CHAPTER 505
MARSHFIELD
WETLANDS
PROTECTION
REGULATIONS

CHAPTER 505

MARSHFIELD WETLANDS PROTECTION REGULATIONS

[HISTORY: Adopted by the Conservation Commission of the Town of Marshfield 5-15-1990; as amended through 5-1-2008. Subsequent amendments noted where applicable.]

GENERAL REFERENCES

Wetlands protection — See Ch. **294'**
Zoning — See Ch. **305**.
Seawalls — See Ch. **217**
Subdivision of land — See Ch. **405**.

Part I

PURPOSE AND PROCEDURES

ARTICLE 1.0
Authority

§ 505-101.1. Authority to promulgate rules; relationship to established regulations.

These Wetland Protection Regulations (hereinafter referred to as "the Town of Marshfield Wetland Protection Regulations:" or "MWPR") are promulgated by the Town of Marshfield Conservation Commission ("Commission") pursuant to the authority granted to it under §**294-4C** of the Town of Marshfield Wetlands Protection Bylaw, codified in the Town Code of Marshfield, Division 2, General Bylaws, Chapter **294** (hereinafter referred to as "the Bylaw") and under the Home Rule authority of the Town of Marshfield and other federal and state, statutes. These Regulations shall complement the Bylaw by setting forth controls in addition to those already promulgated by the Department of Environmental Protection (DEP) under MGL c. 131, § 40 (the "Wetlands Protection Act"). These Regulations also protect resource areas under the Wetlands Protection Act as well as additional resource areas and wetland values and specify standards and procedures stricter than those under the Wetlands Protection Act and its implementing regulations at 310 CMR 10.00.

ARTICLE 2.0
Purpose

§ 505-102.1. Provision of additional definitions, procedures, standards and controls.

These Regulations provide additional definitions, procedures, standards and control activities for work within those areas subject to protection under the Bylaw. They further seek to minimize and/or prevent any activities and the cumulative impacts of activities from having significant adverse or cumulative adverse effects on any of the Resource Areas, including the Buffer Zone, or values protected by the Bylaw. Any project or activities subject to jurisdiction of the Commission shall comply with these Regulations and all other applicable laws, bylaws and regulations.

§ 505-102.2. Implementation of bylaw provisions.

The Bylaw sets forth a public review and decision-making process by which activities affecting areas subject to protection under the Bylaw are to be regulated in order to contribute to the protection of the following Resource Areas and their wetland values:

A. Aesthetics.

B. Agriculture.

C. Aquaculture.

D. Erosion control.

E. Fish and fisheries.

F. Fish habitats.

G. Flood control.

H. Groundwater.

I. Prevention of water pollution, including coastal storm flowage.

J. Prevention of storm damage.

K. Private water supply.

L. Public safety.

M. Public water supply.

N. Recreation.

O. Sedimentation control.

P. Shellfish.

Q. Shellfish habitats.

R. Threatened, Rare or Endangered plant species.

S. Wildlife including Species of Special Concern, Threatened, Rare and Endangered animals.

T. Wildlife habitats.

§ 505-102.3. Effect on other provisions.

Activities that may not require review or permitting under the Wetlands Protection Act, the Rivers Protection Act, the federal or state Clean Water Act, or other federal, state or local statutes are not assumed to be exempt from these Regulations. These Regulations are intended solely for use in administering the Bylaw and; nothing contained herein should be construed as preempting or precluding other protections afforded to wetlands or other natural Resource Areas by other Town of Marshfield bylaws or regulations.

ARTICLE 3.0
Jurisdiction

§ 505-103.1. Areas subject to protection.

The following Resource Areas are subject to protection under the Bylaw and these Regulations:

A. Any freshwater or Coastal Wetland, isolated wetland, beach, dune, flat, marsh, wet meadow, bog, swamp, vernal pool, creek, river, stream, pond, lake, estuary, or ocean;

B. Any bank bordering on a freshwater or Coastal Wetland or water body;

C. Land under Water Bodies and Waterways, including but not limited to, Land Under the Ocean, ponds, lakes, rivers, streams, creeks, any Freshwater or Coastal Wetland, and estuaries;

D. Land subject to flooding or inundation by groundwater or surface water, including but not limited to, freshwater wetlands, isolated wetlands, beaches, wet meadows, marsh, swamps, bogs, vernal pools, streams, rivers, creeks, ponds, lake, or reservoirs;

E. Land bordering on the ocean, including but not limited to beaches, dunes, Tidal Flats, coastal bank, salt Marshes, salt meadows, estuaries;

F. Land within 100 feet (hereinafter referred to as the "Buffer Zone") from any of the aforementioned Resource Areas;

G. Land Subject to tidal action, Coastal Storm Flowage, or flooding, including but not limited to the coastal floodplain (FEMA Flood Zones A and V; or subject to flooding or inundation by groundwater or surface water whether Bordering or Isolated Land Subject to Flooding [as shown on the Flood Insurance Rate (FIRM) Maps for the Town of Marshfield]. These Resource Areas have no Buffer Zone; or

H. Land within 200 feet of any perennial stream, creek or river including the North River (hereinafter referred to as the "Riverfront Area"). This Resource Area has no Buffer Zone.

§ 505-103.2. Activities subject to regulation.

The following Activities are subject to regulation under the Bylaw and Regulations:

A. Any activity proposed or undertaken within an area subject to regulation under the Bylaw and these Regulations.

B. Any Activity as likely to have a significant adverse or cumulative adverse effect within Resource Areas or wetland values as determined by the Commission.

C. Any Activity, including but not limited to any and all of the following activities when undertaken to, upon, within or affecting Resources Areas or their wetland values, as determined by the Commission:

(1) Removal, excavation, or dredging of soil, sand, gravel, or aggregate materials of any kind;

(2) Changing of preexisting drainage characteristics, flushing characteristics, salinity distribution, sedimentation patterns, flow patterns, or flood-retention characteristics;

(3) Drainage, or other disturbance of water level or water table;

(4) Dumping, discharging, or filling with any material which may degrade water quality;

(5) Placing of fill, or removal of material;

(6) Driving of piles, construction or expansion or repair of buildings or structures or construction of any kind whether it be for industrial, commercial, residential, recreational or other purposes, regardless of its size;

(7) Placing of obstructions or objects in any water body, surface water and/or groundwater hydrology of any Resource Area;

(8) Significant damage, destruction or removal of plant life, including but not limited to, cutting or trimming of trees, shrubs and/or salt water and freshwater aquatic vegetation;

(9) Changing temperature, biochemical oxygen demand, or other physical, biological, or chemical characteristics of any water;

(10) Any activities, changes, or work which may cause or tend to contribute to pollution of any water body, surface water and/or groundwater; and

(11) Incremental activities which cause, or may cause, a cumulative adverse impact on the Resource Areas and wetland values protected by the bylaw and these Regulations.

§ 505-103.3. Activities outside areas subject to protection under bylaw.

Any activity proposed or undertaken outside the areas specified in MWPR Part I Article 3.0 is not subject to regulation under the Bylaw, and does not require the filing of a Conservation Permit Application, as defined herein, unless and until that activity actually alters a Resource Area. In the event that the Commission determines that such activity has, in fact, altered a Resource Area referenced in MWPR Part I Article 3.0 it shall impose such conditions on the Activity or any portion thereof as it deems necessary to contribute to the protection of the wetland values identified in these Regulations.

§ 505-103.4. Exceptions.

Exceptions may be made at the discretion of the Commission or the Conservation Administrator for maintaining, repairing or replacing, but not substantially changing or enlarging, an existing and lawfully located structure or facility and/or for *de minimis* activities that in the judgment of the Conservation Commission, and after review and approval of the Conservation Commission at a public meeting, will have minimal, if any, adverse impact on a Resource Area. It is the responsibility of the owner of the property or the person or entity proposing any such work to notify the Commission or the Conservation Administrator in writing in advance of such proposed activities and provide all evidence necessary to support the claim of no substantial change.

§ 505-103.5. Exemptions.

The following activities shall be exempt from the setback zones of any Resource Area set forth in the Bylaw or these Regulations:

A. Work related to the public water supply or municipal sewer systems.

B. Work on existing structures related to stormwater management, such as swales, retention and detention basins, drainage pipes and headwalls.

C. Work related to maintaining, repairing or replacing, but not substantially changing or enlarging, an existing and lawfully located structure or facility used in the service of the public to provide electric, gas, water, or telephone service, provided that the written notice has been given to the Commission prior to commencement of work.

D. Work on public open space nature trails, observation platforms, boardwalks, footbridges or other such monuments as may be approved by the Commission.

E. Seawalls, bulkheads, and revetments.

F. Repairs or improvements to existing on-site septic systems and their related structures in order to comply with current standards where there is no other viable alternative. No increase in the design flow of the dwelling or structure shall be permitted.

ARTICLE 4.0
Promulgation of Regulations

§ 505-104.1. Adoption of additional regulations, policies, fees and standards.

The Commission may adopt such additional definitions, regulations, policies, fees, and performance standards as it may deem necessary to protect the wetland values of these Regulations. Said definitions, regulations, fees and performance standards shall become effective upon publication following a public hearing for which public notice has been provided. Policies may be adopted from time to time by a majority vote of the Commission.

ARTICLE 5.0
General Definitions

§ 505-105.1. Terms defined.

A. Definitions of selected words, terms and phrases used in these Regulations are provided below. Definitions of Resource Areas are also found in subsequent sections for each Resource Area. Capitalized terms used in these Regulations but not otherwise defined in these Regulations shall have the meanings set forth in the Massachusetts Wetlands Regulations at 310 CMR 10.00 et seq. Where applicable, the definitions, presumptions of significance, and performance standards, set forth in the Bylaw or the Massachusetts Wetlands Regulations, 310 CMR 10.00 et seq., are hereby incorporated herein only when no definitions, presumptions of significance or performance standards are given in these regulations.

B. As used in this chapter, the following terms shall have the meanings indicated:

Activity means any form of draining, dumping, dredging, damming, discharging, excavating, filling or grading; the erection, reconstruction or expansion of any buildings or structures; the driving of pilings; the construction or improvement of roads and other ways; the changing of run-off characteristics; the

intercepting or diverging of ground or surface water; the installation of drainage, sewage and water systems; the discharge of pollutants; the destruction of plant life and any other changing of the physical characteristics of land.

Aesthetics means the retention or improvement of natural conditions, including natural lighting, sound, odors and significant trees, 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 adverse or cumulative adverse effects on aesthetic values.

Agriculture means any work which produces food or other products for commerce or subsistence which occurs in, on, or within 100 feet of a resource area or which is directly or indirectly dependent upon wetlands values for proper agricultural functions, such as prevention of pollution or maintenance of adequate water flow for irrigation. Agriculture includes, but is not limited to the growing of crops, including cranberries, and the raising of livestock. Nonagricultural activities in or within 100 feet of resource areas shall not have a significant adverse or cumulative adverse effect on existing agriculture. Notwithstanding this definition, new or expanded agricultural activities shall not have a significant adverse or cumulative adverse effect on other wetlands values identified in the Bylaw.

Aquaculture is the growing, raising, breeding, storing, or producing of specified aquatic or marine organisms at specified locations for commercial, municipal, or scientific purposes as approved by appropriate agencies. Organisms in aquacultural use include, but are not limited to: shellfish, such as oysters, quahogs, clams, lobsters, mussels, scallops and crabs; finfish, such as trout, eel, herring, salmon, smelt and bass; amphibians, such as frogs; reptiles, such as turtles; seaweeds, such as Irish moss and dulse; edible freshwater plants, such as watercress; and plankton grown as a food source for other organisms. Activities in or within 100 feet of a resource area shall not have a significant adverse or cumulative adverse effect on existing permitted aquaculture. Notwithstanding this definition, new or expanded aquacultural activities shall not have a significant adverse or cumulative adverse effect on other wetlands values set forth in Chapter 294, Wetlands Protection By-Law.

Alter means to change the condition of any area subject to protection under these regulations. Examples of alterations include, but are not limited to, the following:

A. The changing of preexisting drainage characteristics, flushing characteristics, salinity distribution, sedimentation patterns, flow patterns and flood-retention areas;

B. The lowering of the water level or water table;

C. The destruction of vegetation, including eel grass;

D. The changing of water temperature, biochemical oxygen demand (BOD), or other physical, biological or chemical characteristics of any water;

E. Removal, excavation or dredging of soil, sand, gravel or aggregate material of any kind;

F. Dumping, discharging or filling with any material which may degrade water quality;

G. Placing of fill, or removal of material, which would Alter elevation;

H. Placing of obstructions or objects in water (other than boats, moorings, fish or shellfish traps, pens or trays used in conjunction with aquaculture, or aids to navigation);

I. Driving of piles, erection or repair of buildings or structures of any kind;

J. Application of pesticides or herbicides.

Applicant means any person who submits a Conservation Permit to the Commission, or on whose behalf such a permit is submitted to the Commission. The Commission, at its discretion, shall require the applicant, or the applicant's representative, to appear before the Commission at all stages of the permitting process. Failure to comply with this provision shall result in denial without prejudice.

Coastal Wetland means any bank, marsh, swamp, meadow, flat or other lowland, or shellfish habitat subject to tidal action or coastal storm flowage.

Cold-water Fishery means waters in which the mean of the maximum daily temperature over a seven-day period generally does not exceed 68ºF (20ºC) and, when other ecological factors are favorable (such as habitat) are capable of supporting a year-round population of cold-water stenothermal aquatic life such as trout. Waters designated as cold-water fisheries by the Department in 314 CMR 4.00: *Massachusetts Surface Water Quality Standards* and waters designated as cold-water fishery resources by the Division of Fisheries and Wildlife are cold-water fisheries. Waters where there is evidence based on a fish survey that a cold-water fish population and habitat exist are also cold-water fisheries. Cold-water fish include but are not limited to brook trout (*Salvelinus fontinalis*), rainbow trout (*Oncorhynchus mykiss*), brown trout (Salmo trutta), creek chubsucker (*Erimyzon oblongus*) and fallfish (*Semotilus corporalis*).

Conservation Permit means a Determination of Applicability (DOA), an Order of Resource Area Delineation (ORAD), an Order of Conditions (OOC), Mitigation Permit, as defined herein, and/or a written opinion issued by the Commission and/or by the Conservation Administrator with the approval of the Commission.

Cumulative Effects are activities regulated under this chapter which may be individually minor, but when considered in relation to other past, present or future activities in a given area may be significant in the aggregate.

***de minimis* activity** means any activity which, in the judgement of the Conservation Commission will have minimal, if any, adverse effect on a resource area does not require a conservation permit.

Department of Environmental Protection or DEP means the Commonwealth of Massachusetts Department of Environmental Protection or its successor entity in the event of any reorganization of the state agencies by the Commonwealth of Massachusetts.

Endangered Species means any plant or animal listed by the Massachusetts Division of Fisheries and Wildlife Natural Heritage and Endangered Species Program (NHESP) as endangered, threatened, or special concern.

Erosion and Sedimentation Control

A. **Erosion Control** is the ability of the wetland to buffer forces or processes which would threaten or cause to be threatened the stability of landforms and the soil and/or vegetation associated with wetlands and adjoining land areas, in particular, coastal and inland banks. Erosion can be caused by a wearing away of the surface soil or by undermining the interior portion of the landform. Activities in or within 100 feet of resource areas shall not have a significant adverse or cumulative adverse effect on natural erosion processes.

B. **Sedimentation Control** is the ability of wetlands to settle out sediments and other waterborne material by reducing water flow by passing it through vegetation or by diffusing flow and reducing velocity. Activities in or within 100 feet of resource areas shall not significantly accelerate or impede the rate of natural sedimentation.

Flood Control is the ability of wetlands to absorb, store and slowly release floodwaters to minimize peak flood levels. Flooding can be caused by precipitation or a rising water table. Activities within 100 feet of resource areas shall not alter the flood control value of wetlands significantly.

Groundwater is all subsurface water contained in natural geologic formations or artificial fill, including soil water in the zone of aeration. Activities in or within 100 feet of resource areas shall not significantly alter the existing quality or elevation of naturally occurring groundwater.

Minimize Adverse Effect means to make as small as possible, to achieve the least amount of a significant adverse or cumulative adverse effect that can be attained using best available measures or best practical measures, whichever is referred to in the pertinent section.

Mitigation means an activity approved by the Commission as part of the Conservation Permitting process to offset adverse impacts associated with the proposed work to the Resource Areas, or their wetland values under the Bylaw.

Mitigation Permit means a permit which allows the use of land within the buffer zone under a special exception to these regulations. Any intrusion into buffer zone setbacks or alteration of buffer zone habitat shall be considered adverse and shall be mitigated by counterbalancing beneficial actions which offset these adverse impacts by a minimum of 110%. Issuance of Mitigation Permits is allowed only in the Buffer Zone Resource Area and will only be granted after an affirmative vote of three fourths of the full Commission.

Naturally Vegetated Condition means an area on a lot or parcel of land, or portion thereof, that is left in a natural, undisturbed vegetative state; has existed in a primarily natural, undisturbed state, but has been or may be enhanced with indigenous plantings conducive to improved Wildlife Habitat according to a plan/report approved by the Commission; or has been disturbed, but is revegetated with indigenous plantings that will return the land to its pre-disturbed condition according to a plan/report approved by the Commission.

Navigation means the ability to traverse a waterway and is part of the wetland value of Recreation under the Bylaw.

Person is any individual, group of individuals, associations, partnership, corporation, company, business organization, trust, estate, the commonwealth or political subdivision thereof to the extent subject to

Town ordinances, administrative agency, public or quasi-public corporation or body, the Town of Marshfield, and any other legal entity, its legal representatives, agents, or assigns.

Pier means the entire structure of any pier, dock, wharf, walkway, bulkhead or float, and any part thereof including pilings, ramps, walkways, stairs, platforms, floats and/or tie-off pilings attached to the shore, including seasonal structures.

Polder means a low-lying tract of land enclosed by embankments known as “dikes” that forms an artificial hydrological entity, meaning it has no connection with outside water other than through man operated devices. In Marshfield, the Polder is that area identified as the Green Harbor Reclamation Area on the plan titled "Plan Showing Boundaries of Green Harbor Reclamation District," dated February 1925, Plymouth Registry of Deeds, Plan Book 1, Page 142

Private Water Supply is any source or volume of surface or ground water demonstrated to be in private use or shown to have potential for private use, including ground or surface water in the zone of contribution around a private well. Activities in or within 100 feet of a resource area shall not have a significant adverse or cumulative adverse effect on the quality of a private water supply.

Public Water Supply is any source or volume of surface or ground water demonstrated to be in public use or approved for water supply pursuant to MGL c. 111, § 160, by the Department of Environmental Quality Engineering Division of Water Supply, or demonstrated to have a potential for public use, in addition to all surface and ground water in zones of contribution. Activities within 100 feet of resource areas shall not have a significant adverse or cumulative adverse effect on the quality of a public water supply.

Qualified Consultant means an individual who, in the opinion of the Commission and by reason of education and experience, has developed skill or knowledge in a particular subject, so that he or she may form an opinion that will assist the Commission in finding of fact.

Rare Species Habitat means areas that are utilized by threatened, rare, or endangered plant or animal species, or Species of Special Concern; or species on the Watch List; or Priority Sites of Rare Species Habitat; or Exemplary Natural Communities (all of which are defined and determined by the Massachusetts Division of Fisheries and Wildlife, Natural Heritage and Endangered Species Program).

Recreation means the use and enjoyment of our natural surroundings in a manner consistent with their preservation. Recreational activities should not hinder access to coastal and inland resources. Activities that shall be considered part of the use and enjoyment of our natural surroundings in a manner consistent with their preservation shall include but not be limited to recreational boating, swimming and shellfishing. The Commission's analysis of the project's effect on the wetland value of recreation should be relative to a proposal's potential impacts on other protected wetland values, with priority given to enhancing and protecting those recreational values which are not detrimental to the continued natural functions of wetlands or their wetland values.

Resource Area means any of the areas specified in MWPR Part I Article 3.0. It is used synonymously with Areas Subject to Protection Under the Bylaw, each one of which is described in MWPR Part II.

Significant means plays a role. A Resource Area is significant to a wetland value when the Resource Area plays a role in the provision or protection of that wetland value.

Species of Special Concern means any species of plant or animal which has been documented by biological research and inventory to have suffered a decline that could threaten the species if allowed to continue unchecked or that occurs in such small numbers or with such a restricted distribution or specialized habitat requirements that it could easily become threatened within the commonwealth as defined by the Massachusetts Natural Heritage and Endangered Species Program (NHESP).

