore to provide for the continuing procreation of shell fisheries.

Land within the Buffer Zone Resource Area of a Vegetated Wetland is likely to be significant to the protection and maintenance of vegetated wetlands, and therefore to the protection of the interests which these resource areas serve to protect.

## 2. Definition, Critical Characteristics and Boundary

- (a) Vegetated Wetlands are freshwater wetlands. The types of freshwater wetlands are wet meadows, marshes, swamps and bogs. They are areas where the topography is low and flat, and where the soils are annually saturated. The ground and surface water regime and the vegetational community which occur in each type of freshwater wetland are specified in Section 3.02 (2) (c) 1 below.

The physical characteristics of Vegetated Wetlands, as described in the foregoing subsection 1, are critical to the protection of the interests specified in subsection 1 above.

The boundary of Vegetated Wetlands is the line within which 50 percent or more of the vegetational community consists of the wetland plant species identified in paragraphs (b) through (e), below:

- (b) The term "bogs" as used in this section shall mean areas where standing or slowly running water is near or at the surface during a normal growing season and where a vegetational community has a significant portion of the ground water or surface covered with sphagnum moss (*Sphagnum*) and where the vegetational community is made up of a significant portion of one or more of, but not limited to nor necessarily including all, of the following plants or groups of plants: aster (*Aster nemoralis*), azaleas (*Rhododendron canadense*

and *R. viscosum*), black spruce (*Picea mariana*), bog cotton (*Eriophorum*), cranberry (*Vaccinium macrocarpon*), highbush blueberry (*Vaccinium corymbosum*), larch (*Larix laricina*), laurels (*Kalmia angustifolia* and *K. polifolia*), leatherleaf (*Chamaedaphne calyculata*), orchids (*Arethusa*, *Calopogon*, *Pogonia*), pitcher plants (*Sarracenia purpurea*), sedges (*Cyperaceae*), sundew (*Droseraceae*), sweet gale (*Myrica Gale*), white cedar (*Chamaecyparis thyoides*).

- (c) The term "swamps" as used in this section shall mean areas where ground water is at or near the surface of the ground for a significant part of the growing season or where runoff water from surface drainage frequently collects above the soil surface, and where a significant part of the vegetational community is made up of, but not limited to nor necessarily include all of the following plants or groups of plants: alders (*Alnus*), ashes (*Fraxinus*), azaleas (*Rhododendron canadense* and *R. Viscosum*), black alder (*Ilex verticillata*), black spruce (*Picea mariana*), button bush (*Cephalanthus occidentalis*), American or white elm (*Ulmus americana*), white hellebore (*Veratrum viride*), hemlock (*Tsuga canadensis*), highbush blueberry (*Vaccinium corymbosum*), larch (*Larix laricina*), cowslip (*Caltha palustris*), poison sumac (*Vernix toxicodendron*), red maple (*Acer rubrum*), skunk cabbage (*Symplocarpus foetidus*), sphagnum mosses (*Sphagnum*), spicebush (*Lindera Benzoin*), black gum tupelo (*Nyssa sylvatica*), sweet pepper bush (*Clethra alnifolia*), white cedar (*Chamaecyparis thyoides*), willow (*Salicaceae*), common reed (*Phragmites communis*)
- (d) The term "wet meadows" as used in this section where ground water is at the surface for a significant part of the growing season and near the surface throughout the year and where a significant part of the vegetational community is composed of various grasses, sedges and rushes; made up of, but not limited to nor necessarily including all, of the following plants or groups of plants: blue flag (*Iris*), vervain (*Verbena*), thoroughwort (*Eupatorium*), dock (*Rumex*), false loosestrife (*Ludwigia*), hydrophilic grasses (*Gramineae*), loosestrife (*Lythrum*), marsh fern (*Dryopteris thelypteris*), rushes (*Juncaceae*), sedges (*Cyperaceae*), sensitive fern (*Onoclea sensibilis*), smart weeds (*Polygonum*), jewelweed (*Impatiens capensis*).
- (e) The term "marshes" as used in this section, shall mean areas where a vegetational community exists in standing or running water during the growing season and where a significant part of the vegetational community is composed of, but not limited to nor necessarily including all, of the following plants or groups of plants: arums (*Araceae*), bladder worts (*Utricularia*), bur-reeds (*Sparganiaceae*), button bush (*Cephalanthus occidentalis*), cattails (*Typha*), duck weeds (*Lemnaceae*), eelgrass (*Vallisneria*), frog's-bit (*Hydrocharitaceae*), horsetails (*Equisetaceae*), hydrophilic grasses (*Gramineae*), leatherleaf (*Chamaedaphne calyculata*), pickerel weeds (*Pontederiaceae*), pipeworts (*Eriocaulon*), pond weeds (*Potamogeton*), rushes

