Town of Shutesbury Massachusetts
General Wetlands Protection Bylaw Regulations
(Adopted July 26, 2000; Amended October 5, 2023)

Table of Contents

ARTICLE I: INTRODUCTION

1. Statement of Jurisdiction and Protected Values

1.1 Authority: These Regulations shall be effective on and· after October 5, 2023, and shall remain until modified or amended by the Shutesbury Conservation Commission, hereafter "the Commission." They are enacted by the Commission under authority granted by Section 8 of the Shutesbury General Wetlands Protection Bylaw, hereafter "the Bylaw." That Bylaw is adopted under the Home Rule Amendment of the Massachusetts Constitution and the Home Rule statutes, independent of the Massachusetts General Laws (MGL) Wetlands Protection Act Chapter 131, § 40 (hereafter, the "WPA"), and its Regulations hereunder.

1.2. Purpose: The purpose of the Bylaw is as set forth in Section 1 of the Bylaw.

1.3. These Regulations serve to implement the Bylaw and the protection of the Bylaw's Resource Area Values in Section 1 of the Bylaw by providing standard definitions, uniform procedures, design specifications, and Performance Standards by which the Commission may carry out its responsibilities under the Bylaw.

1.4. These Regulations further aim to provide clear guidance to Applicants regarding the standards that the Commission has determined are necessary to protect Wetland Resource Areas based on Shutesbury's topography and hydrology, the special value these Resource Areas have for Shutesbury and neighboring communities, and the Commission's past experience with wetlands protection.

1.5. Resource Area Values protected by the Bylaw include: public or private water supply, groundwater and groundwater quality, surface water and surface water quality, flood control, erosion and sedimentation control, storm damage prevention, water pollution, fisheries, storm drainage, runoff, wildlife habitat, recreation, aesthetics, historic values, agriculture, and aquaculture.

1.6. Areas subject to protection under Section 2 of the Bylaw and these Regulations include the following Resource Areas (also "Resource Areas"):

1.6.1. any freshwater wetlands including Bordering Vegetated Wetlands (BVWs) or Isolated Wetlands (IWs), marsh, wet meadow, bog or swamp:

1.6.2. any lake, river, pond, or stream (regardless of whether the stream is perennial or intermittent, surface or subsurface);

1.6.3. any land subject to flooding or inundation by groundwater, surface water, storm flowage, or within a 100-year flood plain; and

1.6.4. the 100-foot Adjacent Upland Resource Area around the Resource Areas listed above in Sections 1.6.1 and 1.6.2 (hereafter referred to as the "Adjacent Upland Resource Area" or AURA). The AURA is also sometimes referred to as the 100-foot Buffer Zone.

1.7.Activities subject to Regulation under the Bylaw and provisions of these Regulations include:

1.7.1. Any proposed or undertaken activity--that constitutes removing, filling, dredging, building upon, or otherwise altering any area specified in Subsection 1.6 above--is subject to Regulation under the Bylaw and requires the filing of an application for a permit.

1.7.2. If any person wishes to have the Commission determine whether an activity may be subject to Regulation under the Bylaw, they shall submit a Request for Determination of Applicability (RDA) pursuant to Article V of these Regulations.

2. General Presumptions

2.1. Activities undertaken in close proximity to wetlands and other Resource Areas have a high likelihood of unacceptable significant or cumulative effects upon the wetland or other resource, either immediately, as a consequence of construction, or over time, as a consequence of daily operation or other activities. These unacceptable effects from construction and use can include but are not limited to erosion, siltation, loss of groundwater recharge, disruption of hydrologic connections, nutrient runoff, poor water quality, harm to wildlife habitat, or disruption of wildlife habitat corridors. The Commission may therefore require that the Applicant maintain a strip of continuous, undisturbed vegetative cover in part or all of the AURA. The Commission may set other conditions on this area unless the Applicant provides evidence deemed sufficient by the Commission that the area or part of it may be disturbed without harm to the Values protected by the Bylaw.

2.2. Work and activity within the AURA and other Resource Areas shall be avoided, and Reasonable Options must be considered. Accordingly, the Commission shall presume that the AURA and other Resource Areas discussed in this Section should be left undisturbed and natural.

3. Exceptions and Exemptions

3.1. Existing Structures or Facilities: The permit and application required by this Bylaw shall not be required for 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, telephone, telegraph, or other telecommunication services, provided that all of the following conditions are met:

3.1.1. the structure or facility is not substantially changed or enlarged;

3.1.2. written notice has been given to the Commission prior to the commencement of the work; and

3.1.3. the work conforms to any relevant Performance Standards and Design Specifications in these Regulations.

3.2. Conditional Exceptions

3.2.1. Agriculture: The application and permit required by the Bylaw shall not be required for work performed for routine maintenance or improvement of land which is lawfully in agricultural use at the time the work takes place. The Commission may require the landowner to submit documentation establishing a qualifying agricultural use.

3.2.2. Emergency Projects: Any person requesting permission to perform an emergency project, or within 24 hours of commencing an emergency project, as defined in 310 CMR 10.06, shall submit a request for an Emergency Certification per the requirements of Emergency Projects in Article V below.

3.2.3. Minor Activities within the AURA: Minor activities, as described in 310 CMR 10.02(2)(b)2.a. through d. and 310 CMR 10.02(2)(b)2.f. through q., within the AURA and outside any other Resource Areas are hereby adopted with the provision that setback requirements contained herein must include all freshwater wetlands that are jurisdictional under the Bylaw, and not just Bordering Vegetated Wetlands. Activities that meet these definitional requirements shall not be otherwise subject to regulation under the Bylaw and these Regulations provided that the work is performed: solely within the AURA, as prescribed in 310 CMR 10.02(2)(b)2.a. through d. and f. through q., in a manner so as to reduce the potential for any unacceptable significant or cumulative effects on the Resource Areas during construction, and with post-construction measures implemented to stabilize any disturbed areas. Activities that fall within the definition of 310 CMR 10.02(2)(b)e. are not exempt from regulation under the Bylaw and these Regulations.

3.3. Other than stated in this Section, no other exceptions and exemptions provided in the WPA and its Regulations shall apply under the Bylaw.

4. Reservation

These Regulations should not be construed to limit the authority of the Commission under the Bylaw. The Commission reserves the right to act in a manner consistent with the Bylaw upon any matter within its jurisdiction.

5. Incorporation

All of the procedures and requirements set forth in the WPA Regulations of 310 CMR 10.00 et. seq. are hereby incorporated and made part of these Bylaw Regulations except where they differ from or depart from these Bylaw Regulations. Where the Bylaw Regulations differ from or depart from the WPA Regulations, the Bylaw Regulations shall take precedence over the WPA Regulations. The Applicant shall first address the requirements of the WPA Regulations at 310 CMR 10.00 et. Seq. and then supplement them with the requirements of the Bylaw Regulations.

ARTICLE II: DEFINITIONS

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 WPA Regulations at 310 CMR 10.00 et Seq. All definitions in these Regulations are presumed to be the same as WPA and its Regulations unless otherwise noted below.

Abutter: the owner of any land within one hundred (100) feet of the property line of the land where the activity is proposed, as determined by the most recent assessors' records, including any land located directly across a street, river, stream, or pond that is within one hundred (100) feet of the project's limits of work.

Act: Wetlands Protection Act (WPA), MGL Ch. 131, § 40

Activity: any form of draining, dumping, removing, dredging, damming, discharging, excavating, filling, or grading; the erection, reconstruction, or expansion of any buildings or structures; the driving of pilings or erection of walls; the construction or improvement of roads and other ways; the changing of hydrology runoff characteristics; the intercepting, withdrawing, or diverting of groundwater or surface water; the installation of any component of drainage, sewage, or water systems; the discharging of pollutants; the destruction or significant alteration of plant life; the cutting or removal of 20% or more of the growth or limbs of trees or vegetation; or any other changing of the physical characteristics of land, or the changing of the physical, biological, or chemical characteristics of water.

Adverse Effect: a greater-than-negligible, unacceptable effect on the Resource Area, one of its characteristics, or on factors that diminish the Resource Area’s ability to protect to the Values. “Negligible” means small enough to be disregarded.

Agriculture: defined as in 310 CMR 10.04.

Application: Notice of Intent (NOI), Request for Determination of Applicability (RDA), Abbreviated Notice of Resource Area Delineation (ANRAD), Emergency Certification Requests, Certificate of Compliance (COC) Request, Amended OOC Request, or Extension Permit Request, or an Administrative Approval Request (AAR).

Alter: a change to any Resource Area subject to protection under the Bylaw including, without limitation, the following actions when undertaken upon or affecting any of the Areas Subject to Protection under the Bylaw and listed in Articles I and IV of these Regulations:

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

2. Changing the pre-existing drainage characteristics, flushing characteristics, salinity distribution, sedimentation patterns, flow patterns, or flood retention characteristics;

3. Concentrated discharge of stormwater into an area subject to protection;
4. Drainage, withdrawal, lowering, or other disturbance of water level or water table;
5. Dumping, discharging, or filling with any material that may degrade water quality;
6. The placing of fill, or removal of material, that would alter elevation;
7. Driving of piles or erection of buildings or structures of any kind;
8. Placing of obstructions or objects in water, whether or not they interfere with flow;
9. Destruction of or alteration to vegetation, including but not limited to cutting of trees;
10. Temporary or permanent conversion of land cover types;
11. Changing water temperature, biochemical oxygen demand, or other physical, biological, or chemical characteristics of any water;
12. Placing of leaves, grass clippings, or brush within an area subject to protection by the Bylaw;
13. Use of chemicals for plants (herbicides) or pest (pesticides) control;
14. Any activities, changes, or work that may cause or tend to contribute to the pollution of any body of water or groundwater.

Applicant: a person filing an application with the Commission or on whose behalf such application is filed.

Aquaculture: Land being used for aquaculture means land presently and primarily used in the growing of aquatic organisms under controlled conditions, including one (1) or more of the following uses: raising, breeding, or producing a specified type of aquatic animal or vegetable life.

Arborist: a professional certified in the practice of arboriculture who focuses on the health and safety of individual trees or wooded landscapes rather than one who manages forests or the harvesting of wood.

Area Subject to Protection under the Bylaw: synonymous with Resource Area protected by the Bylaw.

Bank: as defined in 310 CMR 10.54 (2), except where otherwise specified under Article IV of these Regulations.

Best Management Practices (BMPs): the most up-to-date technology or the best designs, practices, procedures, or other management or engineering practices that have been developed and that are commercially available.

Bogs: as defined in the WPA (MGL Ch. 131, § 40(6)), except where otherwise specified under Article IV of these Regulations.

Bordering: means touching. A Resource Area is bordering on a water body listed in the WPA, this Bylaw, and their respective Regulations if some portion of the Resource Area is touching another Resource Area, some portion of which is, in turn, touching the water body.

Bordering Vegetated Wetland (BVW): as defined in the WPA and its Regulations (310 CMR 10.55(2)).

Boundary: the boundary of a Resource Area under this Bylaw. A description of the boundary of each Resource Area is found in the appropriate subjection of Article IV of these Regulations.

Buffer Zone: also referred to as the Adjacent Upland Resource Area (AURA); the land area extending one hundred (100) feet horizontally outward from the boundary of all other Resource Areas listed in Section 2a and 2b of the Bylaw. The 100-foot Buffer Zone or AURA is a Protected Resource Area under this Bylaw and its Regulations.

Bylaw: the Town of Shutesbury General Wetlands Protection Bylaw.

Certificate of Compliance (COC): a written determination by the Commission as to whether work or a portion thereof has been completed in accordance with an order or permit issued under the Bylaw governing said work.

Commission or Conservation Commission: the Town of Shutesbury, Massachusetts Conservation Commission as lawfully appointed pursuant to MGL Ch. 40, § 8C.

Commissioner: a Commissioner of the Shutesbury Conservation Commission.

Competent Source(s): an individual with at least a master's degree in wetland science or ecological science from an accredited college or university or another competent wetland professional with at least two years of training and experience in wetland plant and soil identification and delineation. When warranted under the circumstances, the Commission may accept any of the following as Competent Sources: Registered Professional Engineers, Architects, Landscape Architects, Certified Arborists, Surveyors, Registered Sanitarians, Licensed Site Professionals, Hydrologists, and Hydrogeologists.

Conditions: requirements set forth in a written OOC, DOA, Order of Resource Area Delineation, Emergency Certification, Enforcement Order, Certificate of Compliance, or other such permit issued by the Commission for the purpose of permitting, regulating, or prohibiting any activity that removes fills, dredges, or alters an area subject to protection under the Bylaw.

Cumulative Effect: an effect that is significant when considered in combination with other activities that have occurred, are going on simultaneously, or that are likely to occur, whether such other activities have occurred or are contemplated as a separate phase of the same project, such as the build-out of a subdivision or an industrial park, or unrelated but reasonably foreseeable actions, including other development projects currently under construction, under review, or expected to come forward.

Date of Issuance: the date a Permit, Order, Determination, or Certification is mailed via U.S. Mail or electronically via email), as evidenced by a postmark, the date it is hand-delivered, or the date of the confirmed email delivery.

Date of Receipt: the delivery date to an office, home, or usual place of business by mail, hand delivery, or date of the confirmed email delivery receipt.

Determination of Applicability (DOA): a permit where the Commission finds an area or activity is subject to the jurisdiction of the Bylaw and its Regulations.

Determination of Significance: a written finding by the Commission, after a public hearing, that the area on which the proposed work is to be done or which the proposed work will alter is significant to one or more of the Values of the Bylaw.

Diameter at Breast Height (DBH): the diameter (in inches) of the trunk of a tree (or, for multiple trunk trees, the aggregate diameters of the multiple trunks) measured 4 ½ feet from the existing grade at the base of the tree.

Discharge: a release of sewage, industrial waste, or other effluent that is "untreated or partially treated," which has been confined, concentrated, or directed. Discharge can include stormwater in cases where stormwater systems have not been inspected and maintained as required by permit.

Dredge: to deepen, widen, or excavate, either temporarily or permanently.

Enforcement Order: a written notice issued by the Commission requiring the cessation of all activities that violate the Bylaw and its Regulations.

Erosion and Sedimentation Control: the use of physical barriers to prevent the detachment or movement of soil or rock fragments by water, wind, ice, or gravity. Erosion Control Barriers include, but are not limited to, straw wattles, erosion mats, silt sacks, filter fabric, staked straw bales, coffer dams,

sandbags, and turbidity curtains. No hay is permitted in erosion and sedimentation controls due to risk of invasive species spread.

Extreme Weather Event: the weather at the extremes of the historical distribution lying in the outermost 10% of a locale's history, including but not necessarily limited to droughts, high winds and microbursts, blizzards and ice storms, excessive precipitation, wildfires, tornadoes, and severe thunderstorms or hurricanes.

Fill: to deposit or discharge any material so as to raise an elevation of a given Resource or jurisdictional Area, either temporarily or permanently.

First: When referring to distances within the 100-foot Adjacent Upland Resource Area, "first" shall refer to the innermost area closest to the Resource Area (i.e., 0-50 feet from the Resource Area boundary). "First" is also synonymous with "inner" in this context.

Flood Control: the prevention or reduction of flooding and flood damage, both as currently expected to occur and as projected based on the best available data.

Ground Disturbance: any work, operation, or activity that results in a disturbance of the earth, including excavating, digging, trenching, cultivating, drilling, tunneling, backfilling, blasting, topsoil stripping, land leveling, peat removing, quarrying, clearing, and grading.

Groundwater: all subsurface water contained in natural geologic formations or artificial fill, including soil water in the zone of aeration. Activities within the AURA or other Resource Areas shall not significantly alter naturally occurring groundwater's existing quality or elevation.

Growing Season: the portion of the year when soil temperatures are above 41°F, generally from April through October in Shutesbury, but subject to annual variation.

Heavy Equipment: self-propelled, self-powered, or pull-type equipment and machinery primarily employed for construction, industrial, and forestry uses (e.g., water tender, backhoe, mini-excavator, and tractor).

Hydric Soil: A soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part and includes soils that developed under sufficiently wet conditions to support the growth and regeneration of hydrophytic vegetation. Also included are soils that are sufficiently wet because of artificial measures and soils in which the hydrology has been artificially modified if the soil, in an unaltered state, was hydric.

For these Regulations, the "upper part" is defined as 6 inches for somewhat poorly drained soils. Poorly and very poorly drained soils are presumed to be hydric unless artificially drained or otherwise altered. In such special cases, the "upper part" shall be defined as within 12 inches of the soil surface. Oxidized rhizospheres and mottling within the "upper part" of the soil, as defined above, shall be considered evidence of anaerobic conditions, and the soil shall be considered hydric. Also, for the Regulations, wetland plant communities that are dominated by plants rated as Facultative Wetland (FACW) by the Fish and Wildlife Service and which contain Obligate wetland plants shall be presumed to be located in Hydric Soils.

The drainage classification of a soil shall be determined as designated in the "Massachusetts Handbook for Delineation of Bordering Vegetated Wetlands," produced by the Massachusetts Department of Environmental Protection (MassDEP), Second Edition (September 2022, or its successor). However, The Commission recognizes that some Hydric Soils do not meet these published guidelines, so it reserves the right to determine a soil's drainage classification case-by-case. These unusual soils include but are not limited to soils developed in red parent materials, recently deposited sediments, and soils formed in oxygenated groundwater seeps.

Imminent Risk to Public Health and Safety: environmental conditions that constitute an imminent risk to public health or safety or property as confirmed in writing and submitted to the Commission by the Shutesbury Tree Warden, Fire Department Representative, Board of Health, Public Safety Officer, or a certified arborist.

Impacts of Climate Change: impacts including but not necessarily limited to (i) extreme temperatures (ii) timing, frequency, intensity, and amount of precipitation; (iii) storm surges and rising water levels, (iv) increased intensity and frequency of storm events, (v) frequency, intensity, and duration of droughts, and (vi) impacts caused by or resulting from an Extreme Weather Event.

Impervious Surface: surfaces such as compacted soils, sidewalks, roadways, driveways, and rooftops that are resistant to penetration by water or plant roots and do not allow stormwater infiltration into the soils as stormwater entered under natural conditions before development.

In: within an area subject to protection under the Bylaw, including in, through, under, over, cantilevered over, and shading; does not require physical touching of a Resource Area. Concerning structures, "In" is measured from the drip line of the roof or foundation or footing, whichever is closer to the Resource Area.

Interests of the WPA: the purposes of the WPA as set forth in 310 CMR 10.01(2).

Isolated Vegetated Wetland (IVW): a freshwater wetland that meets all standards for BVWs, except for the "bordering" requirement. Delineation of IVWs shall follow the same methodology as BVWs described above, except for the establishment of the bordering requirement.

Isolated Wetland (IW): a freshwater wetland not adjacent to or bordering a stream, river, pond, or lake, where soils are saturated and/or inundated such that they support the presence of Hydric Soils or a predominance of wetland indicator plants. IWs include both IVWs and Vernal Pools. Vernal Pools and their AURAs are protected, regardless of whether the Vernal Pools have been certified under a state program or whether the Vernal Pool and its AURA are located within a Resource Area.

Lake: any body of fresh water with a surface area of 10 acres or more, including great ponds.

Lot: an area of land in one ownership, with definite boundaries. When an area of land is comprised of more than one lot, the lots share a common boundary and are owned or controlled by the same entity or individual(s), the Commission may consider the lots as a single lot.

Low Impact Development (LID): as defined in 310 CMR 10.04; a Best Management Practice designed for controlling stormwater runoff on a property with systems modeled after natural hydrologic features, including but not limited to: rain gardens, bioretention ponds, and vegetated drainage swales.

Mitigation: reduce or attenuate an unacceptable significant or cumulative effect by repairing, rehabilitating, or restoring the affected Resource Area or compensating for the unacceptable effect by enhancing or providing replacement Resource Areas on site or elsewhere.

