

Town of Reading, Massachusetts Conservation Commission



Wetlands Protection Regulations July 2006

Authorized by READING GENERAL BYLAWS - SECTION 5.7
Effective Date July 14, 2006

SECTION 1 INTRODUCTION

The citizens of the Town of Reading, Massachusetts, through Town Meeting action, gave the Conservation Commission power to regulate and protect wetlands and floodplains by adding Section 5.7, Wetlands Protection, to the Reading General Bylaws. This Amendment to the Town Bylaws was approved by the Massachusetts Attorney General on February 29, 1980.

All filings made under the Wetlands Protection Act (Massachusetts General Laws, Chapter 131, Section 40) are also subject to the Town of Reading General Bylaws, Section 5.7. Some projects not subject to the Wetlands Protection Act may still be subject to Section 5.7.

From time to time and after a public hearing, the Commission amends the Reading Wetlands Protection Regulations. Amendments are intended to formalize actions that the Commission has taken to address recurrent issues, to clarify the language used in the regulations, and to maintain consistency with changes made by the Commonwealth of Massachusetts in the Wetlands Protection Act and its accompanying regulations, Title 310, Code, Mass. Regulations, Section 10.00. The amendments are based on the current body of experience and knowledge that the Commission has accumulated in implementing both the Act and the Wetlands Protection Regulations. The amendments are also based on new scientific and regulatory literature and workshops promulgated by the Massachusetts Association of Conservation Commissions and the Massachusetts Department of Environmental Protection. The amendments are intended to further clarify and streamline the regulatory process, to be more consistent with aspects of the State regulations, and to protect specific resources in Reading that are not well addressed in the statewide wetlands protection regulations.

Submission guidelines and forms are available through the office of the Conservation Commission at the Reading Town Hall. These guidelines are intended to maximize efficiency in project review, minimize post-application redesign, and minimize delay in the permitting process.

The Reading Conservation Commission recognizes that environmental review is a site-specific process. The submission guidelines are therefore intended to be taken as guidelines in the broadest sense. The Commission intends that consultants have maximum flexibility in design and freedom to employ innovative techniques to minimize adverse environmental impacts. Pre-application conferences and site visits are strongly encouraged.

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SECTION 2 GENERAL PROVISIONS

A. Authority

1. These Regulations are promulgated under the authority of the Home Rule Amendment of Article LXXXIX (89), of the amendments of the Constitution of Massachusetts, 1966 and Section 5.7 of the General Bylaws of the Town of Reading (“the Bylaw”), and shall be effective upon the fulfillment of all legal requirements.

B. Purpose

1. These Regulations are promulgated to create uniformity of process and to clarify and define the provisions of the Town of Reading Wetlands Protection Bylaw.

C. Jurisdiction

1. AREAS SUBJECT TO PROTECTION UNDER THE BYLAW (Resource Areas): Any bank; any fresh water wetland including marsh, meadow, bog, or swamp; any creek, river, stream, pond (including vernal pool), or lake whether permanent or intermittent; any land under water bodies; any land within one hundred feet of any of the preceding resource areas; any land subject to flooding; and any riverfront area.
2. ACTIVITIES SUBJECT TO REGULATION UNDER THE BYLAW: Any activity proposed or undertaken within an area specified above which will remove, fill, dredge or alter that area is subject to regulation under the Bylaw and requires the filing of a Notice of Intent or an Abbreviated Notice of Intent.
3. ACTIVITIES WITHIN THE BUFFER ZONE: Any activity proposed or undertaken within one hundred feet of all areas specified above except for land subject to flooding, (hereinafter called the Buffer Zone) which, in the judgment of the issuing authority, is **likely to alter** an area subject to protection under the Bylaw is subject to regulation and requires the filing of a Notice of Intent, or an Abbreviated Notice of Intent.
4. ACTIVITIES OUTSIDE THE BUFFER ZONE: Any activity proposed or undertaken outside the areas specified above and outside the Buffer Zone is not subject to regulation under this bylaw and does not require the filing of a Notice of intent or Abbreviated Notice of Intent unless that activity is **likely to alter** an area subject to protection under this bylaw. In the event that the Commission determines that such activity is **likely to alter** an area subject to protection under the Bylaw, it shall impose conditions on the activity or any portion thereof as it deems necessary to contribute to the protection of the interests identified in the Bylaw.

SECTION 2 GENERAL PROVISIONS

D. Filing Fees

1. The local newspaper charges the applicant for publishing the legal notice of the public hearing or public meeting that is required by law for all Requests for Determination, Notices of Intent, Abbreviated Notices of Intent, Abbreviated Notices of Resource Area Delineation, and Amendments to Orders of Conditions.
2. Town projects are exempt from filing fees under these Regulations.
3. The filing fee for a Request for Determination of Applicability shall be \$75 for projects on single-family residential sites and \$100 for all other projects.
4. Filing fees for Notices of Intent, Abbreviated Notices of Intent, and Abbreviated Notices of Resource Area Delineation shall be paid according to the Notice of Intent Filing Fee Schedule below. Filing fees must be submitted or the filing shall be deemed incomplete. Filing fees calculated from incorrect delineations of wetland resource areas shall be adjusted upon a determination of the correct delineation by the Commission. Where filing fees are listed for two different resource areas, and those two areas overlap on the site, only the higher of the two filing fees shall be paid. Although the Fee Schedule lists fees for alterations of specific resource areas, no such alteration shall be allowed that does not meet the performance standards in the Regulations or qualify for a variance from the performance standards.
5. The filing fee for a Request for an Extension Permit for an existing Order of Conditions shall be \$25 for projects on single-family residential sites and \$50 for all other projects.
6. The filing fee for a Minor Project permit under Section 4.G of these Regulations shall be \$50.00.
7. The filing fee for a Request to approve a plan change as insignificant under an existing Order of Conditions shall be \$25 for projects on single-family residential sites and \$50 for all other projects.
8. The filing fee for a Request to Amend an existing Order of Conditions shall be \$25 for projects on single-family residential sites and \$100 for all other projects.
9. There is no filing fee for a Request for a Certificate of Compliance or a Partial Certificate of Compliance.