(Juncaceae), sedges (Cyperaceae), smart weeds (Polygonum), sweet gale (Myrica gale), water milfoil (Halagraceae), water lilies (Nymphaeaceae), water start worts (Callitrichaceae), water willow(Decodon verticilatus).

3. Any proposed work, permitted by the Commission, in a vegetated wetland or within 100 feet of a vegetated wetland shall not destroy any portions of said vegetated wetland, nor shall the proposed work impair in any way the vegetated wetland's ability to perform any of the functions in section 1 above.

### **C. Land Under Water Bodies (under any creek, river, stream, pond or lake, flats or ditch)**

#### 1. Preamble

Land Under Water Bodies and Waterways is likely to be significant to wildlife, public and private water supply, to ground water supply, to flood control, to storm damage prevention, to prevention of pollution and to the protection of fisheries.

Where Land Under Water Bodies and Waterways is composed of pervious material, such land represents a point of exchange between surface and ground water.

The physical nature of Land Under Water Bodies and Waterways is highly variable, ranging from deep organic and fine sedimentary deposits to rocks and bedrock. The organic soils and sediments play an important role in the process of detaining and removing dissolved and particulate nutrients (such as nitrogen and phosphorous) from the surface water above. They also serve as traps for toxic substances (such as heavy metal compounds).

Land Under Water Bodies and Waterways, in conjunction with banks, serves to confine flood water within a definite channel during the most frequent storms. Filling within this channel blocks flows which in turn causes backwater and overbank flooding during such storms. An alteration of Land Under Water Bodies and Waterways that causes water to frequently spread out over a larger area at a lower depth increases the amount of property which is routinely flooded. Additionally, it results in an elevation of water temperature and a decrease in habitat in the main channel, both of which are detrimental to fisheries, particularly during periods of warm weather and low flows.

Land under ponds and lakes are vital to a large assortment of warm water fish during spawning periods. Species such as largemouth bass (*Micropterus salmoides*), smallmouth bass (*Micropterus dolomieu*), blue gills (*Lepomis macrochirus*), pumpkin seeds (*Lepomis gibbosus*), black crappie (*Pomoxis nigromaculatus*) and rock bass (*Ambloplites rupestris*) build nests on the lake and bottom substrates within which they shed and fertilize their eggs.

Land within the Buffer Zone Resource Area of any bank abutting land under a water body is likely to be significant to the protection and maintenance of land under a water body, and therefore to the protection of the interests which these water bodies serve to protect.

2. Definition, Critical Characteristics and Boundaries

- (a) Land Under Water Bodies is the land beneath any creek, river, stream, pond, lake or ditch. Said land may be composed of organic muck or peat, fine sediments, gravel or rock.
- (b) The physical characteristics and location of Land Under Water Bodies and Waterways specified in the foregoing subsection 1 are critical to the protection of the interests specified in subsection 1 above.
- (c) The boundary of Land Under Water Bodies is the mean annual low water level.

3. Any proposed work, permitted by the Commission, on land under a water body shall not impair the following:

- (a) The water carrying capacity within the defined channel, which is provided by said land in conjunction with the banks;
- (b) Ground and surface water quality; and
- (c) The capacity of said land to provide breeding habitat, escape cover and food for fisheries.