Native Plants: plants recognized as native to Franklin, Hampshire, Hampden, or Berkshire Counties according to the most recent revision of *The Vascular Plants of Massachusetts: A County Checklist, First Revision (2011)* by Melissa Dow Celina, Bryan Connolly, Bruce A. Sorrie and Paul Somers (Natural Heritage & Endangered Species Program) or *Vascular Flora of Franklin County, Massachusetts (2020)* by Robert I. Bertin, Matthew G. Hickler, Karen B. Searcy, Glenn Motzkin, and Peter P. Grima (New England Botanical Club), or similar publications as the Commission may designate from time to time. Cultivars are not considered native plants.

NOAA 14: Point precipitation frequency estimate data compiled by the National Oceanic and Atmospheric Administration's ("NOAA") National Weather Service (NOAA Atlas, Volume 10), used in evaluation/planning for stormwater infrastructure and management. If NOAA 14 is updated, the most recent published edition shall apply.

Notice of Intent (NOI): the written notice filed by any person(s) intending to remove, fill, dredge, or alter an Area Subject to Protection under the Bylaw. For purposes of the Bylaw, unless alternative forms are created by the Commission, such notice may use the Massachusetts Department of Environmental Protection (hereafter, "MassDEP") Form 3 or 4.

Obstructions or Objects in Water: objects including but not limited to debris, dams, weirs, sluice gates, docks, bulkheads, pilings, and floats.

Ongoing (Perpetual) Conditions: Special Conditions outlined in a written Permit issued by the Commission to permit, regulate, or prohibit any activity that removes, fills, dredges, builds upon, or alters any Resource Area and or the AURA. These perpetual conditions must remain with the title/deed of the property and are included in the Certificate of Compliance for said property.

Order: an Order of Conditions, Superseding Order, or any other final Order issued under the Bylaw.

Order of Conditions (OOC): the written document issued by the Commission containing conditions that regulate or prohibit activity in a Resource Area Subject to Protection under the Bylaw. For this Bylaw, an OOC shall be issued using the Bylaw Form 5, with the findings and conditions issued under the Bylaw's jurisdiction so identified.

Outer: When referring to distances within the AURA, "outer" shall refer to the outermost area farthest from the Resource Area.

Parties in Interest: all abutters as determined from the most recent records of the Assessor (Certified Abutters List), all owners of land directly across a body of water (including those persons in another municipality), and all abutters to abutters within three hundred (300) feet of the property line of the owner.

Permit: the document issued by the Commission under the Bylaw which allows work per the Commission's conditions in the Resource Areas.

Permit Denial: The document issued by the Commission under the Bylaw that disallows proposed work.

Person: any individual, group of individuals, associations, partnerships, corporations, business organizations, trust, estate, the Commonwealth of Massachusetts, or its legal representatives, agents, or assigns.

Plans: such data, maps, engineering drawings, calculations, specifications, schedules, narratives, and other materials as deemed necessary by the Commission.

Pond: any open body of fresh water, either naturally occurring or human-made by impoundment or excavation, which is never without standing water due to natural causes, except in periods of extended drought. For purposes of this definition, extended drought is defined at 310 CMR 10.58(2)(a)1.f. as an "Advisory" or more severe drought level in accordance with the Massachusetts Drought Management Plan (MDMP). Basins or lagoons which are part of wastewater treatment plants, swimming pools, or other impervious human-made stormwater retention basins shall not be considered ponds.

Prevention of Pollution: the prevention or reduction of chemicals (e.g., nutrients, hydrocarbons, solvents, metals, vapors) or turbidity known or suspected of causing harm to humans, plants, or animals via exposure to any media (air, water, soil, sediment).

Priority Habitat: the known geographical extent of habitat for all state-listed rare species, both plants and animals, as codified under the Massachusetts Endangered Species Act (MESA). Habitat alteration within Priority Habitats may result in a take of a state-listed species and is subject to regulatory review by the Massachusetts NHESP.

Private Water Supply: any source or volume of surface or groundwater demonstrated to be in any private use or shown to have potential for private use for domestic purposes.

Project Site: the area that comprises the limit of work for activities subject to regulation under the Bylaw and these Regulations.

Protection of Fisheries: Protection of the capacity of an area subject to protection under the WPA or the Bylaw to prevent or reduce contamination or damage to fish and to serve as their habitat and nutrient source.

Protection of Wildlife Habitat: protection of habitat necessary plant or animal species' capacity for breeding, reproduction, and survival within Areas Subject to the Protection of the Bylaw and its Regulations, including but not limited to those listed as endangered, threatened, or of special concern, or on the Watch List by the Massachusetts NHESP; listed as Federally Endangered or Federally Threatened by the U.S. Fish and Wildlife Service; deemed locally threatened, in writing, by the Conservation Commission; and means protection of the ability of any Resource Area to provide food, breeding habitat, shelter or escape cover and species falling within the definition of wildlife outlined in these Regulations.

Public Water Supply: any source or volume of surface water or groundwater demonstrated to be in public use or approved for water supply pursuant to MGL Chapter 111, § 160 by the Massachusetts Division of Water Supply Protection or shown to have the potential for public use.

Rare Species: vertebrate and invertebrate animal species, without limitation, listed as endangered, threatened, rare, of Special Concern by the Massachusetts Division of Fisheries and Wildlife, regardless of whether the Division has previously identified the site in which they occur. Estimated and priority habitats of rare and endangered species can be found on the most current NHESP Map.

Reasonable Option: a measure that is available and capable of being done after considering cost, existing technology, and logistics in light of overall project purposes and that has less adverse effects on the Values of the Bylaw. The scope of alternatives or options under consideration shall be commensurate with the type and size of the project. Alternatives may be based on cost, existing technology, proposed use, and logistics in light of the overall project purpose. See also Consideration of Reasonable Options in Article III.

Remove: to take away any type of material, thereby changing the elevation of land surface or ground, either temporarily or permanently.

Request for Determination of Applicability (RDA): A written request made by any person to the Commission for a determination as to whether an area or activity is subject to the Bylaw.

Resilience: the ability to minimize the negative impacts of climate change and activities subject to regulation under the Bylaw and its Regulations; to build capability and ability of a Resource Area to minimize negative impacts of climate change and activities.

Resource Area: any Protected Area specified in Section 1 of the Bylaw; synonymous with the Area Subject to Protection under the Bylaw.

Sedimentation Control: Mitigation measures that prevent or reduce the movement, collection, or concentration of sand, soil, or rock fragments by action of the water, wind, ice, or gravity.

Select Species of Amphibians: species of amphibians that depend upon Vernal Pools for breeding habitat, including but not limited to: mole salamanders (*Ambystoma maculatum, A. jeffersonianum, A. laterale, A. opacum*); four-toed salamander (*Hemidactylium scutatum*); eastern spadefoot toad (*Scaphiopus holbrookii*); American and Fowler's toad (*Bufo a. americanus* and *B. woodhousii fowleri*); spring peeper (*Hyla c. crucifer*); gray tree-frog (*Hyla versicolor*); and wood frog (*Rana sylvatica*).

Self-Imposed Hardship: any alteration of the configuration of a property or properties which would result in more adverse or unacceptable effects on Resource Areas on such property or properties as a result of future development compared to if the property or properties remained in their original configuration(s).

Significant: plays a discernible role, e.g., a Resource Area is significant to a Value of the Bylaw when it plays a role in the provisions or protection, as appropriate, of that Value.

Stormwater: runoff caused by water (from precipitation, snowmelt, dewatering, and other sources) flowing over and through land surfaces such as lawns and over impervious areas such as paved streets, parking lots, and building rooftops that often contain pollutants in quantities that could adversely affect the water quality of the water to which the runoff drains, either through stormwater discharge pipes or from diffuse sources. Stormwater runoff may contain bacteria, sediments, toxic organic chemicals, toxic inorganic chemicals, salts, acidic and alkaline chemicals, and other contaminants.

Storm Damage Prevention: measures taken to mitigate the severity and consequence of a storm event on the Resource Area and the prevention of damage caused by water from storms, as currently occurs and is predicted by best available data to occur from the impacts of weather event and climate change, including but not limited to erosion and sedimentation, damage to vegetation, property, or buildings or damage caused by flooding, waterborne debris, or waterborne ice.

Storm Flowage: the movement of water caused by a storm up to and including the 100-year storm.

Stream: a body of running water, including brooks and creeks, which moves in a definite channel in the ground due to a hydrologic gradient. A portion of a stream may flow through a culvert or beneath a bridge. A stream may be ephemeral, intermittent, or discontinuous. Criteria and standards to determine the periodicity of flow are found at 310 CMR 10.58(2)(1)(a-d). A stream under the Bylaw does not necessarily drain or flow out of an upgradient wetland.

Structure (within the context of the built environment): anything constructed or built on a fixed location on the ground.

Subsurface Stream: the entirety of the subsurface or subterranean portion of a naturally occurring perennial or intermittent stream or river whose riverbed loses its connection with the earth's surface before re-emerging into a downgradient surface channel. The maximum protected distance between the stream inlet and outlet shall be two hundred (200) feet.

Town: the Town of Shutesbury.

Tree Removal: any act that will cause a tree to die within a three year period.

Values: the purposes of the Bylaw listed in Section 1 of the Bylaw.

Vernal Pool: a Resource Area defined as any seasonal or isolated wetland which, in the Commission's judgment, functions as breeding habitat for obligate or facultative Vernal Pool species as defined below under the definition of Vernal Pool Habitat or as described in the following publications: *Guidelines for the Certification of Vernal Pool* Habitat by the MA NHESP (March 2009; updated October 2020 or its successor), *Certified: A Citizen's Step-By-Step Guide to Certifying Vernal Pools* by the Massachusetts Audubon Society and Tufts University Center for Public Service (May 1988), and *A Field Guide to the Animals of Vernal Pools* by the MA NHESP and Vernal Pool Association (June 2009 or its successor).The Commission will follow the certification procedures of the MA NHESP. Under the Bylaw and its Regulations, Vernal Pools are regulated the same regardless of the NHESP Certification status, meaning they are regulated if they meet the definitional requirements for a Vernal Pool, independent of their NHESP certification status.

Vernal Pool Habitat: Vernal Pool Habitat includes, in addition to scientific definitions found in the the WPA and its Regulations, 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 at some time during most years, is free of adult predatory 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 MA NHESP. The boundary of the Resource Area for Vernal Pools shall be 100 feet outward from the

mean annual boundary defining the depression, but shall not include existing lawns, gardens, landscaped or developed areas. These areas are essential breeding habitat for a variety of amphibian species such as wood frog (*Rana sylvatica)* and the spotted salamander (*Ambystoma maculatum)* and also provide other extremely important wildlife habitat functions during non-breeding season for other wildlife species.

Vernal Pool Species: animals that depend upon Vernal Pools and uplands adjacent to Vernal Pools for life including but not limited to wood frogs (*Rana sylvatica*), green frogs (*Rana clamitans*), mole salamanders (*Ambystoma, spp*.), spotted salamanders (*Ambystoma maculatum*), blue-spotted salamanders (*Ambystoma laterale*), four-toed salamanders (*Hemidactylium scutatum*), Jefferson salamanders (*Ambystoma jeffersonianum*), marbled salamanders (*Ambystoma opacum*); Fairy Shrimp (Anostraca: *Eubranchipus*), Fowler's toads (*Bufo woodhoussi fowleri*), American toads (*Bufo americanus*), spring peepers (*Hyla crucifer*), and gray tree frogs (*Hyla versicolor*).

Water-dependent uses: those uses and facilities which require direct access to, or location in inland waters and which therefore cannot be located away from said waters, such as marinas, public recreational uses, boating facilities, water-based recreational uses, navigation aids, basins, and channels.

Wetland Replication Translocation Methodology: a replication approach that involves the removal, in intact blocks, of wetland impact area soil (at least the top foot or so and the full O and A horizons, with B horizon to the extent possible) and the vegetation growing on and in the block of soil, inclusive of roots and mycorrhizae. The removed blocks are directly transferred to the wetland replication area, which has already been excavated to accommodate the installation of the soil blocks. This approach has the following advantages: soil structure, native plants, and plant root-mycorrhizal relationships (and biodiversity) are preserved to a greater extent; plant density, diversity, and maturity can be greater; substantially less restoration ground surface area is bare soil following installation; more soil organic carbon is preserved (thus enhancing the water-holding capacity of the wetland replication area soil and reducing loss of soil carbon to the atmosphere due to disturbance of wetland impact area); soil stockpiling and associated compaction, desiccation, erosion, and sedimentation issues are avoided; cost savings include reduced labor due to moving soil only once rather than twice; costs avoided for purchase, transport, and installation of topsoil, nursery plants, and seeding; costs avoided for the cost of mulch, hydroseed, and other materials. Limitations include difficulty in implementation if the wetland impact area is forested, inadvisability if the wetland impact area has significant invasive species, and potential added costs for transporting translocated soil and vegetation if the wetland replication area is a significant distance from the wetland impact area.

Wildlife: Any non-domesticated mammal, bird, reptile, amphibian, fish, mollusk, arthropod, or other invertebrate, other than a species of the Class Insecta (Phylum *Arthropoda*, Subphylum *Tracheata*) that has been determined by the Commonwealth of Massachusetts or any agency thereof to be a pest, the protection of which under the provisions of the Bylaw would be a risk to human health and safety.

Watercourse: a stream wholly or partially made by humans.

Work: the same as "activity."

Definitions outlined in Section 9 of the Bylaw are incorporated herein by reference, provided, however, these Regulations may expand upon or clarify, but not supersede, the definitions outlined in Section 9 of the Bylaw.

Definitions outlined in Section 310 CMR 10.04 are incorporated herein by reference, provided, however, that the definitions outlined in the Bylaw or these Regulations shall take precedence in the event of any conflict.

ARTICLE III: GENERAL PROVISIONS

1. Burden of Proof

The Burden of Proof is as stated in Section 12 of the Bylaw: *"The Applicant for a permit shall have the burden of proving by a preponderance of the credible evidence that the work proposed in the application, will not have unacceptable significant or cumulative effect upon the wetland values protected by this Bylaw. Failure to provide evidence which is, in the opinion of the Commission, adequate to support this burden shall be sufficient cause for the Commission to deny a permit or grant a permit with conditions."*

2. Hardship Waivers

2.1. The Commission may, at its discretion, grant waivers from the operation of one or more of the provisions of the Bylaw or Regulations promulgated thereunder, based upon a finding that full compliance with all provisions and standards of the Bylaw and these Regulations would constitute an undue hardship, as allowed for in Section 7 of the Bylaw, and that there are no Reasonable Options to the proposed project with less adverse effects on the Values.

2.2. The standards set forth herein shall be the sole basis upon which a waiver shall be granted.

2.3. Applicants shall file a written request for a waiver at the same time as or as soon as possible when an application for a permit is filed with the Commission and, in any event, prior to the close of the hearing on said application. Such waiver request shall be a separate submittal from the application or request forms. It shall be the Applicant's responsibility to provide the Commission with any and all information that the Commission may request to enable the Commission to ascertain any adverse effects of the proposed waiver. The failure of the Applicant to furnish any information that has been so requested shall result in the denial of a waiver request. Such written request shall include, but not be limited to, the following information:

2.3.1. a statement of the relief sought;

2.3.2. a description of all Reasonable Options considered as described below that includes a description of alternatives to the Applicant's proposal that the Applicant considered and that would avoid or minimize the necessity of the requested relief, along with the reasons why such alternatives were deemed to be unreasonable;

2.3.3. a statement of all efforts that will be undertaken to minimize the impact upon Resource Areas, including but not limited to restoration and mitigation measures to be used to contribute to the protection of the Values;

2.3.4. credible evidence in support of the waiver requested.

2.4. A waiver based upon hardship may be granted only for one or more of the following reasons and upon the following conditions:

2.4.1. The Commission determines that the proposed activity, or its natural and consequential impacts and effects, will not have a significant detrimental impact on the Values and that there are no Reasonable Options that will allow the work to proceed in full compliance with these Regulations and the Bylaw.

2.4.2. The Commission determines that a waiver is necessary to avoid so restricting the use of the property as to constitute a taking of private property without compensation.

2.4.3. The Commission determines that any adverse effect on the Values is offset by the need to accommodate an overriding public benefit such as public health and safety, universal accessibility, or community enhancement relative to its cultural, environmental, educational, or recreational Values.

2.5. The Commission may impose conditions, safeguards, limitations, and mitigation requirements in granting a waiver to protect or further the Values protected by the Bylaw and its Regulations. Waivers are intended to be granted only in rare and unusual cases and are issued at the sole discretion of the Commission.

3. Consideration of Reasonable Options

3.1. Work and activity in Resource Areas, including the AURA, should be avoided and discouraged, and alternative options shall be considered that achieve the project purpose and protect the Values.

3.2. Depending on the scope and size of the project, the Commission may require additional specific evidence regarding the Applicant's efforts to minimize impacts on Resource Areas, including the inner fifty (50) feet of the AURA. Information may be required as to other Reasonable Options that would have less impacts and yet meet the project purpose.

4. No Unacceptable Significant or Cumulative Effects Standard

4.1. An Applicant must demonstrate that any work, including proposed mitigation measures, will have no unacceptable significant or cumulative effects on the Resource Area.

4.2. The Commission requires that the inner fifty (50) feet of the AURA be maintained as an undisturbed, vegetated corridor, except for Vernal Pools. Vernal Pools require a minimum of a 100-foot undisturbed AURA.

4.3. The Commission prohibits the use of pesticides, fertilizers, and herbicides within Resource Areas unless permitted by the Commission and applied by a licensed applicator. The Commission may set specific conditions prohibiting or restricting those forms of landscaping activities in the AURA deemed potentially harmful to the Resource Area Values, included but not limited to quick-release herbicides, pesticides, fungicides, and quick-release fertilizers.

4.4. When determining whether an unacceptable significant or cumulative effect is likely to occur or has occurred, the Commission shall include in its review all potential cumulative effects on Resource Areas and all work conducted within the AURA from the time of adoption of the applicable Regulation through the proposed project time frame.

5. Presumption Concerning the Application of Herbicides

These Regulations incorporate the presumption set forth in 310 CMR 10.03(6).

6. Presumption of Significance

Each Resource Area Subject to Protection Under Section 2 of the Bylaw is presumed to be significant to one or more of the sixteen (16) Values identified in Section 1 of the Bylaw.

7. Stormwater Management

7.1. Preamble

7.1.1 According to the US Environmental Protection Agency (USEPA), stormwater runoff constitutes the single largest source of pollution causing water quality impairments to our lakes, ponds, and rivers. Stormwater runoff results from rainwater and snowmelt running over streets, lawns, farms, construction sites, and industrial sites where the water picks up sediments, fertilizers, pesticides, oil, grease, bacteria, metals, hydrocarbons, and other pollutants prior to discharge to wetlands and waterbodies.

7.1.2. Stormwater runoff, when not properly controlled, treated, and recharged, can cause harm to Resource Areas that are necessary to protect the Values.

7.1.3. Proper stormwater management includes evaluation of the quantity, quality, rate, and pattern of stormwater runoff that may enter a Resource Area.

7.1.4. The Commission shall presume that control, treatment, and recharge of stormwater runoff is significant to the Values.

7.2. Performance Standards

7.2.1. The Commission requires Applicants to demonstrate that no significant change in off-site runoff from existing conditions will result from the proposed work. Alteration of cover types and development can increase runoff velocities reduce natural groundwater recharge, the Commission may require measures such as BMPs to prevent increased runoff. Direct discharge of runoff into a Resource Area shall not be allowed.

7.2.2. The Commission adopts the MassDEP Stormwater Management policy and all ten (10) Stormwater Management Standards in 310 CMR 10.05(6)(k). For these Regulations, all AURAs shall be considered critical areas.

7.2.3. Loss of pervious surfaces in Resource Areas. The Applicant must demonstrate how a project improves overall net infiltration of stormwater to protect the Values. For a reduction in pervious surfaces, the Applicant shall demonstrate that there are no other Reasonable Options other than the proposed loss of pervious surface. The Commission may require additional stormwater management features and/or larger vegetated buffer strips to mitigate unacceptable significant or cumulative effects and protect the Values.