SECTION 2 GENERAL PROVISIONS

NOTICE OF INTENT FILING FEE SCHEDULE

- A. For each addition to or accessory use activity associated with an existing single-family or multi-family residential dwelling, including but not limited to driveways, sheds, swimming pools, athletic courts, additions to existing houses, grading, and landscaping - \$110.00, plus all applicable fees listed in lines F through K.
- B. For each new single-family dwelling, including associated driveway, utilities, grading, landscaping, and drainage structures - \$500.00, plus all applicable fees listed in lines F through K.
- C. For each new multi-family dwelling - \$500.00, plus \$110.00 per unit located in any Resource Area or Buffer Zone, plus all applicable fees listed in lines F through K.
- D. For each subdivision roadway, or other roadway or driveway (other than for single-family dwelling), and all associated drainage structures, utilities, grading, curbing, landscaping, and other associated work exclusive of dwellings - \$550.00, plus all applicable fees listed in lines F through K.
- E. For each commercial, industrial, institutional, or other non-residential project - \$700.00, plus all applicable fees listed in lines F through K.
- F. For boundary delineation for any Resource Area - \$1.11 per linear foot of Resource Area boundary, up to a maximum of \$111.00 for a single-family lot and \$1110.00 for any other lot.
- G. For temporary and/or permanent alteration of land within the Buffer Zone - \$1.25 per square foot of Buffer Zone altered for any temporary or permanent alteration within 25 feet of a Resource Area or any permanent structure within 35 feet of a Resource Area; and \$0.03 per square foot of Buffer Zone temporarily or permanently altered for any other work
- H. For work in Floodplain - \$0.60 per square foot of Floodplain temporarily or permanently altered outside of any other Resource Area and Buffer Zone
- I. For Work in Vernal Pool or its Buffer Zone - \$11.10 per square foot of Vernal Pool temporarily or permanently altered and \$1.11 per square foot of Buffer Zone of Vernal Pool temporarily or permanently altered
- J. For work in Freshwater Wetland, Wet Meadow, Bog, Swamp, Marsh, Creek, River, Stream, Pond, Lake, or Land Under Waterbody - \$11.00 per square foot of Resource Area temporarily or permanently altered
- K. For work in Bank - \$11.00 per linear foot of Bank temporarily or permanently altered.

SECTION 2 GENERAL PROVISIONS

E. Variance from Regulations

1. The Conservation Commission may grant a variance from strict compliance with these regulations for a proposed activity when the Commission finds that:
 - a. There are no reasonable conditions or alternatives that would allow the project to proceed in compliance with the performance standards in these Regulations; and
 - b. Mitigating measures are proposed that will allow the project to be conditioned so as to have no adverse impact upon the wetland values set forth in Section 5.7 of the Reading General Bylaws; and
 - c. The variance is necessary to accommodate an overriding community, regional, state, or national public interest.
2. Any request for a variance shall be submitted to the Commission in writing as part of a Notice of Intent or a Request to Amend an Order of Conditions. The applicant shall submit an analysis of alternatives explored that would allow the project to proceed in compliance with these Regulations and an explanation of why each alternative is unreasonable. The applicant shall also submit a description of the mitigating measures to be used to prevent adverse impacts upon wetland values. The applicant shall also submit evidence that an overriding public interest is associated with the project that justifies the variance. After holding a public hearing on the Notice of Intent or Request to Amend an Order of Conditions, the Commission shall issue a written decision concerning the request for a variance as part of the Commission's decision on said Notice of Intent or Request to Amend an Order of Conditions.

F. Burden of Proof

1. Any person who files a Request for Determination of Applicability, Notice of Intent or Abbreviated Notice of Intent to perform any work within an area subject to protection under the Bylaw, or within the Buffer Zone, has the burden of demonstrating to the Commission that:
 - a. The area is not significant to any of the interests identified in the Bylaw; or
 - b. The proposed work will contribute to the protection of the interests identified in the Bylaw by complying with the performance standards listed in these regulations.

SECTION 2 GENERAL PROVISIONS

G. Emergencies

1. Any person requesting permission to do an emergency project shall specify why the project is necessary for the health or safety of the citizens of the Commonwealth and what agency of the Commonwealth or subdivision thereof, including the Town of Reading, is to perform the project or has ordered the project to be performed. If the project is certified to be an emergency by the Conservation Commission or its Administrator, the certification shall include a description of the work which is to be allowed and shall not include work beyond that necessary to abate the emergency. A site inspection shall be made prior to certification.
2. The time limitation for performance of emergency work shall not exceed 30 days unless written approval of the Commission is obtained. However, if the emergency work is for Immediate Response Actions approved by the Massachusetts Department of Environmental Protection, Bureau of Waste Site Cleanup, in accordance with the provisions of 310 CMR 40.0410, then the time limit shall not exceed 60 days unless written approval of the Commission is obtained.
3. The recipient of an emergency certificate may be required by the Administrator or a member of the Commission to meet with the Commission to explain the nature and extent of the work performed and its long-term impacts upon the interests protected by Section 5.7 of the Reading General Bylaws and these Regulations. The Commission may require that the recipient of the emergency certificate, the owner of the subject property, and/or the persons responsible for the emergency shall file a Notice of Intent documenting the impacts and setting forth a proposal for restoration, mitigation, and other actions to ameliorate the impacts.