Storm Damage Prevention is the ability of wetland soils, vegetation and physiography to prevent 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. Activities in or within 100 feet of a resource area shall not have a significant adverse or cumulative adverse effect on storm damage protection.

Structure means a combination of materials assembled at a fixed location to give support or shelter, including but not limited to a building, bridge, driveway, trestle, tower, framework, retaining wall, tank, tunnel, stadium, reviewing stand, shed, platform, deck, fence, sign, flagpole, windmill, solar devices, tennis courts, swimming pools, impervious paved areas, utility pipeline, or anything requiring a building permit.

Surface Water Body is any area where water or ice stands or flows over the surface of the ground for at least five months of any calendar year except in times of severe, extended drought as defined in appropriate section of 310 CMR. Drainage ditches, exclusive of fish runs and intermittent streams, and impoundment areas which hold or pass water only during or for short periods following storms and which, owing to their relationship to groundwater, do not support wetland vegetation, are excluded from this definition.

Trust lands are lands impressed with public trust rights protected by the commonwealth, including great ponds; and tidelands, being present and former submerged lands and tidal flats lying between the natural high-water mark and the state limit of seaward jurisdiction. Tidelands include both flowed and filled tidelands, and privately owned and publicly owned tidelands.

Unvegetated Wetland Resource Areas are coastal areas, such as flats and unvegetated intertidal areas; coastal and freshwater beaches, dunes and banks; and land subject to flooding. Also, inland areas subject to flooding which do not support wetland vegetation, but which store at least 1/4-acre feet of water to an average depth of six inches at least once a year, and land areas two feet or less vertically above the high-water mark of any lake or pond defined by 310 CMR. Does not include swimming pools, artificially lined ponds or pools, wastewater lagoons or stormwater runoff basins, the construction of which may be regulated, but do not themselves constitute regulated areas.

Valid Conservation Permit means a Conservation Permit that has been approved, or approved with special conditions, by the Conservation Commission and which has not expired and has met all the regulations and requirements under Chapters 294 and these Regulations.

Wetland Delineation Wetland Delineation means the procedures used to establish a line connecting wetland delineation flags and/or applicable test plot which defines the upper limit of a plant community where 50% or more of the individual plants are included in facultative (FAC), facultative wetland (FACW),

or obligate wetland (OBL) categories in the National List of Plant Species That Occur in Wetlands: U.S. Fish & Wildlife Service, U.S. Department of the Interior, 1988 or plants exhibiting physiological or morphological adaptations to life in saturated or inundated conditions. In addition to vegetation a delineation methodology shall include an evaluation of hydrology and soils using MassDEP's Massachusetts Handbook for Delineation of Bordering Vegetated Wetlands (Second Edition, September 2022) or the latest edition of said Handbook when the delineation was accomplished. Wetlands shall be delineated by the applicant's Qualified Consultant using this Handbook.

For sites where there is a dispute regarding the location of the delineated wetlands line, the delineation shall be redone using the methodology according to the U.S. Army Corps of Engineers Wetlands Delineation Manual dated January 1987 (Technical Report Y-81-1) as modified by the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, (Version 2.0) dated January 2012. Based on the scientific evidence presented, the final decision regarding the location of the delineated line shall be made by a majority vote of the Commission. When the boundary is not presumed accurate or to overcome the lack of clear and credible evidence, additional information shall be submitted to the Commission by a Qualified Consultant selected by the Commission and paid for by the Applicant. The submittal by the Commission's qualified consultant may necessitate the applicant's qualified consultant to submit additional information. The Commission maintains sole discretionary authority relative to a determination that a wetland delineation is accurate.

Wetland Plants means any plant listed in the U.S. Fish and Wildlife Service "National List of Plant Species That Occur in Wetlands: Massachusetts 1988" and condensed by the Massachusetts Department of Environmental Protection, Division of Wetlands and Waterways, April 1995, having an indicator category of obligate wetland (OBL), facultative wetland (FACW), or facultative (FAC).

Wildlife Habitat means areas which, due to their plant community composition and structure, hydrologic regime or other characteristics, provide food, shelter, migratory or overwintering areas, or breeding areas for animals. This includes all areas in a Naturally Vegetated Condition.

Work means the same as Activity.

ARTICLE 6.0
Procedures

§ 505-106.0. Filing of notice of intent or request for determination of applicability required.

A. Any person who proposes to perform work within a Resource Area shall submit to the Commission either a Notice of Intent for such work or a Request for Determination of Applicability. Said request shall include sufficient information to enable the Commission to find and view the area and to determine whether the proposed work will Alter a Resource Area under the Bylaw.

B. Specific filing requirements, instructions, and fees can be found in the Commission's Policies and Procedures Guide.

§ 505-106.1. Conservation Permit.

A. Any person who proposes to commence an activity subject to regulation under the Bylaw shall submit a request for a Conservation Permit after consulting with the Conservation Administrator.

B. The request for a Conservation Permit shall be filed according to instructions provided by the Commission and/or Conservation Administrator, using forms specified by the Commission and/or by the Commonwealth of Massachusetts, and shall include any required fees.

C. Failure to provide any of the information required in completing a request for a Conservation Permit or failure to provide the required fees according to instructions provided by the Town of Marshfield shall be deemed an incomplete filing and, as such, the application will be deemed to not have been received by this Commission until such filing is complete.

D. For a Conservation Permit involving a Notice of Intent or Abbreviated Notice of Resource Area Delineation, the applicant must also submit a list of abutters, with names and mailing addresses, along with evidence that this list has been reviewed and verified by the Marshfield Board of Assessors. Mailing to listed abutters at least seven days prior to the public hearing shall constitute timely notice to abutters. Proof of notice shall be required by the Commission at the time of the public hearing.

E. A public hearing or public meeting shall be held by the Commission within 21 days of receipt of the submittal. The public hearing/public meeting shall be held under both MGL c. 131, § 40, and the Bylaw, unless the project is located in only one of the two jurisdictions. The Commission shall send notice of the public hearing or public meeting to a newspaper of local circulation. The applicant is responsible for the advance payment of the cost of the legal notice. The twenty-one-day requirement to hold a public hearing can be waived with the approval of the applicant. The public hearing shall be conducted in general as follows:

(1) The Chair of the Commission shall read the public hearing notice as published and present the submitted Conservation Permit application to the Hearing Officer who shall call the hearing to order. The Hearing Officer will review administrative requirements to ensure that they are current.

(2) The applicant or applicant's representative shall be invited to make any presentation.

(3) The Commissioners may question the applicant.

(4) Questions from other Town officials or boards shall be addressed to the applicant or the applicant's representatives through the Hearing Officer.

(5) Questions from the public to the applicant shall be addressed to the applicant or the applicant's representatives through the Hearing Officer.

(6) The hearing shall then be continued in accordance with the regulations set forth by the Commission in separate guidance documents or in 310 CMR 10.05(5)(b) or closed by a majority of a quorum vote of the Commission.

(7) Upon closure of the public hearing, the Commission shall ratify a decision either approving, approving with special conditions, or denying the proposed activity by a majority of a quorum vote of the Commission. The written decision shall be issued within 21 days of the closing date of public hearing.

(8) At the applicant's request, the Commission may accept withdrawal of the Conservation Permit application subject to a majority vote of the Commission.

(9) The Commission may deviate from this general procedure in its sole discretion.

F. Repetitive Petitions/Applications. A new Notice of Intent for a project that was denied may not be filed (and will be rejected if filed) for a period of two years from the date of the Commission's denial, unless in the sole discretion of the Commission significant and substantial changes have been made to the plan and those changes, in the sole discretion of the Commission, are responsive to and attempt to resolve those issues causing the Commission to previously deny the project.

§ 505-106.2. Request for determination of applicability (RDA)/WPA Form 1.

A. Any person who desires a determination as to whether the Bylaw or these Regulations apply to land, or to work that may affect a Resource Area protected under the Bylaw or Regulations, may submit to the Commission by certified mail or hand delivery a Request for Determination of Applicability using forms provided by the Town of Marshfield and according to instructions provided by the Commission. For work within Riverfront Areas, an applicant may submit to the Commission by certified mail or hand delivery a Request for Determination of Applicability to identify the scope of alternatives to be evaluated under these Regulations, including sufficient information to enable the Commission to determine the applicable scope of alternatives.

B. A Request for a Determination of Applicability shall include certification that the owner of the area subject to the request, if the person making the request is not the owner, has been notified that a determination is being requested under the Bylaw.

§ 505-106.3. Determination of applicability/WPA Form 2.

A. Within 21 days after the date of receipt of the Request for a Determination of Applicability, all necessary supporting documentation and/or plans, and appropriate fees, the Commission shall hold a public meeting. Notice of the time and place of the public meeting at which the determination will be made shall be given by the Commission at the expense of the person making the request not less than five days prior to such meeting, by publication in a newspaper of general circulation in the Town of Marshfield. Notice shall also be given in accordance with the Open Meeting Law, MGL c. 30A, §§ 18 through 25. Said determination shall be signed by a majority of the Commission, and copies thereof shall be provided by the Commission to the person making the request. Delivery of the copy to the person making the request shall be by hand delivery or certified mail, return receipt requested. Said determination shall be valid for three years from the date of issuance.

B. The Commission shall have the authority to continue the public meeting to a date certain announced at the meeting, for reasons stated at the meeting. The applicant may also request to continue a meeting to a date certain announced at the meeting. Reasons for continuing a meeting may include, but are not limited to, failure of the applicant or others to provide information (including comments, recommendations, or action of other Town boards and officials) by the submittal deadline, lack of timely receipt of necessary information from the applicant, time needed by the applicant to provide additional or missing information and for the Commission to review such information, inability to view the proposed project, and need for additional information to evaluate the potential impacts upon the wetland values. Once the Commission closes the public meeting, it shall issue a Determination within 21 calendar days.

C. The Commission shall find that the Bylaw and these Regulations apply to the work, or a portion thereof, if it is an Activity Subject to Regulation under the Bylaw as defined in Chapter 294. The Commission shall identify the scope of alternatives to be evaluated, if requested, for work within Riverfront Areas under § 505-205.1.

D. A Notice of Intent which is filed as a result of a positive determination shall be filed with the Commission according to the procedures set forth in MWPR Part I Article 6.0. A Determination of Applicability may be conditioned by the Commission to protect the wetland values of the Resource Areas involved.

E. Said Determination of Applicability shall be valid for three years from the date of issuance.

§ 505-106.4. Abbreviated notice of resource area delineation (ANRAD)/WPA Form 4A.

A. To establish the extent of Bordering Vegetated Wetland and other Resource Areas on land subject to protection under the Bylaw or these Regulations, applicants may use the Abbreviated Notice of Resource Area Delineation for the confirmation of a delineated boundary of bordering Vegetated Wetlands and other Resource Areas on the site, prior to filing a Notice of Intent for proposed work. Alternatively, the boundary of bordering vegetated wetland (or other Resource Area) may be determined through the filing of a Notice of Intent.

B. The ANRAD shall be submitted on the form and according to instructions provided by the Commission along with all necessary supporting documentation and/or plans, and appropriate fees. A public hearing shall be held as described under MWPR Part I Article 6.0. Procedures for an ANRAD filing, hearing, and issuance of a decision follow those outlined for the Notice of Intent as described in § 505-106.5.

C. The DEP File Number for the ANRAD submitted under 310 CMR 10.00 may serve as the File Number for the ANRAD submitted under the Bylaw. The designation of a file number shall not imply that the plans and supporting documents have been judged adequate for the issuance of an Order of Resource Area Delineation (ORAD), but only that copies of the minimum submittal requirements have been file.

D. If the Commission determines that the Resource Areas are incorrectly or incompletely delineated, it shall request that the applicant provide the correct delineation or missing information. If the correct delineation or missing information is not provided, the Commission shall close the ANRAD hearing and issue a denial Order of Resource Area Delineation within 21 calendar days, specifying each

Resource Area that is incorrectly or incompletely delineated. The Commission shall have the authority to deny any proposed Resource Area delineation when 1) the application is incomplete; 2) the delineation is incorrect, or, 3) the Commission requires additional information that is not provided by the applicant.

E. The Commission shall have the authority to continue the ANRAD hearing to a date certain announced at the hearing, for reasons stated at the hearing. The applicant may request to continue a hearing to a date certain announced at the hearing. Reasons for continuing a hearing may include, but are not limited to, lack of timely receipt of necessary information from the applicant or others (including comments, recommendations, or action of other town boards and officials), time needed by the applicant to correct the delineation and for the Commission to review the corrected delineation, inability to view the proposed delineation, need for additional information to evaluate the potential impacts upon the wetland values, or incorrect or incomplete abutter notification as required under 505.6. Once the Commission closes the public hearing it shall issue an ORAD within 21 calendar days, specifying whether the proposed Resource Area boundaries are correct or not (i.e., approval or denial of the boundaries).

§ 505-106.5. Notice of Intent (NOI)/WPA Form 3.

A. Any person who proposes to do work that will Alter or affect any Resource Area under the Bylaw shall file a NOI on the form and according to instructions provided by the Commission along with all necessary supporting documentation and/or plans, and appropriate fees.

B. To establish the extent of bordering vegetated wetland and other Resource Areas on land subject to protection under the Bylaw, applicants may file an Abbreviated Notice of Resource Area Delineation for the confirmation of a delineated boundary of Bordering Vegetated Wetlands and other Resource Areas on the site prior to filing a Notice of Intent for proposed work. Alternatively, the boundary of Bordering Vegetated Wetland (or other Resource Area) may be determined through the filing of a Notice of Intent.

C. The DEP File Number for the Notice of Intent submitted under 310 CMR 10.00 may serve as the File Number for the Notice of Intent submitted under the Bylaw. The designation of a file number shall not imply that the plans and supporting documents have been judged adequate for the issuance of an Order, but only that copies of the minimum submittal requirements have been filed.

D. In the event that only a portion of a proposed project or Activity lies within a Resource Area under the Bylaw and these Regulations, and the remainder of the project or Activity lies outside those areas, only that portion within those areas must be described in the detail called for by the Policy and Procedures Guide and by the Town of Marshfield. Notwithstanding the foregoing, when the Commission has determined that an Activity outside the Resource Areas has in fact Altered a Resource Area, it may require such plans, supporting calculations and other documentation as are necessary to describe the entire Activity.

E. The requirement under these Regulations to obtain or apply for all obtainable permits, variances and approvals required by local bylaw with respect to the proposed Activity shall mean only those which are feasible to obtain at the time the Notice of Intent is filed.

F. If the Commission rejects a Notice of Intent because of a failure to obtain or apply for all permits, variances and approvals required by local bylaw, it shall specify in writing the permit, variance or approval that has not been applied for. A ruling by the municipal agency which has jurisdiction for the issuance of the permit, variance or approval, or by the Town Counsel or Board of Selectmen, concerning the applicability or obtainability of such permit, variance or approval shall be accepted by the Commission. In the absence of such a ruling, other evidence may be accepted.

G. A Notice of Intent shall expire when the applicant has failed to diligently pursue the issuance of a Final Order in proceedings under these Regulations. A Notice of Intent shall be presumed to have expired two years after the date of filing unless the applicant submits information showing that a) good cause exists for the delay of proceedings under the Bylaw; and b) the applicant has continued to pursue the project diligently in other forums in the intervening period; provided, however, that unfavorable financial circumstances shall not constitute good cause for delay. No NOI shall be deemed expired under the Bylaw when an appeal under the Bylaw is pending and when the applicant has provided all information necessary to continue with the prosecution of the case.

H. The Commission may require that supporting plans and calculations be prepared and stamped by a registered professional engineer when, in its judgment, the proposed work warrants this professional certification. The Commission may also require preparation and submission of supporting materials by other professionals including, but not limited to, registered landscape architect, registered land surveyor, environmental scientist, geologist or hydrologist when in its judgment the complexity of the proposed work and/or the wetland values of the Resource Areas warrant the relevant specialized expertise. Submitted materials may be used by the Commission to evaluate the effects of the proposed project on wetland values. Submission of requested materials does not imply approval of the project.

I. The Commission shall have the authority to continue the hearing to a date certain announced at the hearing, for reasons stated at the hearing. The applicant may also request to continue a hearing to a date certain announced at the hearing. Reasons for continuing a hearing may include, but are not limited to, failure of the applicant or others to provide information (including comments, recommendations, or action of other Town boards and officials) by the submittal deadline, lack of timely receipt of necessary information from the applicant, time needed by the applicant to provide additional or missing information and for the Commission to review such information, inability to view the proposed project, need for additional information to evaluate the potential impacts upon the wetland values, and incorrect or incomplete abutter notification as required under these Regulations. Should the applicant refuse to continue the hearing or to provide the requested information, the Commission shall close the public hearing and issue an Order of Conditions within 21 calendar days.

J. The Commission shall have the authority to deny any NOI application for which 1) the application is incomplete and the applicant fails to provide the Commission with additional information that the Commission deems necessary in order to evaluate the potential impacts of the proposed project on the wetland values; and/or 2) the proposed work or Activity does not meet the performance standards specified herein and cannot be conditioned to meet the performance standards specified herein.

§ 505-106.6. Orders of Conditions Regulating Work/WPA Form 5 and Orders of Resource Area Delineation/WPA 4B.

A. Within 21 days of the close of the public hearing, the Commission shall either:

(1) Make a determination that the area on which the work or activity is proposed to be done, or which the proposed work will remove, fill dredge or Alter, is not Significant to any of the wetland values identified in the Bylaw, and shall so notify the applicant; or

(2) Make a determination that the area on which the work or activity is proposed to be done, or which the proposed work will remove, fill, dredge or Alter, is Significant to any of the wetland values identified in the Bylaw, and shall issue an Order of Conditions for the protection of said values; or

(3) Make a determination that bordering vegetated wetland and other resources areas subject to jurisdiction have been identified and delineated according to the definitions in MWPR and shall issue an Order of Resource Delineation/WPA 4B to confirm or modify the delineations submitted. The Order of Resource Delineation shall be effective for three years.

B. The standards and presumptions to be used by the Commission in determining whether an area is Significant to the wetland values in the Bylaw are found in MWPR Part II.

C. The Order of Conditions/WPA Form 5 shall impose such conditions as are necessary to meet the performance standards set forth in MWPR Part II for the protection of those areas found to be Significant to any of the wetland values identified in the Bylaw. The Order shall prohibit any work, activity or any portion thereof that cannot be conditioned to meet said standards.

§ 505-106.7. Denials; revocations.

A. Procedural Denials. If the Commission finds that the information submitted by the applicant is not sufficient to describe the site, the work, the activity or the effect of the work or activity on the wetland values of the Resource Area, it may issue a denial prohibiting the work. The denial shall specify the information which is lacking and why it is necessary. In writing the procedural denial, the Commission shall:

(1) State that the denial is specifically based on lack of information describing the site, the work, the activity and/or the effect of the work or activity on the wetland values; and

(2) List specific information needed in each of the three possible problem areas mentioned above, citing appropriate sections of these Regulations.

B. Substantive Denials. The Commission may deny permission for any Activity within areas under its jurisdiction if, in its judgment, such denial is necessary to protect the wetland values. Due consideration shall be given to all possible effects of the proposal on all wetland values. Substantive denials are based on a reasoned analysis of the proposed Activity and the likely effects of this Activity on the wetland values. In most cases, neither the assumption of protection nor the assumption of damage will be able to be proven with certainty. The Commission will base its judgment on the best

information available at the time and in all cases will act to protect the wetland values. The written decision will include the reasons for the denial, citing wetland values protected, and relevant bylaw, law and regulations. The written decision will be signed by a majority of the Commission.

C. Revocation. For good cause, the Commission may revoke or modify any permit, order, determination or other decision issued under the Bylaw after notice to the holder of the permit, the public, abutters, and town boards, and holding a public hearing.

§ 505-106.8. Recording in Registry of Deeds or Land Court.

In no case shall any work, activity or construction commence unless and until the Order of Conditions or Order of Resource Delineation has been recorded at the Registry of Deeds or Land Court and the proof of recording is delivered to the Commission.

§ 505-106.9. Validity.

A Determination of Applicability, Order of Resource Delineation and Orders of Conditions shall be effective for three years from the date of issuance.

§ 505-106.10. Extensions of Orders of Conditions and Orders of Resource Area Delineations /WPA Form 7.

A. The Commission may extend an Order for one or more periods of up to three years each, which shall be made on Form 7. The request for an extension shall be made to the Commission at least 30 days prior to expiration of the Order.