7.2.4. All stormwater management systems shall comply with the MassDEP's Stormwater Handbook (February 2008 and as it may be amended), as well as the of the following minimum standards:

7.2.4.1. Applicants for projects that generate stormwater runoff shall prioritize, to the maximum extent that is practicable, the use of Low Impact Design techniques as the primary approach in managing on-site stormwater.

7.2.4.2. All stormwater management systems shall remove sediment, nutrients, hydrocarbons, and bacteria from stormwater flow to the maximum extent practicable.

7.2.4.3. Applicants shall provide evidence that the proposed work or project shall not result in an exacerbation or creation of flooding conditions, including confirmation of no increase in the peak rate of stormwater runoff over existing conditions during storm events.

7.2.4.4. Rainfall amounts used for stormwater management design and analysis shall be based on NOAA Atlas 14, Volume 10 (or as it may be amended).

7.2.4.5. All stormwater management systems shall be designed and constructed to adequately control, contain, and recharge flow resulting from a 24-hour, 2-year, 10-year, and 100-year storm event. This requirement is designed to decrease the likelihood of downstream and off-site flooding, as well as to contribute to groundwater recharge.

7.2.4.6. All footing drains and all stormwater outfalls must be, at a minimum, outside of the 50-foot Inner AURA and must be shown on all plans. See 310 CMR 10.03(4).

7.2.5.Commensurate with the size, scope, and complexity of a proposed activity, the Commission may also require additional information in support of a stormwater management design, including but not limited to engineering calculations showing pre- and post-development peak runoff conditions for comparative purposes and soils investigation data involving test pits to confirm stormwater BMP design parameters.

8. Resource Area Delineation

8.1. Delineation of the boundary of a Resource Areas that are not Subsurface Streams is governed by:

8.1.1. 310 CMR 10.55 (2)(c)

8.1.2. MassDEP Wetlands Program Policy 95-1

8.1.3.The MassDEP Publication, entitled "Massachusetts Handbook for Delineation of Bordering Vegetated Wetlands-Second Edition", dated September 2022 (or as it may be amended).

8.1.4. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0),* 2012*,* ed. J.S. Wakeley, R.W. Lichvar, C.V. Noble, and J.F. Berkowitz. ERDC/EL TR-12-1. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

8.2. See Article IV for specific definitions and boundary characteristics of Inland Wetland Resource Areas.

8.3. Wetland plant communities, which are dominated by wetland indicator plants shall be presumed to be underlain by Hydric Soils. Wetland indicator plants shall include but not necessarily be limited to those plant species identified in the WPA. Wetland indicator plants are also those classified in the indicator categories of Facultative, Facultative Wetland, or Obligate Wetland in the National Wetland Plant List, Version 3.5 (US Army Corps of Engineers, 2020 or as it may be amended). Wetland plants exhibit physiological or morphological adaptations to life in saturated or inundated conditions. The line between the upland plant community and wetland plant community may be distinct or abrupt. With these conditions, the Commission may determine that sole reliance on wetland indicator plants will yield an accurate delineation.

8.4. Where natural vegetation is absent because of mowing, grazing, or other disturbance, the presence of Hydric Soils (soils that are annually saturated, as evidenced by observed groundwater, gleyed soils, or redoximorphic features within 18" of the surface) shall provide positive determination of jurisdiction. In cases where natural vegetation is absent as a result of filling, draining, or other alteration, historic evidence and records may provide positive determination or jurisdiction.

8.5. Whenever possible, delineation of Freshwater Wetlands should be avoided under abnormally dry conditions, which can occur during dry seasons or declared drought periods. If delineation must be conducted during these dry periods, Resource Area delineation methodology and criteria should be modified as follows: If the hydrophytic status of the area's vegetation during periods of average precipitation cannot be determined, consideration of vegetation, including herbaceous vegetation, shall be excluded, and Resource Area boundaries shall be delineated based on Hydric Soil conditions and evidence of wetland hydrology. If appropriate, woody and other perennial species can be considered.

8.6. Where an area has been disturbed (e.g., by cutting, filling, or cultivation), the boundary is the line within which there are indicators of saturated or inundated conditions sufficient to support a predominance of wetland indicator plants, or where credible evidence is presented that the area has supported in the past or would have supported, under undisturbed conditions, a predominance of wetland indicator plants prior to the disturbance. In situations where the natural vegetative community may have been destroyed, the Commission may determine an area to be a freshwater wetland based on Hydric Soils alone or may defer the determination until the natural vegetation has regrown, and until that time, may determine the area to be a freshwater wetland based on Hydric Soils alone.

8.7. While the Commission reviews and confirms wetland delineations, the Applicant shall have the burden of ensuring that they have accurately identified all Resource Areas. For large or complex sites, the Commission may require the Applicant to obtain professional delineation review at the Applicant's expense.

8.8. Winter Delineations

8.8.1.Delineating or verifying Resource Area boundaries during the winter months, especially with deep snow cover or frozen soil conditions, is complex and, under extreme conditions, virtually impossible. Vegetation and other hydrology indicators used to determine wetland boundaries are not readily observable or may be misleading during these times. When these conditions exist, it is also impossible to conduct field verification of a delineation that was performed under more favorable conditions but only submitted to the Commission when unfavorable conditions existed.

8.8.2. The Commission may find it necessary and appropriate to continue any hearing on a filing with an unapproved wetland delineation until conditions have improved sufficiently to permit field verification of the submitted delineation. The Commission Chair or other designated representative is authorized to determine when such conditions exist and thereafter schedule a Commission site visit for evaluation purposes when conditions allow.

8.8.3. Exceptions to this procedure outlined in this Section may be granted upon a written request stating the reasons for the exceptions sought. Each request shall be evaluated on its own merits, on a case-by-case basis, taking into account the type(s) of Resource Areas being delineated, the type of work proposed, and the distance between the work and the unapproved Resource Area delineation. When warranted, the grant of an exception on any given property or for any particular application shall be for that one instance only.

8.8.4. If the Applicant does not agree to a meeting or hearing continuance in order to allow the Commission to complete an adequate field verification of the Resource Area boundaries affecting a particular application, the Commission shall close the hearing and render a decision based on the information available, which may result in a denial for lack of information. The Commission will defer final action on COC determinations using the same procedures described above until conditions improve sufficiently to permit a site visit.

8.9. Qualifications: Minimum qualifications for Resource Area delineation shall be a professional wetland scientist with at least two years of training and experience in wetland plant, soil identification, and delineation. Delineation of subsurface (i.e., Intermittent Streams), as defined in Section IV below, shall require a qualified, professional hydrologist or hydrogeologist with at least two years of training and experience and a working knowledge of hydrology and geology.

9. Wildlife Habitat

9.1. Presumptions

9.1.1. The protection of the habitats of both common and rare species of plant and animal communities are Values. The Commission presumes that protecting the habitats of rare species within Resource Areas are significant to these Values.

9.1.2. If a proposed project is found by the Commission to alter a Resource Area that is part of the habitat of a State-Listed species, such project shall not be permitted to have any short- or long-term adverse effects on the habitat of the local population of that species. A determination of whether or not a proposed project will have such an adverse effect shall be made by the Commission based on the written opinion of the NHESP.

9.2. General Performance Standards

9.2.1. The Commission accepts and adopts the definitions, requirements, and Performance Standards for wildlife habitat as specified in 310 CMR 10.00.

9.2.2. If a project is within Estimated Habitat, as indicated on the most recent Estimated Habitat Map of State-Listed Rare Wetlands Wildlife published by NHESP, a full copy of any Permit request shall be sent by the Applicant to the NHESP. Such copy shall be sent by the date of filing the application with the Commission. Proof of timely submission to NHESP shall be included in the application.

9.2.3. The Commission shall give special attention to including topographical and ecological features that it deems important for maintaining the wildlife habitat value of the Resource Area. The potential presence of rare or endangered species and their specific sensitivity to activities within the AURA shall be considered in determining any conditions or restrictions. The Commission shall consider evidence of the presence of such species or evidence of likely habitat. The Commission may consult with NHESP or other authorities as necessary for guidance and recommendations.

9.2.4. The Commission will evaluate the potential for an unacceptable significant or cumulative effect of work within Resource Areas. For wildlife habitat purposes, an “unacceptable significant or cumulative effect" is defined as an impact that would, under reasonable assumptions, result in a measurable decrease in the extant wildlife populations or biological structure, composition, or richness on the site or in the vicinity, taking into account the projected impacts of future projects that could be proposed in the vicinity with similar, comparable, or other significant impacts and disturbance.

10. Title 5 and Septic Systems

10.1. The State Environmental Code (310 CMR 15.00 et. Seq., hereafter referred to a “Title 5”), administered locally by the Shutesbury Board of Health (BOH), is a minimal public health regulation that may be supplemented at the local level. The use of septic systems may have a significant or cumulative adverse effect on the Values. Where septic-derived contaminants are concerned, the Bylaw and Bylaw Regulations complement local BOH Regulations, which are independently authorized and administered.

10.2. Presumptions

10.2.1. A subsurface sewage disposal system that is to be constructed in compliance with the requirements of Title 5, or any more stringent local BOH requirements or Zoning Bylaws, shall be presumed to protect any and all Values, provided that all of the components of said system are located outside of all Resource Areas, including the AURA.

10.2.2. Any proposed septic system within an area subject to the protection of the Bylaw that does not meet the provisions of Title 5 of the State Environmental Code (310 CMR 15.00 et seq.), the Shutesbury Board of Health Regulations, and the Shutesbury Zoning Bylaw shall be presumed to have an unacceptable significant and cumulative effect on Resource Areas and the Values.

10.3. Performance Standards

10.3.1. If an Applicant seeks authorization for a new construction septic system, an expansion of an existing system, or a renovation or replacement of an existing septic system located within the outer fifty (50) feet of the AURA and such system receives Shutesbury BOH approval, the Commission shall presume the design meets requirements for effluent impacts, and the Commission shall only review construction impacts.

10.3.2. If an Applicant seeks authorization for new construction septic system, an expansion of an existing system, or a renovation or replacement of an existing septic system located within the inner fifty (50) feet of the AURA and such system receives Shutesbury BOH approval, the Commission shall presume the design meets requirements for effluent impacts, and the Commission shall only review construction impacts. However, this presumption of no adverse impact on the Values may be overcome by credible evidence from a Competent Source that such system does not protect the Values.

10.3.3. The Commission shall presume that a new construction septic system, an expansion of an existing system, or a renovation or replacement of an existing septic system, that receives Shutesbury BOH approval and is subject to the requirements in Sections 10.3.1. and 10.3.2. above, protects the Values of the Bylaw.

ARTICLE IV: STANDARDS FOR INLAND WETLANDS

Unless otherwise specified herein, all Resource Areas and associated Preamble, Definitions, Presumptions, and General Performance Standards under the WPA and its Regulations shall apply.

1. Banks (Naturally Occurring and Human-Made Banks and Beaches)

1.1. Preamble

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

1.1.2. 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. Partially or totally vegetated Banks provide habitat for wildlife.

1.1.3. Banks are likely to be significant to wildlife habitat, public or private water supply, groundwater supply, flood control, storm damage prevention, pollution prevention, and fisheries protection. Where Banks are composed of concrete, asphalt, or other artificial impervious material, said Banks are likely to be significant to flood control and storm damage prevention. In these ways, Banks are important in mitigating the negative impacts of climate change.

1.1.4. Banks may also provide shade that moderates water temperatures and provides breeding habitat, escape cover, and food, all of which are significant to the protection of fisheries. Banks that drop off quickly or overhang the water's edge often contain numerous undercuts, which are favorite hiding spots for important species.

1.1.5. Banks act to confine floodwaters during storms, preventing the spread of water to adjacent land. Because Banks confine water during storms to an established channel, they maintain water temperatures and depths necessary for the protection of fisheries. Maintaining cool water temperatures during warm weather is critical to the survival of many species. An alteration of a Bank that permits water to spread frequently or consistently over a larger and more shallow area increases the amount of property that is routinely flooded, as well as elevates water temperatures and reducing fish habitat within the main channel, particularly during warm weather.

1.1.6. Banks' topography, plant community composition and structure, and soil structure provide important food, shelter, migratory and overwintering areas, and breeding areas for wildlife. Topography plays a role in determining the suitability of Banks to serve as burrowing or feeding habitat. Soil structure also plays a role in determining the suitability for burrowing, hibernation, and other cover. Bank topography and soil structure impact the Bank's vegetative structure as well. Bushes and other undergrowth, trees, vegetation extending from the Bank into the water, and vegetation growing along the water's edge are also important to a wide variety of wildlife. A number of tubers and berry bushes also grow in Banks and serve as important food for wildlife. Finally, Banks may provide important shelter for wildlife that must move between wetland areas.

1.1.7. Land bordering or within one hundred (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 Values.

1.2. Definitions, Critical Characteristics, and Boundaries

1.2.1. A Bank is the portion of the land surface that normally abuts and confines a water body or freshwater wetland. A Bank may occur between a water body and a BVW or IW, an adjacent flood plain, or, in the absence of these, between a water body and the AURA. Bank may be partially or totally vegetated, or it may be comprised of exposed soil, gravel, stone, or sand.

1.2.2. The upper boundary of a Bank is the first observable break in the slope or the mean annual flood level, whichever is higher in elevation. The lower boundary of a Bank is the mean annual low flow level or low water level.

1.2.3. The physical characteristics of a Bank, as well as its location, as described in the preceding Subsections 1.2.1 and 1.2.2, are critical to protecting the Values.

1.2.4. Land within one hundred (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 Values.

1.3. Presumptions

Where a proposed activity involves removing, filling, dredging, or altering a Bank or within 100 feet of a Bank, the Commission shall presume that such area is significant to the Values and the adjacent Resource Areas. This presumption is rebuttable and may be overcome upon a preponderance of evidence showing that the Bank does not play a role in the protection of said Values. If the presumption is deemed to have been overcome, the Commission shall make a written determination to this effect, setting forth its grounds.

1.4. Performance Standards

1.4.1. No activity, other than the maintenance of an already existing structure or Resource Area Enhancement, shall be allowed which will result in the building within or upon, removing, filling, or altering of a Bank.

1.4.2. Where the presumption set forth in the foregoing Section 3 is not overcome, any proposed work on a Bank shall not impair the following:

1.4.2.1. the proposed project shall not cause any adverse effect or cumulative adverse effect upon the Values of Inland Bank; and

1.4.2.2. the proposed project shall be permitted only if there is no 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.

1.4.3. Work on a stream crossing shall be presumed to meet the Performance Standard set forth in 310 CMR 10.54(4)(a) provided the work is performed in compliance with the Massachusetts Stream Crossing Standards by consisting of a span or embedded culvert in which, at a minimum, the bottom of a span structure or the upper surface of an embedded culvert is above the elevation of the top of the Bank. The structure spans the channel width by a minimum of 1.2 times the bankfull width.

2. Freshwater Wetlands

2.1. Preamble

2.1.1. Bordering Vegetated Wetlands (BVWs) and Isolated Vegetated Wetlands (IVWs) are freshwater wetlands.

2.1.2. BVWs include but are not limited to Wet Meadows, Marshes, Swamps, and Bogs.

2.1.3. IVWs include but are not limited to Vernal Pools (see Section below), Wet Meadows, Marshes, Swamps, Bogs, Hillside Seeps, and Springs.

2.1.4. Freshwater wetlands are likely to be significant to public or private water supply, groundwater supply, flood control, storm damage prevention, pollution prevention, and fisheries and wildlife habitat protection.

2.1.5. Freshwater wetlands form a point of exchange between ground and surface water and are likely to be significant to public and private water supply and groundwater supply. Freshwater wetlands serve as recharge and discharge areas, contributing to local and regional groundwater flow. Seasonal changes in functions may occur, with some wetlands contributing to groundwater during high water periods (recharge in the spring) and receiving groundwater inputs during the dry season (late summer) due to high evapotranspiration rates. The intricate underground network of fissures and subterranean streams associated with freshwater wetlands can move water rapidly through the hydrological system.

2.1.6. Freshwater wetlands are important for the prevention of pollution. The plant communities, soil, and topography of freshwater wetlands remove or detain sediments, nutrients (such as nitrogen and phosphorous), bacteria and other microorganisms, and toxic substances (such as heavy metal compounds) in runoff and flood waters. Some nutrients and toxic substances are retained for years in

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

2.1.7. When freshwater wetlands are lost, receiving waters and watersheds are more likely to be impacted by contaminants such as nutrients, herbicides, and pesticides. Water is recharged at upper elevations and discharged to regional lows (e.g., other wetlands, lakes, local rivers, and streams).

2.1.8. Development of adjacent uplands can introduce nutrients from runoff which can alter plant composition. Freshwater wetlands provide nutrient transformation and cycling/water-quality maintenance benefits.

2.1.9. When underlain by peat, freshwater wetlands play a significant role in carbon sequestration. Disturbance of these wetlands can lead to significant carbon release to the atmosphere.

2.1.10. Freshwater wetlands may be areas where groundwater discharges to the surface and, under some circumstances, surface water discharges to the groundwater. The profusion of vegetation and the low topography of freshwater wetlands slow down and reduce the passage of flood waters during peak flows by providing temporary flood water storage and facilitating water removal through evaporation and transpiration. This process reduces downstream flood crests and resulting damage to private and public property. During dry periods, the water retained in freshwater wetlands is essential to maintaining base flow levels in rivers and streams, which in turn is important to protecting water quality and water supplies.

2.1.11. Freshwater wetlands provide shade that moderates water temperatures important to fish life. Wetlands flooded by adjacent water bodies and waterways provide food, breeding habitat, and cover for fish.

2.1.12. Freshwater wetlands and their AURA are important habitat for wildlife. The hydrologic regime, plant community composition and structure, soil composition and structure, topography, and water chemistry of freshwater wetlands provide important food, shelter, migratory and overwintering areas, and breeding areas for many birds, mammals, amphibians, and reptiles. A wide variety of vegetative wetland plants, the nature of which is determined in large part by the depth and duration of water, as well as soil and water composition, are utilized by various species as important areas for mating, nesting, brood rearing, shelter, and (directly and indirectly) food. The diversity and interspersion of the vegetative structure are also important in determining the nature of its wildlife habitat. Different wildlife species use different habitat characteristics during summer, winter, and migratory seasons.

2.1.13. Freshwater wetlands provide localized cooling within the wetland, surface and groundwater supplies, and adjacent ecosystems and human communities. Cooling effects result from the volume of water found in wetlands, which modifies air and water temperatures similar to how waterbodies modify temperatures, and from shade provided by vegetation.

2.1.14. Freshwater wetlands sequester and store significant amounts of carbon in biomass and soils. The Values contribute to increasing the resilience of adjacent ecosystems, wildlife habitat, and human communities.

2.2. Definitions, Critical Characteristics, and Boundary

2.2.1. BVWs are freshwater wetlands that border on surface water bodies or other Bylaw Resource Areas, including creeks, rivers, streams, ponds, and lakes.

2.2.2. Excluding Vernal Pools which are defined the Section below, IVWs are isolated freshwater wetlands that meet the same definitional requirements as BVWs, except for the bordering component. Freshwater wetlands may be geographically isolated from other Resource Areas or within other Resource Areas.

2.2.3. The boundary of freshwater wetlands which are not Vernal Pools is the line determined by the methodology in Article III, "Resource Area Delineations."

2.3. Presumptions

2.3.1. Where a proposed activity involves the removing, filling, dredging, or altering of a freshwater wetland, the Commission shall presume that such an area is significant to the Values. This presumption is rebuttable and may be overcome upon a preponderance of evidence showing that the freshwater wetland does not play a role in the protection of said Values. If the presumption is deemed to have been overcome, the Commission shall make a written determination to this effect, setting forth its grounds.

2.3.2. Where a proposed activity involves the removing, filling, dredging, or otherwise altering any freshwater wetland, the Commission shall presume that such an area, as well as the area within the AURA of said wetland, is significant to the Values.

2.3.3. IVWs of at least five hundred (500) square feet in surface area, as observed during, or calculated for, a 100-year storm event, are presumed to be significant to the Values.