H. Enforcement

1. The Commission shall have the authority to enforce the Bylaw and these Regulations by means of violation notices, and/or enforcement orders, administrative orders, civil actions and/or criminal proceedings. The enforcing person shall mean any member of the Commission or its agent. In addition, pursuant to Reading General Bylaws Section 5.7.16: the provisions of said Bylaw and these Regulations may be enforced by noncriminal disposition (fines) in accordance with the provisions of Bylaw Section 5.11 and Massachusetts General Laws Chapter 40 Section 21D. For the purposes of such noncriminal disposition the term “enforcing person” shall mean any member of the Conservation Commission, the Conservation Administrator or his or her designee.

SECTION 2 GENERAL PROVISIONS

H. Enforcement, Continued

2. Any enforcing person taking cognizance of a violation of RGB Section 5.7.16 or these regulations may, as an alternative to initiating criminal proceedings, give the offender a written notice to appear before the clerk of the district court having jurisdiction thereof at any time during office hours, not later than twenty-one days after the date of such notice. Such notice shall be in triplicate and shall contain the name and address, if known, of the offender, the specific offense charged, and the time and place for his required appearance. Such notice shall be signed by the enforcing person and shall be signed by the offender whenever practicable in acknowledgement that such notice has been received.
3. The Town shall fix as penalty for such a violation a specific sum of money not exceeding three hundred dollars (\$300.00). The payment to said clerk of such sum shall operate as a final disposition of the case.
4. No person shall; remove, fill, dredge or alter any area subject to protection under the provisions of the Bylaw without the required authorization; or cause, suffer or allow such activity; or leave in place unauthorized fill; or otherwise fail to restore illegally altered land to its original condition; or fail to comply with an enforcement order issued pursuant to the provisions of this bylaw.
5. Each day a violation continues shall constitute a separate offense, except that any person who fails to remove unauthorized fill or otherwise fails to restore illegally altered land to its original condition after giving written notification of said violation to the Conservation Commission shall not be subject to additional penalties under the Bylaw unless said person thereafter fails to comply with an enforcement order or order of conditions
6. Any person who violates any provision of said Bylaw or of these Regulations or of any condition of an order or a permit issued pursuant hereto, or who allows such violation to occur on his or her property, may be ordered to restore the property to its original condition and take other actions deemed necessary to remedy such violations, and shall, at the discretion of the enforcing person, be punished by a fine of not more than \$300 for each offense. Notwithstanding the preceding sentence, failure to pay said fine within twenty-one (21) calendar days may result in criminal prosecution.
7. Citations issued by the enforcing person shall subsequently be presented to the Conservation Commission for its review. If the Commission does not take action at that time, it shall be deemed to approve of the issuance of such citation. Upon review, the Commission may, at its discretion, withdraw the citation. Notwithstanding said review, during the review the violator shall remain subject to all other provisions of this section.

SECTION 2 GENERAL PROVISIONS

H. Enforcement, Continued

- 8. The Town shall be the beneficiary of all fines imposed on account of the violation of said Bylaw or these Regulations, in order to help defray the expense of enforcing the same.
- 9. Upon request of the Commission, the Board of Selectmen and Town Counsel shall take such legal action as may be necessary to enforce said Bylaw and these Regulations.

FINE SCHEDULE

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| 1. Failure to file a Notice of Intent or Request for Determination of Applicability and to receive a valid Order of Conditions or Determination of Applicability prior to activity: | \$300.00 |
| 2. Failure to promptly comply with an Enforcement Order: | \$300.00 |
| 3. Failure to record Order of Conditions at the Registry of Deeds prior to activity: | \$25.00 |
| 4. Failure to notify the Commission prior to activity where a Condition of an Order of Conditions or a Request for Determination or a Minor Project permit requires such notice: | \$25.00 |
| 5. Failure to install and/or properly maintain erosion controls (per project): | |
| First offense: | WARNING |
| Second offense: | \$25.00 |
| Third offense and each offense thereafter: | \$100.00 |
| 6. Failure to comply with any Condition of an Order of Conditions or Determination of Applicability or Minor Project permit | \$25.00 |
| 7. Failure to apply for a Certificate of Compliance in a timely manner: | |
| First offense: | WARNING |
| Second offense: | \$50.00 |
| 8. Conducting an activity subject to the Bylaw and Regulations after the expiration of a valid Order of Conditions or Determination of Applicability: | \$50.00 |

(Separate fines may be assessed for each violation and for each day of violation.)

SECTION 3 PERFORMANCE STANDARDS FOR RESOURCE AREAS

A. General

1. The following section is intended to notify applicants proposing work that may alter areas subject to protection under the Bylaw of what performance standards should be applied, and to identify the level of protection needed to protect the interests identified in the Bylaw.

B. Banks

1. Proposed work that may alter a bank shall not adversely affect the following:
 - a. The stability of the bank;
 - b. The capacity of the channel to convey water;
 - c. Ground water and surface water quality;
 - d. The capacity of the bank to provide important fisheries, wildlife habitat, food, shelter, migratory, breeding, and overwintering areas; or
 - e. The function of the bank to recharge or discharge groundwater.

C. Fresh Water Wetlands

1. It is the Commission's policy that there shall be no net loss of fresh water wetlands, including marshes, wet meadows, bogs, and swamps.
2. Any proposed work that may alter a fresh water wetland shall not destroy or otherwise impair any portion of the area. However, the Commission may issue an Order of Conditions permitting work that results in the alteration of less than 5000 square feet of fresh water wetland, provided the following requirements are met:
 - a. There is no reasonable alternative to a proposed crossing, utility easement, or roadway drainage structure;
 - b. All design mitigations, including the utilization of structures such as headwalls, have been utilized to minimize the alteration of wetlands;
 - c. A revegetation plan addressing issues of interspersion and diversity of vegetation has been submitted, describing the construction and the amount of recreated fresh water wetland necessary to compensate for that portion that is proposed to be destroyed;
 - d. The replacement fresh water wetland area must adequately replicate the wetland functions to be lost, and shall be at a 2:1 ratio to the area lost. The replacement freshwater wetland shall have an unrestricted hydraulic connection to the same fresh water wetland, waterbody, or waterway associated with the lost area;
 - e. The replacement area shall be located in the same general area of the fresh water wetland, water body, or reach of the waterway as the lost area;