**D Bordering Land Subject to Flooding**

1. Preamble

Bordering Land Subject to Flooding is an area which floods from a rise in a bordering waterway or water body. Such areas are likely to be significant to flood control and storm damage prevention. Bordering Land Subject to Flooding provides a temporal storage area for flood water which has overtopped the bar of the main channel of a creek, river or stream or the basis of a pond or lake. During periods of peak runoff, flood waters are both retained (i.e., slowly released through evaporation and percolation) and detained (slowly released through surface discharge) by Bordering Land Subject to flooding. Over time, incremental filling of these areas causes increases in the extent and level of flooding by eliminating flood storage volume or by restricting flows, thereby causing increases in damage to public and private properties.

2. Definitions, Critical Characteristics and Boundaries

Bordering Land Subject to Flooding is an area with low, flat topography adjacent to and inundated by flood waters rising from creeks, rivers, streams, ponds, lakes or

water courses. It extends from the banks of these waterways and water bodies; where a bordering vegetated wetland occurs, it extends from said wetland.

The topography and location of Bordering Land Subject to Flooding are critical to the protection of the interests specified in Section 1 above.

The boundary of Bordering Land Subject to Flooding is the estimated maximum lateral extent of flood water which will theoretically result from the statistical 100-year frequency storm. Said boundary shall be that determined by reference to the most recently available flood profile data prepared for the community within which the work is proposed under the National Flood insurance Program (NFIP, currently administered by the Federal Emergency Management Agency, successor to the U.S. Department of Housing and Urban Development). Said boundary, so determined, shall be presumed accurate. This presumption may be overcome only by credible evidence from a registered professional engineer or other professional competent in such matters.

Where NFIP Profile data is unavailable, the boundary of Bordering Land Subject to Flooding shall be the maximum lateral extent of flood water which has been observed or recorded.

3. Any proposed work, permitted by the Commission, on land subject to flooding shall not result in the following:
  - (a) Flood damage due to filling which causes lateral displacement of water that would otherwise be confined within said area.
  - (b) An adverse effect on public and private water supply or ground water supply, where said area is underlain by pervious material.
  - (c) An adverse effect on the capacity of said area to prevent pollution of the ground water, where the area is underlain by pervious material which in turn is covered by a mat of organic peat and muck.

## **E Isolated Land Subject to Flooding**

### 1. Preamble

Isolated Land Subject to Flooding is an isolated depression or a closed basin which serves as a ponding area for runoff or high ground water which has risen above the ground surface. Such areas are likely to be locally significant to flood control and storm damage prevention. In addition, where such areas are underlain by pervious materials they are likely to be significant to public or private water supply and to ground water supply. Finally, where such areas are underlain by pervious material covered by a mat of organic peat and muck, they are also likely to be significant to the prevention of pollution.

Isolated Land Subject to Flooding provides a temporary storage area where runoff and high ground water pond and slowly evaporate or percolate into the substrate. Filling causes lateral displacement of the ponded water onto contiguous properties, which may in turn result in damage to said properties.

Isolated Land Subject to Flooding, where it is underlain by pervious material, provides a point of exchange between ground and surface waters. Contaminants introduced into said area, such as septic system discharges and road salts, find easy access into the ground water and neighboring wells, Where these conditions occur and a mat of organic peat or muck covers the substrate of the area, said mat serves to detain and remove contaminants which might otherwise enter the ground water and neighboring wells.

2. Definitions, Critical Characteristics and Boundaries

- (a) Isolated Land Subject to Flooding is an isolated depression or closed basin without an inlet or an outlet. It is an area that stores at least ¼ acre/foot of water to an average depth of 6 inches at least once a year. It may be vegetated or un-vegetated.
- (b) Isolated Land Subject to Flooding may be underlain by pervious material, which in turn may be covered by a mat of organic peat or muck.
- (c) The characteristics are critical to the protection of the interests specified in Section 1 above.
- (d) The boundary of Isolated Land Subject to Flooding is the perimeter of the largest observed or recorded volume of water confined in said area.

3. Any proposed work, permitted by the Commission, on land subject to flooding shall not result in the following:

- (a) Flood damage due to filling which causes lateral displacement of water that would otherwise be confined within said area.
- (b) An adverse effect on public and private water supply or ground water supply, where said area is underlain by pervious material.
- (c) An adverse effect on the capacity of said area to prevent pollution of the ground water, where the area is underlain by pervious material which in turn is covered by a mat of organic peat and muck.