2.4. General Performance Standards

2.4.1. Where the presumptions set forth in Subsection 2.3 above are not overcome, any proposed work in a freshwater wetland shall not destroy, alter, or otherwise impair any portion of said area;

2.4.2. No activity, other than maintenance of an already existing structure, so long as such maintenance does not involve ground disturbance or alteration of the footprint, which will result in the building within or upon, removing, filling, or altering a freshwater wetland, shall be permitted by the Commission.

2.4.3. The Limited Project Provisions in 310 CMR 10.53(3) shall apply under this Bylaw and these Regulations.

2.4.4. When a project is proposed to alter less than five thousand (5,000) square feet of IVWs or BVWs, the Applicant shall complete "Appendix A: Simplified Wildlife Habitat Evaluation" of the *Massachusetts Wildlife Habitat Protection Guidance for Inland Wetlands* by the MassDEP (March 2006 or its successor). Projects proposing to alter IVWs and BVWs within mapped habitat of potential regional or statewide important shall include completion of "Appendix B: Detailed Wildlife Habitat Evaluation" and certification that the project has been designed so that there is no adverse effect on wildlife habitat.

2.4.5. The Commission may allow work in a freshwater wetland that is not a Vernal Pool that results in the loss of up to five thousand (5,000) square feet of a freshwater wetland when said area is replaced in a manner to ensure that the replacement area will provide a viable wetland that replaces the functions and Values of the area lost. Detailed project design is required to guarantee that wetland impacts are avoided to the maximum extent possible, to minimize absolutely necessary impacts and lastly, to successfully replicate losses that cannot be avoided. The design of replication areas shall carefully consider and incorporate to the extent practicable the standards in *The Massachusetts Inland Wetland Replication Guidelines, Second Edition*, by MassDEP (September 2022 or its successor). The Commission may accept restoration of a degraded wetland as satisfying the foregoing replication requirement.

2.4.6. Required design criteria: Projects involving permanent freshwater wetland alterations shall meet the requirements of 310 CMR 10.60(3) and 310 CMR 10.55(4) and also the following requirements of the Commission:

2.4.6.1. The proposed replication area design must be submitted to the Commission for approval as part of the submittal of the project NOI.

2.4.6.2. Applicants shall conduct a feasibility assessment to determine if the translocation of intact wetland impact area soils and vegetation is possible for the proposed wetland replication area. If so, wetland replication area design shall implement Wetland Replication Translocation Methodology (WRT) to the greatest extent possible. If not, Applicants shall reassess chosen location and design of the wetland replication area to determine if adjustments in the location and design will allow for use of the WRT Methodology. Only if the WRT Methodology proves unfeasible can a wetland replication design be based on use of trucked-in or stockpiled topsoil and nursery plants and seeds.

2.4.6.3. Depending on the unique circumstances of a proposed activity, the Commission may require an even higher replacement ratio if impacts are proposed.

2.4.6.4. At a minimum, the replicated wetland must reproduce all the Values and functions of the original wetland as determined by the Commission. The type of wetland created shall be similar to that lost in terms of physiology and function (e.g., similar plant species, hydrologic regime, and soils) except where an improvement in physiology and function is proposed.

2.4.7. If the Commission determines that it is unfeasible to create a replacement freshwater wetland on site, it may require the Applicant to contribute financially to the construction of an offsite replacement area in wetlands under the control of the Commission, the contribution not to exceed the actual cost of the wetland replacement.

2.4.8. The Commission may issue an OOC permitting work that results in the loss of a portion of freshwater wetland that is not a Vernal Pool when that meets the criteria identified in 310 CMR 10.55(4)(c).

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

2.4.10. The above provisions shall not apply to the maintenance of stormwater detention, retention, or sedimentation ponds, drainage easements, or to the maintenance of stormwater emergency dissipating structures that have been constructed in accordance with a valid OOC.

3. Vernal Pools

3.1. Preamble

3.1.1. Vernal Pools are a type of Isolated Wetland (IW) protected by the Bylaw.

3.1.2. Vernal Pools constitute a unique and increasingly rare type of wetland inhabited by many species of wildlife, some completely dependent on Vernal Pools and their associated habitat for survival.

3.1.3. Vernal Pools, which confine water for a minimum of two continuous spring months but lack vertebrate predators such as adult fish, are significant in the support of duckweed, caddis flies, and mollusks, thus providing habitat for members of the fingernail and pea clam family (*Sphaeriidae*), numerous amphibians, reptiles (including spotted turtle, painted turtle, and snapping turtle) and a number of other animals. Vernal pools, in addition, may provide critical breeding habitat for a variety of Vernal Pool Species, including but not limited to Jefferson salamander (*Ambystoma jeffersonianum*), blue-spotted salamander (*A.* la*terale*), marbled salamander (*A. opacum*), spotted salamander (A. maculatum), and wood frog (*Rana sylvatica*), as well as feeding and occasional breeding habitat for the gray treefrog (*Hyla versicolor*), spring peeper (*H. crucifer*), American toad (*Bufo americanus*), and four-toed salamander (*Hemidactylium scutatum*).

3.1.4. Vernal Pools provide habitat for threatened and endangered species and species of concern. Areas in the immediate vicinity of the Vernal Pool (i.e., the AURA) provide these species with

important non-breeding habitat functions, such as migratory pathways, feeding, shelter, and over-wintering sites. Many other species utilize Vernal Pools and their associated AURAs for breeding and non-breeding functions, although such species are not limited to this type of wetland. Protecting Vernal Pools and their associated AURAs are essential for the survival of wildlife species that depend on these unique and threatened Resource Areas. Vernal Pools need not be state certified to be protected under the Bylaw or these Regulations.

3.1.5. The extreme edges of Vernal Pool habitat represent one of the most ecologically valuable portions of these habitats. Shallow water at the edges of a pool generally is the first to thaw in the spring. This provides early access to the pool for the earliest breeding species. The shallow water zones also tend to be significantly warmer than the deeper portions of a vernal pool throughout the spring. Egg masses of early breeding amphibians benefit from the warmer water temperatures at the pool edges that promote rapid egg development.

3.1.6. Vernal Pool Habitat connectivity is essential for the survival of many Vernal Pool Species and biodiversity conservation. Protection of individual pools or pools with associated upland habitat may be ineffective over the long term if connectivity among pools is not maintained.

3.1.7. The protection of Vernal Pools and their associated AURA are essential for the survival of wildlife species that depend on these unique and threatened Resource Areas. Vernal Pools need not be certified by NHESP to be protected under the Bylaw or these Regulations.

3.2. Definition, Critical Characteristics, and Boundary

3.2.1. Vernal Pools include, in addition to scientific definitions found in the WPA Regulations, 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, is free of adult predatory fish populations, and provides essential breeding and rearing habitat functions for amphibian, reptile or other Vernal Pool Species, regardless of whether the site has been certified by the MA NHESP.

3.2.2. The boundary of the AURA for Vernal Pools shall be 100 feet outward from the mean annual high-water line defining the depression. The AURA of Vernal Pools is regulated as a no-disturbance zone, except for areas where the AURA includes previously developed areas as described above in Section 3.2.1. above.

3.2.3. Presumption that a confined basin is a Vernal Pool: the Bylaw presumes that Vernal Pool Habitat exists if an area's physical characteristics conform with those basins, depressions, or ponding areas as defined in these Bylaw Regulations.

3.2.4. The presumption of the existence of a Vernal Pool, where there is a closed basin or depression meeting the definition contained in these Regulations, may be overcome with the presentation of a preponderance of the evidence to the Commission that, in the judgment of the Commission, demonstrates the basin, depression, or ponding area does not provide and cannot provide Vernal Pool wildlife habitat functions.

3.2.5. For the purposes of overcoming the presumption of Vernal Pool Habitat, the Commission shall consider:

3.2.5.1. evidence that the basin, depression, or ponding area does not hold water for at least two continuous months in three out of five consecutive years;

3.2.5.2. evidence that Vernal Pool species do not breed or have not bred in the basin, depression, or ponding area through a minimum of one spring breeding season for the purpose of documenting the occurrence of breeding activity or lack of breeding activity of obligate Vernal Pool species;

3.2.5.3. evidence that the basin, depression, or ponding area could not be a viable breeding site for Vernal Pool species because of incompatible physical, chemical, biological, or other persistent conditions at the site in most years, that is three out of five consecutive years. Such evidence may include, without limitation, several months of pH and dissolved oxygen measurements yielding values incompatible with amphibian or reptile breeding.

3.2.5.4. Vernal Pool habitat may be found at various locations throughout the 100-year floodplain, the pool itself generally formed by meander scars, or sloughs left after water channels have changed course. These pools are essential breeding sites for certain amphibians which require isolated areas that are generally flooded for at least two continuous months in the spring and/or summer and are free from fish predators. Most of these amphibians remain near the breeding pool during the remainder of their lifecycle. Many reptiles, birds and mammals also feed in these areas.

3.2.5.5. Failure to find evidence of breeding must be tied explicitly to those periods during which the evidence is most likely to be available. Accordingly, the Commission shall require that the evidence be collected only at the appropriate time and for a minimum of one spring breeding season. In instances of unusually dry spring breeding seasons, the Commission may require two spring breeding seasons. The Commission may require site visits as necessary to confirm the evidence presented.

3.3. Presumptions

3.3.1. The Commission shall presume that protection of a Vernal Pool is significant to the Values. This presumption of significance may be rebutted upon a showing of a preponderance of the evidence that the Vernal Pool does not play a role in the protection of the Values.

3.3.2. The Commission shall regulate all Vernal Pools under these Regulations regardless of the status of certification of such Vernal Pools by NHESP.

3.3.3. Vernal Pools are highly likely to be significant to wildlife, wildlife habitat, to groundwater supply, and to flood control.

3.3.4. The AURA of Vernal Pools is likely to be significant to the protection and maintenance of Vernal Pools, and therefore, to the protection of the Bylaw Values.

3.4. Performance Standards

3.4.1. No activity or work that will result in altering the Vernal Pool or the AURA of any Vernal Pool shall be permitted by the Commission, except upon a preponderance of evidence from a Credible Source showing that any proposed work and its natural and consequential cumulative impacts and effects shall have no unacceptable significant or cumulative effect upon any of the Values.

3.4.2. The Commission may require habitat connectivity within the AURA be maintained between clusters of Vernal Pools and may consider development between Vernal Pools as habitat alteration, where fragmentation will adversely impact wildlife habitat associated with Vernal Pool(s).

3.4.3. Notwithstanding the provisions above in Section 3.4.1 above, no project may be permitted which will have any adverse effect on specified habitat sites of rare species, as identified on the most recent Priority Habitat and Estimated Habitat Map of state-listed rare wetland plants as well as wildlife published by the MA NHESP.

4. Land Under Water Bodies and Waterways (under Rivers, Streams, Ponds, Pools, or Lakes)

4.1. Preamble

4.1.1. Land under Water Bodies and Waterways (LUWW) is likely to be significant to the Values. LUWW is important in mitigating the negative impacts of climate change.

4.1.2. Where LUWW is composed of pervious material, such land represents a point of exchange between surface water and groundwater.

4.1.3. Where LUWW is composed of concrete, asphalt, or other artificial impervious material, said land is likely to be significant to flood control and storm damage prevention.

4.1.4. LUWW, in conjunction with Banks, confines floodwater within a definite channel during the most frequent storms. Filling within this channel blocks flows which in turn causes backwater and overtopping of Banks during such storms.

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

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

4.1.7. Land under rivers, streams, and creeks composed of sand and gravel allows the circulation of cold, well-oxygenated water necessary for the survival of fish species. River, stream, and creek bottoms with a diverse structure composed of gravel, large and small boulders, and rock outcrops provide escape cover and resting areas for fish species. Such bottom type also provides areas for the production of aquatic insects essential to fisheries.

4.1.8. Land under lakes and ponds is vital to a large assortment of warm-water fish during spawning periods. Said species build nests on the lake and bottom substrates within which they shed and fertilize their eggs.

4.1.9. The plant community composition and structure, hydrologic regime, topography, soil composition, and water quality of LUWW provide important food, shelter, migratory and overwintering areas, and breeding areas for wildlife. Waterfowl and some mammals eat certain submerged rooted vegetation. Some amphibians and invertebrate species attach their eggs to such vegetation.

4.1.10. Land within one hundred feet of any Bank abutting LUWW is likely to be significant to the protection and maintenance of land under a water body and therefore, to the protection of the Values which these water bodies serve to protect, while also providing climate change resilience for the water body.

4.1.11. Rare, threatened, and endangered aquatic species rely on land under water for habitat.

4.2. Definitions, Critical Characteristics, and Boundaries

4.2.1. LUWW is the land beneath any creek, river, stream, pond, reservoir, or lake. Said land may be composed of organic muck or peat, fine sediments, sand, gravel, rocks, or bedrock. LUWW may also include intermittent streams.

4.2.2. The physical characteristics and location of LUWW specified in the preceding Section 2.1 are critical to protecting the Values of this Bylaw and these Regulations.

4.2.3. The outer boundary of Land under Water Bodies and Waterways is the Mean Annual High Water level.

4.3. Presumptions

4.3.1. Where a project involves building within or upon, removing, filling, dredging, or altering any LUWW, the Commission shall presume that such an area is significant to the Values. This presumption is rebuttable and may be overcome upon a preponderance of evidence showing that the proposed work, and its natural and consequential cumulative effects, shall have no adverse effect upon any of the Bylaw Values, upon any of the LUWW functions set forth in Subsection 4.1 above and as further provided in the Performance Standards for LUWW and its AURA. In the event that the presumption is deemed to have been overcome, the Commission shall make a written determination to this effect, setting forth the grounds.

4.3.2. Land within the AURA of LUWW is likely to be significant to the protection and maintenance of the LUWW, and therefore, to the protection of the Values which the LUWW serves to protect.

4.4. General Performance Standards

4.4.1. No activity, other than the maintenance of an already existing structure or Resource Area enhancement, which will result in the building within or upon, or removing, filling, dredging, or altering of LUWW shall be done without written permission of the Commission.

4.4.2. The Commission may allow activity on LUWW or within the AURA of LUWW only if such activity will not impair the following:

4.4.2.1. the water-carrying capacity within the defined channel, which is provided by said land in conjunction with the Banks;

4.4.2.2. groundwater and surface water quality and quantity;

4.4.2.3. the capacity of said land to provide breeding habitat, escape cover, and food for fisheries; and

4.4.2.4. the capacity of said land to provide wildlife breeding habitat, escape cover, or food for wildlife.

4.4.3.No work shall be permitted which will have any adverse effect on specified habitat sites of rare species, as identified on the most recent Priority Habitat and Estimated Habitat Map published by the MA NHESP.

4.4.4.When a project is proposed to alter greater than 10% or five thousand (5,000) square feet (whichever is less) of LUWW on a single lot, or cumulatively for multi-lot projects, the Applicant shall complete a Wildlife Habitat Evaluation as determined by procedures established under 310 CMR 10.60. Additional alterations beyond the above threshold may be permitted if they will have no adverse effects on wildlife habitat, as determined by procedures established under 310 CMR 10.60.

4.4.5. Work on a stream crossing shall be presumed to meet these Performance Standards provided the work is performed in compliance with the requirements in 310 CMR 10.56(4)(a)5.

5. Land Subject to Flooding (Bordering and Isolated)

5.1. Preamble

5.1.1. Bordering Land Subject to Flooding (BLSF) is an area which floods from a rise in a bordering waterway or water body.

5.1.2. Isolated Land Subject to Flooding (ILSF) is an isolated depression or a closed basin which serves as a ponding area for runoff or high groundwater which has risen above the ground surface.

5.1.3. BLSF and ILSF are likely to be locally significant to flood control and storm damage prevention. As such, they are important in mitigating the impacts of climate change. BLSF and ILSF provide a temporary storage area for flood water. During periods of peak runoff, flood waters are both

retained (i.e., slowly released through evaporation and percolation) and detained (slowly released through surface discharge) by such areas. Over time, incremental filling of these areas by sedimentation causes increases in the extent and level of flooding by eliminating flood storage volume or by restricting flows, thereby causing increases in damage to properties and downstream Resource Areas.

5.1.4. When BLSF and ILSF are underlain by pervious material, they are likely to be significant to public or private water supply and to groundwater supply by providing a point of exchange between groundwater and surface waters. Contaminants introduced into said BLSF and ILSF may infiltrate groundwater and neighboring wells. Where these conditions occur and a mat of organic peat or muck covers the substrate of the area, said mat serves to detain and remove contaminants which might otherwise enter groundwater and neighboring wells. These areas are thus significant to the prevention of pollution.

5.1.5. Certain portions of BLSF and ILSF are likely to be significant to wildlife habitat protection. These include all areas on the ten-year floodplain or within one hundred (100) feet of the Bank or a freshwater wetlands (whichever is further from the Water Body or Waterway, so long as such area is contained within the 100-year floodplain), and all Vernal Pool habitat on the 100-year floodplain, except for those portions of which have been so extensively altered by human activity that their important wildlife habitat functions have been effectively eliminated (such "altered" areas include paved and graveled areas, cemeteries, playgrounds, landfills, quarries, gravel pits, buildings, lawns, gardens, roadways, and similar areas lawfully existing on November 1, 1987 and maintained as such since that time).

5.1.6. The hydrologic regime, plant community composition and structure, topography, soil composition and proximity to water bodies and BVWs of BLSF and ILSF provide important food, shelter, migratory and overwintering areas, and breeding areas for wildlife. Nutrients from flood waters, as well as the inundation of floodplain soil, create important wildlife habitat characteristics, such as richness and diversity of soil and vegetation. A great many species require or prefer habitat which is as close as possible to water and/or has moist conditions, characteristics generally present on lower floodplains. Similarly, lower floodplains, because of their proximity to water and vegetated wetlands, can provide important shelter for wildlife which needs to migrate between such areas, or between such areas and uplands. The "edge" where floodplain habitat borders vegetated wetlands or water bodies is frequently high in wildlife richness and diversity. Similar "edges" may be found elsewhere the lower floodplain, where differences in topography and frequency of flooding have created varied soil and plant community composition and structure.

5.2. Definitions, Critical Characteristics, and Boundaries

5.2.1. BLSF is an area with a low, generally flat topography adjacent to and subject to inundation by flood waters rising from rivers, streams, brooks, creeks, ditches, ponds, or lakes. It extends from the Banks of said Waterways or Water Bodies. When a BVW or IW is present within BLSF, the AURA extends from the BVW or IW.

5.2.2. ILSF is an isolated depression or closed basin without an inlet or an outlet. It is an area which at least once a year confines standing water to a volume of at least ¼ acre-feet and to an average depth of at least six inches. ILSF may be underlain by pervious material, which in turn may be covered by a mat of organic peat or muck.

5.2.3. The topography and location of BLSF and ILSF are critical to protecting the Values specified in Bylaw and Regulations. Where BLSF and ISLF are significant to the protection of wildlife habitat, the physical characteristics as described in 310 CMR 10.57(1)(a)(3) are critical to the protection of that Interest.

5.2.4. The boundary of BLSF is the estimated or observed maximum lateral extent of the floodwater which will theoretically result or has resulted from the statistical 1%-annual-chance flood.

5.2.4.1. Said boundary shall be that determined by reference to the most recently available flood profile data prepared for the Town of Shutesbury within which the work is proposed under the Federal Emergency Management Agency's National Flood Insurance Program (NFIP). Said boundary, so determined, shall be presumed accurate. This presumption may be overcome only by credible evidence from a registered professional engineer or other professional competent in such matters.

5.2.4.2. Notwithstanding the foregoing, where NFIP profile data is unavailable or is determined by the Commission to be outdated, inaccurate or not reflecting current conditions, the boundary of BLSF shall be the maximum lateral extent of floodwater, which has been observed or recorded, or the Commission may require the Applicant to determine the boundary of BLSF by engineering calculations which shall be:

5.2.4.2.1. based upon NOAA Atlas 14, Volume 10 (or latest version*). See definition in Article III;*

5.2.4.2.2. based upon the standard methodologies set forth in the *US Soil Conservation Service Technical Release No. 55, Urban Hydrology for Small Watersheds* (USDA Natural Resources Conservation Service, 1986) and *Section 4: Hydrology, National Engineering Handbook* (USDA NRCS, 1972); and

5.2.4.2.3. prepared by a registered professional engineer or other professional competent in such matters.