B. The Commission may deny the request for an extension and require the filing of a new Notice of Intent for the remaining work or a new Abbreviated Notice of Resource Area Delineation in the following circumstances:

(1) Where no work has begun on the project, except where such failure is due to an unavoidable delay, such as appeals, in the obtaining of other necessary permits;

(2) Where new information, not available at the time the Order was issued, has become available and indicates that the Order is not adequate to protect the wetland values identified in the Bylaw;

(3) Where incomplete work is causing damage to the Resource Area and wetland values in the Bylaw;

(4) Where work has been done in violation of the Order or Bylaw and Regulations; or

(5) Where a Resource Area delineation or certification in an Order of Resource Delineation is no longer accurate.

C. The Extension Permit shall be recorded in the Land Court or the Registry of Deeds, whichever is appropriate, and proof of the recording shall be delivered to the Commission.

§ 505-106.11. Amendments to Orders of Conditions.

A. Any person who proposes to modify work under valid Orders of Conditions that will Alter or affect any Resource Area under the Bylaw shall file an Amended Notice of Intent (NOI) on WPA Form 3 including the term "Amended" using forms provided by the Commission along with all necessary supporting documentation and/or plans, and appropriate fees and in accordance with instructions provided by the Commission.

B. The submission shall be made by certified mail or hand delivery. The submission shall be complete and made in accordance with instructions provided by the Commission. The complete submission shall include but not be limited to all necessary supporting documentation and plans as well as all required fees.

C. If the Conservation Administrator or the Commission determines that the scope of change is sufficient to merit an Amended NOI rather than a new NOI, then the WPA Filing Number assigned to the existing, valid Order of Conditions may be reused along with the insertion of the word "Amended." The applicant will include the existing WPA Filing Number- "Amended" on the WPA Form 3/Amended Notice of Intent. Within 21 days of the close of the public hearing, the Commission shall either:

(1) Make a determination that the area on which the work is proposed to be done, or which the proposed work will remove, fill dredge or Alter, is not Significant to any of the wetland values identified in the Bylaw, and shall so notify the applicant; or

(2) Make a determination that the area on which the work is proposed to be done, or which the proposed work will remove, fill, dredge or Alter, is Significant to any of the wetland values identified in the Bylaw, and shall issue an Amended Order of Conditions for the protection of said values; or

(3) Issue a denial in accordance with the provisions of these Regulations.

D. The standards and presumptions to be used by the Commission in determining whether an area is Significant to the wetland values in the Bylaw are found in MWPR Part II.

E. The Amended Order of Conditions shall impose such conditions as are necessary to meet the performance standards set forth in MWPR Part II for the protection of those areas found to be Significant to any of the wetland values identified in the Bylaw. The Amended Order shall prohibit any work or any portion thereof that cannot be conditioned to meet said standards.

F. Under no circumstances will the issuance of an Amended Order of Conditions extend the expiration date of the original Final Order of Conditions without the express written approval of the Commission. The Amended Order shall run with the term of the original Order of Conditions or the effective date of an extended Order of Conditions.

G. The Amended Order should be issued on the form provided for an Order of Conditions, with the insertion of the word "Amended" and the amendment date. Amended Orders must be recorded with the Plymouth County Registry of Deeds or Land Court, as appropriated.

H. Amending a Final Order of Conditions is at the discretion of the Marshfield Conservation Commission. If a request to amend is not approved by the Commission, the applicant will be required to file a new Notice of Intent.

§ 505-106.12. Requests for Certificates of Compliance/WPA Form 8A and Certificates of Compliance/WPA FORM 8B.

A. Upon completion of the work described in the Final Order of Conditions, the applicant, owner or his or her successor in interest, or the applicant's representative shall request in writing the issuance of a Certificate of Compliance stating that the work has been satisfactorily completed in compliance with all conditions set forth in the approved Order of Conditions. Unless exempted by the Commission, said request shall be accompanied by an As-Built plan, certified by a registered professional engineer or registered professional land surveyor in the Commonwealth. The said As-Built shall certify that the work conforms to the approved original or amended Order of Conditions. In the case of Amended Order of Conditions, said As-Built plans shall be accompanied by a letter describing any deviations or changes from the original approved Order of Conditions. A Certificate of Compliance shall be acted on by the Commission within 21 days of receipt thereof, and shall certify on the required form that the Activity or portions thereof described in the Notice of Intent and plans has been completed in compliance with the approved Order or Conditions.

B. Prior to issuance of a Certificate of Compliance, a site inspection shall be made by the Commission or its Conservation Administrator.

C. If the Commission determines, after review and inspection, that the work has not been done in compliance with the Order, it may refuse to issue a Certificate of Compliance. Such refusal shall be issued within 21 days of receipt of a request for a Certificate of Compliance, shall be in writing and shall specify the reasons for denial.

D. If a project has been completed in accordance with plans stamped by a registered professional engineer, architect, landscape architect or land surveyor, a written statement by such a professional person certifying compliance with the plans and setting forth what deviation, if any, exists from the plans approved in the Order shall accompany the request for a Certificate of Compliance.

E. If the final Order contains conditions which 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 Order.

F. The Certificate of Compliance shall be recorded in the Land Court or Registry of Deeds, whichever is appropriate, and evidence of the recording shall be delivered to the Commission.

G. Upon completion of the work allowed under this Order of Conditions the applicant shall apply for a Certificate of Compliance (COC) (a) within 30 days after completion of the work or (b) thirty (30)

days prior to the expiration date of the original or extended Order of Conditions (OOC), whichever time comes sooner. If no work was started under the OOC or if some of the work will not be performed, the applicant must still apply for a Certificate of Compliance at least 30 days prior to the expiration of the OOC.

§ 505-106.13. Emergencies/Emergency Certificates.

A. Where activity is necessary to protect public health and safety, the Commission may certify an emergency situation and allow the activity or allow the activity subject to conditions.

B. Any person requesting permission to perform an emergency activity shall specify why the project is necessary for the protection of the public health or safety and what agency of the commonwealth or subdivision thereof is to perform the project or has ordered the project to be performed. If the project is certified to be an emergency by the Commission, the certification shall include a description of the work which is to be allowed and shall not include work beyond that necessary to abate the emergency. A site inspection shall be made prior to certification.

C. An Emergency Certificate, that may include Special Conditions, shall be issued by the Commission only for the protection of public health or safety.

D. The time limitation for performance of emergency activity shall not exceed 30 days.

E. The emergency activity shall not exceed work necessary to abate the emergency situation.

F. Excepting in extreme circumstances where it is not practical to obtain signatures due to the nature of the emergency, the Emergency Certificate shall be signed by a majority of the Commission, its Conservation Administrator at the direction of the Commission or its Chair. In such cases, the Commission shall meet for the purpose of ratifying or terminating the emergency Certificate.

§ 505-106.14. Right of Entry.

The Commission, its Administrator, employees, consultants, or designees, may enter upon the land upon which proposed work is to be done in response to a request for a prior determination or for the purpose of carrying out its duties under the Bylaw and these Regulations and may make or cause to be made such examination or survey as deemed necessary.

§ 505-106.15. Enforcement.

A. Authority. The Commission shall have the authority to enforce these Regulations and permits issued thereunder by undertaking and issuing violation notices, administrative orders, and civil and criminal court actions. Upon request of the Commission to the Board of Selectmen, the Town Counsel may take legal action for enforcement under civil law. Upon request of the Commission or its Administrator, the Chief of Police may take legal action for enforcement under criminal law.

B Fines. Any person who violates any provision of the Bylaw and these Regulations or permits issued thereunder, shall be punished by a fine set by the Commission. Each day or portion thereof during

which a violation continues shall constitute a separate offense, and each provision of the MWPR, regulations or permit violated shall constitute a separate offense.

C. Noncriminal Disposition. In addition to the procedure of enforcement as described above, the provision of the Bylaw and these Regulations or permits issued thereunder may also be enforced by the Commission or its Administrator, by noncriminal complaint pursuant to the provisions of MGL Ch. 40, § 21D. Each provision of the chapter, bylaw, regulations or permit violation that is violated shall constitute a separate offense.

§ 505-106.16. Security.

As part of a permit issued under the Bylaw and these Regulations, in addition to any security required by any other municipal or state board, agency or official, the Commission may require that the performance and observance of the conditions imposed thereunder (including requiring mitigation work) be secured wholly or in part by one or more of the methods described below:

A. By a proper bond or deposit of money or negotiable securities or other undertaking of financial responsibility sufficient in the opinion of the Commission, to be released in whole or in part upon issuance of a Certificate of Compliance for work performed pursuant to the permit. Such bond or deposit shall be released only upon issuance of a Certificate of Compliance.

B. By accepting a conservation restriction, easement, or other covenant enforceable in a court of law, executed and duly recorded by the owner of record, running with the land to the benefit of this municipality whereby the permit conditions shall be performed and observed before any lot may be conveyed other than by mortgage deed. This method shall be used only with the consent of the applicant.

§ 505-106.17. Burden of Proof.

The applicant shall have the burden of proof by a preponderance of credible evidence that the work proposed will not have a significant adverse or cumulative adverse effect upon Resource Areas or their wetland values protected herein. No project determined to have a significant adverse or cumulative adverse effect upon Resource Areas or wetland values protected herein shall be allowed. Failure to provide adequate evidence to the Commission supporting this burden shall be sufficient cause for the Commission to deny the proposed project. In all instances herein, the Commission, after due deliberation, shall have the discretion to determine the weight of the information presented or omitted. The Commission maintains the right to condition any project as it deems necessary to protect any of the wetland values set forth herein.

§ 505-106.18. Variances.

A. The Commission may, in its discretion, grant variances from the operation of one or more of these regulations pursuant to this section. Such variances are intended to be granted sparingly, and in rare and unusual cases, and shall be granted only in accordance with the provisions of this section.

B. The applicant must request a variance in writing, filed with the notice of intent. The request shall set forth the reasons particular to the applicant's project which meet the requirements for a variance as set forth in § 505-106.18C.

C. A variance may be granted only for the following reasons and upon the following conditions:

(1) The Commission may grant a variance from these regulations upon a clear and convincing showing by the applicant that any proposed work, or its natural and consequential impacts and effects, will not have any significant adverse or cumulative adverse effect on any of the wetland values and values protected in the bylaw. It shall be the responsibility of the applicant to provide the Commission with any and all information which the applicant determines is relevant and/or which the Commission may request in writing in order to enable the Commission to ascertain the significance of such adverse effects or cumulative adverse effects. In addition, the Applicant shall submit an Alternatives Analysis which shall demonstrate, to the satisfaction of the Commission, that no feasible alternative to the proposed action exists. The failure of the applicant to furnish any information which has been so requested shall result in the denial of a request for a variance pursuant to this subsection; or

(2) The Commission may grant a variance from these regulations when it is necessary to avoid so restricting the use of the property as to constitute a regulatory taking in violation of state and/or federal law without compensation. It shall be the responsibility of the applicant to provide the Commission with any and all information necessary to determine if the enforcement of these regulations constitutes such an unconstitutional taking without compensation. No variance shall be granted unless and until the Commission has received from Town Counsel a written opinion that such enforcement of these regulations shall constitute an unconstitutional taking without compensation.

§ 505-106.19. Fees.

A. Application Fees. At the time of a filing a Notice of Intent (NOI), Abbreviated Notice of Resource Area Delineation (ANRAD), Request for Determination of Applicability (RDA), or application for Certificate of Compliance, the applicant shall pay a filing fee specified in the Conservation Commission's Policy and Procedures Guide. The fee is in addition to that required by the Wetlands Protection Act (MGL c. 131, § 40) and Regulations (310 CMR 10.00). The Commission is authorized to require an applicant (for an ANRAD, RDA or NOI or other filing) to pay a fee to cover the reasonable costs and expenses borne by the Commission in processing and evaluating the permit application. The fee schedule will be set by the Commission following public notice and a public hearing. The Commission may, at its discretion, waive the application fee, costs and expenses for a permit application.

B. Consultant Fees.

(1) As provided by MGL c. 44, **§** 53G, the Commission may impose reasonable fees for the employment of outside consultants, engaged by the Commission, for specific expert services deemed necessary by the Commission to come to a final decision on an application submitted to the Commission pursuant to the requirements of the Massachusetts Wetlands Protection

Act (MGL c. 131, **§** 40), the Marshfield Wetlands Bylaw (Marshfield Town Code Chapter 294), Commission Act (MGL c. 40, **§** 8C), or any other state or municipal statute, bylaw or regulation, as they may be amended or enacted from time to time.

(2) Funds received by the Commission pursuant to these rules shall be deposited with the Town Treasurer-Collector who shall establish a special segregated account (Account) for this purpose. Expenditures from this Account may be made at the direction of the Commission without further appropriations as provided in MGL c. 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. Any unused portion of the consultant fee, including interest, shall be returned to the applicant.

(3) Specific consultant services may include but are not limited to Resource Area survey and delineation, analysis of Resource Area values, hydrogeologic and drainage analysis, impacts on municipal conservation lands, inspections during construction, permit compliance, any reports necessary for a Certificate of Compliance, and environmental or land use law. The consultant shall be chosen by, and report only to, the Commission and/or its Administrator.

(4) The Commission shall give notice to the applicant of the selection of an outside consultant, which notice shall state the identity of the consultant, the amount of the fee to be charged to the applicant, and a request for payment of said fee in its entirety. Such notice shall be deemed to have been given on the date it is mailed or delivered. No such costs or expenses shall be incurred by the applicant if the application or request is withdrawn in writing within five days of the date such notice is given. The fee must be received in its entirety prior to the initiation of consulting services. Failure by the applicant to pay the consultant fee specified by the Commission within 10 business days of the request for payment shall be cause for the Commission to determine that the application is administratively incomplete (except in the case of an appeal).

(5) The applicant may appeal the selection of the outside consultant to the Board of Selectmen (administrative appeal), who may disqualify the outside consultant selected only on the grounds that the consultant has a conflict of interest or does not possess the minimum required qualifications. The minimum qualifications are described in the Commission's Policy and Procedures Guide. Such an appeal must be in writing and received by the Board of Selectmen and a copy received by the Commission, so as to be received within 10 days of the date consultant fees were requested by the Commission. The required time limits for action upon the application shall be extended by the duration of this administrative appeal.

C. Fee Waiver. The Commission may, at its discretion, waive fees.

D. After the Fact Fees. Any Notice of Intent or Request for Determination of Applicability fee received as a result of after-the-fact removal, alteration, dredging or filling within conservation jurisdictional boundaries under the Wetlands Protection Bylaw or these Regulations or the Commission issuing an enforcement order for a violation of the Wetlands Protection Bylaw shall be doubled.

§ 505-106.20. Appeals.

Any applicant, owner or abutter, any person aggrieved or any 10 residents of the Town of Marshfield may appeal an order of the Commission under the Bylaw to the Superior Court of Plymouth County within 60 days following the date of issuance of the order, in accordance with MGL c. 249, § 4.

ARTICLE 7.0
Severability; Additional Provisions

§ 505-107.1. Severability.

Should any term, condition, definition, language, section or provision of these Regulations be found invalid by competent legal authority, the validity of any other term, condition, definition, language, section or provision thereof shall not be affected, nor shall it invalidate any permit, approval, enforcement order or determination which previously has been issued.

§ 505-107.2. Relation to Other Federal, State and Local Statutes.

A. Relation to the Wetlands Protection Act and Other Federal, State and Local Statutes. These implementing regulations under the Marshfield Wetlands Protection Bylaw are adopted under the Home Rule Amendments of the Massachusetts Constitution and the Home Rule statutes, independent of the Wetlands Protection Act M.G.L. Ch. 131 § 40 and implementing regulations, and other federal, state and local environmental statutes. Activities that may not require review or permitting under the Massachusetts Wetlands Protection Act, the Rivers Protection Act, the federal or state Clean Water Act, or other federal, state or local statutes are not assumed to be exempt from these Regulations.

B. Coordination of Permitting. In order to ensure that various permit granting authorities review the impacts upon resources protected by these Regulations in a coordinated manner, and where the provisions of these Regulations are applicable, applicants for permits under federal, state or local statute or regulation shall comply with the requirements for filing under these Regulations within 45 days of said application made under federal, state or local statute or regulation.

Part II
PERFORMANCE STANDARDS FOR RESOURCE AREAS

Resource Area definitions and performance standards for work proposed in Resource Areas protected under the Bylaw are described in this MWPR Part II Article 2.0.

ARTICLE 1.0
Land Under Water Bodies.

§ 505-201.1. Land Under the Ocean.

A. Preamble.

(1) Land Under the Ocean provides feeding areas, spawning and nursery grounds and shelter for many coastal organisms related to marine fisheries and wildlife. Eel Grass (*Zostera* marina) and Widgeon Grass (*Ruppia maritima*) are important for the prevention of pollution, protection of water quality, as well as fisheries and fish/shellfish habitat and provides an important food source for waterfowl. Nearshore Areas, and in some cases offshore areas of Land Under the Ocean help reduce storm damage, erosion, and flooding by diminishing and buffering the high-energy effects of storms. Submerged sand bars dissipate wave energy. Such areas provide a source of sediment for seasonal rebuilding of Coastal Beaches and dunes. The bottom topography and sediment type of Nearshore Areas of Land Under the Ocean are critical to erosion control, prevention of storm damage, and flood control. Water circulation and flushing rates, distribution of sediment grain size, water quality (including but not limited to turbidity, temperature, nutrients, pollutants, salinity, and dissolved oxygen), and the habitat of wildlife, finfish, and shellfish, including rare species when they occur, are all factors critical to the protection of wildlife and marine finfish and shellfish fisheries.

(2) Land Under the Ocean in an unobstructed state is important for the protection of recreational swimming, fishing, shellfishing, boating and sailing, commercial fishing and shellfishing, aquaculture, and aesthetics which are important to Marshfield's economy. Land within 100 feet of Land Under the Ocean is Significant to the protection and maintenance of Land Under the Ocean and therefore to the wetland values.

B. Wetland Values and Presumption of Significance. Whenever a proposed project involves removing, filling, dredging, altering or building upon Land Under the Ocean, the Commission shall presume that such land is Significant to the protection of the following wetland values: flood control, erosion and sedimentation control; storm damage prevention, including coastal storm flowage; prevention of water pollution; protection of fisheries; protection of shellfish; protection of wildlife and Wildlife Habitat; protection of Rare Species Habitat, including rare plant and animal species; protection of Recreation; protection of aquaculture; and protection of aesthetics. These presumptions may be overcome only upon a clear showing that the Land Under the Ocean does not play a role in protecting any of the wetland values given above.

C. Definitions. Same as 310 CMR 10.25(2).

D. Performance Standards. When Land Under the Ocean is determined to be Significant to a protected wetland value, the following regulations shall apply:

(1) Proposed work shall not have any significant adverse or cumulative adverse effect on the wetland values of Land Under the Ocean.

(2) Proposed work shall not destroy any portion of eelgrass or widgeon grass beds or have any significant adverse or cumulative adverse effect on these aquatic plant species.

(3) Notwithstanding the above provisions, no project may be permitted which will have any significant adverse or cumulative adverse effect on specified habitat of rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.37.

(4) Refer to MWPR Part III for additional project-specific performance standards.

(5) Performance standards for proposed work or activities within the Buffer Zone to Land Under the Ocean are specified in MWPR Part II Article 6.0.

(6) The Commission may impose such additional requirements as are necessary to protect the wetland values protected under the Bylaw.

§ 505-201.2. Land Under Salt Ponds.

A. Preamble.

(1) Salt Ponds provide excellent habitat for marine fisheries and shellfish. The high productivity of plants and phytoplankton in Salt Ponds provides food for shellfish, crustaceans, and juvenile fish. Bottom sediments and shallow water are excellent habitats for many bivalves. The Salt Ponds also serve as spawning and nursery areas for crabs and fish. The productivity of Salt Ponds and the food web they support provide ideal habitat for many types of wildlife, particularly ducks and shore birds, and for rare species of plants and animals where they occur. Salt Ponds may provide suitable habitat for aquaculture. The enclosed nature of the Salt Ponds also provides shelter for wildlife. Salt Ponds and the area around them are important aesthetically and provide the public with many recreational opportunities including: shellfishing, fishing, sailing, swimming, hunting, and wildlife observation. Because of their semi-enclosed nature, Salt Ponds are sensitive to pollution or nutrient inputs. These inputs can change the plant and animal species composition of the pond, and thus can be detrimental to fish, shellfish, and wildlife. Bioaccumulation through food webs can also create dangerous levels of pollutants or toxins for wildlife and humans.