SECTION 3 PERFORMANCE STANDARDS FOR RESOURCE AREAS

C. Fresh Water Wetlands, Continued

2.f. All surface vegetation and contours of the replacement area shall be substantially restored within two growing seasons; and

g. Excavation and soil preparation of the replacement area shall be completed prior to the commencement of alteration of the area to be destroyed, except for the purpose of replacement in an area being temporarily altered. Where soils and vegetation are to be transferred from the area to be destroyed into the replacement area, said transfer shall immediately follow excavation and soil preparation in the replacement area. Where soils and vegetation are to be imported from sources other than the area to be destroyed, they shall be installed properly in the replacement area prior to commencement of alteration of the area to be destroyed.

3. Supporting biological data for fresh water wetland delineation shall be considered valid for a period of three years from the date of the issuance of an Order of Conditions or a Determination of Applicability.

D. Zone of Natural Vegetation

1. Bordering any wetland, the Commission may require a Zone of Natural Vegetation (ZNV) of sufficient width and vegetative community type to assure that silt, soil, fertilizer in solution, organic chemicals, herbicides, organic manures, oils or petroleum products which may be carried by surface run-off shall not reach that wetland, but instead will be trapped by the natural mulch, soil and roots; and that light levels and temperature shall be moderated; and that dispersal of seeds of exotic or otherwise disruptive plant species, such as *phragmites* reed and purple loosestrife (*Lythrum salicaria*) shall be avoided; and that other alterations shall be avoided or mitigated within the wetland.
2. Under most conditions, a zone width of a minimum of twenty-five feet would be considered sufficient to accomplish this purpose. A wider ZNV may be required, depending on specific site conditions, such as grades, soil permeability or other impact potential.
3. Excavations for proposed structures extend beyond the finished limits of the structures. The extent of excavation varies depending on: the nature of the structure; the soil; depth of excavation; type of equipment used; construction techniques; slope; incidence of precipitation; groundwater flow; soil saturation and freeze/thaw cycles; existing vegetative cover; or other ground cover. An area of curtilage is developed around structures as a result of access for finish work, maintenance, foot traffic, and machine travel such as lawnmowers; and to provide a clear area for security; and to prevent moisture damage and physical damage from shading and plant structures such as tree limbs.

SECTION 3 PERFORMANCE STANDARDS FOR RESOURCE AREAS

D. Zone of Natural Vegetation, Continued

4. To protect the integrity of the Zone of Natural Vegetation, including the associated root system and canopy, no new foundations, including footings, frost walls or other in-ground structures, shall be permitted within ten feet of the ZNV. Depending on special site conditions, a greater distance may be required. Associated structures, including but not limited to the following: cantilevered structures, bay windows, eaves, and, garrisons, or other overhangs, may protrude to no closer than seven feet from the ZNV.
5. Notwithstanding the standards of the preceding paragraph, the Commission may grant a reduced setback distance of structures from the ZNV as a consideration of specific site conditions, such as limited vegetative cover or an existing developed condition, and provided that a permanent physical delineation, such as a solid hedge or an appropriate permanent fence or wall, of sufficient height, shall be provided and shall be maintained between the structure and the ZNV.
6. Permanent markers shall be installed and maintained in convenient locations along the limits of the ZNV, such as at any corners or along a radius, no more than fifty feet apart. Markers may be stone or concrete bounds, metal pipes or rods, trees, shrubs or other structures as approved.

E. Land Subject to Flooding

1. Proposed work that may alter land subject to flooding shall not adversely affect the interests protected under the Bylaw, including the flood control capacity of said area. Work must be on a single lot and may not alter more than 10% of the land subject to flooding on said lot.
2. Additional alterations beyond the above threshold, or altering vernal pool habitat, may be permitted if they will have no adverse effects on important wildlife habitat, food, shelter, migratory, breeding or overwintering areas.
3. Construction of the compensatory storage area shall be completed prior to any alteration of the existing storage area.
4. Compensatory storage shall be provided for all flood storage volume that will be lost as the result of a proposed project within land subject to flooding, when in the judgement of the issuing authority said loss will cause an increase or will contribute incrementally to an increase in the horizontal extent and level of flood waters during peak flows. Compensatory storage shall mean a volume not previously used for flood storage and shall be incrementally equal to the theoretical volume of flood water at each elevation, up to and including the 100-year flood elevation, which would be displaced by the proposed project. Such compensatory volume shall have an unrestricted hydraulic connection to the same waterway or water body. Further, with respect to waterways, such compensatory volume shall be provided within the same reach of the river, stream, or creek.

SECTION 3 PERFORMANCE STANDARDS FOR RESOURCE AREAS

E. Land Subject to Flooding, Continued

5. Work within land subject to flooding, including that work required to provide the above-specified compensatory storage, shall not restrict flows so as to cause an increase in flood stage or velocity.
6. Work in those portions of land subject to flooding found to be significant to the protection of wildlife habitat shall not impair its capacity to provide important wildlife habitat functions. Except for work that would adversely affect vernal pool habitat, a project or projects on a single lot, for which Notice(s) of Intent is filed on or after November 1, 1987, that (cumulatively) alter(s) up to 10% or 5,000 square feet (whichever is less) of land in this resource area found to be significant to the protection of wildlife habitat, shall not be deemed to impair its capacity to provide important wildlife habitat functions. Additional alterations beyond the above threshold, or altering vernal pool habitat, may be permitted if they will have no adverse effect on wildlife habitat, as determined by procedures contained in 310 CMR 10.60

F. Land Under Water

1. Proposed work that may alter land under water shall not adversely affect the following:
 - a. Water storage or carrying capacity of the waterbody, or of the land under the waterbody;
 - b. Groundwater or surface water quality;
 - c. The ability to provide important fisheries and wildlife habitat, food, shelter, migratory, breeding, and overwintering areas.