5.2.4.3. The boundary of ILSF is the perimeter of the largest observed or recorded volume of water confined in said area. In the event of a conflict of opinion regarding the extent of water confined in an ILSF, the Applicant may submit an opinion certified by a registered professional engineer, supported by engineering calculations, as to the probable extent of said water. Said calculations shall be prepared in accordance with the general requirements set forth in 310 CMR 10.57(2)(a)3.a. through c., except that the maximum extent of said water shall be based upon the total volume (rather than peak rate) of runoff from the drainage area contributing to the ILSF and shall be further based upon the assumption that there is no infiltration of said runoff into the soil within the ILSF.

5.3. Presumptions

Where a proposed activity involves removing, filling, dredging, or otherwise altering BLSF and ILSF, the Commission shall presume that such an area is significant to the protection of the Values of this Bylaw and these Regulations. This presumption is rebuttable and may be overcome only upon a preponderance of evidence showing that said land does not play a role in the protection of such Values. In the event that the presumption is deemed to have been overcome, the Commission shall make a written determination to this effect, setting forth its grounds.

5.4. General Performance Standards

5.4.1. No activity, other than the maintenance of an already existing structure which will result in the building within or upon, or removing, filling, dredging, or altering of BLSF or ILSF shall be conducted without written permission of the Conservation Commission.

5.4.2. The Commission may permit activity on BLSF or ILSF provided it shall not result in the following:

5.4.2.1. flood damage due to filling which causes lateral displacement of water that would otherwise be confined within said area;

5.4.2.2. adverse effect on surface or groundwater, where said area is underlain by pervious material;

5.4.2.3. an adverse effect on the capacity of said area to prevent pollution of the groundwater, where the area is underlain by pervious material which in turn is covered by a mat of organic peat and muck;

5.4.2.4. a rise in the base flood elevation anywhere in the floodplain. This must be demonstrated through hydrologic and hydraulic analysis performed in accordance with standard engineering practice performed by a registered professional.

5.4.2.5. reduction in the ability of the land to buffer more inland areas from flooding.

5.4.3. Any such activity shall provide compensatory flood storage for all flood storage volume that will be lost at each elevation. Compensatory flood storage shall be at a 2:1 ratio, minimum, for each unit volume of flood storage lost at each one-foot elevation. Compensatory flood storage shall mean a volume not previously used for flood storage, shall have an unrestricted hydraulic connection to the same waterway or water body, and, with respect to waterways, shall be provided within the same reach of the river, stream, or creek. Work within Bordering or Isolated Land Subject to Flooding, including that work required to provide the above specified compensatory storage, shall not restrict flows that cause an increase in flood stage or velocity.

5.4.4. No work shall be performed within fifty (50) feet of BLSF or ILSF that abuts an Estimated Habitat area as designated on the most current map prepared by the Massachusetts NHESP unless the Applicant can demonstrate by a preponderance of credible evidence that the work will not have any short term or long-term adverse effect on the Resource Area Values protected by the Bylaw.

6. 100-Foot Adjacent Upland Resource Area (AURA)

6.1. Preamble

6.1.1. The AURA is presumed significant to wildlife, plant, or wildlife habitat, water quality, public and private water supply, groundwater supply, flood control, storm damage prevention, prevention of pollution, erosion control and sedimentation control, natural character and recreation, protection of surrounding land and other homes or buildings and mitigation of potential climate change impacts.

6.1.2. Trees in the AURA provide additional important functions not provided by any other plant type. Trees provide shade to moderate water temperatures and levels of dissolved oxygen and water flow. Trees also mitigate heat island effects and sequester carbon, reducing greenhouse gases and promoting climate change resilience**.** They serve as windbreaks to moderate wind stress and shear during storms, and provide nesting, roosting and perching areas for birds and other wildlife. The transitional assemblage of trees, shrubs, and ground cover (containing both wetland and upland elements) frequently found in AURAs has been found significant to the support of a greater number of native and specialist wildlife species in the interior of other Resource Areas, which they border.

6.1.3. Lands within the AURA are best left undisturbed or in a natural or vegetated state. These lands play a critical role in protecting the important functions provided by wetlands, waterways, and water bodies. Undisturbed AURAs:

6.1.3.1. reduce runoff velocity and filter pollutants, which mitigate erosion and nutrient and other pollutant transport to wetland resources;

6.1.3.2. enhance the capacity of Resource Areas to adapt and provide resilience to challenges presented by climate change such as increased flooding and drought events; and

6.1.3.3. provide core habitat for wildlife that also utilize wetlands, waterways, and water bodies.

6.1.3.3.1. Numerous scientific studies have established that many species of wildlife depend on significantly more than one hundred (100) feet of adjacent upland habitat. As such, the AURA is essential to biodiversity.

6.1.3.3.2. AURA vegetation, particularly shrubs and trees, protect wetland-associated wildlife and provide necessary shade to adjacent wetlands, waters, and wildlife microclimates.

6.1.3.3.3. Numerous scientific studies document the critical importance of the adjacent upland regions for wildlife habitat. In Massachusetts, 100% of wetland-dependent mammal species use upland habitats, more than half of which use upland areas beyond two hundred (200) feet of the wetland edge . These include beaver, otters, muskrats, minks, and shrews. Non-water dependent mammals use upland areas as travel corridors to wetlands, including racoons, moose, bears, and deer. Water-dependent reptiles, amphibians, and birds also depend upon upland habitat. Scientific studies have found that as much as 76% of Massachusetts freshwater wetlands-dependent species require upland habitat.

6.1.3.3.4. The AURA and riparian corridors protect fish and shellfish by removing water-borne pollutants, controlling pH levels and temperature, and removing harmful sediments.

6.1.4. Intact, vegetated AURAs protect adjacent Resource Areas and associated Values as well contribute to ecological climate resilience. AURAs become even more important as our climate becomes more variable and wetland boundaries shift up and down gradient, depending on shifting precipitation, drought, and hydrologic conditions. During extended dry periods and drought, the wetland boundary may shift downgradient due to replacement of wetland herbaceous species with upland herbaceous species. However, this same wetland may shift upgradient in response to extended heavy precipitation and flooding events. Protection of AURAs ensures that the functional wetland can shift on the landscape in this manner on short-term time scales without loss of jurisdictional area and functional capacity over the long term. AURAs also provide important shading of adjacent Resource Areas, buffering them from increased heat and drought. They also act as a buffer between intact Wetland Resource Areas and invasive species, which increase as the climate warms.

6.1.5. There is overwhelming scientific consensus that significant physical, chemical, or biological alterations to AURAs will have negative physical, chemical, or biological impacts on associated or adjacent wetland Resource Areas such as banks, creeks, streams, rivers, ponds, lakes, and wetlands. AURAs are important to the protection of these resources because activities undertaken near wetlands and other Resource Areas protected by the Bylaw have a high likelihood of adverse impact upon those areas, either immediately, as a consequence of construction, or over time, as a consequence of daily operation or existence of the activities. These adverse impacts from construction activities, impervious surfaces, and use can include, without limitation, erosion, siltation, loss of groundwater recharge, loss of flood control or storm damage prevention, poor water quality, harm to wildlife and wildlife habitat, and loss of resource resiliency for potential impacts of climate change. The ability of the AURA to protect a wetland resource, and to provide habitat, increases with buffer width and continuity.

6.1.6. Generally, vegetated buffers of less than twenty-five (25) feet in width within the AURA are ineffective in protecting adjacent wetlands or providing wildlife habitat functions. Vegetated buffers wider than twenty-five (25) feet are necessary to provide wildlife habitat and to protect adjacent Resource Areas from continuing activities such as inputs of sediments and nutrients which adversely affect water quality, to protect from direct human disturbance, to protect sensitive species from adverse impacts, and to protect adjacent Resource Areas from the adverse effects of climate change and changing water quality, including but not limited to nutrient concentrations, temperature, salinity, and dissolved oxygen concentrations.

6.1.7. The effectiveness of buffers in removing pollutants is dependent upon slope, soil condition, pollutant type, flow patterns, vegetation, exposure to sunlight, width, and upland land use. Steep slopes increase the velocity at which water travels through a buffer, thereby decreasing the amount of time that rainwater can filter through soil and vegetation. For removal of most pollutants, flat slopes with gradients of less than 5% are desirable. Increasing buffer width is desirable when slopes are steeper than 15%.

6.1.8. Development activities within the AURA can cause significant adverse impacts during and after construction. Construction impacts may include erosion and sedimentation, improper debris disposal, removal of vegetation, soil degradation, and noise. Post-construction impacts may be similar but may also include disruption of wildlife habitat and corridors, stormwater pollution from impervious surfaces and landscaped areas in which herbicides, pesticides, fertilizers, and fungicides are used, nitrogen and phosphorus loading from septic systems.

6.2. Definitions and Critical Characteristics

The AURA is the protected area of land adjacent to a Resource Area specified in Article I, Sections 1.6.1 and 1.6.2 of these Regulations, and is the land within one hundred (100) feet, measured horizontally, of any of the aforesaid Resource Areas.

6.3. Presumptions

6.3.1. The Commission shall presume that the AURA is an integral part of a wetland Resource Area system and that protection of the AURA is significant to the Bylaw Values.

6.3.2. Work and activity in the AURA shall be avoided and discouraged, and Reasonable Options pursued that achieve the project purpose.

6.3.3. The inner fifty (50) feet of the AURA is presumed to be significant for the Values of the Bylaw. This is a rebuttable presumption by the presentation of a preponderance of credible evidence by a Competent Source. See, e.g., Section 6.4.10 below.

6.4. Performance Standards

6.4.1. Where work is proposed in the AURA, the Applicant shall present a consideration of Reasonable Options to prove by a preponderance of credible evidence from a Competent Source that the project as proposed has met the standard of avoid, minimize, and mitigate and there are no Reasonable Options to the proposed project with materially less adverse or cumulative effects on the Values, and that the work, including proposed mitigation, will have no significant adverse impacts.

6.4.2. Any proposed work within the AURA of a Resource Area shall not result in any impairment of the Values and functions of the Resource Area nor shall it result in any impairment in the Values and functions of the AURA.

6.4.3. The first inner fifty (50) feet of the 100-foot AURA (measured horizontally from a Resource Area specified in Article I is considered a "No Disturb" Protection Area. No activities or work, other than passive passage, Resource Area enhancement, and construction of Title 5 septic systems as set forth in Article III, Section 10 above, are permitted within the first fifty (50) feet of the AURA.

6.4.4.The 50-foot "No Disturb" restriction in the AURA shall not apply to any structure existing before the adoption of these Regulations. However, removed and replaced structures must comply with the Regulations in effect at the time of the reconstruction. For pre-existing structures within the inner first fifty (50) feet of the AURA, which are not being removed but for which the footprint is changing, any increase in footprint area must occur in the outer 50 feet of the AURA.

6.4.5. When an Applicant proposes a project with impact to the AURA, the Commission may require mitigation involving restoration, including but not limited to:

6.4.5.1. a wider undisturbed, vegetated area within the AURA; or

6.4.5.2. new structures set back greater than fifty (50) feet.

6.4.6. In the case of new lots or work in undeveloped lots when partial encroachment into the AURA is unavoidable, in addition to the requirements noted above, the Applicant must mitigate the intrusion by creating or expanding an area of native vegetation within the first twenty-five (25) feet of the AURA on the lot. For unavoidable encroachment, as mitigation, the Commission may require improvements to remaining undisturbed AURA function.

6.4.7. Impervious surface.

6.4.7.1. The total area of impervious surface within the AURA shall not increase over existing total area unless the Commission determines, based on sufficient proposed mitigation, that there is no permanent, significant impact on Resource Area Values.

6.4.7.2. Impervious surfaces shall not intrude farther into the AURA than pre-project conditions unless the Commission determines that the total area of impervious surface is significantly decreased, or other sufficient mitigation is provided that serves to protect the Resource Area Values. Impervious surface shall be kept as close as possible to the outer (upland) boundary of the AURA.

6.4.8. Work in the AURA shall not adversely affect the hydrology of the site including runoff rates, volume, water quality, flood storage capacity, or flow paths.

6.4.9. For permitted projects in the AURA, landowners shall follow 330 CMR 31.00 Plant Nutrient Application Requirements for Agricultural Land and Land Not Used for Agricultural Purposes.

6.4.10. The Commission may allow temporary, limited, or permanent disturbance in the AURA as appropriate and consistent with this Section if the Applicant proves that there are no other Reasonable Options to the project with materially less adverse and cumulative effects on the Values protected by this Bylaw and convinces the Commission by a preponderance of credible evidence from a Competent Source that the area or part of it may be altered without harm to the Values taking into consideration the characteristics of the Resource Area, including but not limited to the following: slope, soil characteristics, drainage patterns, extent and type of existing native vegetation, extent and type of invasive vegetation, amount of impervious surface, wildlife and wildlife habitat, intensity and extent of use, and intensity and extent of adjacent and nearby uses. This approach is intended to allow flexibility for use of property while maintain necessary levels of protection of Resource Area Values protected by the Bylaw.

6.4.11. Some activities in the AURA, which are deemed not likely to have a significant or cumulative effect on the Values, may be reviewed by the Commission provided that the other provisions of these Regulations are satisfied. Requirements for these proposed activities are addressed in Article V, Administrative Approval Requests.

7. Surface and Subsurface Streams, Intermittent Streams, and Rivers

7.1. Preamble

7.1.1. Streams and Rivers, and their AURA, are likely to be significant to protect the private or public water supply; to protect groundwater; to provide flood control; to prevent storm damage; to prevent pollution; to protect land containing shellfish; to protect wildlife habitat; and to protect the fisheries. Land adjacent to rivers and streams can protect the natural integrity of these water bodies. The presence of natural vegetation within the AURA of streams is critical to sustaining rivers as ecosystems and providing these public Values.

7.1.2. The AURA can prevent water quality degradation by filtering sediments, toxic substances (such as heavy metals), and nutrients (such as phosphorus and nitrogen) from stormwater, nonpoint pollution sources, and the river itself. Sediments are trapped by vegetation before reaching the river. Nutrients and toxic substances may be detained in plant root systems or broken down by soil bacteria. Stream AURAs may trap and remove disease-causing bacteria that otherwise would reach rivers and coastal estuaries where said bacteria can contaminate shellfish beds and limit safe human consumption. Natural vegetation within the stream AURAs also maintains water quality for fish and wildlife. Where rivers serve as water supplies or provide recharge to wells, the stream AURAs can be important to the maintenance of drinking water quality and quantity.

7.1.3. Land along rivers in its natural state with a high infiltration capacity increases the yield of a water supply well. When stream AURAs lack the capacity to filter pollutants, contaminants can reach human populations served by wells near rivers or by direct river intakes.

7.1.4. The capacity of the stream AURAs to filter pollutants is equally critical to surface water supplies, reducing or eliminating the need for additional treatment. In the watershed, mature vegetation within stream AURAs provides shade to moderate water temperatures and slow algal growth, which can produce odors and taste problems in drinking water. Within the stream AURAs, surface water interaction with groundwater significantly influences the stream 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. The hyporheic zone extends to greater distances horizontally from the channel in large, higher order streams with alluvial floodplains. However, the interaction within this zone is also important in smaller streams. By providing recharge and retaining natural flood storage, as well as by slowing surface water runoff, stream AURAs can mitigate flooding and damage from storms.

7.1.5. The root systems of riverine vegetation keep soil porous, increasing infiltration capacity. Vegetation also removes excess water through evaporation and transpiration. This removal of water from the soil allows for more infiltration when flooding occurs.

7.1.6. Increases in storage of floodwaters can decrease peak discharges and reduce storm damage. Vegetated AURAs also dissipate the energy of storm flows, reducing damage to public and private property. Stream AURAs are critical to maintaining thriving fisheries. Maintaining vegetation along rivers promotes fish cover, increases food and oxygen availability, decreases sedimentation, and provides spawning habitat.

7.1.7. Maintenance of water temperatures and depths is critical to many important fish species. Where groundwater recharges surface water flows, loss of recharge as a result of impervious surfaces within the stream AURAs may aggravate low flow conditions and increase water temperatures. In some cases, summer stream flows are maintained almost exclusively from groundwater recharge. Removing trees and other vegetation along the shore most readily impacts small streams. Stream AURAs are important wildlife habitat, providing food, shelter, breeding, migratory, and overwintering areas. Many predominantly upland species use and may be seasonally dependent on the stream AURAs. Stream AURAs promote biological diversity by providing habitats for an unusually wide variety of upland and wetland species, including bald eagles, osprey, and kingfishers.

7.1.8. Large dead trees provide nesting sites for bird species that typically use the same nest from year to year.

7.1.9. Sandy areas along rivers may serve as nesting sites for turtles and water snakes. Stream AURAs provide food for species such as wood turtles which feed and nest in uplands, while using rivers as resting and overwintering areas. Stream AURAs provides corridors for the migration of wildlife for feeding or breeding.

7.1.10. Loss of this connective function, from activities that create barriers to wildlife movement within the stream AURA, results in habitat fragmentation and causes declines in wildlife populations.

7.1.11. Wildlife must also be able to move across the AURA around streams, between uplands and the river. Vernal pools are frequently found within depressions in the AURA around streams. These pools are essential breeding sites for certain amphibians which require isolated, seasonally wet areas without predator fish. Most of these amphibians require areas of undisturbed woodlands as habitat during the non-breeding seasons. Some species require continuous woody vegetation between woodland habitat and the breeding pools. Depending on the species, during non-breeding seasons these amphibians may remain near the pools or travel ¼ mile or more from the pools. Reptiles, especially turtles, often require areas along rivers to lay their eggs. Since amphibians and reptiles are less mobile than mammals and birds, maintaining integrity of their habitat is critical. In those portions so extensively altered by human activity that their important wildlife habitat functions have been effectively eliminated, stream AURAs are not significant to the protection of important wildlife habitat and vernal pool habitat.

7.1.12. Streams are important for storm damage prevention, flood control, groundwater protection, wildlife habitat, and recreation Values. During spring, summer, and fall these streams disperse snow melt and storm runoff across the landscape thereby preventing dangerous volumes and flows from impacting roadways and property. This broad dispersal also allows for larger volumes of water to infiltrate into the ground, recharging groundwater supplies.

7.1.13. Streams are an essential source of food and water for wildlife and are often the only source of water in higher elevation areas of town. The moist soils that border intermittent streams are significantly richer in herbs and flowering/fruiting plants, which are the base trophic level of food, than surrounding upland areas.

7.1.14. During all seasons, but especially in winter and spring, intermittent streams act as essential corridors for animal movement when food is scarce. Some animals, such as pickerel frogs and eastern spotted newts, rely heavily on intermittent streams for movement.

7.1.15. For these above-listed reasons, the upland areas surrounding intermittent streams are heavily used by wildlife for living space, breeding, feeding, migrating, dispersal, and security.

7.2. Definitions

7.2.1. A river is any natural flowing body of water that empties to any ocean, lake, pond, or other river and which flows throughout the year. Rivers include perennial streams (see 310 CMR 10.04: Stream) that are perennial because surface water flows within them throughout the year. Occasionally, a body of running water which does not flow throughout the year may be perennial because the dryness is due to drought, impoundment, or other unusual or unnatural circumstances.

7.2.2. Intermittent streams are not rivers as defined herein because surface water does not flow within them throughout the year. When surface water is not flowing within an intermittent stream, the surface water may remain in isolated pools or may be absent. When surface water is present in contiguous and connected pool/riffle systems, it shall be determined to be flowing. Rivers begin at the point an intermittent stream becomes perennial or at the point a perennial stream flows from a spring, pond, or lake. Downstream of the first point of perennial flow, a stream normally remains a river except where interrupted by a lake or pond. Upstream of the first point of perennial flow, a stream is normally intermittent.