**PART III- FOR BUFFER ZONE RESOURCE AREA**

Buffer Zone Resource Area Performance Standards

(1) Presumption of 100 Foot Buffer Zone Resource Area

- (a) The Conservation Commission presumes that an undisturbed forested or naturally vegetated 100-foot buffer zone is necessary to protect the interests of these regulations and the Bylaw. To maintain the protection of the

interests of the regulations, the Commission is adopting the following standards for work within the Buffer Zone Resource Area.

1. The area within 35 feet of a resource area is a no-touch zone. No development, alteration, filling, dredging, or removal is permitted within the 35-foot no-touch zone.
2. Areas within 35-50 feet of the 100-foot Buffer Zone Resource Area shall be no build zones.
3. For work within 50-100 feet of the 100-foot Buffer Zone Resource Area, the Commission may allow activities provided the applicant demonstrates that there are no practical alternatives to locating the activity within the Buffer Zone Resource Area. The applicant must demonstrate that the activity contributes to the protection of the interests of the Act. The Commission may require mitigation for any activity proposed within the Buffer Zone Resource Area.
4. Nothing in this regulation shall prevent the Conservation Commission from prohibiting activity anywhere within the 100 foot Buffer Zone Resource Area defined by the Bylaw and these regulations including, without limitation, the area between the 35 to 100 foot buffer zone.
5. Minor activities within the 35-100 foot area within the Buffer Zone Resource Area and outside any area specified in Section 3A 1 through 5 shall not be subject to regulation. Minor activities include the following:
  - Septic system upgrade and repair provided the system was in existence prior to the effective date of these regulations.
  - Unpaved walkways for pedestrian use.
  - Fencing, provided it does not constitute a barrier to wildlife movement, stonewalls, stacks of cordwood.
  - Vista pruning, as defined in the MA Wetlands Protection Act and regulations at 310 CMR 10.04 provided the activity is more than 50 feet from the mean annual high water line of a river or a vegetated wetland.
  - The conversion of lawns to uses accessory to single family dwellings including decks, sheds, patios and pools.
  - The conversion of impervious surfaces to pervious areas.
  - Planting native vegetation.
  - Activities that are temporary in nature and have negligible impacts and are necessary for planning and design purposes.

## **SECTION 11. SPECIFIC ACTIVITIES REGULATED**

### **A. Replication of Bordering Vegetated Wetland**

#### 1. Preamble.

There is at present no published scientific evidence to substantiate that the process of wetland replication is a viable, realistic, or reasonable substitute for a mature, established wetland. Thus, the Commission's approach to replication will be cautious until such evidence is available. The following standards are established in an attempt to insure the viability and success of any replication project in the Town of Plymouth. In addition, Section X of the town Wetland Protection By-law sets forth additional standards for the replication of bordering vegetated wetlands.

2. The Commission will make a determination as to whether the proposed wetland replication is necessary. The justification for the destruction of a wetland must be clear and convincing that there is no available alternative.
3. The edge of the proposed replicated wetland must be at least 100 feet from any property line unless written permission is granted by the adjoining property owner.
4. In areas within the Aquifer Protection District as defined in the town's Zoning Bylaws, Ch. 205, Article VI, s.205-57, no Bordering Vegetated Wetland may be impaired or destroyed.

#### 5. Submittals:

The applicant must provide the Commission with;

- (a) competent and complete analysis and survey of the area being destroyed, drained, or filled; and the area selected for replication as it exists before replication;
  - (b) A replication plan including a complete hydrological, geological, chemical, and biological survey and analysis.
  - (c) A complete record of the area being replicated and the area being filled. This shall include, but not necessarily limited to, photographs, soil profiles, water elevations, and vegetative cover for the area before, during and after replication.
6. The replication area must be the same type of wetland in form and vegetative composition and hydrologically connected to the filled, dredged, or destroyed wetland.
  7. The applicant must show that alteration of said area for new replication will have no adverse effect on: flood protection, protection of private or public water supply, wildlife habitat, other protective vegetation and/or adjacent properties and habitats.