(2) Characteristics of Salt Ponds which are critical to various wetland values include, but are not limited to, water circulation, distribution of sediment grain size, amount of freshwater and saltwater inflow, productivity of plants, and water quality (including but not limited to amounts of dissolved oxygen, nutrients, temperature, turbidity, pollutants, pH, and/or salinity). Land within 100 feet of a Salt Pond is considered to be Significant to the protection

and maintenance of a Salt Pond and the land beneath it and therefore to the protection of the wetland values of the Salt Pond.

B. Wetland Values and Presumption of Significance. Whenever a proposed project involves removing, filling, dredging, altering or building upon a Salt Pond or land within 100 feet from a Salt Pond, the Commission shall presume that the Salt Pond is Significant to the protection of the following wetland values: protection of public or private water supply; protection of groundwater; flood control; erosion and sedimentation control; storm damage prevention, including coastal storm flowage; prevention of water pollution; protection of fisheries; protection of shellfish; protection of wildlife and Wildlife Habitat; protection of Rare Species Habitat, including rare plant and animal species; protection of Recreation; protection of aquaculture; and protection of aesthetics. These presumptions may be overcome only upon a clear showing that the Salt Pond does not play a role in protecting any of the wetland values stated above.

C. Definitions. Same as 310 CMR 10.33(2).

D. Performance Standards. When a Salt Pond or land within 100 feet of a Salt Pond is determined to be Significant to a wetland value, the following regulations shall apply:

(1) Proposed work shall have no significant adverse or cumulative adverse effect upon the wetland values of a Salt Pond.

(2) Notwithstanding the above provisions, no project may be permitted which will have any significant adverse or cumulative adverse effect on specified habitat of rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.37.

(3) Refer to MWPR Part III for additional project-specific performance standards.

(4) Performance standards for proposed work or activities within the Buffer Zone to a Salt Pond are specified in MWPR Part II Article 6.0.

(5) The Commission may impose such additional requirements as are necessary to protect the wetland values protected under the Bylaw.

§ 505-201.3. Land Under Inland Water Bodies and Waterways - Rivers, Creeks, Streams, Ponds, Lakes, Ditches, or Flats.

A. Preamble.

(1) Where Land under Water Bodies and Waterways is composed of pervious material, such land represents a point of exchange between surface water and groundwater. Depending upon the hydrological conditions and water levels at a given time, these areas may serve as recharge or discharge points, or both, with groundwater. An area may serve as recharge area at one season and a discharge point at another time. This allows pollutants and nutrients easy access into private wells or the general groundwater supply. The physical nature of Land under Water

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

(2) Land under Water Bodies and Waterways in conjunction with banks serve to confine floodwater 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. Alteration of Land under Water Bodies and Waterways that causes water to frequently spread out over a larger area at lower depth increases flooding. Additionally, it results in an elevation of water temperatures and decrease in habitat in the main channel, both of which are detrimental to fisheries and shellfish, particularly during periods of warm weather and low flows. It may also flood waterfowl nesting sites which otherwise would not be disturbed. Land under ponds and lakes is vital to a large assortment of warm water fish during spawning periods. Species such as large-mouth bass (Micropterus salomoides), small-mouth bass (Micropterus dolomieui), blue gills (Lepomis macrochirus), pumpkinseeds (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 100 feet of any bank abutting land under a water body is Significant to the protection of the wetland values which these water bodies serve to protect.

(3) Characteristics of water bodies which are critical to protection of wildlife and fisheries include water circulation and flushing rates, distribution of sediment grain size, and water quality (including concentrations of dissolved oxygen, turbidity, nutrients, temperature, and pollutants). Leaving ponds and the land bordering ponds in an unobstructed state may be important to recreational swimming, fishing, and boating. Water bodies and the area around them also provide other recreational opportunities such as hunting and wildlife observation. Vegetated borders of large ponds are important in reducing shoreline erosion and storm damage by dissipating the high energy of storm waves and by anchoring the sediments. Water bodies provide important feeding and/or drinking areas for many types of aquatic wildlife, birds and animals. Ponds and other water bodies provide habitat for insects which serve as food for several species of birds, particularly swallows. Ducks, geese, swans, and herons all use water bodies and surrounding borders for feeding, shelter, and/or nesting areas. Many other birds, animals, reptiles and amphibians use Land under Water Bodies and Waterways, water bodies, and the borders of water bodies for parts of their life cycles. Such areas may be suitable for aquaculture of fresh or brackish aquatic plants or animals. Changes in sediments, water quality, water level, or species composition of food sources or ground cover may be detrimental to any of the above wildlife and to any rare species of plants or animals which occur in water bodies.

(4) Ponds and the land surrounding them often provide aesthetically important wetland scenic views, particularly when they are in a natural condition. Ponds provide recreational swimming, boating, fishing, shellfishing, and sightseeing opportunities. The enclosed area and limited size of most fresh water bodies in the Town of Marshfield make them particularly sensitive to pollution or nutrient inputs. These inputs can change the plant and animal species composition of the water body and thus can be detrimental to fish and wildlife. Bioaccumulation of pollutants through food webs can also create dangerous levels of pollutants or toxins for wildlife and humans.

B. Wetland Values and Presumption of Significance. Whenever a proposed project involves removing, filling, dredging, altering or building upon water bodies or the land beneath them or land within 100 feet from such land, the Commission shall presume that the water bodies and the land beneath them are Significant to the protection of the following wetland values: protection of public or private water supply; protection of groundwater; flood control; erosion and sedimentation control; storm damage prevention, including coastal storm flowage; prevention of water pollution; protection of fisheries; protection of shellfish; protection of wildlife and Wildlife Habitat; protection of Rare Species Habitat, including rare plant and animal species; protection of Recreation; protection of aquaculture; and protection of aesthetics. These presumptions may be overcome only upon a clear showing that the water body or the land beneath it does not play a role in protecting any of the wetland values given above.

C. Definitions. Same as 310 CMR 10.56(2) with the following addition:

Pond shall include any open body of fresh water with a surface area observed or recorded within the last 10 years of at least 5,000 square feet. Ponds shall contain standing water except for periods of extended drought.

D. Performance Standards. When Land Under an Inland Water Body or land within 100 feet of Land Under an Inland Water Body is determined to be Significant to a wetland value, the following regulations shall apply:

(1) Proposed work shall not cause a significant adverse or cumulative adverse effect upon the wetland values of Land Under an Inland Water Body.

(2) Notwithstanding the above provisions, no project may be permitted which will have any significant adverse or cumulative adverse effect on specified habitat of rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.59.

(3) Refer to MWPR Part III for additional project-specific performance standards.

(4) Performance standards for proposed work or activities within the Buffer Zone to Land Under an Inland Water Body are specified in MWPR Part II Article 6.0.

(5) The Commission may impose such additional requirements as are necessary to protect the wetland values protected under the Bylaw.

ARTICLE 2.0
Land Bordering on the Ocean

§ 505-202.1. Coastal Banks.

A. Preamble.

(1) Coastal Banks composed of unconsolidated sediment and exposed to wave action serve as a major source of sediment for other coastal landforms, including beaches, dunes, and Barrier

Beaches. The supply of sediment is removed from such sediment source banks by wave action. It is a naturally occurring process necessary to the continued existence of other protected Resource Areas including Coastal Beaches, Coastal Dunes, and Barrier Beaches. These areas protect public safety because they dissipate storm wave energy, thus protecting structures and Coastal Wetlands landward of them from storm damage, erosion, and flooding.

(2) Coastal Banks, because of their height and stability, may act as a vertical buffer or natural wall, which protects upland areas from storm damage, erosion, and flooding. While erosion caused by wave action is an integral part of shoreline processes and furnishes important sediment to downdrift landforms, erosion of a Coastal Bank by wind and rain runoff, which plays only a minor role in beach nourishment, should not be increased unnecessarily. Disturbance to a Coastal Bank which reduces its natural resistance to wind and rain erosion causes cuts and gullies in the bank and decreases its value as a vertical buffer. Vegetation tends to stabilize a Coastal Bank and reduce the rate of erosion due to wind and rain runoff. Undisturbed vegetated areas along banks are critical to reducing wind and rain erosion from the bank.

(3) A particular Coastal Bank may serve as a sediment source and a vertical buffer or it may serve only one role. Coastal Banks of either type provide habitat for wildlife, particularly nesting birds and provide habitat for rare plant and animal species where these occur. Characteristics of Coastal Banks which are critical to wildlife are bank steepness (i.e., slope), height, stability, soil grain size and compaction or consolidation, and vegetation cover and type. Coastal Banks provide scenic views of the coast and in a natural condition are scenic in themselves, thus providing opportunities for birdwatching, hiking, photography, and other recreation. Land within 100 feet of the top of any coastal bank is Significant to the protection and maintenance of a bank and therefore the wetland values.

B. Wetland Values and Presumption of Significance. Whenever a proposed project involves removing, filling, dredging, altering or building upon a Coastal Bank or land within 100 feet from the top of a coastal bank, the Commission shall presume that the bank is Significant to the protection of the following wetland values: flood control; erosion and sedimentation control; storm damage prevention, including coastal storm flowage; protection of wildlife and Wildlife Habitat; protection of Rare Species Habitat, including rare plant and animal species; protection of Recreation; and protection of aesthetics. These presumptions may be overcome only upon a clear showing that the coastal bank does not play a role in protecting any of the wetland values given above.

C. Definitions. Same as 310 CMR 10.30 (2) with the following additions:

Sediment Source Coastal Bank (i.e., eroding Coastal Bank) is a Coastal Bank which is or could be, as determined by the Commission, undergoing erosion or landward retreat and which is supplying sediment to a nearby Coastal Beach (including Tidal Flat), Coastal Dune, or Barrier Beach.

Vertical Buffer Coastal Bank (i.e., non-eroding Coastal Bank) is a coastal bank which is stable and does not appear to be undergoing, as determined by the Commission, erosion or landward retreat and which is not supplying sediment to a nearby Coastal Beach, Coastal Dune, or Barrier Beach.

D. Performance Standards.

(1) When a Coastal Bank is determined to be a Sediment Source Coastal Bank (i.e., eroding Coastal Bank), the following regulations shall apply:

(a) Proposed work shall not cause any significant adverse or cumulative adverse effect on the wetland values of the Coastal Bank.

(b) All projects shall be restricted to activities as determined by the Commission to have no significant adverse or cumulative adverse effect on the ability of the eroding Coastal Bank to serve as a sediment source to coastal Resource Areas, bank height, bank stability, bank vegetation and Wildlife Habitat.

(c) All projects must provide a buffer strip to the top of the Coastal Bank that is sufficient to protect the wetland values and functions of this type of Coastal Bank and to allow such Coastal Banks to continue to serve as a sediment source to coastal Resource Areas.

(d) Notwithstanding the above, minimal elevated walkways designed not to affect bank vegetation and sediment transport may be permitted to allow for pedestrian passage over a bank, provided that the ability of the bank to serve as a sediment source and its stability are not adversely affected.

(e) Refer to MWPR Part III for additional project-specific performance standards.

(f) Performance standards for activities or work proposed in the Buffer Zone to a Coastal Bank are specified in MWPR Part II Article 6.0.

(g) The Commission may impose such additional requirements as are necessary to protect the wetland values protected under the Bylaw.

(2) When a Coastal Bank is determined to serve solely as a Vertical Buffer Coastal Bank, the following regulations shall apply:

(a) Proposed work shall not cause any significant adverse or cumulative adverse effect on the wetland values of the Coastal Bank.

(b) All projects shall be restricted to activities as determined by the Commission to have no significant adverse or cumulative adverse effect on bank height, bank stability, bank vegetation and Wildlife Habitat.

(c) The Commission may allow projects to approach the top of such a Vertical Buffer Coastal Bank, which meet all other performance standards for the Coastal Bank or condition such projects so that they meet all performance standards.

(d) Notwithstanding the above, elevated walkways designed not to affect bank vegetation and bank stability may be permitted to allow for pedestrian passage over a bank, provided that the stability of the bank and Wildlife Habitat are not adversely affected.

(e) Refer to MWPR Part III for additional project-specific performance standards.

(f) Performance standards for activities or work proposed in the Buffer Zone to a Coastal Bank are specified in MWPR Part II Article 6.0.

(g) The Commission may impose such additional requirements as are necessary to protect the wetland values protected under the Bylaw.

(3) When a Coastal Bank is determined to serve as both a Sediment Source Coastal Bank and a Vertical Buffer Coastal Bank, the performance standards specified for Sediment Source Coastal Banks shall take precedence over the performance standards specified for Vertical Buffer Coastal Banks.

(4) Notwithstanding the above provisions, no project may be permitted which will have any significant adverse or cumulative adverse effect on specified habitat of rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.37.

§ 505-202.2 Coastal Beaches and Tidal Flats.

A. Preamble.

(1) Coastal Beaches, which include Tidal Flats, 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 subtidal 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. Coastal Beaches also serve as sediment sources for downdrift coastal areas. Coastal Beaches serve to prevent storm damage, control erosion control, control flooding by dissipating wave energy, reducing the height of storm waves, and providing sediment to supply other coastal features, including Coastal Dunes, Land under the Ocean, and other Coastal Beaches. Interruptions of these natural processes by man-made structures reduce the ability of a Coastal Beach to perform these functions.

(2) Coastal Beaches and Tidal Flats provide wildlife, shellfish and fisheries habitat. Characteristics of Coastal Beaches and Tidal Flats which are critical to the protection of wildlife, fisheries, and shellfish include the following: distribution of sediment grain size, movement of sediment, water quality (including turbidity, temperature, nutrients, pollutants, salinity, and dissolved oxygen), water circulation, and beach topography.

(3) Coastal Beaches and Tidal Flats are used by coastal birds for feeding areas, nesting sites, and resting sites. Vegetative debris deposited along the drift line is vital for resident and migratory shorebirds, which feed largely on invertebrates which eat the vegetation. Infauna (invertebrates such as mollusks, polychaete worms, horseshoe crabs and crustacea) below the drift line in the lower intertidal zone are also eaten by fish and shorebirds. In addition, Coastal Beaches are important as haul-out and resting areas for seals.

(4) 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. Eelgrass beds are highly productive communities that provide food and shelter for many marine biologic communities and loss of eelgrass can result in Significant shifts in fauna, including commercial and Recreational species.

(5) Beaches and Tidal Flats are iconic features of the Town of Marshfield. They are also one of the Town's most heavily utilized recreation areas, providing opportunities for beachgoers, shellfish harvesters, anglers, boaters, and hunters, among others. Characteristics of Coastal Beaches and Tidal Flats which are critical to Recreation are topography, sediment grain size, water quality, water circulation rates and patterns, unobstructed access along shore, natural erosional and depositional cycles, and wave intensity. Characteristics of Coastal Beaches which are critical to aesthetics are natural erosion and deposition cycles, relief topography, slope and elevation, sense of openness and solitude.

(6) Land within 100 feet of a Coastal Beach or tidal flat is considered to be important to the protection and maintenance of Coastal Beaches and Tidal Flats, and therefore to the protection of the wetland values.

B. Wetland Values and Presumption of Significance. Whenever a proposed project involves removing, filling, dredging, altering, building upon or degrading a Coastal Beach or flat or within 100 feet of a Coastal Beach or flat, the Commission shall presume that the beach or flat is Significant to the protection of the following wetland values: flood control; erosion and sedimentation control; storm damage prevention, including coastal storm flowage; prevention of water pollution; protection of fisheries; protection of shellfish; protection of wildlife and Wildlife Habitat; protection of Rare Species Habitat, including rare plant and animal species; protection of Recreation; protection of aquaculture; and protection of aesthetics. These presumptions may be overcome only upon a clear showing that the Coastal Beach or tidal flat does not play a role in protecting any of the wetland values given above.

C. Definitions. Same as 310 CMR 10.27(2).

D. Performance Standards. When a Coastal Beach, Tidal Flat or land within 100 feet of a Coastal Beach or Tidal Flat is determined to be Significant to a wetland value, the following regulations shall apply:

(1) Any project or Activity on a Coastal Beach shall not cause a significant adverse or cumulative adverse effect by increasing erosion, decreasing the volume or changing the form of any such Coastal Beach or an adjacent or downdrift Coastal Beach.

(2) Notwithstanding the above, beach nourishment with clean sediment of a grain size compatible with that on the existing beach may be permitted, provided that there is no permanent significant adverse or cumulative adverse effect upon the wetland values or upon submerged aquatic vegetation.

(3) Any use or storage of vehicles including marine, land, or amphibious shall not cause a significant adverse or cumulative adverse effect on the wetland values of the Coastal Beach, nor shall that use or storage increase erosion, decrease the volume or change the form of any such Coastal Beach.

(4) When Tidal Flats are Significant to protection of shellfish, shellfish habitat, fish or fisheries,

the performance standards for Land Containing Shellfish (§ 505-202.5) shall apply.

(5) In addition to complying with the requirements of §505 202.2D a project on a tidal flat shall have no significant adverse nor cumulative adverse effects on fisheries, vegetation, and/or Wildlife Habitat caused by alterations in water circulation, alterations in the distribution of sediment grain size, and changes in water quality, including, but not limited to, other than natural fluctuations in the levels of dissolved oxygen, temperature or turbidity, or the addition of pollutants.

(6) Notwithstanding the above provisions, no project may be permitted which will have any significant adverse or cumulative adverse effect on specified habitat of rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.37.

(7) Refer to MWPR Part III (project-specific performance standards or guidance document) for additional project-specific performance standards.

(8) Performance standards for activities or work proposed in the Buffer Zone to a Coastal Beach or Tidal Flat are specified under MWPR Part II Buffer Zone Article 6.0.

(9) The Commission may impose such additional requirements as are necessary to protect the wetland values described under the Bylaw.

§ 505-202.3. Coastal Dunes.

A. Preamble.

(1) Coastal Dunes aid in storm damage prevention, erosion control, 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. Vegetated 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. Characteristics of Coastal Dunes which are critical for storm damage prevention, flood control, and erosion control include: ability of dune to erode and change in response to Coastal Beach conditions; dune volume, sediment grain size, and slope; dune form which can change with wind and natural water flow; amount, continuity, and density of vegetative cover; and ability of the dune to move landward or laterally.

(2) Coastal Dunes are important habitats for a wide variety of wildlife, particularly birds and rare species of plants and animals where these occur, for feeding and nesting areas. The amount of vegetation, dune height and slope, and sediment grain size are all features of dunes which are critical characteristics for the protection of wildlife. The pervious nature of Coastal Dunes allows for the infiltration of surface waters and therefore recharges groundwater and public and private water supplies, and also filters out pollutants. Characteristics of Coastal Dunes which are critical to protection of aesthetic wetland values and wetland scenic views are dune form, slope, elevation, size of dune field, proportion and scale of dunes in relationship to other land forms. Land within 100 feet of a Coastal Dune is considered to be Significant to the

protection and maintenance of Coastal Dunes, and therefore to the protection of the wetland values which these areas contain.

B. Wetland Values and Presumption of Significance. Whenever a proposed project involves removing, filling, dredging, altering or building upon a Coastal Dune or within 100 feet of a coastal dune, the Commission shall presume that the dune is Significant to the protection of the following wetland values: protection of public or private water supply; protection of groundwater; flood control; erosion and sedimentation control; storm damage prevention, including coastal storm flowage; prevention of water pollution; protection of fisheries; protection of shellfish; protection of wildlife and Wildlife Habitat; protection of Rare Species Habitat, including rare plant and animal species; protection of Recreation; protection of aquaculture; and protection of aesthetics. These presumptions may be overcome only upon a clear showing that the dune does not play a role in protecting any of the wetland values given above.

C. Definitions. Same as 310 CMR 10.28(2).

D. Performance Standards. When a Coastal Dune or land within 100 feet of a Coastal Dune is determined to be Significant to a wetland value, the following regulations shall apply:

(1) Any alteration of, or structure on, a Coastal Dune or within 100 feet of a Coastal Dune shall not have a significant adverse or cumulative 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;

(e) Causing removal of sand from the dune artificially; or

(f) Interfering with mapped or otherwise identified bird nesting habitat.

(2) With the exception of engineered Coastal Dunes, no new coastal revetments or coastal engineering structures of any type shall be constructed on a Coastal Dune.

(3) The following projects may be permitted:

(a) Pedestrian walkways, designed to minimize the disturbance to the vegetative cover and traditional bird nesting habitat;

(b) Fencing and other devices designed to increase dune development; and

(c) Plantings compatible with the natural vegetative cover.