7.2.3. Under this Bylaw and these Regulations, all flowing watercourses shall be considered to be perennial streams unless a preponderance of evidence deemed acceptable by the Commission rebutting this presumption is presented.

7.2.4. Intermittent Streams: for the purposes of the Bylaw, an intermittent stream is that segment of a flowing watercourse that regularly experiences naturally occurring sporadic flow interruptions such that it does not have a continuous flow for at least five (5) consecutive days or more in any consecutive 12 month period. The Commission recognizes two types of intermittent streams:

7.2.4.1. Type I: stream segments in which continuous standing water disappears for at least five (5) but not more than thirty (30) consecutive days annually; and

7.2.4.2. Type II: streams in which continuous standing water disappears for more than thirty (30) consecutive days annually.

7.2.5. An AURA exists for both Type I and Type II intermittent streams.

7.2.6. For any subsurface stream protected under the Bylaw, the continuity and flow from the point at which a stream loses its connection with the earth's surface (inlet) to where it re-emerges into a surface channel (outlet) shall be determined during periods of flow using tracer dye testing, or other methods approved by the Commission. An agent or member of the Commission shall witness flow testing for continuity. For a road crossing or any other construction activity proposed between the subsurface stream inlet and outlet, confirmatory tests must be performed to establish the subsurface centerline of the stream. Subsurface flow may not be interrupted or reduced by any improvements. The Applicant for a permit shall provide the Commission with hydraulic calculations to affirm that any work proposed over or within the subsurface portion of the stream shall not impact the stream continuity or flow capacity.

7.3. Presumptions

Where a proposed activity involves removing, filling, dredging, or altering a stream or river or within 100 feet of a stream or river, the Commission shall presume that such area is significant to the Values and the adjacent Resource Areas. This presumption is rebuttable and may be overcome upon a preponderance of evidence from a Credible Source showing that the Bank does not play a role in the protection of said Values. If the presumption is deemed to have been overcome, the Commission shall make a written determination to this effect, setting forth its grounds.

7.4. Performance Standards

7.4.1. For the AURA of perennial streams and Type I intermittent streams, rivers, the Commission accepts and adopts the definitions, requirements, and Performance Standards for the inner one hundred (100) feet of Riverfront Area as specified in 310 CMR 10.58.

7.4.2. For the AURA of Type II intermittent streams, the Commission accepts and adopts the definitions, requirements, and Performance Standards for the outer one hundred (100) feet of Riverfront Area as specified in 310 CMR 10.58.

7.4.3. Requests for Reclassification of Perennial Streams

7.4.3.1. The Commission may consider finding a stream intermittent when an Applicant has filed an RDA or other type of application and has provided documentation meeting the provisions of 310 CMR 10.58(2)(a)1.d., with documentation at regular intervals and at the start and end of the portion of the stream under consideration. A Determination or Finding of the stream as intermittent is only valid for three years.

7.4.3.2. In addition to the information required under 301 CMR 10.58(2)(a)1.d., the following evidence must be submitted by Applicants requesting a reclassification of a stream as shown on current USGS topographical maps:

7.4.3.2.1. Watershed (i.e., drainage basin) size at the point of the stream for which reclassification is being requested. (A watershed greater than one square mile shall be a strong indicator of a perennial stream or river. A watershed greater than 1/2 square mile with a

stratified drift component of 75% or greater shall be a strong indicator of a perennial stream or river.)

7.4.3.2.2. Rainfall data based on NOAA Atlas 14.

7.4.3.2.3. Current Commonwealth of Massachusetts-declared drought conditions for the specific area in question.

7.4.3.2.4. Flowing water. Flowing water at the site in question shall be a strong indicator of perennial status. Lack of flowing water during unusually dry conditions (as determined by the Commission based on available rainfall data and observation of below-normal water level conditions) shall prohibit stream reclassification from perennial to intermittent until normal hydrological conditions exist. Proof of a dry stream bed must be present five (5) consecutive days (i.e., a minimum of 120 consecutive hours). Proof must be documented with field notes and dated, signed photographs. Any information provided must be provided by a Competent Source (as determined by the Commission). A credible source is typically classified as a professional in the field with an associated master's degree or a bachelor's degree and two to five years of documented field experience.

7.4.3.3. Impoundments created by beavers or human activity or evidence of withdrawal of water of any kind upstream or at the point in question shall be cause to deny a change from perennial to intermittent unless and until the change has been corrected and normal flow conditions have resumed. In the instance of beaver activity, the Applicant should note that beavers typically only build dams in response to running water, thus indicating a stream's perennial nature.

8. Vegetation Removal and Replacement

8.1. Preamble

8.1.1. Vegetation in a Resource Area is significant for wildlife, wildlife habitat and water quality. In addition, vegetation controls flood and storm damage, thereby mitigating potential impacts of climate change. Vegetation provides food, shelter, socialization, shade, sound control, water detention, sediment control, non-point source pollution filtration, bank stabilization, biodiversity, pollutant uptake, evapotranspiration of water, aesthetics, and atmospheric purification. In addition, plant size ordinarily is proportional to habitat value, i.e., large trees are of greatest habitat value, followed by bushes, and then ground cover. Thus, an adequate quantity of vegetation must be maintained so that Resource Areas can function to protect the Values.

8.1.2. Trees have significant ecological value in that they provide oxygen, shade, moisture transpiration in the air benefitting lower story plant life, habitat for wildlife, soil stabilization, carbon dioxide absorption and erosion control. Dead trees provide habitat for a variety of nesting animals and contribute organic nutrients for soil.

8.1.3. The Commission strongly encourages retaining trees and vegetation in their natural state within the AURA. Trees should be retained along and around the Resource Area as much as possible.

8.1.4. The Commission recognizes that a diseased, dying, dead or otherwise compromised tree can pose a danger to persons and property prompting their removal. Notwithstanding, the AURA provides a barrier between developed areas and Resource Areas such as wetlands, ponds, streams, and rivers which must be maintained in as close to their natural state as is reasonable to ensure the health and viability of the wetland Resource Areas.

8.2. Definitions

8.2.1. Compromised trees are trees that are either deemed to be a threat to a dwelling, structure, or a public facility, or are deemed to be a risk due to their state of health, persistent insect activity, or

having been infected with insects, fungi, or diseases that pose a threat of spreading to the surrounding area.

8.2.2. “Non-Compromised Healthy Trees” are trees that are able to maintain a crown of leaves or needles that pose no threat to structures. They produce new growth yearly on both their trunk and branches. Non-Compromised Healthy Trees, as defined here, are those deemed not to be a threat to a dwelling, structure, or public facility.

8.2.3. Extensive pruning is defined as removal of 20% or more of limbs or growth of a tree.

8.3. Performance Standards

8.3.1. The Commission may require a letter from a Certified Arborist may be required to verify that a tree is a Compromised Tree unless such requirement is expressly waived by the Commission. Health evaluation of a deciduous tree in winter is difficult. The Commission may require that such trees be evaluated only during the growing season. In any instance where a certified arborist or tree services company is or has been consulted to determine the status of, and recommendations for, a property's trees, the landowner shall provide an official copy of the expert's survey results and recommendations as part of the request to the Commission.

8.3.2. In instances where there is a preponderance of evidence of a tree's imminent failure threatening danger to persons and property, the Commission may, issue an Emergency Certification for the immediate removal of the tree.

8.3.3. No vegetation in a Resource Area shall be damaged, extensively pruned, or removed without written approval by the Commission.

8.3.4. For extensive pruning or removal of vegetation because of an imminent risk to public health and safety, in-kind replacement shall be to the greatest extent practicable as determined by the Commission.

8.3.5. Tree stumps within the inner fifty (50) feet of the AURA should remain in place to assist in soil stabilization unless otherwise approved by the Commission.

8.3.6. The Commission requires planting of replacement trees or shrubs for tree removed in an area subject to protection by the Bylaw and these Regulations. Replacement quantities and types may be modified by the Commission upon a finding of undue hardship or a finding that the tree removal shall have a negligible effect on the Values, including but not limited to situations where the tree or shrub to be removed was significantly damaged by a storm event and is not likely to survive, the tree or shrub is already dead, or the property is heavily wooded and re-planting would be difficult).

8.3.7. A tree six (6) inches or greater in dbh size that is cut with a remaining tree trunk that is 15 feet tall above grade (known as a “snag”) does not require replacement plantings. This option may be preferred where a large, tall tree threatens a structure but is within a naturalized area. Snags provide a habitat and food for wildlife.

8.3.8. Tree Mitigation Requirements

8.3.8.1. The number and size of replacement trees required for each tree removed in the AURA, which is not left as a snag, shall be based on the following table:

Existing trees to be removed	**Replacement Trees and Shrubs**			
Size (dbh) of tree to be cut	Number of deciduous shade trees	Number of evergreen trees 5-6’ in	Number of large shrubs or small trees	Number of shrubs 3’ in height

	2.5” dbh or greater	height or greater	5-6’ in height or greater	or greater
Less than 6”	1	1	2	3
6” to less than 12”	2	2	4	6
12” to less than 18”	3	3	6	9
18” to less than 24”	5	5	10	12
24” or greater	To be determined by Commission, but plantings may be in proportion to cross-section area dbh			

8.3.8.2. For all replacement trees:

8.3.8.2.1. Trees must be native and non-invasive in Massachusetts and must be of the same general category of the removed tree or shrub (i.e., evergreen or deciduous).

8.3.8.2.2. Replacement trees or shrubs shall have ball sizes which are of a diameter and depth to encompass enough of the fibrous and feeding root system as necessary for the full recovery of the plant once planted. Replacement trees shall have a caliper size at dbh of 1.5” or greater.

8.3.8.2.3.Replacement plantings must be installed within one hundred and eight (180) days of the day when the existing tree or shrub is removed.

8.3.8.2.4. Vegetation replacement is not considered successful until the replacement plants have survived two (2) full growing seasons from the date of planting. The Commission reserves the right to require re-planting if replacement trees or shrubs do not remain viable for two (2) full growing seasons.

4. Application Types: the application for vegetation removal shall be submitted as part of an Administrative Approval Request (AAR), Emergency Certification Request, RDA, or NOI application as described by the Bylaw and these Regulations.

4.1. Administrative Approval is required for removal of no more than five (5) Compromised Trees located solely within the AURA.

4.2. An RDA or NOI shall be submitted to remove six (6) or more Compromised Trees or any number of Non-Compromised Healthy Trees located within the AURA or in NHESP Priority Habitat. The Commission may require the filing of an application following an Emergency Certification for the tree removal and mitigation.

ARTICLE V: PROCEDURES AND PERMITS

1. Self-Imposed Hardships

1.1. A self-imposed hardship is a circumstance brought on by decisions made by the landowner, including not limited to the following:

1.1.1.Failure to consider wetlands when subdividing land.

1.1.2.Selling off upland access which results in a project that cannot meet Performance Standards.

1.1.3.Purchasing land knowing that all upland access to the property interior had previously been subdivided off.

1.1.4.Disregarding impacts on the Resource Area.

1.1.5 The Applicant or landowner is advised to prevent situations where they may create their own hardship by not carefully considering all likely impacts to areas subject to the Bylaw and Regulations.

1.1.6. Projects may not be segmented in such a way that would limit the ability of the Conservation Commission to review all options and alternatives and consider Resource Area impacts.

1.1.7. The Applicant must disclose full development plans.

1.1.8. In determining whether a self-imposed hardship has been created, the Commission shall take into account whether alternatives exist/existed, including any lots currently or formerly owned by an Applicant and any other land which can be reasonably obtained.

1.1.9. No special consideration will be given for not being aware of the requirements of the Bylaw, and its Regulations.

1.1.10. No special consideration will be given to those who seek and obtain Planning Board subdivision approval and partially develop parcels, lots, or projects of any type prior to delineating and determining Resource Area boundaries and the AURA to same.

2. Time Periods

2.1. All time periods of ten (10) days or less specified in the Bylaw and these Regulations shall be computed upon business days only. In the case of a Determination or Order, such period shall commence on the first day after the date of issuance and shall end at the close of business on the tenth business day thereafter. All other time periods specified in the Bylaw and these Regulations shall be computed based on calendar days, unless the last day falls on a Saturday, Sunday, or legal holiday, in which case the last day shall be the next business day following.

2.2. To allow for careful review by the Commission, all Applicants and inquirers must submit (in hard copy and electronic form) complete materials as follows:

2.2.1. New applications: all materials are due by noon, ten (10) business days prior to the hearing or meeting.

2.2.2. Revised materials for open hearings: all materials are due by noon, ten (10) business days prior to the hearing/meeting.

2.2.3. Informal discussions: all materials are due by noon, five (5) business days prior to the hearing/meeting.

2.3. Exceptions to these deadlines shall be at the sole discretion of the Commission Chair.

3. Working Sessions

3.1. When the Commission has time available, as a matter of courtesy, it may, but is not required, conduct a working session with any person seeking guidance or direction on what type of application to file with the Commission and what information the Commission might like to see in such an application in addition to that specified elsewhere in these Regulations or the state Wetlands Protection Regulations. No one has a right to a working session.

3.2. Any working session shall be held in accordance with the Open Meeting Law, MGL Ch. 30A, §§ 18 – 25.

3.3. For any working session, notwithstanding the Plan requirements in Article VI below, the following information, at a minimum, must be provided (at the working session):

3.3.1. a map or plan showing the location of the proposed work;

3.3.2. a sketch of the area of the proposed work, showing existing conditions (structures, approximate locations of actual or potential Resource Areas); and

3.3.3. a brief narrative describing the proposed work.

3.4. Statements by the Commission or any Commission member in a working session shall not be construed as prejudging a project or guaranteeing a particular action by the Commission on a subsequent filing. The Commission shall not be bound to any comments or opinions offered at a working session. A person who relies on any statements or information provided at the working session does so at their own risk.

4. Abutter Notifications

4.1. Concurrent with the filing of an RDA, NOI, Request for an Amended OOC, or ANRAD, the Applicant also shall provide notification to all Abutters and any property owners within one hundred (100) feet of the property line of the land where the delineation or activity is proposed, including properties separated from that land by a public or private street or a body of water.

4.2. Bylaw requirements for Abutter access to plan documents shall be considered satisfied when digital copies of the application, provided by the Applicant to the Commission, are posted on the Town of Shutesbury website. Copies of said plans shall be available online at www.shutesbury.org/concom and at Town Hall upon request at no additional cost.

4.3. The Applicant shall provide notification at the mailing addresses shown on the most recent applicable tax list, obtained within 30 days of the date of the application submission, from the Shutesbury Assessor (Certified Abutters List).

4.4. Notification of Abutters shall be at the Applicant's expense.

4.5. The Notification shall state where copies of the permit application may be examined or obtained and must include the date, time, and location of the public hearing/meeting and brief description of the project or permit purpose.

4.6. The Applicant shall notify abutters by USPS Certified Mail (Return Receipt Requested). Hand delivery is permitted and requires a signature and date of recipient.

4.7. Mailing of Abutter Notifications is required at least seven (7) business days prior to the Public Hearing or Public Meeting.

4.8. The Applicant shall present the Certified Mail receipts or proof of hand delivery with recipient signatures and date for all Abutters prior to, or at the beginning of the Public Hearing/Meeting.

4.9. The presentation of the receipts for all Abutters identified on the Certified Abutters List shall constitute compliance with Abutter Notification requirements. The Commission shall determine whether the Applicant has complied with Abutter Notification requirements and reserves the right not to open a hearing until requirements have been satisfied.

5. Actions by Conservation Commission

Where the Bylaw states that a particular action (except receipt of an RDA or other application for permit) is to be taken by the Commission, that action is to be taken by more than half the members present at a meeting of at least a quorum. A quorum shall be at least three Commissioners for the 5-member Commission. Where the Bylaw states that a permit or notification shall be issued by the Commission, that action is to be taken by a majority of the members then in office, who need not convene as a body in order to sign said permit or Determination, provided they met pursuant to the Open Meeting Law (MGL Ch. 30A, §§ 18-25) when voting on the matter.

6. Abbreviated Notice of Resource Area Delineation (ANRAD)

Applicants wishing to have wetlands delineations approved by the Commission, pursuant to 310 CMR 10.05 (4)(b)(2), shall use the most current MassDEP guidelines and forms for ANRADs. Applicants are advised that the Commission has broader jurisdiction under the Bylaw than the WPA, and shall therefore

review ANRADS concurrently under the WPA, the Bylaw, and these Regulations. ANRAD applications shall identify all Resource Areas, including Resource Areas protected by the Bylaw alone.

7. Administrative Approval Request (AAR)

7.1. On a case-by-case basis, for projects that the Commission finds are not likely to alter a jurisdictional Resource Area, work may be reviewed on an expedited review basis. The intention of the AAR process is to ensure that Resource Areas are protected while creating a streamlined review process for small, limited projects outside of the inner fifty (50) feet of the AURA that are determined to have a limited or negligible impact on the Values.

7.2. Activities that may not be permitted with an AAR:

7.2.1. any activity in a Resource Area other than the outer fifty (50) feet of the AURA, excluding Minor Activities defined in Article I which are exempt from any application requirement;

7.2.2. any activity that involves the use of heavy equipment;

7.2.3. any activity that involves substantial regrading, excavating, filling, or other form of ground disturbance, except for the installation of helical piers or in-ground cast or poured concrete pier supports necessary for structures allowed under Section 7.2.8 below.

7.2.4. uprooting or root grappling of trees;

7.2.5. mowing or clearing of native vegetation that is not a Compromised Tree;

7.2.6. removal of any Non-Compromised Healthy Trees or six (6) or more Compromised Trees.

7.2.7. construction or installation of docks, piers, or other water-dependent structures requiring a Chapter 91 Waterways Program permit or license or notification to the NHESP; and

7.2.8. the conversion of more than one hundred twenty (120) square feet of previously established lawn to residential accessory structures including, but not limited to, decks, sheds, above-ground pools, garages, patios, replacement of basement bulkheads, and the installation of accessibility ramps.

7.3. The Commission reserves the right to require another type of permit application for any activity reviewed under an AAR, including an RDA, NOI, or Emergency Certification, if the Commission determines that the proposed activity does not constitute a small project.

7.4. Applicants are responsible for ensuring that activities approved under an AAR do not result in any non-permitted alteration of a Resource Area, including the AURA, and to use appropriate erosion and sedimentation controls.

7.5. At a minimum, an AAR shall include the following:

7.5.1. a written description of the work or activity to be reviewed and the name and contact information for the Applicant;

7.5.2. a site plan or sketch identifying the location of the activity;

7.5.3. a site visit conducted by the Commission or its representative; and

7.5.4. a review of the AAR at a public meeting.

7.6. If approved by the Commission, AARs shall not require professional wetland delineation, Abutter Notifications, or a Legal Notice.

7.7. Upon reviewing the application, AARs shall be either approved or denied by a majority of Commissioners at the next public meeting. The Commission may attach conditions or time limitations on any AA and reserves the right to conduct post-approval site inspections to monitor compliance with such conditions.

8. Request for Determination/Determinations of Applicability (RDA)

8.1. Any person who desires a Determination as to whether the Bylaw applies to an area or activity that may affect an area subject to protection under the Bylaw, may submit to the Commission by USPS Certified mail or hand delivery two (2 hard copies and one electronic copy via email of an RDA, Bylaw Form 1, along with other required materials. The RDA shall include such data and plan requirements as are required by the Commission, including the provisions outlined in Article VI below.

8.2. Any person filing an RDA with the Commission shall comply with the Abutter notification requirements discussed in Article V above in these Regulations.

8.3. The Commission does not grant waivers to Abutter notification requirements for RDAs.

8.4. An RDA shall include a written 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.

8.5. If the Commission or its agent determines that an application is incomplete, it shall notify the Applicant. Upon confirmation that the RDA application is complete, the Commission shall give the Applicant a date and time for a Public Meeting.

8.6. A Legal Notice of the time and place of the public meeting, at which the Determination will be made, shall be published by the Applicant's expense in a local newspaper not less than five (5) business days prior to such meeting.