G. Riverfront Area

Riverfront area shall be defined as in Massachusetts General Laws, Chapter 131, Section 40 and 310 CMR 10.00, as amended. Proposed work in riverfront areas shall conform to the requirements of Massachusetts General Laws, Chapter 131, Section 40 and 310 MR 10.00, as amended.

H. Public and Private Water Supply

1. Projects proposed in areas significant to public or private water supply shall be required to demonstrate that there will be no adverse impact on the water resources. Projects proposed for the Aquifer Protection District shall comply with the provisions of the Aquifer Protection Bylaw, Section 4.8 of the Reading Zoning Bylaws.

SECTION 3 PERFORMANCE STANDARDS FOR RESOURCE AREAS

I. Side Slope Grades Near Wetlands

1. Side slopes within 100 feet of a wetland shall have a finished grade according to the following:
 - a. No steeper than a 3:1 (horizontal:vertical) slope for grassed and mulched slopes;
 - b. No steeper than a 2:1 (horizontal:vertical) slope for all stone rip-rapped slopes. Stone used for rip-rap shall be hard, durable, angular in shape, resistant to weathering, and shall be free from overburden, such as loose shale and organic material. No stones shall be less than 4 to 8 inches in diameter.
 - c. Where slopes must be steeper than 2:1 (horizontal:vertical), vertical retaining walls shall be used to ease the slope. The land surface above and below each wall shall be graded and stabilized in accordance with subsections 3.H.1 and 3.H.2 above.

J. Vernal Pools

1. Vernal pools or ponds are generally temporary in nature, are isolated from permanent water bodies, and are noted for their absence of adult fish populations. Because vernal pools are devoid of the effects of fish predation, breeding strategies of a number of amphibian species have evolved such that they place total reliance on these isolated wetlands. Areas in the immediate vicinity of these pools also provide these species with important non-breeding functions, such as feeding, shelter, shade, leaf litter, and over-wintering sites. The invertebrates that inhabit vernal pools provide an important food source for various species of birds, mammals, and reptiles, as well as amphibians. The extreme upper edges of the vernal pool represent one of the most ecologically valuable portions of these habitats. Shallow water at the edge of a vernal pool is generally 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 portion 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.
2. Protection of vernal pool habitat is essential for the continued survival of certain wildlife species. Destruction of vernal pools and the areas in their immediate vicinity is likely to have significant adverse impact on local amphibian populations for which the pool serves as a breeding site.

SECTION 3 PERFORMANCE STANDARDS FOR RESOURCE AREAS

J. Vernal Pools, Continued

3. Vernal pools may be identified as confined basin depressions that, in most years, contain water for at least eight consecutive weeks during the spring or summer of the year. Vernal pool habitat includes both the maximum annual high water elevation in the vernal pool in a non-drought year, and any land within one hundred feet of the maximum annual high water elevation. The maximum annual high water elevation may be determined by the Commission using one or more of the following types of information:

- a. Certification of the maximum annual high water elevation by the Massachusetts Division of Fisheries and Wildlife, Natural Heritage and Endangered Species Program;
- b. Engineering calculations that are: i) based upon a design storm of 2.7 inches of precipitation in 24 hours; ii) based upon the total volume, rather than the peak rate of run-off, from the drainage area contributing to the vernal pool; iii) based upon the standard methodologies set forth in the U.S. Soil Conservation Services Technical Release No. 55, *Urban Hydrology for Small Watersheds*, and on Section 4 of the U.S. Soil Conservation Service, *National Engineering Hydrology Handbook*; iv) prepared by a registered professional engineer or other professional competent in such matters; and v.) take into account groundwater that the basin is holding at the beginning of the spring amphibian breeding season;
- c. Field observations that include but are not limited to: i) the lowest elevation of the rim of the topographic depression; ii) the maximum observed or recorded water level in the topographic depression in a non-drought year; iii) the presence of water-stained leaves or other water-stained objects; iv) the presence of vernal pool indicator species.

4. Any one of the following will serve to verify the existence of a vernal pool:

- a. The documented presence of water in a confined basin depression for at least eight weeks; and confirmation that the vernal pool area becomes completely dry during a portion of the year;
- b. Documentation providing evidence of the absence of adult fish populations within the depression;
- c. Evidence of reptile, amphibian, mollusk, or invertebrate species in standing water within the basin depression.
- d. Certification by the Massachusetts Natural Heritage and Endangered Species Program.

SECTION 3 PERFORMANCE STANDARDS FOR RESOURCE AREAS

J. Vernal Pools, Continued

5. The presence of any of the following will be considered acceptable proof that a vernal pool is utilized for amphibian, reptile or invertebrate breeding purposes; including but not limited to:
 - a. Breeding adults;
 - b. Spermatophores (sperm cases);
 - c. The presence of egg masses; or
 - d. Transforming juveniles.
6. Performance Standards for Vernal Pools - A proposed project within 100 feet of a vernal pool shall not result in the following:
 - a. Discharge of contaminated runoff or runoff that would cause erosion or sedimentation or other impacts in a vernal pool;
 - b. Any impairment of the capacity of the vernal pool, as well as the area within 100 feet of the outer edge of the pool, to provide wildlife habitat. (Alterations may be permitted if they will not have an adverse impact on wildlife habitat);
 - c. Any adverse effect upon species listed by the Massachusetts Natural Heritage and Endangered Species Program or by Massachusetts Division of Fisheries & Wildlife under 321 CMR 8.00; and
 - d. Alteration of the topography, soil structure, plant community composition and structure, and hydrologic regime; insofar as such alteration will, following two growing seasons of project completion and thereafter (or, if a project would eliminate trees, upon the maturity of planted saplings) substantially reduce the vernal pool habitat's capacity to provide the following important wildlife habitat functions:
 - (1) Food, shelter, migratory and breeding areas, and overwintering areas for amphibians; and
 - (2) Food for other wildlife.
7. Erosion control fencing or hay bales, if used, shall be positioned to function and yet allow access to the vernal pool and to the area within 100 feet of the outer edge of the pool by amphibians during the breeding seasons.