8. The new wetland must be created before the existing wetland is filled, drained or destroyed (unless material from the existing wetland is to be used in the creation of the new wetland). Completion shall include at minimum the creation of a natural wetlands soil profile, grading to natural water level and planting of species as conditioned by the Commission. In no case may other activities be undertaken until the replication is complete.
9. The applicant must monitor the replicated wetland for a minimum of 5 years and submit annual reports to the Commission. These reports must assess the soil, water, and plant conditions of the replicated wetland. The applicant may be required, on an annual basis, to remedy any deficiencies at the replication site.

## **B. Limited Access Projects**

### 1. Preamble

The project must be included in one of the following categories:

- (a) Construction of new road drainage structures including culverts and catchbasins, drainage easements, ditches, watercourses and artificial water conveyance structures to ensure flow capacity.
- (b) Construction of a new roadway, through a resource area of minimum legal and practical width acceptable to the Planning Board, where reasonable alternative means of access from a public way to an upland area of the same owner is unavailable. Such roadway or driveway shall be constructed in a manner which does not restrict the flow of water or the recharge of groundwater on-site.
- (c) New construction of underground or overhead public utilities, such as electrical distribution or transmission lines, or communication, sewer, water and natural gas line, may be permitted, in accordance with the following general conditions and any additional conditions deemed necessary by the Commission:
  - (i) The Commission may require a reasonable alternative route with fewer adverse effects.
  - (ii) The best available mitigation measure shall be used to minimize adverse effects during construction.
  - (iii) All surface vegetation and contours of the area shall be substantially restored.
  - (iv) All sewer lines shall be constructed to minimize inflow and leakage.
- (d) The construction of wildlife ponds impoundments designed to enhance the wetland values of this by-law. Proposed projects will be required to submit supporting information to verify the project's benefit to wetland wildlife habitat values.

2. Area:

When limited access projects are permitted a minimum replication area of twice that of the area being lost will be required.

3. Submittals:

The applicant must provide the Commission with:

- (a) Written documentation from the Planning Board that the new roadway or driveway is of minimum legal and practical width acceptable to the Planning Board.
- (b) Documentation of alternative accesses requested and the environmental or other reasons for denial by the Planning Board.
- (c) Presentation of alternative ways of constructing and or obtaining access (e.g.: bridge, pilings), and design of access (e.g.: minimum width, height, length).
- (d) Presentation of methods explored to minimize wetlands Impacts and rationale for selected design decision. Applicants should explore the use of piling supports, bridging, box culverts with vertical walls, etc.
- (e) Construction methodology must be described in full. Proposals for coffer damming, type of equipment, size of equipment, etc. should be included. Construction area shall be the limits of the roadway.

### **C. Detention Basins**

1. Preamble:

For the purposes of these regulations, a detention basin is defined as a manmade, basin-like flood control structure which is designed to collect stormwater runoff and to detain it for a specified period of time during major storm events. It also is designed to minimized contaminants from leaving the project site. The purpose of these regulations is to establish guidelines and standards for the design and construction of detention basins. Given variations in soil conditions and topography, no "standard basin" is applicable in all cases. However, design assumptions, calculation formulas and construction details can be applied to the majority of designs. A detention basin is not the only method of controlling excess runoff from developments. Before considering the use of a detention basin, other methods of controlling runoff including, but not limited to, stormwater leaching pits and natural or man-made swales shall be investigated. A detention basin should be used only if alternate, low-maintenance methods are not feasible. The applicant shall demonstrate, through a preponderance of credible evidence, that alternative solutions have been seriously considered. Detention basins will not be allowed within a Resource Area or in the Buffer Zone Resource Area.

## **D. Vernal Pools**

### 1. Preamble.

Vernal Pools may be found among land subject to flooding, and at various locations throughout the 100-year floodplain, as well as in other places. It is likely that the general area in which vernal pools are found, as well as the pools themselves, may fulfill functions in addition to those which are specific to the pools, such as providing temporary storage areas for flood water and/or ponding areas for run-off or high ground water, likely to be locally significant to flood control and storm damage prevention. Vernal pools are essential breeding areas for certain amphibians which require isolated areas that are generally flooded for at least two continuous months in the spring and/or summer and are free from fish predators. Most of these amphibians remain near the breeding pool during the remainder of their lifecycle. Many reptiles, birds and mammals also feed here.