(4) Any use or storage of vehicles including marine, land, or amphibious shall not cause significant adverse or cumulative adverse effect on the wetland values of the Coastal Dune, nor shall that use or storage increase erosion, decrease the volume or change the form of any such Coastal Dune.

(5) Notwithstanding the above provisions, no project may be permitted which will have any significant adverse or cumulative adverse effect on specified habitat of rare vertebrate or invertebrate and rare plant species, as identified by procedures established under 310 CMR 10.37.

(6) Refer to MWPR Part III (project-specific performance standards or guidance document) for additional project-specific performance standards.

(7) Performance standards for activities or work proposed in the Buffer Zone to a Coastal Dune are specified under Buffer Zone MWPR Part II Article 6.0.

(8) The Commission may impose such additional requirements as are necessary to protect the wetland values described under the Bylaw.

§ 505-202.4. Salt Marshes.

A. Preamble.

(1) A Salt Marsh is a highly productive type of coastal wetland that produces large amounts of organic matter and provides valuable habitat. A Significant portion of this material is exported to estuarine and coastal waters as detritus and dissolved organics. This detritus provides the basis for a large food web that supports many marine organisms, including fish and shellfish. Salt Marshes also provide spawning and nursery habitat for several important estuarine forage 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 adsorb hydrocarbons, heavy metals and other pollutants. The Salt Marsh also helps retain nitrogen and phosphorus compounds. This relationship helps to reduce algal blooms and changes in ocean plankton and plant communities, particularly eelgrass.

(2) The underlying peat in a salt marsh serves as a barrier between fresh groundwater landward of the marsh and the ocean, thus helping to maintain the level of the groundwater and protecting public and private water supplies by preventing saltwater intrusion. A notable feature of Salt Marshes is the development of Tidal Creeks within the marsh itself. The flow in Tidal Creeks is bidirectional; the channels tend to remain fairly stable and do not meander as much as streams that are subject to unidirectional flow. Tidal Creeks provide important spawning and nursery habitat for fish, invertebrates and birds and provide a conduit for energy and material exchange between the Salt Marsh and the adjacent estuary. Tidal Creeks shall be considered an element of the Salt Marsh system.

(3) Salt Marsh vegetation and underlying peat and soils are resistant to erosion and dissipate wave energy, thereby providing a buffer that reduces wave damage and coastal erosion. Salt Marshes are important feeding areas for many types of fish, shellfish, invertebrates, and aquatic and terrestrial wildlife. The marsh, including its creeks and open water, also provides

important shelter for many aquatic and migratory birds. Where rare species of plants and animals occur, Salt Marsh provides important Rare Species Habitat.

(4) Salt Marshes help absorb pollutants, but there is a careful balance of nutrient and pollutant input. Because the marsh is the basis for such a large food web, bioaccumulation of pollutants and toxins can mean that even relatively low levels of pollutants may be detrimental. Some of the characteristics of Salt Marshes which are critical to their health and ability to protect wetland values include: the growth, composition, and distribution of Salt Marsh vegetation; the amount of flow and level of both tidal and fresh water; the water quality (including but not limited to turbidity, temperature, nutrients, pollutants, salinity, and dissolved oxygen) of both tidal and fresh water; the presence and depth of peat; rate of marsh productivity; and the diversity of the animals and plants making up the marsh community. Salt Marshes provide excellent areas for recreational activities such as bird watching, boating, hunting, fishing and shell fishing which are important to Marshfield's economy. Salt Marshes in a natural condition are aesthetically valuable. Land within 100 feet of a Salt Marsh is considered to be Significant to the protection and maintenance of Salt Marshes, and therefore to the protection of the wetland values.

(5) Salt Marshes serve two important roles in reducing climate change: Carbon Sequestration and Carbon Storage. Carbon Sequestration is the process of capturing carbon dioxide from the atmosphere; measured as the rate of carbon uptake per year. Carbon Storage is the long-term confinement of carbon in plants and sediment and is measured as total weight of carbon stored. Coastal Wetlands may sequester carbon at the rate of two to four times greater than mature tropical forests and store three to four times more carbon per equivalent area than tropical forests. Destruction of coastal habitats has a two-fold consequence: carbon sequestration capacity is lost, and stored carbon would be released to greenhouse gasses in the atmosphere.

B. Wetland Values and Presumption of Significance. Whenever a proposed project involves removing, filling, dredging, altering or building upon a Salt Marsh or within 100 feet of a Salt Marsh, the Commission shall presume that the Salt Marsh is Significant to the protection of the following protected wetland values: protection of public or private water supply; protection of groundwater; flood control; erosion and sedimentation control; storm damage prevention, including coastal storm flowage; prevention of water pollution; protection of fisheries; protection of shellfish; protection of wildlife and Wildlife Habitat; protection of Rare Species Habitat, including rare plant and animal species; protection of Recreation; protection of aquaculture; and protection of aesthetics. These presumptions may be overcome only upon a clear showing that the Salt Marsh does not play a role in protecting any of the wetland values given above.

C. Definitions. Same as CMR 310 10.32 (2).

D. Performance Standards. When a Salt Marsh or land within 100 feet of a Salt Marsh is determined to be Significant to **a** wetland value, the following regulations shall apply:

(1) A proposed project or Activity shall not cause any significant adverse or cumulative adverse effect upon Salt Marsh productivity and Interests of a Salt Marsh. Alterations in growth, distribution, and composition of salt marsh vegetation shall be considered in evaluating significant adverse or cumulative adverse effects on productivity.

(2) Notwithstanding the above provisions, no project may be permitted which will have any significant adverse or cumulative adverse effect on specified habitat of rare vertebrate or invertebrate and rare plant species, as identified by procedures established under 310 CMR 10.37.

(3) Refer to MWPR Part III (project-specific performance standards or guidance document) for additional project-specific performance standards.

(4) Performance standards for activities or work proposed in the Buffer Zone to a Salt Marsh are specified in MWPR Part II Article 6.0.

(5) The Commission may impose such additional requirements as are necessary to protect the wetland values described under the Bylaw.

§ 205-202.5. Shellfish Habitat.

A. Preamble.

(1) Shellfish are one of the wetland values protected by the Bylaw. Further, the protection of Shellfish Habitat is critical to the protection of shellfish regardless of the presence of shellfish at any one point in time. Shellfish Habitat is found within many of the Resource Areas protected by the Bylaw. In addition to the regulations for those Resource Areas above described, this Section discusses additional protection for shellfish and shellfish habitat. Shellfish Habitat is important to the protection of marine fisheries in addition to the protection of shellfish. Shellfish in the Town of Marshfield are a very important recreational and commercial resource and an important economic commodity for fishermen and the Town. Shellfish used as a human food resource need very clean, uncontaminated water, since they have the ability to concentrate very low levels of pollutants. 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. Young shellfish in the planktonic larval stage during the spring and summer months are an important food source for juvenile marine fish and many crustaceans.

(2) Characteristics of Shellfish Habitat which are critical to the protection of shellfish include, but are not limited to: water circulation patterns, rates of water flow, and amounts of water; the relief, elevation, distribution, grain size, and pollutant load of the sediments; water quality (including turbidity, temperature, pollutants, nutrients, salinity, and dissolved oxygen); and public access to the site for the purpose of shell fishing, fishing, hunting, or navigating.

B. Wetland Values and Presumption of Significance. Whenever a proposed project involves removing, filling, dredging, altering or building upon Shellfish Habitat or the water over Shellfish Habitat or within 100 feet of such and, the Commission shall presume that the Shellfish Habitat is Significant to the protection of the following wetland values: prevention of water pollution; fisheries; shellfish; Wildlife Habitat; Recreation; aquaculture; and aesthetics. These presumptions may be overcome only upon a clear showing that Shellfish Habitat does not play a role in protecting any of the wetland values given above.

C. Definitions.

Shellfish Habitat means (1) Land Containing Shellfish or (2) the area below means high water in any coastal Resource Area that provides or has provided characteristics including but not limited to sediment type and grain size, circulation patterns, hydrologic regime, water chemistry, plant communities and food supply, necessary to support shellfish species. Shellfish habitat shall include organisms that make up part of the food chain/web regardless of commercial value. Further, Shellfish Habitat shall be defined as those areas with currently productive shellfish populations regardless of their commercial value, areas deemed historically productive, and areas of municipal shellfish propagation efforts. Evidence of shell fragments shall be deemed as being located in shellfish habitat.

D. Performance Standards. When Shellfish Habitat or land within 100 feet of Shellfish Habitat is determined to be Significant to a wetland value, the following regulations shall apply:

(1) A proposed project or Activity shall not cause any significant adverse or cumulative adverse effect on Shellfish Habitat and shall not contaminate, damage, or impair shellfish, its food supply, habitat, or plant communities in that area.

(2) Any use of amphibious vehicles shall not cause any significant adverse or cumulative adverse effect on land containing shellfish, shellfish, Shellfish Habitat, or plant communities.

(3) A proposed project shall not Significantly adversely affect water quality (including but not limited to changes in turbidity, temperature, salinity, dissolved oxygen, nutrients and pollutants), water circulation, or natural drainage from adjacent land.

(4) A proposed project shall not obstruct or limit the ability of the public to gather shellfish recreationally or the ability of commercial fishermen to harvest shellfish or obstruct or limit an existing aquaculture project.

(5) Notwithstanding the above provisions, no project may be permitted which will have any significant adverse or cumulative adverse effect on specified habitat of rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.37.

(6) Refer to MWPR Part III (project-specific performance standards or guidance document) for additional project-specific performance standards.

(7) Performance standards for activities or work proposed in the Buffer Zone to Shellfish Habitat are specified in MWPR Part II Article 6.0.

(8) The Commission may impose such additional requirements as are necessary to protect the wetland values described under the Bylaw.

ARTICLE 3.0
Land Subject to Flooding or Inundation by Groundwater or Surface Water.

§505-203.1.Land Subject to Flooding (Bordering and Isolated Land and Vernal Pools).

A. Preamble.

(1) Bordering Land Subject to Flooding provides a temporary storage area for floodwater, which has overtopped the bank of the main channel of a creek, river, or stream or the basin of a pond or lake. During periods of peak stormwater runoff, floodwaters are both retained (i.e., slowly released through evaporation and percolation) and detained (slowly released through surface discharge). Over time, incremental filling of these areas causes displacement of flooding effects and increases 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 due to flooding and erosion. Pollutants or contaminants located on Bordering Land Subject to Flooding may be washed into surface waters and subsequently into ground water, or percolate directly into ground water. Sources of pollutants within these areas will have widespread effect on wetland values.

(2) Bordering Land Subject to Flooding provides an important source of microscopic plant and animal material which enriches the nearby water body and serves as the basis for a food web which supports fish and wildlife. Bordering Land Subject to Flooding provides important Wildlife Habitat and wildlife access to surface water resources. Bordering Land Subject to Flooding is often low and level and thus helps prevent erosion of soil into water bodies due to surface water runoff. The topography and location of Bordering Land Subject to Flooding is critical for protection of flood control capabilities.

(3) Isolated Land Subject to Flooding provides a temporary storage area where runoff and high groundwater collects and slowly evaporates or percolates into the ground. These areas, often small, are usually numerous and thus very important in preventing more serious flooding somewhere else. Filling causes lateral displacement of ponded water or increased runoff onto contiguous properties, which may result in damage to those properties or other properties. The additive nature of the flood protection provided by isolated land subject to flooding and the fact that filling one may redirect water so as to radically change watershed sizes means that small changes in one area may have a direct impact on another area. Isolated land subject to flooding helps prevent erosion by breaking up watersheds so that runoff does not become so great as to have enough force to erode soil. Areas where the isolated land subject to flooding is pervious are likely to serve as Significant recharge points to the groundwater aquifer.

(4) A Vernal Pool Habitat is an essential breeding habitat for amphibian, reptile, or other vernal pool community species and provides other extremely important functions during the non-breeding season for a variety of these species as well as other wildlife. Vernal pools are temporary bodies of freshwater that provide critical habitat for many vertebrate and invertebrate wildlife species. Vernal pools are found across the landscape where small woodland depressions, swales or kettle holes collect spring runoff or intercept seasonally high groundwater tables. They may not be connected to other wetlands. Any wetland resource exhibiting these characteristics can be considered a vernal pool and may or may not be certified.

(5) Vernal pools constitute a unique and increasingly vulnerable type of wetland. They are inhabited by many species of wildlife, some of which are totally dependent on vernal pools

for their survival. The lack of fish populations as predators for the eggs and larvae of these wildlife species allows for their successful breeding in these vernal pools. They are also an important habitat resource for many birds, mammals, reptiles and amphibians, including many state listed rare species. Vernal pools are often a resource habitat for state-listed endangered species and are also protected in the Massachusetts Endangered Species Act (MESA), 321CMR 10.00 which is administrated by the MA Division of Fisheries and Wildlife (DFW) Natural Heritage & Endangered Species Program (NHESP).

(6) Contamination in these areas may easily migrate into groundwater and neighboring wells. Isolated land subject to flooding which is covered by a mat of organic peat or muck may help remove contaminants before the floodwater enters the ground water. Isolated Land Subject to Flooding may provide important habitat for amphibians, and some rare species particularly during their breeding period. It may also provide important habitat for wildlife and in particular waterfowl. Both Bordering and Isolated Land Subject to Flooding are aesthetically attractive in a natural condition and provide opportunities for passive recreational activities such as hiking, wildlife viewing, or birding. Land within 100 feet of land subject to flooding is Significant to the protection and maintenance of land subject to flooding and therefore to the wetland values of this land.

B. Wetland Values and Presumption of Significance.

(1) Whenever a proposed project involves removing, filling, dredging, altering or building upon land subject to flooding or within 100 feet of such land, the Commission shall presume that the land is Significant to the protection of the following wetland values: protection of public or private water supply; protection of groundwater; flood control; erosion and sedimentation control; storm damage prevention, including coastal storm flowage; prevention of water pollution; protection of fisheries; protection of wildlife and wildlife habitat; protection of rare species habitat, including rare plant and animal species; protection of recreation, protection of agriculture; and protection of aesthetics. These presumptions may be overcome only upon a clear showing that land subject to flooding does not play a role in protecting any of the Wetland Values given above.

(2) Where a freshwater wetland's physical characteristics conform to those defined for vernal pool habitat, the Commission shall presume the existence of a vernal pool and vernal pool habitat. This presumption is unconditional and shall be made notwithstanding certification or lack thereof by the Massachusetts Division of Wildlife and Fisheries and notwithstanding the site might not be located within another Resource Area. Evidence that the vernal pool is a thriving active habitat could include, without limitation, several months of pH and dissolved oxygen measurements yielding values compatible with amphibian or reptile breeding.

(3) Many of the indicators of vernal pool habitat are seasonal. Accordingly, in the case of challenges to the presumption of vernal pool habitat the Conservation Commission may require that the determination be postponed until the appropriate time period consistent with the evidence being presented. The Commission may also require its own site visits as necessary to confirm the evidence. Evidence gathered at inappropriate times could be considered faulty or invalid

(4) The Vernal Pool Habitat presumption may be overcome only upon a showing by clear and convincing credible evidence that in the judgment of the Commission demonstrates that such resource area does not provide, or cannot provide, vernal pool habitat function.

C. Definitions. Same as 310 CMR 10.57(2)(a)1-4 with the following additions:

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.

Isolated Land Subject to Flooding is freshwater wetland that is a confined basin or depression which supports a maximum of 400 square feet or less of predominantly wetland plant vegetation and holds at least six inches of water within highest extent of flooding at least once a year. This Resource Area is not contiguous to other wetland resources.

Vernal Pool is, any confined basin or depression not occurring in existing lawns, gardens, landscaped areas, or driveways which, at least in most years, holds water for a minimum of two continuous months during the spring and/or summer, contains water at some time during most years, is free of fish populations, and provides essential breeding and rearing habitat functions for amphibian, reptile, or other vernal pool community species, regardless of whether the site has been certified by the Massachusetts Division of Fisheries and Wildlife's Natural Heritage and Endangered Species Program(NHESP).

Vernal Pool Habitat is the vernal pool and the area within 100 feet of the mean annual boundaries of a vernal pool. It can be located in any forested or open area except as noted in the definition above.

D. Performance Standards.

(1) Land Subject to Flooding. When Land Subject to Flooding (Bordering and Isolated Land) is determined to be Significant to a wetland value, the following regulations shall apply:

(a) A proposed project shall not cause any significant adverse or cumulative adverse effect on the wetland values of Land Subject to Flooding.

(b) Projects on Land Subject to Flooding shall be permitted only in connection with such procedures determined by the Commission as not having the effect of reducing the ability of the land to provide floodwater storage.

(c) The Commission may require compensating or greater flood storage capacity in the same watershed if it permits any filling of land subject to flooding, and all filling of areas subject to flooding shall be strictly minimized. Except as stated in the preceding sentence, no proposed projects shall be permitted to displace or direct floodwaters, through fill or other means, to other areas.

(d) Notwithstanding the above provisions, no project may be permitted which will have any significant adverse or cumulative adverse effect on specified habitat of rare vertebrate

or invertebrate and rare plant species, as identified by procedures established under 310 CMR 10.59.

(e) Refer to MWPR Part III (project-specific performance standards or guidance document) for additional project-specific performance standards.

(f) Reserved: Pending MassDEP flood plain performance standards.

(g) The Commission may impose such additional requirements as are necessary to protect the wetland values described under the Bylaw.

(2) Vernal Pools.

(a) Any discharge of solid or liquid fill, storm drainage from roads, driveways, or rooftops into or within the boundaries of the pool or its habitat is prohibited.

(b) Septic tanks, distribution boxes and the leaching field must be located a minimum of 100 feet from the mean annual boundary of a vernal pool.

(c) The Conservation Commission shall not allow any work within any Vernal Pool Habitat and the Commission shall not consider a variance for such activity.

(d) Vernal pools need not to be certified by the Division of Fisheries and Wildlife (DFW) Natural Heritage and Endangered Species Program (NHESP) to be protected under this bylaw regulation.

(e) Refer to MWPR Part III (project specific performance standards or guidance document) for additional project specific performance standards.

(f) Performance standards for activities or work proposed in the Buffer Zone Resource Area bordering Vernal Pool Habitat as specified in MWPR Part II Article 6.0.

(g) The Commission may impose such additional requirements as are necessary to protect the Wetland Values described under the Bylaw.

§ 505-203.2. Bordering and Isolated Vegetated Wetlands (Wet Meadows, Marshes, Swamps, Bogs).

A. Preamble.

(1) Bordering and Isolated Vegetated Wetlands are areas where groundwater discharges to the surface and where, in some circumstances, surface water discharges to the groundwater. The profusion of vegetation and the low, flat topography of Vegetated Wetlands slow down and reduce the passage of stormwater runoff and floodwaters during periods of peak flows by providing temporary floodwater storage, and by facilitating water removal through

evaporation and transpiration. This reduces downstream flood crests, erosion, sedimentation, 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 streams or into the groundwater which in turn is important to the protection of water quality, public and private water supplies, fisheries and wildlife.

(2) Wetlands are important for the prevention of pollution. The plant communities, soils, and associated low, flat topography of Vegetated Wetlands remove or detain sediments, nutrients (such as nitrogen and phosphorus), and bacteria and toxic substances (such as heavy metal compounds) that occur in runoff and floodwaters. Some nutrients and toxic substances are retained for years in plant root systems or in soils. Bordering Vegetated Wetlands in coastal areas act to filter out pollutants in floodwaters and stormwater runoff, thereby protecting water quality and protecting shellfish beds in adjacent coastal Resource Areas.

(3) Wetlands provide critical fish and Wildlife Habitat. Isolated Vegetated Wetlands can provide critical Rare Species Habitat, just as does Isolated Land Subject to Flooding (see § 505-203.1). Wetland vegetation provides shade that moderates water temperatures important to fish life. Vegetated Wetlands that are always wet or that are 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 these wetlands since they provide large quantities of microscopic plant and animal food material. Wetland vegetation provides habitat for a wide variety of insects, reptiles, amphibians, mammals and birds. Many of these, particularly insects, are food sources for fish.

(4) Vegetated Wetlands, together with land within 100 feet 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 Significant to the maintenance of a proper salinity ratio in estuarine areas downstream of the vegetated wetland. Proper water chemistry is essential to the ability of fish and shellfish to spawn successfully and for the success of fisheries and shellfisheries. A proper salinity ratio is also important for many species of fish.