SECTION 3 PERFORMANCE STANDARDS FOR RESOURCE AREAS

J. Vernal Pools, Continued

8. If the Commission determines that a vernal pool having characteristics set forth in the preceding subsections 3.J.1, 3.J.3, 3.J.4, and 3.J.5 is present in or within 100 feet of a proposed work area, the vernal pool and the land within one hundred feet of the vernal pool shall be presumed to provide significant vernal pool habitat functions. This presumption may be overcome only upon a clear showing by the applicant during the public hearing of sufficient credible evidence for the Commission to determine that the pool does not function as vernal pool habitat. Evaluation of vernal pool habitat functions normally requires observations during and after the springtime breeding season. **It is strongly advised that applicants survey sites for potential vernal pool habitat and request a site inspection by the Commission in the springtime prior to filing a Request for Determination, a Notice of Intent, or an Abbreviated Notice of Resource Area Delineation, to avoid postponement until springtime verification can be accomplished.**

K. Wildlife Habitat

1. Persons proposing to alter natural wetland areas suitable for wildlife habitat shall be required to submit documentation describing the alternatives to alteration and to provide means of compensating for lost wildlife habitat values.
2. Adverse effects to wildlife habitat shall mean the alteration of any habitat characteristic, insofar as such alteration will, following two growing seasons of project completion (or, if a project includes the elimination of trees, upon the maturity of replanted saplings), substantially reduce its capacity to provide the important wildlife habitat functions listed below:
 - a. Food
 - b. Shelter
 - c. Migratory areas
 - d. Breeding areas
 - e. Overwintering areas
 - f. Travel corridors.
3. Any project that alters less than the below-named thresholds shall be deemed not to have an adverse effect on important wildlife habitat:
 - a. For banks: work must be on a single lot, and may alter no more than 10% or 50 feet (whichever is less) of the length of the bank on the lot;
 - b. For land under water bodies and waterways: work must be on a single lot, and may cumulatively alter no more than 10% of the land under water bodies on the lot or 5,000 square feet (whichever is less);

SECTION 3 PERFORMANCE STANDARDS FOR RESOURCE AREAS

K. Wildlife Habitat, Continued

- c. For land subject to flooding: work must be on a single lot, and may not alter more than 10% of the land subject to flooding on the lot or 5,000 square feet (whichever is less);
- d. Such performance standards shall not apply to the habitat of rare species as listed by the Massachusetts Natural Heritage and Endangered Species Program. All projects that may impact on endangered species must apply for permitting through the Massachusetts Natural Heritage and Endangered Species Program.

4. Measuring Adverse Effects on Wildlife Habitat:

- a. To the extent that a proposed project on inland banks, land under water, or land subject to flooding will alter vernal pool habitat or other wildlife habitat, such alterations may be permitted only if they will have no adverse effects. Adverse effects means the alteration of any habitat characteristic, such as food, shelter, migratory, breeding, and overwintering areas, insofar as such alteration will, following two growing seasons of project completion and thereafter (or if a project would eliminate trees, upon the maturity of replanted saplings) substantially reduce its capacity to provide the important wildlife habitat functions. Such performance standards, however, shall not apply to the habitat of rare species, which shall require a permit from the Massachusetts Natural Heritage and Endangered Species Program, or vernal pool habitat, which shall be regulated under the performance standards listed for vernal pools
- b. An evaluation by the applicant of whether a proposed project will have an adverse effect on wildlife habitat beyond permissible thresholds shall be performed by an individual with at least a Master's degree in wildlife biology or ecological science from an accredited college or university, or other competent professional with at least 2 years experience in wildlife habitat evaluation. Documentation of this shall be provided with this evaluation.
- c. Any fisheries habitat management practices conducted by the Division of Fisheries and Wildlife, and any wildlife management practices of any individual or organization if reviewed and approved in writing by said Division, shall be presumed to have no adverse effect on wildlife habitat. Such presumption is rebuttable, and may be overcome by a clear showing to the contrary.

5. Wildlife Habitat Characteristics on Inland Resource Areas

- a. Banks - The topography, soil structure, and plant community composition and structure of banks are presumed to provide the following important wildlife habitat functions: food, shelter, traveling corridors, and migratory, breeding and overwintering areas for wildlife.

SECTION 3 PERFORMANCE STANDARDS FOR RESOURCE AREAS

K. Wildlife Habitat, Continued

- 5.b. Land under water bodies or waterways - The plant community, soil composition and structure, hydrologic regime, topography, and water quality of land under water bodies or waterways are presumed to provide the following important wildlife habitat functions: food, shelter, traveling corridors, and migratory, breeding and overwintering areas for wildlife.
- c. Vernal pool habitat - The topography, soil structure, plant community composition and structure, and hydrologic regime of vernal pool habitat are presumed to provide the following important wildlife habitat functions: food, shelter, traveling corridors, and migratory, breeding and overwintering areas for wildlife.
- d. Lower floodplains - The hydrologic regime, plant community, soil composition and structure, topography, and proximity to water bodies and waterways of lower floodplains (ten year floodplains) are presumed to provide the following important wildlife habitat functions: food, shelter, traveling corridors, and migratory, breeding and overwintering areas for wildlife.
- e. Fresh water wetlands – Fresh water wetlands are probably the town of Reading’s most important inland habitat for wildlife. The hydrologic regime, plant community, soil composition and structure, topography, and water chemistry of fresh water wetlands are presumed to provide the following important wildlife habitat functions: food, shelter, traveling corridors, and migratory, breeding and overwintering areas for wildlife.