### 2. Definition:

See Section 5, Vernal Pool.

### 3. Goals:

The Commission's goal is to protect vernal pools' ability to perform their functions of:

- (a) flood control, storm damage prevention, recharge of public, private and ground water supplies, where underlain by pervious material;
- (b) prevention of pollution, when underlain by pervious material covered by an organic layer of peat or muck;
- (c) temporary storage areas for run-off and high ground water;
- (d) provide, protect, and maintain wildlife habitat, including settings for potential vernal pools;
- (e) provide food, shelter, migratory, overwintering and breeding areas.

### 4. Performance Standards:

- (a) A protective radius for vernal pools is established as the area within a line parallel to the boundary of the vernal pool measuring 200 feet from that boundary. Any alteration to the protective radius is presumed to be a threat to the ability of the vernal pool to perform its functions. This presumption may be overcome only by expert testimony to the contrary demonstrating that the project will not have an adverse effect on such vernal pool or its protective radius by:
  - (i) affecting the ability of the vernal pool to hold water; and/or

- (ii) affecting the quantity or quality of the water flowing to the vernal pool; and/or;
  - (iii) affecting the ability of the vernal pool and its protective radius to provide food, shelter, overwintering and breeding areas for wildlife.
- (b) Notwithstanding the above, the first 100 feet of the 200 foot protective radius shall be a no-touch zone.
- (c) Notwithstanding the above, if a building already exists within the protective radius of a vernal pool, a project accessory to the existing building may be permitted; provided that such work is conducted using best management practices, minimizes adverse effects on the vernal pool and provides mitigation which contributes to the interests of these regulations, acceptable to the Commission.

#### **E. Slope/Grades Near Inland Wetlands**

Side slopes within a Resource Area of the Buffer Zone Resource Area shall have a finished grade according to the following:

1. No greater than a 3:1 slope for grassed and mulched slopes.
2. No greater than a 2:1 slope for all stone rip-rapped slopes. Stone used for rip-rap will be hard, durable, angular in shape; resistant to weathering, free from overburden, spoil shale and organic material, and shall be from 4 inches to 8 inches in diameter. Neither breadth nor thickness of a single stone should be less than one-third its length. Round stone is not acceptable. The Commission strongly encourages a 3:1 slope unless the rip-rapped slope will eliminate the proposal for wetland filling.

#### **SECTION 12. WAIVER**

The Conservation Commission may at its discretion waive one or more of these regulations when, in the Commission's opinion, the proposed work potentially represents a significant ecological improvement when compared to existing conditions, or will not adversely affect any areas subject to protection within these regulations. A waiver may only be granted in exceptional circumstance and only upon a written request. Said request will be submitted to the Commission and must demonstrate that there are no alternatives **and** that the proposed work will contribute to the interests for which the resource area is significant.

### **SECTION 13. SEVERABILITY**

The invalidity of any section or provision of the Regulations shall not invalidate any other sections or provision thereof, nor shall it invalidate any Permit or Determination which previously has been issued. If any Court of competent jurisdiction shall invalidate any provision of the Bylaw or of the Regulations, the Commission shall promulgate additional regulations that are designed to comply with any Court decision, to be presented to the next Town Meeting for adoption after such invalidation.

### **SECTION 14. EFFECTIVE DATE**

The effective date of these Rules and Regulations shall be April 23, 1990\* as voted at Annual Town Meeting. The provisions of these Regulations shall apply to all work performed, and all Requests, Notices, or other actions filed or requested of the Commission related thereto, on or after this date.

\*Amended at the Annual Town Meeting, April 4, 1994; amended at the Annual Town Meeting, April 4, 1998; amended at the Annual Town Meeting, April 8, 2001; amended at the Annual Town Meeting on April 5, 2005; amended at a meeting of the Conservation Commission on May 18, 2010; and amended at a meeting of the Conservation Commission on September 14, 2010.