(5) Vegetated Wetlands are excellent places for birdwatching, hunting, fishing, and other recreational activities. Some Vegetated Wetlands, particularly bogs, provide habitat for rare plants and animals. Vegetated Wetlands along pond edges can prevent erosion by wind-driven waves. Land within 100 feet of a vegetated wetland is considered to be Significant to the protection and maintenance of Vegetated Wetlands, and therefore to the protection of the wetland values of these Resource Areas.

B. Wetland Values and Presumption of Significance. Whenever a proposed project involves removing, filling, dredging, altering or building upon a vegetated wetland or within 100 feet of a vegetated wetland, the Commission shall presume that the vegetated wetland is Significant to the protection of the following wetland values: protection of public or private water supply; protection of groundwater; flood control; erosion and sedimentation control; storm damage prevention, including coastal storm flowage; prevention of water pollution; protection of fisheries; protection of shellfish; protection of wildlife and Wildlife Habitat; protection of Rare Species Habitat, including rare plant and animal species; protection of Recreation; and protection of aesthetics. These

presumptions may be overcome only upon a clear showing that the vegetated wetland does not play a role in protecting any of the wetland values given above.

C. Definitions.

Bordering Vegetated Wetlands are wetlands contiguous to other Resource Areas and contain predominantly wetland vegetation.

Isolated Vegetated Wetlands are wetlands not contiguous to other resources areas and contain a minimum of 400 square feet of predominantly wetland vegetation. The types of wetlands include but are not limited to wet meadows, marshes, swamps, bogs, vernal pools and pockets of coastal salt marsh. Vegetated Wetlands are areas where soils are saturated and/or inundated such that they support a predominance of wetland indicator plants. The groundwater and surface water hydrological regime, soils and the vegetation which occur in each type of wetlands, including but not limited to both bordering and isolated Vegetated Wetlands, are defined under the Bylaw. The boundary of Vegetated Wetland, whether Bordering or Isolated, is the line within which 50% or more of the vegetation consists of wetland indicator plants and saturated or inundated conditions exist. See 505-105.1.

Vernal Pool is any confined basin or depression not occurring in existing gardens, landscaped areas, or driveways which, at least in most years, holds water for a minimum of two continuous months during the spring and/or summer, contains water at some time during most years, is free of adult predatory fish, and provides ~~potential~~, essential breeding and rearing habitat functions for amphibian, reptile, or Vernal Pool community species, regardless of whether the wetland site has been certified as a Vernal Pool by the Massachusetts Division of Fisheries and Wildlife Natural Heritage and Endangered Species Program (NHESP).

D. Performance Standards. When a Vegetated Wetland, whether Bordering or Isolated, or land within 100 feet of a Vegetated Wetland is determined to be Significant to a wetland value, the following regulations shall apply:

(1) A proposed project shall not cause any significant adverse or cumulative adverse effect upon the wetland values of a Vegetated Wetland.

(2) Where an Isolated Vegetated Wetland meets the criteria for a vernal pool, whether or not it has been certified, as described in § 505-203.2, a proposed project shall not cause any significant adverse or cumulative adverse effect upon the wetland values of vernal pool habitat. Notwithstanding the above provisions, no project may be permitted which will have any significant adverse or cumulative adverse effect on specified habitat of rare vertebrate or invertebrate and rare plant species, as identified by procedures established under 310 CMR 10.59.

(3) Projects shall not have any significant adverse or cumulative adverse effect on Vernal Pools, whether certified or uncertified, provided such wetlands meet the physical and biological requirements for certification as described in the Massachusetts Division of Fisheries and Wildlife 2009 Guidelines for Certification of Vernal Pools. The Commission may require more than the minimum protective undisturbed buffer strip. These performance standards are also

applicable to Vernal Pools which are in Bordering or Isolated Vegetated Wetlands (see 505-203.1 & 505-203.2).

(4) Refer to MWPR Part III (project-specific performance standards or guidance document) for additional project-specific performance standards.

(5) Performance standards for activities or work proposed in the Buffer Zone to a Vegetated Wetland are specified in MWPR Part II Article 6.0.

(6) The Commission may impose such additional requirements as are necessary to protect the wetland values described under the Bylaw.

(7) A vernal pool setback zone shall be created where no disturbance or alteration shall occur within mean annual boundaries of a vernal pool.

§ 505-203.3. Inland Banks and Beaches.

A. Preamble.

(1) Banks are areas where groundwater discharges to the surface and where, under some circumstances, surface water recharges the groundwater. 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 alterations which allow water to frequently and consistently spread over a larger and shallower area results in an increase in the amount of land routinely flooded and elevated water temperatures.

(2) Banks may provide shade that moderates water temperatures as well as providing breeding habitat, escape cover and feeding areas, all of which are important for the protection of fish and wildlife, including any rare species which may occur. Banks may also help channel water and thus maintain a water depth which helps keep the water temperatures cool in warm weather, thus providing habitat necessary for both fish and the food sources for fish. Inland Banks may act as a sediment source for inland beaches. By confining floodwaters, Banks decrease the erosion of topsoil from adjacent land surfaces and help prevent flood and storm damage to buildings and roads. Confining floodwaters also decrease water pollution and help to protect public or private water supplies by preventing floodwaters from mixing with many contaminants found on roads, near and in dwellings, from fertilized soil, from farm animals and from septic tanks. Banks may provide nesting habitat for some species of birds. Banks and particularly beaches provide wildlife and human access to water bodies for Recreation and for aesthetic enjoyment of the scenery. Land within 100 feet of inland Banks and beaches is Significant to the protection and maintenance of inland Banks and beaches and therefore, to the wetland values of these Resource Areas. Land within 100 feet of a bank is likely to be Significant to the protection and maintenance of the bank, and therefore, to the protection of the wetland values of these Resource Areas.

B. Wetland Values and Presumption of Significance. Whenever a proposed project involves removing, filling, dredging, altering or building upon an inland bank or beach or within 100 feet of an inland bank or beach, the Commission shall presume that the bank or beach is Significant to the protection

of the following wetland values: protection of public or private water supply; protection of groundwater; flood control; erosion and sedimentation control; storm damage prevention, including coastal storm flowage; prevention of water pollution; protection of fisheries, protection of wildlife and Wildlife Habitat; protection of Rare Species Habitat, including rare plant and animal species; protection of Recreation; and protection of aesthetics. These presumptions may be overcome only upon a clear showing that the inland bank or beach does not play a role in protecting any of the wetland values given above.

C. Definitions. Same as 310 CMR 10.54 (2) (a), (b) and (c).

D. Performance Standards. When an Inland Bank or Beach or land within 100 feet of an Inland Bank and Beach is determined to be Significant to **a** wetland value, the following regulations shall apply:

(1) A proposed project shall not cause any significant adverse or cumulative adverse effect on the wetland values of Inland Bank or Inland Beach.

(2) A proposed project shall be permitted only if there is no significant adverse or cumulative adverse effect on bank stability, bank height, groundwater and surface water quality, the water-carrying capacity of an existing channel within a bank, and the capacity of the bank to provide habitat for fisheries and/or wildlife.

(3) Notwithstanding the above provisions, no project may be permitted which will have any significant adverse or cumulative adverse effect on specified habitat of rare vertebrate or invertebrate and rare plant species, as identified by procedures established under 310 CMR 10.59.

(4) Refer to MWPR Part III for additional project-specific performance standards.

(5) Performance standards for activities or work proposed in the Buffer Zone to an Inland Bank or Inland Beach are specified in MWPR Part II Article 6.0.

(6) The Commission may impose such additional requirements as are necessary to protect the wetland values described under the Bylaw.

ARTICLE 4.0
Land Subject to Coastal Storm Flowage

§ 505-204.1. Land Subject to Coastal Storm Flowage (LSCSF).

A. Preamble.

(1) Land Subject to Coastal Storm Flowage (LSCSF) is Significant to storm damage prevention and flood control. LSCSF is also likely to be Significant to the protection of Wildlife Habitat and the prevention of water pollution.

(2) Velocity zones (V Zones) and overwash zones (AO Zones) of LSCSF are areas which are subject to hazardous flooding, wave impact, and, in some cases, Significant rates of erosion as a result of storm wave impact and scour. V and AO Zones in coastal areas are generally subject to repeated storm damage which can result in loss of life and property, increasing public expenditures for storm recovery activities, historic taxpayer subsidies for flood insurance and disaster relief, and increased risks for personnel involved in emergency relief programs. Alteration of land surfaces in Stillwater zones (A-zones) could change drainage characteristics that could cause increased flood damage on adjacent properties.

(3) A number of complex and interrelated factors determine the wave height and the landward extent of wave run-up in V and AO Zones, including shoreline orientation, nearshore/offshore bathymetry, onshore topography, wave fetch, storm frequency and magnitude, and the presence of coastal engineering structures. The topography, soil characteristics, vegetation, erodibility and permeability of the land surface within V and AO Zones are critical characteristics which determine how effective an area is in dissipating wave energy and in protecting areas within and landward of these zones from storm damage and flooding. The gentler and more permeable a seaward-sloping land surface is, the more effective that land surface is at reducing the height and velocity of incoming storm waves. Wave energy may be expended by eroding and transporting materials comprising the land surface within the V and AO Zones, as well as by percolation or the downward movement of the stormwater runoff through more permeable land surfaces, thereby lessening the effects of backrush, scour and erosion.

(4) Development and alteration of the LSCSF can Alter or destroy those characteristics cited above which are critical to the Resource Area wetland values.

(5) Dredging or removal of materials within V and AO Zones acts to increase the landward velocity and height of storm waves, thereby allowing storm waves to break further inland and to impact upland and wetland Resource Areas which might not otherwise be impacted. Filling and the placement of solid fill structures within V and AO Zones may cause the refraction and /or reflection of wave energy onto adjacent properties, natural resources, and public or private ways. When struck with storm waves, solid structures within V and AO Zones also may increase localized rates of erosion and scour (Shore Protection Manual, U.S. Army Corps of Engineers, 1984, V.1, pp.5-3 and 5-5).

(6) LSCSF (the coastal floodplain) buffers and protects upland areas from severe storm conditions. Since the floodplain contains areas where the water table is close to the surface (as well as other wetland Resource Areas) pollutants in a floodplain, including contents of septic systems and fuel tanks, may affect public or private water supplies, groundwater quality, wildlife, fisheries and shellfish during a storm. Wave impacts, inundation by floodwaters and storm-driven debris may cause direct and collateral damage to man-made structures in the floodplain. Hardened surfaces deflect wave energy; **as** they do not dissipate it. Soft structures and surfaces dissipate wave energy and protect property. Certain portions of LSCSF are Significant to the protection of Wildlife Habitat. Coastal floodplain areas are often low-lying areas that are ecologically transitional areas between marine/estuarine ecosystems and upland areas. Resource Areas within the 10-year floodplain are important habitats for a large variety of wildlife species, including a number of rare species. Salt Marshes provide habitat for many crustaceans and mollusks and serve as critical nursery areas for numerous finfish species

which in turn provide food for species higher in the food chain, including birds, mammals, and humans. These Resource Areas provide important over-wintering and stopover areas for many species of waterfowl.

(7) Areas of coastal floodplains adjacent to wetland Resource Areas provide important wildlife functions, such as nesting and roosting habitat, Rare Species Habitat, and wildlife corridors connecting coastal resources with freshwater wetland resources. LSCSF may be Significant to the prevention of pollution. These Significant pollution prevention areas include all areas within the 100-year floodplain that are within 100 feet of any other coastal or freshwater Resource Area. These areas can mitigate significant adverse or cumulative adverse effects associated with human disturbance and pollutants. Natural or relatively undisturbed coastal floodplains can reduce erosion and sedimentation, and in a vegetated state can prevent pollutants contained in surface runoff from directly entering waterways and other wetland areas during flood events. While erosion of stream banks and shorelines is an important natural process, the design and management of activities in the floodplain should aim to avoid excessive erosion (and thus possible pollutant-laden runoff) due to human activities. Areas of coastal floodplains which are immediately landward of Salt Marshes, coastal beaches, Barrier Beaches, Coastal Dunes or Coastal Banks are likely to be in a state of transition as the entire complex of Coastal Wetland resources gradually moves landward as a result of climate change and sea level rise. For thousands of years, relative sea level has been rising in Massachusetts, and it is still rising resulting in gradual inundation of landward area.

(8) As sea level rises, the shoreline may retreat, and areas of the coastal floodplain will successively be inundated more frequently by storm and tidal Activity. Activities carried out within these transitional areas of coastal floodplains may interfere with the natural landward migration of the adjacent coastal Resource Areas. Maintaining these transitional areas in their natural state is Significant to the protection of the wetland values of other wetland resources.

B. Wetland Values and Presumption of Significance. Whenever a proposed project involves removing, filling, dredging, altering or building upon LSCSF, the Commission shall presume that the land is Significant to the protection of the following wetland values: protection of public or private water supply; protection of groundwater; flood control; erosion and sedimentation control; storm damage prevention, including coastal storm flowage; prevention of water pollution; protection of fisheries; protection of shellfish; protection of wildlife and Wildlife Habitat; and protection of Rare Species Habitat, including rare plant and animal species. These presumptions may be overcome only upon a clear showing that LSCSF does not play a role in protecting any of the wetland values given cited above.

C. Definitions.

Land Subject to Coastal Storm Flowage (LSCSF) means land subject to any inundation caused by coastal storms up to and including that resulting from a 100-year flood as designated by the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM), surge of record, or flood of record, whichever is greater. A 100-year flood (or base flood as it is also referred to) means the flood having a one-percent chance of being equaled or exceeded in any given year. The seaward limit is mean low-water.

Velocity Zones (including V, VE, and Va-30) are those portions of LSCSF which are coastal high hazard areas or areas of special flood hazard extending from the mean low-water line to the inland limit within the 100-year floodplain supporting waves greater than three feet height.

AO Zones are those portions of LSCSF which are subject to inundation by moving water (usually sheet flow on sloping terrain) where average depths are between one and three feet. In Massachusetts, coastal AO-Zones are commonly associated with over wash and generally, border on the landward side of V Zones.

A Zones (including A, AE, A1-30 and A99) are those portions of LSCSF which are subject to inundation by types of 100-year flooding where still water flooding predominates.

AH Zones are those portions of LSCSF which are subject to shallow flooding, usually ponding resulting from over wash, where average water depths are between one and three feet.

Overwash is that portion of storm wave uprush that carries over the crest of a berm, dune bank, or man-made structure, often times depositing sediment or other storm-laden material.

D. Performance Standards. When a LSCSF is determined to be Significant to **a** wetland value, the following regulations shall apply:

(1) A proposed project shall not cause any significant adverse or cumulative adverse effect upon the wetland values of LSCSF.

(2) When LSCSF is Significant to protection of Wildlife Habitat, a proposed Activity shall not impair the capacity of LSCSF to provide important Wildlife Habitat functions. A proposed Activity shall not reduce the ability of the resource to serve as a Wildlife Habitat and migration corridor through activities such as, but not limited to, the removal of substantial vegetative cover and/or installation of fencing and other structures which prevent wildlife migration across property.

(3) When LSCSF is Significant to pollution prevention, a proposed Activity shall not cause ground, surface or salt water pollution triggered by coastal storm flowage or flooding. For those areas within at least 100 feet of another Resource Area, activities shall Minimize significant adverse or cumulative adverse effects in order to maintain the capability to remove suspended solids and other contaminants from runoff before it enters other Resource Areas.

(4) For activities proposed in A Zones, the predicted rate of relative sea level rise in Massachusetts of 2.8 feet per 100 years (based on the U.S. National Climate Assessment) shall be incorporated into the project design and construction.

(5) The following activities proposed within Velocity Zones (V Zones) are likely to have an significant adverse or cumulative adverse effect on the protected wetland values and are therefore prohibited:

(a) New construction or placement of new structures, including buildings, sheds, and garages. Existing buildings may be renovated or reconstructed, but must be built using flood-resistant construction.

(b) Paving of driveways and parking lots.

(c) New or expanded septic systems.

(6) The following activities proposed within AO Zones are likely to have an significant adverse or cumulative adverse effect on the protected wetland values and are therefore prohibited:

(a) New construction or placement of new structures, including buildings, sheds, and garages, or walls on vacant lots.

(b) New or expanded septic systems.

(7) Notwithstanding the above, the Commission may permit the following activities in V Zones and AO Zones provided that the applicant demonstrates to the satisfaction of the Commission that best available measures are utilized to avoid or Minimize significant adverse or cumulative adverse effects on all wetland values of all Resource Areas:

(a) Beach, dune and bank nourishment and restoration projects that incorporate natural vegetative cover and do not otherwise impede the landward migration of these landforms over time.

(b) Elevated pedestrian walkways that are minimal.

(c) Piers, provided that they meet the performance standards specified in Pier Performance Standards.

(d) Projects to restore Salt Marsh, freshwater wetland, shellfish habitat or fisheries.

(e) Improvements necessary to maintain the structural integrity or stability of existing coastal engineering structures.

(f) Projects and activities associated with water-dependent uses such as boat yards, yacht clubs, and maritime schools.

(g) Dredging, including maintenance dredging.

(8) Notwithstanding the above provisions, no project may be permitted which will have any significant adverse or cumulative adverse effects on specified habitat of rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.37.

(9) Refer to MWPR Part III for additional project-specific performance standards.

(10) The Commission may impose such additional requirements as are necessary to protect the wetland values described under the Bylaw.

§ 505-204.2. Barrier Beaches.

A. Preamble. Barrier Beaches protect landward areas from flooding and erosion because they provide a buffer to storm waves and to sea levels elevated by storms. Barrier Beaches provide protection from wave action for such highly productive areas as Salt Marshes, estuaries, Tidal Flats, lagoons, harbors, Salt Ponds, and freshwater marshes and ponds, which are in turn important to fisheries, shellfish, wildlife and rare species where they occur. The along-shore movement of beach sediment caused by wave action maintains Barrier Beaches. The Coastal Dunes, Coastal Beaches, and Tidal Flats of a barrier beach system are made up of sediment supplied by wind action, storm wave over wash, and tidal inlet deposition. Barrier Beaches in Marshfield undergo a landward or along-shore migration caused by the landward and along-shore movement of sediment by wind, waves, and currents. The continuation of these processes maintains the volume of the landform which is necessary to carry out its storm and flood buffer functions. The ability of Barrier Beaches to respond to wave action, including storm over wash sediment transport is critical to the protection of the wetland values of Barrier Beaches. Barrier Beaches in a natural condition are aesthetically attractive and provide opportunities for recreational fishing, shellfishing, swimming, navigation and passive Recreation.

B. Wetland Values and Presumption of Significance. Whenever a proposed project involves removing, filling, dredging, altering or building upon a Barrier Beach or within 100 feet of a Barrier Beach, the Commission shall presume that the Barrier Beach is Significant to the protection of the following wetland values: flood control; erosion and sedimentation control; storm damage prevention, including coastal storm flowage; protection of fisheries; protection of shellfish; protection of wildlife and Wildlife Habitat; protection of Rare Species Habitat, including rare plant and animal species; protection of Recreation; protection of aquaculture; and protection of aesthetics. These presumptions may be overcome only upon a clear showing that the Barrier Beach does not play a role in protecting any of the wetland values given above.

C. Definitions. Same as 310 CMR 10.29 (2).

D. Performance Standards. When a Barrier Beach or land within 100 feet of a Barrier Beach is determined to be Significant to a wetland values, the following regulations shall apply:

(1) No proposed project which may cause any significant adverse or cumulative adverse effects upon the wetland values of a Barrier Beach shall be permitted.

(2) No new coastal revetments or hard coastal engineering structures of any type shall be constructed on a Barrier Beach.

(3) No activities or structures shall be permitted which prohibit the natural movement of sand and water along the beach, or which prohibit the inland migration of the Barrier Beach. The following projects may be permitted:

(a) Pedestrian walkways, designed to minimize the disturbance to the vegetative cover and traditional bird nesting habitat;

(b) Fencing and other devices designed to increase coastal dune development; and

(c) Plantings compatible with the natural vegetative cover.

(4) No activities or structures shall be permitted which increase storm damage, erosion, sedimentation, flooding of adjacent properties or Resource Areas, or which cause significant adverse or cumulative adverse effects on the wetland values.

(5) Notwithstanding the above provisions, no project may be permitted which will have any significant adverse or cumulative adverse effect on specified habitat of rare vertebrate or invertebrate and rare plant species, as identified by procedures established under 310 CMR 10.37.

(6) Refer to MWPR Part III or additional project-specific performance standards.

(7) Performance standards for activities or work proposed in the Buffer Zone to a Barrier Beach are specified in MWPR Part II Article 6.0.

(8) The Commission may impose such additional requirements as are necessary to protect the wetland values described under the Bylaw.