L. Erosion Control

- 1. Disturbed soils areas near and within wetland resource areas shall be stabilized and protected from the erosive forces of wind and water. Erosion and sedimentation control devices shall be kept in functional condition until the soils are stabilized by vegetation and until removal of the devices is authorized by the Commission or its administrator.

M. Crossing of Wetlands

- 1. In addition to the provisions of Section C, proposed crossings of wetland areas shall include the following: retaining walls, embankments, or other structures shall be required, to minimize wetland alteration.

SECTION 3 PERFORMANCE STANDARDS FOR RESOURCE AREAS

N. Stormwater Runoff

1. There shall be no significant change in runoff characteristics to any resource area. Any change in stormwater runoff characteristics, which may result in increased flooding off the site or degradation of water quality, must be mitigated by on-site controls. Such controls may include, but are not limited to, storm water detention facilities and stormwater retention facilities which do not alter existing wetlands.

O. Discharge of Runoff into Resource Areas

1. All discharges must be appropriately treated to mitigate for turbidity, sedimentation, erosion, nutrients, water volume and rate, temperature, oil and grease, and other toxic substances. There shall be no unmitigated point source discharges directly into any resource areas or into their zones of natural vegetation (see Section D).

SECTION 4 DETERMINATION OF APPLICABILITY

A. General

1. Any person who proposes to perform work within the Buffer Zone, or who desires a ruling as to whether or not the Bylaw applies to an area, or work to be performed on an area, shall submit to the Conservation Commission by certified mail or hand delivery a Request for Determination of Applicability. Any meeting held under the Bylaw shall be held simultaneously under the Wetlands Protection Act, M.G.L. Ch. 131, s.40, as it applies.

B. Filing Procedure

1. The applicant shall obtain a certified abutters list, available from the Reading Assessors Office. The applicant shall submit stamped or properly metered (no date), legal-sized envelopes addressed with the names of all abutters, the applicants, their representatives, and all owners.
2. The applicant shall submit an original and eleven copies of the Request for Determination and of all supporting materials.
3. The applicant shall provide proof of payment for the required legal notice(s) prior to the public meeting.

C. Public Meeting

1. The Commission shall hold a public meeting within twenty-one days of the submittal of a complete Request for Determination or by a later date agreed upon by the applicant. The Commission may continue the public meeting beyond the 21 days, with the consent of the applicant.

D. Determination of Applicability

1. The Commission shall close the public meeting and issue its Determination within twenty-one days of the submittal of a complete Request for Determination, or by a later date agreed upon by the applicant.

E. Appeal of Determination of Applicability

1. Any person may appeal a Determination to Superior Court according to the provisions of the Massachusetts General Laws, Chapter 249, Section 4.

SECTION 4 DETERMINATION OF APPLICABILITY

F. Work Pending Appeal

1. Upon the issuance of a Positive Determination, work may not proceed until a judicial determination has been made by a court of competent legal jurisdiction that the proposed work is not subject to the Bylaw, or until a Notice of Intent has been filed and an Order of Conditions has been received by the applicant.
2. Upon the issuance of a Negative Determination, work may not proceed for the appeal period except at the applicant's risk.

G. Minor Projects

1. Some projects are simple, routine, and involve very little activity or alteration within the Buffer Zone, and no significant potential adverse impact on a resource area. For such projects, it would be unreasonable to interpret this section to require a full Determination of Applicability. To avoid unnecessary regulation of doubtful practical validity, the following projects, subject to the following conditions, shall require only the written approval of the Conservation Administrator or other agent duly appointed by the Commission.
2. Conditions:
 - a. The project must be routine and there must be no special circumstances such as known vernal pools.
 - b. The limit of the resource area must be clearly evident to the Conservation Administrator.
 - c. The work must be outside of land subject to flooding and over twenty-five feet (thirty-five feet where structures are involved) from the limit of any other resource area; except if the work area is already in a legally developed condition (such as lawn, pavement, gravel, etc.), then the work must be over ten feet (twenty feet where structures are involved) from any other resource area. Where more restrictive setbacks are imposed in Section 4.G.2, the more restrictive setbacks shall be observed.
 - d. A complete written description of all of the work and protective or mitigative measures, and an accurate sketch or plan must be submitted to the Conservation Administrator.
 - e. All conditions applied by the Administrator shall be complied with.
 - f. The Administrator shall provide a copy of the proposal and any conditions to the Commission at its next regular meeting.

SECTION 4 DETERMINATION OF APPLICABILITY

G. Minor Projects, Continued

2.g. If the Administrator grants approval, the proponent may proceed with the project at his/her own risk pending a review by the Commission; any person may file a formal Request for Determination pursuant to the preceding Section 4.A., and the Commission's Determination shall supersede the Administrator's decision.

3. Minor Projects include:

- a. Installation of unpaved pedestrian walkways for private use;
- b. Installation of fencing or free-standing stone walls, provided that they will not constitute a barrier to wildlife movement;
- c. Pruning of trees and shrubs located more than 50 feet from a wetland resource area, and pruning of existing landscaped areas regardless of distance to wetlands;
- d. Planting of species of trees, shrubs, or groundcover native to Massachusetts, but excluding planting of turf lawns where turf lawns do not presently exist;
- e. Conversion of existing lawns to uses accessory to existing single family houses, provided that the activity is located more than 50 feet from wetland resource areas, such as: open slotted decks without roofs; above-ground pools; freestanding (no foundation) sheds under 15 feet by 15 feet; steps under 100 square feet; patios under 100 square feet; porches under 100 square feet on existing foundations or on concrete footings;. The conversion of such accessory uses to lawn is also allowed.
- f. Conversion of impervious surfaces to vegetated areas in the Buffer Zone;
- g. Activities that are temporary in nature, have negligible impacts, and are necessary for planning and design purposes (e.g., installation of monitoring wells, exploratory borings, sediment sampling, and surveying).