8.7. DOA

8.7.1. Unless otherwise granted an extension by the Applicant, when a complete RDA application is received, the Commission shall convene a Public Meeting to issue a positive or negative DOA within twenty-one (21) days of receipt of a complete application.

8.7.2. The Determination must be signed by a majority of the Commission present at an open session. It shall be sent by the Commission to the person making the Request and the owner of the property if different than the person making the Request.

8.7.3. The Commission shall find that the Bylaw applies to the land, or a portion thereof, if it is an area subject to protection under the Bylaw. The Commission shall find that the Bylaw applies to the work if it is an activity subject to the Bylaw and its Regulations.

8.7.4. Determinations of Resource Area delineations in a DOA shall be based upon the Commission's discretion. In complex delineations, the Commission may hire a consultant at the applicant's expense, pursuant to Article VI of these Regulations, to review the boundaries of Resource Areas.

8.7.5. A Determination shall be valid for three years from the date of issuance.

8.7.6. In the event of a positive DOA, an NOI shall be required for any activity subject to Commission jurisdiction and all of the procedures set forth in Articles V and VI relative to such applications shall apply.

9. Notice of Intent (NOI)

9.1. Any person who proposes work that will remove, fill, dredge, build upon, or alter any Resource Area and/or AURA subject to protection under the Bylaw and these Regulations shall submit an application, called a Notice of Intent (NOI), and other application materials in accordance with the submittal requirements set forth in Articles V and VI of these Regulations.

9.2. The Applicant shall have the burden of proving by a preponderance of credible evidence from Competent Sources that the work proposed in the NOI will not have a significant or cumulative effect

upon the Resource Area Values protected by the Bylaw. Failure to provide adequate evidence to the Commission supporting this burden shall be sufficient cause for the Commission to deny a permit.

9.3. If the Commission or its agent determines that an application is incomplete, it shall notify the Applicant within twenty-one (21) days of the date of receipt. The Commission or its agent may:

9.3.1. return the application, restarting all time periods for application processing;

9.3.2. require additional information or materials be submitted within a specified period of time which shall be no later than the date of the scheduled public hearing; or

9.3.3. continue the public hearing, with the Applicant's consent.

9.4. Applications submitted to the Commission must meet the submittal requirements under both the WPA, the Bylaw, and their Regulations. All applications will be considered under both the WPA and the Bylaw. Any person filing an NOI with the Commission shall comply with the Abutter notification requirements as discussed in Article V above of these Regulations. When a person applying is other than the owner, the owner or a legally authorized representative of the owner must sign the application or provide separate written permission.

9.5. If only a portion of a proposed project or activity lies within an area subject to protection under the Bylaw and the remainder of the project or activity lies outside those areas, all aspects of the project must be described in detail, also provided that in such circumstances, the NOI shall also contain a description and calculation of pre- and post-development peak flows and estimated water quality characteristics of discharge from a point source (both closed and open channel) when the point of discharge falls within an area subject to protection under the Bylaw.

9.6. If an Applicant wishes to obtain an ORAD, they must file an ANRAD prior to filing an NOI. Alternatively, the boundary of a Resource Area may be determined through the filing of the NOI.

9.7. The Commission shall hold a public hearing within twenty-one (21) days of receipt of the complete NOI.

9.8. If the Commission determines that the Applicant incorrectly or incompletely delineated a Resource Area(s), the Commission 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 hearing and issue a denial Order of Resource Area Delineation or denial OOC within twenty-one (21) calendar days. The denial shall specify the basis for the decision. The Commission shall have the authority to deny any proposed Resource Area delineation when:

9.8.1. the application is incomplete;

9.8.2. the delineation is incorrect; or

9.8.3. the Commission requires additional information that the Applicant does not provide.

9.9. Review Period: Resource Area boundary delineations shall be reviewed during winter months in accordance with the Winter Delineation Procedures outlined in Article III.

10. Public Hearings

10.1. The Commission shall hold a public hearing within twenty-one (21) days of receipt of an application that meets the minimum submittal requirements set forth in Articles V and VI. Notice shall be advertised at the expense of the Applicant at least five (5) business days prior to the hearing in a newspaper of general circulation in the Town.

10.2. It is standard practice for the Commission to combine its hearings under the Bylaw with the hearing conducted under the WPA. Public hearings may be continued with the Applicant's consent, to an agreed-upon date, which shall be announced at the hearing.

11. Coordination with Other Boards and Offices

11.1. The Commission or its representative shall provide access to electronic versions of permit applications to the Planning Board, Zoning Board of Appeals, Board of Health, and Building Inspector.

11.2. The boards and offices referred to above may file written comments and recommendations with the Commission. Any such written comments and recommendations will be provided to the Applicant and owner when they are filed with the Commission. The Applicant and owner shall have the right to respond to such written comments and recommendations at a hearing of the Commission prior to final action.

12. Decisions

12.1. Within twenty-one (21) days of the close of the public hearing, the Commission shall issue an approval or denial permit decision with an OOC.

12.2. Approved permits shall impose conditions deemed necessary to protect the Values identified in the Bylaw. The permit shall prohibit any activity or portion thereof that cannot be conditioned to protect said Values.

12.3. If a permit is denied, it shall be for one or more of the following reasons:

12.3.1 for failure to meet specified requirements of the Bylaw;

12.3.2 for failure to submit necessary information or plans requested by the Commission;

12.3.3 for failure to meet design specifications, Performance Standards, or other requirements in the Bylaw and its Regulations;

12.3.4 for failure to avoid or prevent unacceptable significant or cumulative effects upon the Resource Area Values protected by the Bylaw;

12.3.5 where conditions are inadequate to safeguard the Values protected by the Bylaw; or

12.3.6 the Applicant has an outstanding violation of the Bylaw for which either: a) no corrective OOC has been recorded at the Registry of Deeds, or b) which is not under appeal.

12.4. Unless extended or issued for a lesser time period, an OOC shall expire three years from the date of issuance. In some instances, the Commission may issue a maintenance permit for five years.

12.5. The Permit shall be signed by a majority of the Commission and shall be mailed, provided electronically (return receipt), or hand delivered to the Applicant, their agent, or the owner of record.

12.6. A hard copy and an electronic copy of the application and permit materials shall be kept on file by the Commission and shall be made available to the public upon receipt of a public records request.

12.6. Any OOC shall be recorded in the Franklin County Registry of Deeds for recorded land or the Hampshire County Land Court District for registered land. Certification of recording shall be sent to the Commission within 30 days of the issuance of the permit.

12.7. If work is undertaken without the Applicant first recording the Permit, the Commission may issue an Enforcement Order.

12.8. For failure to comply with conditions stated in a Permit, the Commission may revoke or modify said Permit.

13. Subdivisions versus Individual Lots

Unless otherwise specifically identified, Orders of Conditions approving subdivisions apply only to the roads, drainage, and related infrastructure on the definitive plan and do not apply to any individual lots. Each lot within a Resource Area shall be required to file a separate NOI and obtain a separate OOC.

14. Security

As part of a permit issued under the Bylaw, 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 conditions requiring mitigation work) be secured wholly or in part by one or both of the methods described below:

14.1. by a proper bond or deposit of money or negotiable securities or other undertaking of financial responsibility sufficient in the opinion of the Commission. Such bond or surety, if required to be filed or deposited, shall be approved as to form and manner of execution by Town Counsel and as to sureties by the Town Treasurer and shall be contingent upon the satisfaction of such conditions within the time frame of the permit and extension. Such bonds shall be approved by the Commission prior to the close of the public hearing.

14.2. by acceptance of a conservation restriction, easement, or other covenant enforceable in a court of law, voluntarily offered, executed and duly recorded by the owner of record, running with the land to the benefit of the Town, whereby the permit conditions shall be performed and observed before any lot may be conveyed other than by mortgage deed.

15. Extension of Permit

15.1. A DOA or ORAD shall be valid for three (3) years from the date of issuance and may not be extended or renewed.

15.2. An Administrative Approval (AA) shall be valid for one (1) year from the date of issuance and may not be extended or renewed.

15.3. An OOC shall expire up to three (3) years from the date of issuance. The Commission may extend an OOC one or more times for periods of up to three (3) years each. No permit may be extended for more than six (6) years from the date first issued. Notwithstanding this aforesaid provision, the Commission may issue an OOC expiring for a longer period, up to a maximum of five (5) years from the date of issuance, for recurring or continuous maintenance work, provided that annual notification of time and location of work is given to the Commission. Requests for extension shall be made in writing to the Commission at least thirty (30) days prior to the expiration of the permit. The Commission shall hold a public hearing in accordance with the Bylaw and these Regulations within thirty (30) days of receipt of said request. Should said public hearing be continued past the date of the expiration of the permit, the expiration date shall be stayed to the date on which the Commission votes on whether to extend the permit, should the Commission vote not to grant the request for permit extension.

15.4. Extensions require the following:

15.4.1. A site visit to confirm that Resource Area boundaries have not changed.

15.4.2. Resource Area flagging/marking must be present and complete as approved on the original permit approval on the subject site to confirm no boundary changes.

15.4.3. Site must be in full compliance with the existing permit and there may be no outstanding Enforcement Orders on the property.

15.4.4. Information must be provided regarding any changes in Resource Areas or their boundaries since the issuance of the original permit. Changes in Resource Areas shall require a new NOI filing.

15.5. The Commission may deny the request for an extension and require the filing of a new application for a permit for the remaining work under the following circumstances:

15.5.1. 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;

15.5.2. where new information, not available at the time the permit was issued, has become available and indicates the permit is not adequate to protect the Values identified in the Bylaw;

15.5.3. where incomplete work is causing damage to the Values identified in the Bylaw;

15.5.4. where work has been done in violation of the permit or these Regulations; or

15.5.5. where Resource Areas have changed.

15.6. If issued by the Commission, the Extension Permit shall be approved and signed by a majority of the Commission.

15.7. The Extension Permit shall be recorded in the Franklin Registry of Deeds within 30 days of its issuance. Certification of recording shall be sent to the Commission within 30 days of the permit issuance date. If work is undertaken without the Applicant recording the Extension Permit, the Commission may issue an Enforcement Order.

16. Project Changes and Permit Amendments

16.1. If an Applicant seeks to make any change to a permitted project or other Commission determination, the Applicant shall consult with the Commission Chair or other designated representative, who may approve the change or require review by the full Commission. Any such requested modification shall have the same or less impact on the Values as the approved work.

16.2. No permit changes shall be approved for an expired permit.

16.3. Procedure for Amended OOC Requests:

16.3.1. The request shall be submitted in writing and discussed at a regularly scheduled public meeting. The request shall describe the proposed changes and present any pertinent plans showing such changes.

16.3.2. The Commission first shall determine at a public meeting whether the requested change warrants the filing of a new NOI or whether it is sufficiently minor to be considered an amendment to the original OOC. The Commission may determine that the project change is minor only if:

16.3.2.1. the purpose of the project has not changed,

16.3.2.2. the scope of the project has not increased,

16.3.2.3. the project still meets relevant standards in these Regulations,

16.3.2.4. Resource Areas are still protected, and

16.3.2.5. the potential for adverse impacts on Values will not be increased.

16.3.3. If the Commission determines the proposed change(s) is not minor and the Applicant intends to continue to pursue the modification, then it shall not issue an amendment but instead require the filing of a new NOI/application for permit.

16.3.4. Ministerial correction of obvious mistakes, such as citing a wrong file number or typographical errors, may be accomplished by correcting of the permit by the Commission or the Commission Chair.

16.3.5. If the Commission determines that a new NOI is not necessary, the Applicant shall, at their expense, satisfy the notification requirements for public hearings as outlined in Article V above. The notice must describe that an amendment to an Order/permit is being requested, that the request is pending before the Commission for review, the date of the public hearing at which the Commission will consider the request for amendment, and where a copy of the application for the requested change may be obtained. The Commission shall provide notice of the public hearing in accordance with the requirements of the Open Meeting Law, MGL Ch. 30A, §§ 18–25.

16.3.6. Under no circumstances will the issuance of an Amended OOC extend the effective date of the original OOC. The Amended Order shall run with the term of the original OOC or the effective date of an extended OOC.

16.3.7. The Amended OOC shall be issued on the form provided for an OOC/Permit, with the insertion of the word "Amended" and the amendment date. Amended OOCs must be recorded with the Franklin Registry of Deeds in the same manner as OOCs.

17. Enforcement

17.1. The Commission may seek permission from the landowner for the authority of its agents, officers, and employees to enter upon privately owned land that is the subject of Commission action as part of the application process or to determine compliance with the Bylaw, its Regulations, and any Order of the Commission. Failure to grant such access may cause the Commission to deny an application, to issue a notice of violation, or to seek enforcement action.

17.2. The Commission shall have authority to enforce the Bylaw and these Regulations, and permits and variances issued thereunder by violation notices, Enforcement Orders, and civil and criminal court actions.

17.3. Upon request of the Commission, the Shutesbury Select Board may authorize the Shutesbury Town Counsel to take legal action for enforcement under civil law. Upon request of the Commission, the Chief of Police may take legal action for enforcement under criminal law.

17.4. As an alternative to criminal prosecution, the Commission may elect to utilize the non-criminal disposition procedure set forth in MGL Ch. 40, § 21D. For purposes of non-criminal disposition, enforcing persons shall be the Conservation Chair, the Commission's agent, and/or Police Officers, and the penalty for each such violation shall be $300.00. Each day or portion thereof during which the violation continues shall constitute a separate offense, and each provision of the Bylaw, Regulations, permit, or variance violated shall constitute a separate offense.

17.5. When the Commission determines that an activity violates the Bylaw or a permit issued under the Bylaw, the Commission may issue an Enforcement Order or take other action necessary to achieve compliance.

17.6. Violations include, but are not limited to:

17.6.1. failure to comply with a Final Order, Final Determination, Emergency Declaration, or Emergency Certification, such as failure to observe a particular condition or time period specified in the Order, Declaration, or Certification;

17.6.2. failure to complete work described in a Final Order or Final Determination, Emergency Declaration, or Emergency Certification when such failure causes damage to the Values identified in the Bylaw, and its Regulations;

17.6.3. failure to obtain a valid Final Order or Extension Permit prior to conducting an Activity Subject to Regulation under the Bylaw and its Regulations;

17.6.4. making any false, inaccurate, or misleading statements in any certification filed under the Bylaw and its Regulations;

17.6.5. failure to comply with any certification on project plans or eligibility under the Bylaw;

17.6.6. leaving in place unauthorized fill or otherwise failing to restore illegally altered land to its original condition, or continuing any other activity in violation of the Bylaw; or

17.6.7. activities outside the Bylaw jurisdictional areas that, upon review of compelling evidence, are determined by the Commission to have resulted in the removing, filling, dredging, discharging into, building upon, degrading, or otherwise altering a Resource Area specified Article I above.

17.7. The Commission, its members and agents may enter upon privately owned land to perform their duties under the Bylaw, subject to constitutional limitations.

17.8. An Enforcement Order or other directive from the Commission will outline remedial actions necessary, including submission of an after-the-fact permit application, plans, supporting calculations, and other documentation necessary to describe the entire activity resulting in the violation. Upon review, additional requirements or modifications to the remedial actions may be required. An Enforcement Order may include requirements for restoration or mitigation.

17.9. An Enforcement Order issued by the Commission shall be signed by a majority of the Commission. In a situation requiring immediate action, the Order may be signed by a single member or an agent of the Commission. Such an Order must be ratified by a majority of the members at the next scheduled public meeting of the Commission.

17.10. An Enforcement Order shall remain in effect until the Commission reaches a determination that the Enforcement Order has been dismissed.

17.11. Any person who purchases, inherits, or otherwise acquires real estate upon which work has been done in violation of the provisions of the Bylaw, or in violation of any permit issued pursuant to the Bylaw, shall forthwith comply with any Order to restore said land to its pre-violation condition, provided, however, that no action, civil or criminal, shall be brought against such person unless such action is commenced within three (3) years following the recording of the deed or the date of the death by which such real estate was acquired by such person.

18. Certificate of Compliance (COC)

18.1. Upon completion of the work described in an OOC or Amended OOC, the Applicant shall file a Request for Certificate of Compliance (COC) with the Commission.

18.2. Upon written request by the Applicant, a COC shall be issued by the Commission within twenty-one (21) days of receipt thereof, and shall certify, if it so determines, that the activity, or portions thereof, described in the NOI and OOC have been completed in compliance with the Order. If approved by the Commission, the COC shall be signed by a majority of the Commission.

18.3. Prior to the issuance of a COC, a site inspection shall be made by the Commission or its agent, in the presence of the Applicant, or the Applicant's agent if the Applicant so requests.

18.4. If the Commission determines, after review and inspection, that the work has not been done in compliance with the OOC, it may refuse to issue a COC. Such refusal shall be issued within twenty-one (21) days of receipt of a request for a COC, shall be in writing and shall specify the reasons for denial. In some cases, the Commission may issue a partial certification if only some conditions have been met or if the OOC contains perpetual conditions.

18.5. 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 substantial 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 COC. The Commission reserves the right to administer the requirements of this paragraph commensurate with the nature, scope, type, and cost of the proposed project or activity.

18.6. If the final OOC contains conditions which continue past the completion of the work, such as maintenance or monitoring, the COC shall specify which, if any, of such conditions shall continue. The COC shall also specify to what portions of the work are certified under the COC if the COC does not apply to all the work regulated by the Order.

18.7. The COC shall be recorded by the Applicant in the Land Court or Franklin Registry of Deeds, whichever is appropriate, within 30 days of its issuance. Certification of recording shall be sent to the Commission. Upon failure of the Applicant to so record, the Commission may do so.

19. Emergency Projects

19.1. Unless authorized by a Severe Weather Emergency Declaration issued by the Commissioner of MassDEP pursuant to 310 CMR 10.06(8), any person requesting permission to do an emergency project shall specify why the project is necessary for the protection of the health or safety of the citizens of the Town of Shutesbury and what agency of the Commonwealth or subdivision thereof is to perform the project or has ordered the project to be performed.

19.2. If the project is certified to be an emergency, the Emergency 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.

19.3. The Commission shall be notified prior to the commencement of emergency work, or within twenty-four (24) hours after commencement if prior notice is not practicable given the nature of the emergency. This notice will assist the Commission in determining how the work may be conducted in a way that minimizes detrimental impacts to Resource Areas or what work may need to be conducted after the emergency work has been performed to mitigate impacts to Resource Areas.

19.4. An Emergency Certification shall be issued only for the protection of public health or safety.

19.5. The Commission shall conduct a site inspection before issuing an. Emergency Certification.

19.6. The time limitation for the performance of emergency work shall not exceed thirty (30) days.

19.7. Within thirty (30) days after a project is certified as an emergency by the Commission, a public meeting shall be held on the project for which the Commission may require a filing of an NOI or impose remedial conditions on the work.

19.8. At a minimum, a request for an Emergency Certification shall include the following information:

19.8.1. who is doing the work (e.g., contractor, homeowner);

19.8.2. what work is being proposed, including erosion & sediment controls, proposed work, and final stabilization measures;

19.8.3. where the work is proposed (address, where on the property, what Resource Areas in jurisdiction are located on the property);

19.8.4. when the work is to be conducted (dates, including the duration of the work proposed);

19.8.5. why the project is an emergency (e.g., the threat to public health & safety).

19.9. Emergencies (including Agricultural Emergencies) where work is proposed within an area identified by NHESP as being in Estimated and/or Priority Habitats require separate and independent permission from NHESP.

20. Appeals

Any person aggrieved by a decision of the Commission may appeal to a court of competent jurisdiction pursuant to MGL Ch. 249, § 4.

21. Severability

21.1. The invalidity of any section or provision of the Bylaw or of these Regulations shall not invalidate any other section or provision thereof, nor shall it invalidate any permit or determination previously issued.

21.2. If any Court of the Commonwealth shall invalidate any provision of the Bylaw or these Regulations, the Commission may promulgate additional Regulations, or present amendments to the Bylaw to the next Town Meeting after such invalidations, or approve Regulations designed to comply with any court decision, as the case may be.