ARTICLE 5.0

Rivers

§ 505-205.1. Riverfront Area (Including the North River).

A. Preamble.

(1) Riverfront Areas are likely to protect private or public water supply, groundwater, Shellfish Habitat and fisheries. In addition, Riverfront Areas provide flood control, erosion and sedimentation control, storm damage prevention, pollution prevention, wildlife and Wildlife Habitat, Rare Species Habitat and recreational and aesthetic wetland values. Land adjacent to rivers and streams can protect the natural integrity of these water bodies. The presence of natural vegetation within Riverfront Areas is critical to sustaining rivers as ecosystems and providing these public values.

(2) Riverfront Areas can be important to the maintenance of water quality and quantity for both humans and wildlife. Land along rivers in its natural state with a high infiltration capacity increases the yield of a water supply well. When Riverfront Areas lack the capacity to filter pollutants and toxins, contaminants can reach human populations served by wells near rivers or by direct river intakes, and can reach coastal estuaries where they contaminate shellfish beds. The capacity of Riverfront Areas to filter pollutants is equally critical to surface water supplies, reducing the need for treatment of drinking water. In the watershed, mature vegetation within Riverfront Areas provides shade to moderate water temperatures and slow algal growth, also improving drinking water quality.

(3) Within Riverfront Areas, surface water interaction with groundwater Significantly influences the riverine ecosystem. The dynamic relationship between surface and groundwater within the “hyporheic zone” sustains communities of aquatic organisms which regulate the flux of

nutrients, biomass and the productivity of organisms including fish within the stream itself. The hyporheic zone extends to greater distances horizontally from the channel in large, higher order streams with alluvial floodplains, but the interaction within this zone is important in smaller streams as well.

(4) By providing recharge and retaining natural flood storage, as well as by slowing surface water runoff, Riverfront Areas can mitigate flooding and damage from storms. The root systems of riverfront vegetation keep soil porous, increasing infiltration capacity and preventing erosion. Vegetation also removes excess water through evaporation and transpiration. This removal of water from the soil allows for more infiltration when flooding occurs. Increases in storage of floodwaters can decrease peak discharges and reduce storm damage. Vegetated riverfronts also dissipate the energy of storm flows, reducing damage to public and private property.

(5) Riverfront Areas are critical to fisheries. Vegetation along rivers provides cover, increases food and oxygen, decreases sedimentation, and provides spawning habitat. Loss of surface water flow recharge as a result of impervious surfaces within the Riverfront Area may lower water levels and increase water temperatures, harming fisheries. In some cases, summer stream flows are maintained almost exclusively from groundwater recharge. Small streams are most readily impacted by removal of trees and other vegetation along the shore.

(6) Riverfront Areas are important Wildlife Habitat, providing food, shelter, breeding, nesting, migratory, and overwintering areas for wildlife. Even some predominantly upland species use, and may be seasonally dependent on, Riverfront Areas. Riverfront Areas promote biological diversity by providing habitats for a wide variety of upland and wetland species, including bald eagles, osprey, and kingfishers. Large dead trees provide nesting sites for bird species that typically use the same nest from year to year. Sandy areas along rivers may serve as nesting sites for turtles and water snakes. River front Areas provide food for species such as wood turtles which feed and nest in uplands but use rivers as resting and overwintering areas. Riverfront Areas provide corridors for the migration of wildlife for feeding or breeding. Loss of this connective function, from activities that create barriers to wildlife movement within and across Riverfront Areas, results in habitat fragmentation and causes declines in wildlife populations.

(7) Riverfront Areas in a natural condition are aesthetically valuable and offer opportunities for fishing, hunting, canoeing, camping, swimming and other recreational activities

B. Wetland Values and Presumption of Significance. Whenever a proposed project involves removing, filling, dredging, altering or building upon a Riverfront Area, the Commission shall presume that the land is Significant to the protection of the following wetland values: protection of public or private water supply; protection of groundwater; flood control; erosion and sedimentation control; storm damage prevention, including coastal storm flowage; prevention of water pollution; protection of fisheries; protection of shellfish; protection of wildlife and Wildlife Habitat; protection of Rare Species Habitat, including rare plant and animal species; protection of Recreation; and protection of aesthetics. These presumptions may be overcome only upon a clear showing that the Riverfront Area does not play a role in protecting any of the wetland values given above.

C. Definitions. See 310 CMR 10.58(2) and 10.23 in addition to those sections listed below:

Mean Annual High-Water Line of a river is the line that is apparent from visible markings or changes in the character of soils or vegetation due to the prolonged presence of water and that distinguishes between predominantly aquatic and predominantly terrestrial land. Field indicators of bankfull conditions shall be used to determine the mean annual high-water line. Bankfull field indicators include but are not limited to: changes in slope, changes in vegetation, stain lines, top of point bars, changes in bank materials, or bank undercuts.

(1) In most rivers, the first observable break in slope is coincident with bankfull conditions and the mean annual high-water line.

(2) In some river reaches, the mean annual high-water line is represented by bankfull field indicators that occur above the first observable break in slope, or if no observable break in slope exists, by other bankfull field indicators. These river reaches are characterized by at least two of the following features: low gradient, meanders, oxbows, histosols, a low-flow channel, or poorly-defined or nonexistent banks.

(3) In tidal rivers, the mean annual high-water line is coincident with the mean high-water line determined under 310 CMR 10.23 which is the line where the arithmetic mean of the high-water heights observed over a specific nineteen-year metonic cycle (the National Tidal Datum Epoch) meets the shore and shall be determined using hydrographic survey data of the National Ocean Survey of the U.S. Department of Commerce.

D. Performance Standards. When a Riverfront Area is determined to be Significant to a protected wetland value, the following regulations shall apply:

(1) Except as stated below, the Commission hereby incorporates 310 CMR 10.58 in its regulations for all matters related to Bylaw jurisdiction in lands within 200 feet of rivers and streams.

(2) The exemption granted in 310 CMR 10.58(6)(j) as it pertains to the North River within the Town of Marshfield shall not apply to the Riverfront Area as defined in this By-Law. In the case of a conflict between the provisions of Ch. 367, §62 of the Acts of 1978, the Protective Order, and the provisions of this By-law, the more stringent shall apply.

(3) Notwithstanding the above, a river is any natural flowing body of water that empties to any ocean, lake, pond, other river, stream or wetland and which flows throughout the year. Perennial rivers, streams and creeks are rivers; intermittent streams are not. Notwithstanding 310 CMR 10.58, the burden of proof shall be on any applicant to show that a river, stream or creek is not perennial (i.e., is intermittent).

(4) Notwithstanding any provisions of 310 CMR 10.58, the Commission shall presume that the mean annual high-water line of a nontidal river is coincident with the outer (landmost) boundary of any Bordering Vegetated Wetland (as defined in the bylaw) that may be adjacent to the river. This presumption may be overcome upon a clear showing that the mean annual high-water line is closer to the river. Such evidence may include hydrological measurements and calculations prepared by a registered professional engineer and/or hydrologist, and/or stream flow stage data from U.S. Geological Survey stream gauges and survey. For nontidal rivers lacking any Bordering Vegetated Wetland, the inner boundary of the 200-foot Riverfront Area shall be the top of Inland Bank as determined by the first observable break in slope or

the mean annual flood level, whichever is lower. For tidal rivers, the inner boundary of the 200-foot Riverfront Area shall be the mean annual high-water line.

(5) Notwithstanding any provisions of 310 CMR 10.58, the alternatives analysis shall include only lots adjacent to the lot(s) being proposed for development, or located in the near vicinity.

(6) Notwithstanding the above provisions, no project may be permitted which will have any significant adverse or cumulative adverse effect on specified habitat of rare vertebrate or invertebrate and rare plant species, as identified by procedures established under 310 CMR 10.59.

(7) Refer to MWPR Part III for additional project-specific performance standards.

(8) The Commission may impose such additional requirements as are necessary to protect the wetland values described under the Bylaw.

§ 505-205.2 Fish Runs.

This section applies to Anadromous/Catadromous Fish Runs, Banks along Fish Runs, and Lands Under Fish Runs.

A. Preamble. Fisheries are one of the wetland values under the Bylaw. Anadromous and catadromous fish are renewable natural resources that provide recreational and commercial benefits. In addition, throughout their life cycle such fish are important components of freshwater, estuarine, and marine environments and are food sources for other organisms. Fish Runs provide habitats for other fish, shellfish and wildlife. Characteristics of Fish Runs which are critical to the protection of anadromous/catadromous fish include: ease of fish passage upstream and downstream, accessibility of spawning and nursing grounds to fish, volume and rate of water flow in both migratory and spawning areas, and water quality (including turbidity, temperature, pollutants, nutrients, salinity, pH, and dissolved oxygen). Fish Runs are important for recreational and commercial fisheries, and provide aesthetically valuable areas for such activities.

B. Wetland Values and Presumption of Significance. Whenever a proposed project involves removing, filling, dredging, altering, or building upon a Fish Run or within 100 feet of a Fish Run, the Commission shall presume that the Fish Run is Significant to the protection of the following wetland values: prevention of water pollution; protection of fisheries; protection of shellfish; protection of wildlife and Wildlife Habitat; protection of Rare Species Habitat, including rare plant and animal species; protection of Recreation; and protection of aesthetics. These presumptions may be overcome only upon a clear showing that the Fish Run and the land under a Fish Run does not play a role in protecting any of the wetland values given above.

C. Definitions. **Fish Run (Anadromous/Catadromous)** means that area within estuaries, ponds, streams, creeks, rivers, lakes, or coastal waters, which is a spawning or feeding ground or passageway for anadromous or catadromous fish and which is identified by the Division of Marine Fisheries or has been mapped on the Coastal Atlas of the Coastal Zone Management Program. 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 the Notice of Intent is filed.

D. Performance Standards. When a Fish Run or land within 100 feet of a Fish Run is determined to be Significant to **a** wetland value, the following regulations shall apply:

(1) A proposed project shall not cause any significant adverse or cumulative adverse effect upon the wetland values of a Fish Run.

(2) Proposed projects shall not be permitted to fill a Fish Run, impede the upstream or downstream migration of fish, or change the volume, rate or quality of water flow or water quality in a Fish Run.

(3) Notwithstanding the above provisions, no project may be permitted which will have any significant adverse or cumulative adverse effects on specified habitat of rare vertebrate or invertebrate and rare plant species, as identified by procedures established under 310 CMR 10.37 for Coastal Resource Areas or 310 CMR 10.59 for Inland Resource Areas.

(4) Refer to MWPR Part III for additional project-specific performance standards.

(5) Performance standards for work or activities proposed in the Buffer Zone to a Fish Run are specified in MWPR Part II Article 6.0.

(6) The Commission may impose such additional requirements as are necessary to protect the wetland values described in MWPR Part II Article 6.0.

ARTICLE 6.0
Buffer Zone

§ 505-206.1. Buffer Zone Regulations.

A. Preamble.

(1) The 100-foot Buffer Zone Resource Area specified in Chapter 294 provides critical protection for adjacent Resource Areas. Most human activities likely to come under the review of the Commission take place in the Buffer Zone Resource Area.

(2) Adverse impacts to Buffer Zone Resource Areas are likely to have a significant adverse or cumulative adverse effect on the associated Wetland Values. Buffers reduce the significant adverse or cumulative adverse effects of adjacent land uses on wetlands. Wetlands with important functions and Values or wetlands which are sensitive to disruption will require wider “no disturbance areas” within buffers to reduce the risk of this disruption. Wetland functions, Values, and sensitivity are attributes that will influence the necessary level of protection for wetlands. Where wetland systems are rare or irreplaceable (e.g., high quality estuarine wetlands, mature swamps, and bogs) larger, internal buffer setbacks will ensure a lower risk of disruption both within the buffer zone itself as well as to adjacent Resource Areas. A buffer is necessary to protect an adjacent Resource Area from direct human disruption in the form of human encroachment (including, but not limited to, foot traffic, trampling, debris, noise). The appropriate width and/ or internal setbacks to minimize human

disruption depends on the type of vegetation, the slope, soils etc. both internally and exhibited by the adjacent land use.

(3) A Buffer Zone in a Naturally Vegetated Condition can act like wetlands in removing nitrogen and phosphorus from entering receiving waters by serving as sinks, filters and transformers of suspended and dissolved nutrients. As nutrient concentrations in water increase, the likelihood of algal blooms and eutrophication increases, resulting in lower oxygen levels. A buffer can remove 50% to 100% of sediments via filtration through natural organic litter. Absorption of groundwater via mature trees can take up 14 times more water than an equivalent area of grass. Bank and stream channel stability is dependent on the anchoring ability of root systems and slowing of runoff velocity and flow diffusion provided by the natural vegetation. Vegetation in the buffer can act to moderate water column temperatures and levels of dissolved oxygen.

(4) The buffer provides corridors and connector and dispersal routes for wildlife, as well as habitat for breeding, nesting, development, feeding, basking, cover, hibernation, aestivation, and migratory activities for many wildlife species.

(5) Buffers reduce wetland impacts by moderating impacts of stormwater runoff including stabilizing soil to prevent erosion; filtering suspended solids, nutrients, and harmful or toxic substances; and moderating water level fluctuations. Buffers help to prevent water pollution and protect public or private water supplies. They reduce the adverse impacts of human disturbance on wetland habitat including blocking noise and glare; reducing sedimentation and nutrient input; reducing direct human disturbance from dumped debris, cut vegetation, and trampling; and providing visual separation. They also provide essential habitat for wetland-associated species for use in feeding; roosting; breeding and rearing of young; and cover for safety, mobility and thermal protection among other things.

(6) Uplands immediately adjacent to wetlands vary in their ability to reduce significant adverse or cumulative adverse effects of development, most importantly in relationship to slope and vegetative cover. Buffers with dense vegetative cover on slopes less than 15% are most effective for protection of water quality. Dense shrub or forested vegetation with steep slopes provides the greatest protection from direct human disturbance. Appropriate vegetation for Wildlife Habitat depends on wildlife species present in the wetland and buffer. Land uses associated with Significant construction and post-construction impacts need more protective buffers. Construction impacts include, but are not limited to, erosion and sedimentation, debris disposal, vegetation removal and noise. Post-construction impacts are variable depending on the land use, but residential land use in particular can have significant impacts. Residential land use is associated with yard maintenance debris, domestic animal predation, removal of vegetation and trampling, nitrogen and phosphorus loading, and excessive herbicide and pesticide application. Buffers in a natural condition are aesthetically and economically valuable. Buffers provide recreational opportunities for hunting, fishing, walking, photography and other recreational activities.

(7) To retain wetland-dependent wildlife in important wildlife areas, buffers need to retain plant structure. This is especially true where open water exists or where the wetland is used extensively by migratory or overwintering birds or rare species. Priority species may need even larger buffers to prevent their loss due to disturbance or isolation of subpopulations.

(8) Notwithstanding the critical importance of the Buffer Zone for protection of its own and other Resource Area wetland values, there may be some proposed activities which may not have significant adverse or cumulative adverse effects upon the wetland values of the Buffer Zone as it currently exists. Such work or activities may be allowable within the Buffer Zone, provided that the Commission finds that there is no significant adverse or cumulative adverse effect upon Wetland Values.

B. Wetland Values and Presumption of Significance.

(1) The Buffer Zone Resource Area is Significant to the Wetland Values of the Resource Areas which it borders. In addition, where rare species or vernal pools occur in the Buffer Zone, the Buffer Zone itself is Significant for protection of rare species, Rare Species Habitat, vernal pool organisms, and vernal pool habitat, respectively.

(2) Where a project involves removing, building upon, degrading, or otherwise altering a Buffer Zone Resource Area, the Commission shall presume that such area is Significant to, or will have a cumulative effect upon, the following wetland values: protection of public or private water supply; protection of groundwater; flood control; erosion and sedimentation control; storm damage prevention, including coastal storm flowage; prevention of water pollution; protection of fisheries; protection of wildlife and Wildlife Habitat; protection of Rare Species Habitat, including rare plant and animal species; protection of Recreation; and protection of aesthetics. This presumption may be overcome upon a clear showing that said land does not play a role in protecting any Wetland Values given above.

(3) If the Buffer Zone Resource Area has already been altered and/or encroached upon, the Commission shall presume that there already exists a significant adverse or cumulative adverse effect upon the Wetland Values of the Resource Area. This presumption may be overcome upon a clear showing that there is no Significant or cumulative impact upon the protection of said Wetland Values.

C. Definitions.

Buffer Zone is the Resource Area within 100 feet of any other Resource Area specified in 505-103.1 (A-E), excluding the Buffer Zone itself, Land Subject to Coastal Storm Flowage, and the Riverfront Area. The buffer width shall be measured horizontally in a landward direction from the Resource Area boundary as surveyed in the field.

D. Performance Standards.

(1) The intent of the Commission is to keep, and/or only allow, structures and activities as far away as possible from any other adjacent Resource Area in order to protect the Wetland Values associated with either Area. The following Performance Standards shall apply specifically to the Buffer Zone Resource Area.

(2) Within the Buffer Zone, setbacks shall apply as follows:

(a) When land within the 100-foot Buffer Zone Resource Area is naturally vegetated and undisturbed, a setback of 75 feet from adjacent Resource Area(s) shall be observed when siting structures. Additionally, when undertaking activities such as landscaping, removal of vegetation or other activities which will alter this undisturbed land, a fifty-foot setback from any adjacent Resource Area shall be observed. These setback requirements may be modified by the Commission in accordance with §§ 505-103.4, 505-103.5 and 505-106.18 of these regulations.

(b) When land within the 100-foot Buffer Zone Resource Area has been developed subsequent to June 20, 2002, a setback of 50 feet from adjacent Resource Area(s) shall be observed when siting structures or undertaking activities such as landscaping, removal of vegetation or other activities which will alter the Buffer Zone. These setback requirements may be modified by the Commission in accordance with §§ 505-103.4, 505-103.5 and 505-106.18 of these regulations.

(c) When land within the 100-foot Buffer Zone Resource Area encompasses lots developed prior to June 20, 2002, and has buildings which are currently existing on such lots, any new structures shall be required to meet a twenty-five-foot setback to the maximum extent possible. When undertaking activities such as landscaping, removal of vegetation or other activities the twenty-five-foot setback shall also be observed. In any event no new structure(s) shall be located closer to an adjacent Resource Area(s) than any existing building/structure. This setback requirement may be modified by the omission in accordance with §§ 505-103.4, 505-103.5 and 505-106.18 of these regulations.

(d) Applicants wishing to alter Buffer Zone land within the proscribed setbacks as noted in Subsection D(2)(b) and (c) above shall be required to obtain a Mitigation Permit as defined in § 505-105.1 of these regulations and as more fully described in the Commission’s Policy and Procedure Guide.

Part III
PROJECT-SPECIFIC PERFORMANCE STANDARDS

The following performance standards shall be applied to projects that are proposed in any of the Resource Areas and Buffer Zone as defined in 505-103.1 and 505-103.2 respectively. The Commission has frequently reviewed certain activities and as a result has developed standards that the Commission feels are sufficient in most cases to protect the Wetland Values of each affected Resource Area, including the Buffer Zone. In addition to the following specific performance standards, the Commission may require a restriction on land associated with new projects in any Resource Area, including the Buffer Zone, if the Commission deems it necessary to protect the Wetland Values of the Resource Area, including the Buffer Zone. The intent of the Commission is to move all structures and activities as far away as possible from any Resource Area. Each project is evaluated on its own merits and any previously approved project does not set any precedent.

ARTICLE 1.0
Septic Systems

§ 505-301.1. Applicability.

The following presumptions apply to septic systems within the Marshfield Conservation Commission jurisdiction:

A. A septic system is presumed to protect the Resource Areas, Buffer Zone and Wetland Values when:

(1) It is sited according to the provisions of 310 CMR 10.03(3) *Presumption Concerning 310 CMR 15.000: The State Environmental Code, Title 5: Standard Requirements for the Siting, Construction, Inspection, Upgrade and Expansion of On-site Sewage Treatment and Disposal Systems and for the Transport and Disposal of Septage*.; and

(2) Meets the Marshfield Board of Health Regulations and requirements; and

(3) Is located 50 feet or more from a Resource Area, except LSCSF/AE flood zone; and/or

(4) Is located more than 100 feet from a River or perennial stream.

B. Any new proposed septic system or repair to an existing septic system that does not meet the provisions of 505-301.1A shall be presumed to have a significant adverse or cumulative adverse effect on the Natural Resource Areas, including the Buffer Zone and Wetland Values, and requires a conservation permit as specified in § 505-106.1.

C. The Conservation Administrator may exercise discretionary authority (§ 505-103.5) in cases deemed to be an emergency by the Board of Health including but not limited to seepage of sewage.

ARTICLE 2.0
Coverage

§ 505-302.1. Limits; coverage calculations.

A. The proportion of existing coverage of impervious to pervious surface ratio shall not exceed the existing amount without the approval of the Commission.

B. Coverage calculations shall include, but not be limited to, all structures, impervious driveways, impervious walkways, impervious roadways, decks, pools, tennis courts, and any other similar surfaces that cover the ground.

C. For the purpose of coverage calculations,

(1) All roof overhangs, eaves, cantilevered portions of buildings or other structures onto which precipitation may be redirected shall be considered; and

(2) Any hardened surface shall be considered impervious unless it has a demonstrated ability to of its ability to absorb precipitation or runoff.

ARTICE 3.0
Hardened Surfaces in LSCF.

§ 505-303.1. Limitations.

A. The Commission wishes to limit hardened surfaces in Town of Marshfield coastal areas that contain AO Zone and V Zone flood areas. The energy in these flood zones is dissipated by soft, relatively flat surfaces. Limiting the amount of hard impervious surface is necessary to preserve the wetland values of flood control, prevention of storm damage, prevention of pollution, and public safety. In light of this, a request for a conservation permit must be filed with the Commission prior to the installation or replacement of hardened surfaces including patios, walkways, driveways or similar structures in FEMA flood map AO and V Zones flood areas.

B. For the purposes of coverage calculations,

(1) Any hardened surface shall be considered impervious regardless of its ability to absorb precipitation or runoff.

(2) The total combined area of the impervious patios, walkways, driveways, decks or similar structures shall not exceed 500 square feet.

(3) Impervious walkways shall be no more than 36 inches wide.

ARTICLE 4.0
Piers

§ 505-304.1. Performance standards established.

A. Preamble.

(1) Chapter 294, Wetlands Protection, of the Code of the Town of Marshfield, explicitly protects the values of the natural resources of its foreshores, intertidal areas and the Commonwealth of Massachusetts' tidelands and waters as well as inland wetlands, ponds and lakes.

(2) The purpose of these regulations is to establish performance standards for private docks and piers. The authority for these regulations derives from Marshfield Chapter 294. These regulations will not apply to freshwater docks unless the Commission specifically finds that they are applicable.

(3) The construction, use, and maintenance of docks, piers and walkways are likely to have a significant adverse or cumulative adverse effect on the wetland resource values of storm damage prevention, fin and shellfisheries, wildlife habitat, erosion and sediment control, and recreation. Construction, maintenance and use of piers can have significant adverse or cumulative adverse effects on resource areas and on the use of these areas for recreational purposes. Further, piers destroyed by storm pose a threat to nearby properties by increasing waterborne debris.

(4) Turbulence, such as caused by jet-drive boats, and propeller dredging generated by boat use associated with piers significantly increase turbidity levels. High turbidity levels attenuate light. Light is necessary for photosynthetic process responsible for the primary productivity and oxygen regeneration of the water. The suspended sediments settle on shellfish beds, smothering existing shellfish and altering the quality of the benthic environment essential for spat (mollusk larvae) settlement. Resuspension of bottom sediments causes redistribution of sediments, alteration in sediment grain size distribution and causes changes in bottom topography relief, elevation and grade, including creation of depressions in the bottom. Settlement of sediments into depressions can create deep pockets of highly fluid-like sediment which may not be able to physically support shellfish or which can become anoxic and therefore not support shellfish. Disturbance of sediments during the period of shellfish larval settlement hinders or prevents the effective settlement of shellfish larvae. Boat traffic generated from piers will add to this disruption and may cause erosion of banks and marshes.

(5) Construction of piers and subsequent boat activity causes resuspension of nutrient-laden sediment particles which may cause a release of sediment-bound nutrients to the water column resulting in a "bloom" of vegetation. Release of nutrients to the water column leads to eutrophication and anoxic bottom conditions. Anoxic sediments and anoxic bottom conditions create adverse impacts on benthic resources, including shellfish and fisheries.

(6) While pier construction is typically the least environmentally destructive method of crossing a marsh, it may adversely affect the physical characteristics and functional value of marsh. Marsh plants provide the major energy flow (detritus food chain) between the autotrophic and heterotrophic levels in a marsh-estuarine system. Many species of sport and commercial fish and shellfish are dependent upon this system. Plants adapted to high ambient light intensity, such as marsh grasses, are ill-adapted to the shaded conditions created by a pier. Shading may result in the loss of vegetation biomass (decreased plant height, population density, and leaf thickness) or alteration of species composition. Reduction in plant density results in the loss of sediment normally trapped by roots and culms. Tidal washout of sediment can result in localized depressions which, through evaporation of trapped water, concentrate salt. High sediment salt levels effectively preclude recolonization by original vegetation. Localized tidal washout may lead to further vegetative regression, erosion, and disruption of natural communities in the area.

(7) Propeller turbulence near or in areas of submerged aquatic vegetation, such as eel grass, or salt marsh damages vegetation, thereby increasing the rate at which organic detritus is produced. If this organic detritus does not completely decompose aerobically, then anoxic bottom conditions will ensue, which adversely impact shellfish and fisheries.

(8) Cumulative impacts of the construction, maintenance and use of piers threaten to decrease the overall productivity of the marsh ecosystem, to reduce its ability to absorb storm wave energy, and to reduce its contribution to groundwater and surface water quality. Cumulative impacts also affect shellfish habitat and shell fishing.

(9) Docks and piers when placed in land containing shellfish or shellfish habitat have an adverse impact on the resource area value of recreation. The placement, length and size of docks and appurtenant floats can interfere with the harvesting of quahogs, soft-shell clams, and scallops. Docks and piers can have an unacceptable significant adverse or cumulative adverse effect on habitat and recreation.

(10) Piers, depending on their length, can have an adverse impact on recreation by interfering with recreational boating activities. Not properly designed, piers can interfere with intertidal lateral access for recreational fishing and fowling. Any proposal that affects navigation is likely to have a significant adverse or cumulative adverse effect on recreation. Lighting on piers may cause temporary "night blindness" in boaters and may disrupt feeding habits of nocturnal aquatic animals.

(11) Docks conforming to the following regulations can be presumed to minimize the aforementioned possible negative impacts.

B. Presumption of Significance. When a proposed project involves the dredging, removal, filing, altering, or causing significant adverse or cumulative adverse effect to an area subject to protection under the bylaw by the construction, repair, replacement, or enlargement of a pier, the Commission shall presume that the proposed activity will have a significant or cumulative effect upon the wetland resource valves specified in the Marshfield Chapter 294. These presumptions are rebuttable and may be overcome only upon a clear showing that the work does not have a significant or cumulative effect upon, said wetland resource values. In the event that the presumptions are deemed to have been overcome, the Commission shall make a written determination to this effect, setting forth the grounds.

C. Definitions. As used in this article, the following terms shall have the meanings indicated:

Boat Lift, Davit, or Boat Elevator is a mechanical or electrically driven device attached to a dock, pier or bulkhead for raising and lowering a vessel vertically (from one level to another), in and out of the water.

Docks and Piers The terms “dock” and “pier” shall be used interchangeably for the purposes of these regulations and shall mean the entire structure of any pier, wharf, walkway, bulkhead, or float, and any part thereof, including pilings, ramps, walkways, float, tie-off pilings, dolphins and/or outhaul posts, that is located on a bank (inland) (310 CMR 10.54), land under water bodies and waterways (310 CMR 10.56), land under the ocean (310 CMR 10.25), land under a salt pond (310 CMR 10.33), rocky intertidal shore (310 CMR 10.31), or that portion of a coastal beach (310 CMR 10.27) seaward

of the mean high-water line. Notwithstanding the above, either a swimming float or work float, kept at a mooring, that receives a permit from the Harbormaster and is not connected with the shore, is not a float subject to these regulations.

Draft is the maximum depth of a vessel as measured from the surface of the water to the deepest part when loaded to the manufacturer's maximum load specification. In vessels equipped with outboard or I/0 engines, draft shall be measured with its propulsion unit in its lowest operating position.

Improvement Dredging is any dredging under an order of conditions from the Conservation Commission, or from other agencies, in an area which has not previously been dredged or which extends the original dredged width, depth, length or otherwise alters the boundaries of a previously dredged area.

Littoral Processes is the movement of sediments, including gravel, sand, or cobbles, along the shore caused by waves or currents.

Maintenance Dredging is dredging under an order of conditions in any previously dredged area which does not extend, expand, or exceed the originally dredged width, depth or length. However, such dredging does not by its very nature include or mean improvement dredging or backfilling.

Mean High-Water (MHW) is the present arithmetic mean of water heights observed at high tide over a specific 19-year metonic cycle determined by using hydrographic survey data of the National Ocean Survey and the U.S. Department of Commerce.

Mean Low-Water (MLW) is the arithmetic mean of water heights observed at low tide over a specific nineteen-year metonic cycle determined by using hydrographic survey data of the National Ocean Survey and the U.S. Department of Commerce.

Mean Lower Low-Water (MLLW) is the average of the lower low water heights of each tidal day as established by the arithmetic mean of water heights observed at low tide over a specific nineteen-year metonic cycle determined by using hydrographic survey data of the National Ocean Survey and the U.S. Department of Commerce.

Navigation is the ability to traverse a waterway by watercraft.

Private Pier is a water-dependent structure accessory to a residential use but shall also include yacht club, association and community piers and any other noncommercial, nongovernmental pier.

Seasonal Use is the dock, ramp, floats and all supporting materials that are not in place in any wetland resource area prior to April 1 of each year and are removed prior to November 1 of each year.

Shellfish Habitat are areas below MHW that exhibit, or can be demonstrated to have exhibited within a reasonable historical period, characteristics including but not limited to sediment type, grain size, circulation patterns, hydrologic regime, water chemistry, plant and algal communities, food supply, and normal predation patterns necessary to support shellfish species populations. A determination of shellfish habitat can be based on the results of a site analysis and/or on current or

historic shellfish productivity, municipal shellfish population development programs, or as shown on any maps or reports developed by the Massachusetts Division of Marine Fisheries and/or Environmental Division. Shellfish relay areas are presumed to be good habitat. Absence of shellfish shall not be solely determinative of the quality of shellfish habitat due to the cyclic nature of shellfish population.

Spring Tides
The average height of the high waters of the spring tides is called spring high-water or mean high-water springs (MHWS). The "spring tide line" is defined as the annual average of the two monthly lunar spring tides. This information can be obtained from the NOAA tide tables.

D. Filing Protocols, Submission Requirements and Construction Protocol. A Notice of Intent is required for any new piers and docks, whether fixed or floating, permanent or seasonal; and for any substantial alteration, or extension of an existing pier or dock. Submission, design and construction protocol shall be adhered to and is contained in the Marshfield "Guidelines for Docks and Piers in the Town of Marshfield".

E. Performance Standards.

(1) No more than one pier shall be permitted to be constructed on any property or parcel of land zoned as Residential.

No dock or pier shall extend further from the shore (mean high water mark) than a point equal to one half the lot's water frontage measured as a straight line between the lot's waterfront corners.

All floats including vessels, shall maintain a 4/1 setback from established navigation channels and anchorage areas so as not to cause a hazard or impede navigation.
The 4/1 setback formula is as follows: The outer most portion of a dock, pilings and vessel shall be a minimum of 4X the water depth measured at the mean low water mark (at the 0.00 tide) of the navigable channel from the channel's edge.

(2) No dock, even if otherwise permitted, may be constructed when it is appurtenant to a residential dwelling until an occupancy permit has been issued for that dwelling.

(3) Docks shall conform to all the other provisions of these Regulations including all permits concerning docks as a continuing order and shall be so designated with a Certificate of Conformance. Failure to comply with these conditions shall be grounds for the Commission to revoke the permit and order the removal of the pier.

(4) Owners of two adjoining, residential lots may construct a shared pier, provided that such a pier is subject to a permanent Access Easement recorded at the Plymouth County Registry of Deeds and that the maximum float square footage remains limited to 200 square feet total.

(5) No dock may extend from shore more than twenty-five percent (25%) of the width of alinear waterway at MLW except where the location of the channel shall dictate otherwise. This

width shall include the beam of the berthed vessel.

(6) Notwithstanding any other provision pertaining to length, no dock shall be longer thanis necessary to attain the minimum depths required herein.

(7) The base of the pier shall be as close as possible to the center line of the lot, project outwards as nearly perpendicular to the shoreline as possible.

(8) Docks shall be no less than 25 feet from the property line except when subsection E(4) is utilized to minimize dock density by combining two adjoining residential lots for a single dock.

(9) DEP permit number shall be permanently and conspicuously placed on the dock so asto be visible from seaward.

(10) Off season (November 1st-May 1st) storage and maintenance of floats is permittedonly above the mean high-water line when the salt marsh vegetation is in its dormantphase. Any such stored items shall be anchored/secured to prevent flotation during extreme high tide events. Dragging of floats or other associated structures andequipment across salt marsh grasses or other associated species of vegetation isprohibited. Floats shall be marked with the owner's name and silver reflective markings on all four corners.

(11) Pier planking space shall be one (1) inch or greater.

(12) The recommended minimum dock height from substrate/marsh to bottom of stringer is 1:1.5, with a minimum of 1:1.25. (See 505-304.1E (15). The recommended height is tobe no less than five feet.

(13) Dock decking shall be no wider than 48 inches.

(14) Floats shall be no greater than 200 square feet in size. The preferred float configuration is "T" shaped 90 degrees to the gangway.

(15) During the dock system construction, maintenance or operational phase, any damage to any resource area vegetation shall be replicated at a ratio of up to 4:1 at the discretion of the Commission. When such replication is deemed necessary a restoration planting plan shall be submitted to the Commission for review. The plan shall be prepared by a qualified consultant approved by the Commission. The plan, the succession requirements, the implementation and the monitoring shall adhere to the expectations of the Commission.

(16) Float stops are prohibited.

(17) No lighting is permitted except low-wattage lights for float visibility safety.

(18) Boat lifts, boat elevators and boat davits are prohibited.

(19) No floats may rest on any intertidal zone substrate.

(20) Piles are permitted to secure floats in locations where tidal velocity is high in order to ensure a secure and safe attachment. As such, maximizing piling spacing is recommended. Additionally and whenever possible, solutions for float attachments without piles are strongly encouraged.

No piles shall be placed in a location which will result in the fracturing of any adjacent bank material. The location of all piles shall be shown on any plans submitted for approval under these regulations.

(21) Water depth for Floats: The minimum depth under the float shall be field measured at MLW. Depth shall be two and one half feet (30 inches) on all four corners. The above depths must exist not only at the float where a boat(s) is to be berthed or used, but also between the float and the nearest navigable channel or open water.

(22) No float or dock may interfere or impede the use of an existing channel, navigable waterway, boat mooring, public ramp or landing.

(23) Pilings permitted shall be driven, not washed, or jetted into the salt marsh.

(24) All materials used in the construction of the dock shall be as unobtrusive as possible and their construction shall be of such material, color, shade, and tone as to blend in with the natural surroundings.

(25) Wooden pilings used to secure floats must be "Greenhearts" such as (*Chlorocardium rodiei*) that are known for being 3-4 times more durable and have a greater bending strength than treated pine or fir piles and contain natural resistance to marine borers and decay without chemical treatment and leeching. Use of CCA lumber for general marine construction is allowed for walers, stringers and cross braces for ground contact, and saltwater splash in 2" x 8" and/or 3" x 8" and larger nominal dimensions until such time as the Commission determines that a suitable alternative exists. Cutting and treatments of CCA materials must include the use of tarps to collect and safely dispose of chips, sawdust and cuttings. CCA is not allowed for decking, railings, wall caps and related applications. No creosote woods.

(26) No new, or expansion of existing pier shall be permitted without permit.

(27) No floats shall be allowed within blind (dead end) canals, and/or tidal creeks. Obstruction of navigable waters, by any means, is prohibited.

(28) Shellfish and loss of resource mitigation shall be calculated with the replacement of 80 shellfish per square foot of impact for all permanent structures seaward of MHW. Seasonal floats and ramps are not to be incorporated into this calculation. Funds are to be deposited into a Marshfield Shellfish Mitigation fund, to be used exclusively for shellfish seeding, maintenance, and purchase of shellfish equipment. The shellfish mitigation formula is as follows: $3.22/square foot multiplied by the square footage of the dock system. This is a one-time fee per conservation permit.

(29) All new or modified dock projects need to be coordinated with the Marshfield Harbormaster including, but not limited to: access float attachment methods, float location impacts to

navigation, safety, and float location impacts to Town mooring fields, Towndocks, and private marinas. Article 34 Sections 7 and 8 ratified during Special Town Meeting October 26, 2015 placing the responsibility for all marine storage equipment fees on the property owner(s) shall apply. Revisions to Article 34 Section 7 allowing the assessment of marine equipment fees within any Conservation Commission Order Of Conditions or Determination of Applicability Special Conditions approved during Annual Town Meeting April 22, 2019.

(30) No fuel, oil or hazardous materials shall be stored on any element of the dock/pier structure.

(31) No docks or structures are allowed in the Cut River.

ARTICLE 5.0
Underground Storage Tanks

§ 505-305.1. Prohibitions.

No underground storage tank for oil or hazardous material is permitted in any Resource Area as described in 505-103.1.

ARTICLE 6.0
Filling

§ 505-306.1. Alteration of flow of surface water prohibited.

No fill shall be placed in any Resource Area or Buffer Zone so as to Alter the flow of surface water in a way that the Commission determines will adversely affect the Wetland Values of the Resource Area(s).

§ 505-306.2. Alteration of salt marshes prohibited.

No filling, excavation or other alteration of Salt Marshes shall be permitted.

§ 505-306.3. Filling in vegetated wetland.

The Commission at its discretion may allow the filling of up to 2,500 square feet of Vegetated Wetland for a Limited Project, if satisfied that mitigation required in the Order of Conditions is sufficient to protect the Resource Area. If filling is allowed, the Commission may require replication of the wetland at a ratio of at least 2:1 in an area that is hydrologically suitable for supporting wetland functions, hydrologically connected to the altered wetland and must be accomplished by using wetland soils and by using native wetland plant species removed from the area to be filled. The replicated wetland must be established prior to commencing the upland Activity. The replicated wetland must be monitored for at least two growing seasons and must be maintained as a functional wetland with wetland values equaling those of the filled wetland for at least five years following the completion of the main project.

§ 505-306.4. Use of compatible fill required.

Compatible fill shall be used for beach and dune nourishment projects. “Compatible fill” means clean sediment of a grain size that is approximately the same as the area being nourished (e.g., if the area being nourished consists of gravel, sand, silt or clay, then the fill brought in for nourishment should be gravel, sand, silt or clay). “Clean” means the sediment does not contain contaminants and is free of debris.

§ 505-306.5. Dumping of lawn waste and debris.

Dumping of lawn wastes, brush or leaves or other materials or debris is considered filling and is not permitted in any Resource Area.

§ 505-306.6. Authorization to deny filling.

The Commission is authorized to deny any filling of any Resource Area in order to protect the wetland values of the Resource Area.

ARTICLE 7.0
Structures

§ 505-307.1. Intent.

The intent of the Commission is to move all structures and activities as far away as possible from any Resource Area.

§505-307.2. General requirements.

Any new or reconstructed structure situated in any Resource Area shall comply with all applicable provisions of the Town of Marshfield's Zoning By-Law (including the FIRM Map dated 7/6/2021) and 780 CMR.

ARTICLE 8.0
Additional Requirements.

§ 505-308.1 Rain gardens and other stormwater retentions systems.

Rain gardens and other constructed stormwater retention and treatment systems shall be considered protected Resource Areas subject to protection under Chapter 505 upon completion and establishment of wetland vegetation or habitat unless it can be demonstrated that, but for the continued contribution of runoff through the stormwater system, the rain garden and associated vegetation and habitat would not exist.

PART IV
General Provisions

ARTICLE 1.0
Effective Dates

§ 505-401.1. Applicability to applications and requests.

These rules and regulations were first promulgated on May 15, 1990; they have been subsequently amended on December 18, 1990, December 17, 1991, June 19, 2002, October 2, 2002, September 17, 2003, December 1, 2004, May 1, 2008, October 16, 2018, October 30, 2018, March 18, 2021, March 7, 2022, April 14, 2022 and September 20, 2023 and shall apply, as amended, to all applications and requests pending and filed after that date.