22. Effective Date

22.1. These Regulations shall become effective upon passage by the Commission, and the provisions of these Regulations shall apply to all work performed, and all applications received on or after that date.

22.2. Any projects possessing a valid OOC, or other permit, issued under the Bylaw at the time of adoption of these Regulations shall not be subject to re-review under these Regulations. Any revisions to the projects after adoption of these Regulations that require an Amended OOC or Extended Permit shall be subject to review under these Regulations.

23. Amendments

These Regulations may be amended from time to time by a majority vote of the Commission if, prior to such a vote, the Commission has held a public hearing on the proposed changes.

ARTICLE VI: FILING REQUIREMENTS, FEES, AND MINIMAL WORKING CONDITIONS

1. Timeframes for Submission of Documentation

To be considered as part of an application by the Applicant, all documentation – including narratives, plans, maps, tables, charts, reports, and other relevant data – must be submitted to the Commission no later than 12 p.m., ten (10) business days prior to the scheduled public hearing, or its continuation. This is the minimum time needed to allow the Commission and staff to properly review, analyze, and check the information provided. Documentation submitted with fewer than the minimum required days for review may be excluded from consideration at the scheduledhearing and held for discussion at a subsequently scheduled meeting.

2. General Application Requirements

2.1. Introduction: Plans and accompanying documentation shall describe the proposed activity and its effect on the environment. The following requirements are set out as a minimum standard. The Applicant may submit, or be required to submit, any further information that will assist the Commission's review and that is deemed necessary to determine the proposed effect on the Values protected by the Bylaw and these Regulations. Such requirements shall be commensurate with the nature, scope, and type of the proposed project or activity.

2.2. The Applicant is responsible for accurately delineating Resource Areas protected under the Bylaw and these Regulations. Failure to provide this information, or providing erroneous or false information, shall be grounds for denying, suspending, or revoking the permit under this Bylaw.

2.3. The Commission may waive any plan requirements it deems insignificant or irrelevant for a particular project.

2.4. The Commission may create alternative forms, informational checklists, and other instructions for applications under the Bylaw and these Regulations.

2.5. All RDAs, NOIs, and ANRADs shall include:

2.5.1.The names and addresses of the record owner(s), the Applicant(s), and all 100-foot Abutters, as determined by the most recent local tax list certified by the Shutesbury Assessor's Office, unless the Applicant shall have more recent knowledge of such Abutters.

2.5.2.Proof of Legal Notice, Abutter Notifications, and submission of the Application to MassDEP shall be provided prior to the Public Hearing or Public Meeting.

2.5.3. Payment to the Town of Shutesbury in accordance with the fee schedule established in the Fee Section below.

2.5.4. Proof of submission of the application to MassDEP and to any other agency as required under local, state, or federal law, including not limited to the MA NHESP and MassDEP Waterways Program. RDAs that propose work in Priority or Estimated Habitat must submit their application to MA NHESP for review 30 days prior to the Public Meeting.

2.5.5. An eight-and-one-half-inch-by-eleven-inch (8 ½" x 11") reproduction of the USGS quadrangle sheet showing the project locus.

2.6. Site Plans:

2.6.1. Plans illustrating the project location, limit of work, location of erosion and sedimentation control devices, and Resource Area boundaries, including the AURA.

2.6.2. Site plans are required to show 2-foot contour intervals.

2.6.3. Plans shall be drawn to scale.

2.6.4. Comments conveying personal opinions on the quality or degraded nature of Resource Areas cannot be included on any plans (e.g., statements such as "Degraded/Low Quality Wetland").

2.6.5. For perennial streams protected by the Bylaw, drawings must show the Mean Annual High Water (or Bankfull) Line, and both the 100-foot inner Riverfront Area line and the 200-foot Riverfront Area boundary.

2.6.6. Any notes on plans misidentifying Resource Areas with incorrect labels will not be accepted.

2.7. Required Narrative:

2.7.1. Description of method of wetland delineation

2.7.2. Description of delineated Resource Areas and distance from project limit of work

2.7.3. Description of proposed work and, if relevant, construction sequence

2.7.4. Methods to be used, if any, for control erosion and sedimentation during and after construction.

2.7.5. For projects proposing alterations to Resource Areas, including the AURA, a description of Reasonable Options considered that explains what alternative approaches have been considered and how the proposed project protects the Values.

3. RDA Application Requirements

3.1. The Commission will accept as an RDA under the Bylaw the MassDEP RDA Form 1, filed under the WPA. Forms can be obtained at the Commission's office or online at the Commission's and MassDEP's website.

3.2. RDAs must be submitted to MassDEP, either by mail or electronically on the MassDEP online permitting platform, but two (2) separate hard copies and an electronic copy of the RDA (in pdf format) must be submitted separately to the Commission.

3.3. The RDA must include all required information listed above under General Requirements.

3.4. Applicants must provide certification that the owner of the area subject to the RDA, if the Applicant filing the request is not the owner, has been notified of the RDA filing.

3.5. Applicants must provide all information requested on the RDA Form 1 and note on Form 1 that the review under the Bylaw is requested. In addition, the RDA must be accompanied by a plan or drawing, with an accompanying narrative, which provides sufficient information to enable the Commission to

review the project area and to determine whether the proposed activity will alter a Resource Area under the Bylaw and these Regulations.

4. ANRAD Application Requirements

4.1. The Commission will accept, as the application filed under the Bylaw, MassDEP ANRAD Form 4A as filed under the WPA. Forms can be obtained at the Commission's office or online at the Commission's and MassDEP's websites. ANRADs may be submitted electronically to MassDEP through the MassDEP online permitting platform, but two (2) separate hard copies and an electronic copy of the ANRAD (in pdf format) must be submitted separately to the Commission.

4.2. Submittal of plans and plan revisions shall conform to all standards listed on the Instructions to WPA Form 4A as well as those specifications listed on the Commission's ANRAD filing requirement checklist (available from the Commission office and the Commission website).

4.3. The Commission may require that supporting materials be prepared by other professionals including, but not limited to a professional wetland scientist, registered landscape architect, registered land surveyor, environmental scientist, geologist, hydrogeologist, or hydrologist when the complexity of the filing warrants specialized expertise.

5. NOI Application Requirements

5.1. The Commission will accept as an NOI under the Bylaw the MassDEP WPA NOI Form 3, filed under the WPA. Forms can be obtained at the Commission's office or online at the Commission's and MassDEP's websites.

5.2. Applicants must provide all information requested on the MassDEP WPA NOI Form 3.

5.3. NOIs must be submitted to MassDEP, either by mail or electronically on the MassDEP online permitting platform, but two (2) separate hard copies and an electronic copy of the NOI (in pdf format) must be submitted separately to the Commission.

5.4. NOIs which indicate they are "Buffer Zone Only" projects on the MassDEP WPA Form 3 shall be reviewed for AURA impacts under the Bylaw and these Regulations. Applications must include the proposed square footage of AURA alteration in the accompanying narrative and a description of Reasonable Options considered, including proposed avoidance, minimization, and mitigation strategies.

5.5. The Commission may require that supporting materials be prepared by a Competent Source, including, but not limited to a registered landscape architect, registered land surveyor, environmental scientist, wetland scientist, geologist, hydrogeologist, or hydrologist when the complexity of the filing warrants specialized expertise.

5.6. The Commission may require that supporting plans and calculations be prepared and stamped by a registered professional engineer (PE) when, in its judgment, the complexity of the proposed work warrants this certification. Examples of information likely to require certification by a PE include but are not limited to: hydraulic and hydrologic calculations; critical elevations and inverts; soils investigations and drawings for water control structures such as head walls, dams, and retention areas.

5.7. The Commission reserves the right to administer requirements of this Section commensurate with the nature, scope, and type of the proposed project or activity.

6. Site Visits/Inspections

6.1. Site visits shall occur as necessary to obtain required information about the site and to monitor compliance with permit conditions. Site visits may occur without advance notice to an Applicant/permit holder if emergency conditions warrant. Under non-urgent conditions, the Commission shall give the Applicant or their representative advance notice of the site visit. Refusal to permit timely site inspections under an application or permit may result in Enforcement Action.

6.2. Site Requirements Prior to Inspection: Before site inspections can be made by the Commission or the Commission's representative, the following conditions must be met (failure to meet these requirements may result in non-review and hence, delay of the project):

6.3. Submission of the Site Access Authorization Form, with the property owner's authorization for members of the Commission or its agent(s) to visit the site to obtain information needed to review the request or notice, or to monitor compliance with the conditions of a DOA, OOC, or other permit. Authorizations shall remain in effect for the duration of the permit or upon a determination by the Commission that the permit conditions have all been satisfied, whichever comes sooner.

6.4. Stakes must be present indicating the corners of proposed houses or other proposed structures nearest to the Wetland Resource Area and areas to be cleared of vegetation.

6.5. Signage on the property indicating the parcel lot number or house number in a visible location.

6.6. Edges of all Resource Areas must be clearly delineated with numbered flags or stakes.

6.7. Name and contact information for the owner, Applicant, or their representative. A party familiar with the plans shall be present at the site inspection.

7. Fees

7.1. Preamble

7.1.1. Any person filing an RDA, NOI, or other application pursuant to the Bylaw shall, at the same time, pay a filing fee in accordance with the Filing Fee Schedule.

7.1.2. If the project is other than an addition or alteration to an existing one-family home, the Applicant shall agree, in writing, to pay the fees, costs, and expenses of an expert consultant if the Commission deems it necessary to review the RDA, NOI, ANRAD, or other Application.

7.1.3. Municipal, county, state, and federal projects are exempt from any fees other than consultant fees.

7.1.4. Fees shall be paid to the Conservation Commission at the time of application, by check or money order made payable to "Town of Shutesbury." Fees are non-refundable.

7.1.5. Fees for consulting services must be paid prior to the consultant's work activities for the Commission, based on an estimate of cost for the consultant's work.

7.1.6. Fees may be waived by the Commission as provided in Section 4 of the Bylaw. As provided in Section 4 of the Bylaw, the Commission shall waive the filing fee and costs of consulting services for an RDA filed by a person (such as an abutter) having no financial connection with the property which is the subject of the request.

7.1.7. As provided in Section 4 of the Bylaw, the fees specified below are in addition to fees required under the WPA.

7.2. Fee Schedules

If more than one of the following schedules applies to any project, then the schedule providing the lower fee shall be applied. Fees below are in addition to fees authorized by the WPA and 801 CMR 4.02.

APPLICATION	FEE	DETAILS

AAR(e.g., tree removals, buoys, small water-dependent structures; small sheds, small decks; small accessory structures to residential buildings)	$25.00	
RDA*	$75.00 $5.00	for the first 3 acres or less; for each additional acre or part
NOI* **See Appendix A for description of fee categories. Fees are for each activity in application.**		
NOI Category 1	$100.00	
NOI Category 2	$100.00	
NOI Category 3	$200.00	Per activity
NOI Category 4	$400.00	Per activity
NOI Category 5	$500.00	
Amended OOC	$100.00 or 50% of the original Bylaw filing fee, whichever is less	
Extension of OOC	$50.00 $300.00	Residential Other
Re-Issue OOC	$50.00	
COC	$50.00 $200.00	--if requested within 5 years of issuance date --if requested more than 5 years from issuance date
Duplicate attested COC	$50.00	
Emergency Certification	$75.00	Per certification Fee waived for municipal projects
ANRAD	$2.00 per linear foot	--not less than $100.00 --not more than $200.00 for activities associated with a single-family lot

		--not more than $2,000.00 for all other activities
53G Consultant Fee	Per estimate from consultant and subject to Commission approval	

*Fees for filings received after a project has commenced are double the fee listed.

8. Consultants and Consultant Fees

8.1. Upon receipt of any permit application (including but not limited to an RDA, NOI, or ANRAD), or at any point during the public hearing process, the Commission is authorized pursuant to the Bylaw and these Regulations, as well as, independently, under MGL Ch. 44, § 53G, to require an Applicant to pay a fee for the reasonable costs and expenses requested by the Commission for specific expert engineering and other consultant services deemed necessary by the Commission. The fee is called the "Consultant Fee." The exercise of discretion by the Commission in making a determination that outside consultant expertise is required shall be based on its reasonable finding that additional information or verification acquirable only through outside consultants would be necessary for the making of an objective decision. If so decided, the Commission will hire at the Applicant's expense a consultant(s) to review part or the entire submittal. Such consultant fees should be reasonable and/or appropriate to the work undertaken.

8.2. Consultant and Consultant Fees pursuant to MGL Ch. 44, § 53G

8.2.1. Purpose. As provided by MGL Ch. 44, § 53G, the Commission may impose reasonable fees for employing outside consultants, engaged by the Conservation Commission, for specific expert services. Such services shall be deemed necessary by the Commission to come to a final decision on an application submitted to the Conservation pursuant to the requirements of the Bylaw, the Conservation Commission Act (MGL Ch. 40, § 8C), or any other state or municipal statute, Bylaw, or Regulation, as they may be amended or enacted from time to time. The Commission may also impose fees for other consultant services, related to application review, or permit conditioning or monitoring, under any of the above-referenced laws or Regulations.

8.2.2. Special Account. Funds received pursuant to these rules shall be deposited with the Town of Shutesbury Treasurer, who shall establish a special account for this purpose. Expenditures from this special account may be made at the direction of the Commission without further appropriation as provided in MGL Ch. 44, § 53G. Expenditures from this account shall be made only in connection with a specific project or projects for which a consultant fee has been collected from the Applicant. Expenditures of accrued interest may also be made for these purposes.

8.3. Consultant Services. 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, and environmental or land use law. Services may also include on-site monitoring during construction or other services related to the project deemed necessary by the Commission. The consultant shall be chosen by, and report only to, the Commission and/or its representative.

8.4. Notice. The Commission shall give written notice to the Applicant of the selection of an outside consultant. Such 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 (via USPS First-Class mail) or hand delivered. The Applicant shall incur no such costs or expenses if the application or request is withdrawn within five (5) days of the date notice is given.

8.5. Payment of Fee. The fee must be received prior to the initiation of consulting services. The Commission may request additional consultant fees, if necessary, when review requires a larger

expenditure than originally anticipated or new information requires additional consultant services. Failure by the Applicant to pay the consultant fee specified by the Commission within ten (10) business days of the request for payment, or refusal of payment, shall be cause for the Commission to deny the application based on lack of sufficient information to evaluate whether the project meets applicable performance standards in the Bylaw and its Regulations. An appeal stops the clock on the above deadline; the countdown resumes on the first business day after the appeal is either denied or upheld. A denial for lack of information may be based solely on the lack of the third-party consultant review identified as necessary by the Commission. The Commission shall specify in its denial the nature of the information lacking which its chosen consultant would provide, e.g., the questions it needs answered. Failure by the Applicant to pay the consultant fee specified by the Commission within ten (10) business days of the request for payment shall be cause for the Commission to deny the permit application submitted under the Bylaw.

8.6. Appeals. The Applicant may appeal the selection of the outside consultant to the Shutesbury Select Board, who may only disqualify the outside consultant selected on the grounds that the consultant has a conflict of interest or does not possess the minimum required qualifications. The minimum qualifications shall consist of either an educational degree or three or more years of practice in the field at issue or a related field. Such an appeal must be in writing and received by the Shutesbury Select Board, and a copy received by the Commission, so as to be received within ten (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 the administrative appeal.

8.7. Return of Unspent Fees. When the Commission's review of a project is completed and an OOC, DOA, or ORAD is issued, any balance in the special account attributable to that project shall be returned within thirty (30) days. For the purpose of these Regulations, any person or entity claiming to be an Applicant's successor in interest shall provide the Commission with appropriate documentation. A final report of said account shall be made available to the Applicant or Applicant's successor in interest.

9. Minimal Conditions Regulating the Work

9.1. No activity may proceed until the Applicant has received all other permits required by law, including but not limited to any permit required by Health Inspections, Planning Board, Zoning Board of Appeals, MassDEP, NHESP approvals, Chapter 91 Permits and Licenses, and/or the Army Corps of Engineers.

9.2. The Commission shall receive forty-eight (48) hours advance notice, in writing, before the commencement of any activity within, or within the AURA of the Resource Area(s), including site preparation and construction. Email notification to the Commission email (concom@shutesbury.org) shall suffice for this requirement.

9.3. The location of siltation and erosion controls shall be approved by the Commission. Such controls shall remain in place and be maintained until all disturbed areas have been stabilized to the satisfaction of the Commission.

9.4. A copy of the Permit shall be always kept on-site during construction. All contractors and sub-contractors engaged during construction shall be provided with a copy of the Permit and should be prepared to produce said Permit upon request of the Commission or its agent.

9.5. Work shall proceed in strict accordance to referenced plan(s) in the Permit, and to information submitted in the Application.

9.6. All structures, facilities, and equipment as part of the project shall be continually operated and maintained to comply with the Permit. This provision applies specifically to all heavy equipment used on the project. Any leakage of oil, hydraulic fluid, gasoline, or any other pollutant must be cleaned up immediately, and the defective equipment responsible for said leaking shall be repaired immediately or taken off-site.

9.7. All work shall be completed in such a manner as to prevent eutrophication or sedimentation in wetlands, water bodies, or public or private water supplies.

9.8. Any substantial changes made or intended to be made in the plans shall require the Applicant to file a new NOI or to inquire of the Commission, in writing whether the change is so substantial as to require the filing for a new Permit.

9.9. Requests for an extension of the Permit must be submitted, in writing, no less than thirty (30) days prior to the expiration date of that Permit.

9.10. Violation of any of these conditions shall be subject to an Enforcement Order under the Bylaw until said violation(s) has been corrected to the satisfaction of the Commission.

9.11. For OOCs, a COC shall be requested from the Commission upon completion of the proposed work. Said request shall be accompanied by a written statement from the professional who prepared the plan certifying compliance with all plans, as well as an "as-built" plan. On a case-by-case basis, the requirement for "as-built" certification may be waived by the Commission.

10. Forms

10.1. Unless otherwise specified by the Commission, the forms set forth by the MassDEP Regulations shall serve also as the forms to be used under the Bylaw.

10.2. Additional or different forms for the administration of these Regulations and the Bylaw may be adopted and revised from time to time by the Commission by administrative action of the Commission. In the event of such administrative action, sample forms shall be made available by the Commission on the Commission's website or upon request.

Appendix A – Notice of Intent Fee Categories

Category 1 (Fee for each activity is **$100**):
- a.) work on single family lot; addition, pool, etc.;
- b.) site work without a house;
- c.) control vegetation;
- d.) Resource Area improvement;
- e.) work on septic system separate from house;
- f.) monitoring well activities minus roadway;
- g.) new agricultural or aquaculture projects.

Category 2 (Fee for each activity is **$100**)
- a.) construction of single family house;
- b.) parking lot;
- c.) beach nourishment;
- d.) coastal limited projects;
- e.) inland limited projects minus road crossings and agriculture;
- f.) each crossing for driveway to single family house;
- g.) each project source (storm drain) discharge;
- h.) control vegetation in development;
- i.) water level variations;
- j.) any other activity not in Category 1, 3, 4, 5 or 6;
- k.) water supply exploration.

Category 3 (Fee for each activity is **$200.00**)
- a.) site preparation (for development) beyond Notice of Intent scope;
- b.) each building (for development) including site;
- c.) road construction not crossing or driveway;
- d.) hazardous cleanup;
- e.) water supply development.

Category 4 (Fee for each activity is **$400.00**):
- a.) each crossing for development or commercial road;
- b.) dam, sluiceway, tidegate (safety) work;
- c.) landfills operation/closures;
- d.) sand and gravel operations;
- e.) railroad line construction;
- f.) bridge;
- g.) hazardous waste alterations to Resource Areas;
- h.) dredging;
- i.) package treatment plant and discharge;
- j.) airport tree clearing;
- k.) oil and/or hazardous material release response actions.

Category 5 (Fee for each activity is $500.00):
- a.) work on permanent docks, piers, revetments, dikes, etc.