4. Buffer Zone projects that are not permitted by this procedure include but are not limited to the following work (note: no work in a resource area can be permitted by this procedure):

- a. New or increased foundations;
- b. Filling, grading, or machine excavation;
- c. Additions except as listed in subsection 2;
- d. Work within 100 feet of a known vernal pool;
- e. Wells; and
- f. Work within land subject to flooding, or within twenty-five feet of another resource area, or within ten feet if legally existing development exists in the location.

SECTION 5 NOTICE OF INTENT

A. General

1. It is recommended that all applicants confer with the Conservation Administrator prior to filing.
2. Any person who proposes to do work that will remove, fill, dredge or alter any area subject to protection under the Bylaw shall submit a Notice of Intent.
 - a. The requirement of the Bylaw to obtain or apply for all permits, variances, and approvals required by local bylaw with respect to the proposed activity shall include only those which are obtainable at the time the Notice of Intent is filed.
 - b. Notwithstanding the preceding paragraph, when an applicant for a Comprehensive Permit (under M.G.L. Chapter 40B, Sections 20-23, a.k.a. Chapter 774) from a Board of Appeals has received a determination from that Board, whether to grant or deny the permit, and in the case of a denial, has appealed to the Housing Appeals Committee, said applicant shall be deemed to have obtained all local permits obtainable at that time.
 - c. The applicant shall either obtain all permits prior to filing a Notice of Intent, or may file a Notice of Intent after the filing of application(s) for all such obtainable permits. The Notice of Intent shall then include any information submitted in connection with such other application(s) that is necessary to describe the effect of the proposed activity on the environment.
3. If the Conservation Commission rejects a Notice of Intent because of a failure to obtain or apply for all permits, variances, and approvals, it must specify in writing the permit, variance, or approval that has not been obtained or applied for. A ruling by the municipal body within whose jurisdiction the issuance of the permit, variance, or approval lies or by the Town Counsel concerning the applicability of such permit, variance, or approval shall be acceptable by the Commission.
4. Notwithstanding the foregoing, when the Commission has determined that an activity outside the areas subject to protection under this bylaw and outside the Buffer Zone is likely to alter an area subject to protection under this bylaw, the Commission may require such plans, supporting calculations and other documentation as are necessary to describe the entire activity.

B. Abbreviated Notices

For certain purposes, other forms of Notices may be used.

1. The applicant shall have the option to file an Abbreviated Notice of Intent for proposed work only when the following criteria are met:
 - a. The proposed work is within the Buffer Zone, or within land subject to flooding;

SECTION 5 NOTICE OF INTENT

B. Abbreviated Notices, Continued

- b. The proposed work will disturb less than one thousand square feet of surface area within the Buffer Zone and/or land subject to flooding; and
 - c. The proposed work will not require a U.S. Army Corps of Engineers Section 10 or Section 404 permit, or a license from the Department of Environmental Protection Division of Waterways pursuant to M.G.L. Chapter 91 (Waterways License).
2. Abbreviated Notice of Intent Submittal Requirements - The following items are set out as a minimum standard for submittal. The applicant may submit, or be required to submit, further information that will assist in the review and is deemed necessary to determine the proposed effect on the interests protected by the Bylaw. A complete application for an Abbreviated Notice of Intent shall include the original and eleven copies of the Abbreviated Notice of Intent and of the following:
 - a. A drawing designating the property boundaries and the layout of existing and proposed structures;
 - b. A description and a plan showing all relevant wetland resource areas;
 - c. Maximum groundwater elevations, and the dates of measurements;
 - d. Soil characteristics;
 - e. A water management plan, and calculations and narrative summary of runoff based on the 2-, 10-, 25-, and 100-year storm events;
 - f. An erosion control plan describing all methods to be utilized in controlling erosion and siltation of the site; and
 - g. Any other mitigation measures that may be applicable.
3. To establish the extent of freshwater wetlands and other resource areas on a site, applicants may use the Abbreviated Notice of Resource Area Delineation for the confirmation of a delineated resource area boundary prior to filing a Notice of Intent for proposed work.
4. Abbreviated Notice of Resource Area Delineation Submittal Requirements - The following items are set out as a minimum standard for submittal. The applicant may submit, or be required to submit, further information that will assist in the review and is deemed necessary to determine the delineation of the resource areas. A complete application for an Abbreviated Notice of Resource Area Delineation shall include the original and eleven copies of the Abbreviated Notice of Resource Area Delineation form and of the following:

SECTION 5 NOTICE OF INTENT

B. Abbreviated Notices, Continued

- 4.a. A site plan at a scale of 1"=20' or 1"=40' prepared by a Registered Professional Engineer or a Registered Land Surveyor, including: a title block, a north arrow, property boundaries, wetland resource area and buffer zone boundaries, and a sufficient number of existing features within the site such as topography and structures for the Commission to locate the wetland resource areas on the site;
- b. The length of each resource area delineated;
- c. A description of the methodology and/or reference materials used to delineate each resource area, along with field data forms setting forth the observations upon which each delineation is based; and
- d. Identification of the person(s) who prepared the delineation of each resource area.

C. Filing Procedure

A complete Notice of Intent, Abbreviated Notice of Intent, or Abbreviated Notice of Resource Area Delineation shall include:

1. An original and eleven copies of the Notice of Intent, Abbreviated Notice of Intent, or Abbreviated Notice of Resource Area Delineation, and accompanying plans (see SECTION 6 - PLANS AND TECHNICAL DATA), plus the filing fee payable to the Town of Reading, (unless exempted under the fee schedule). These documents and plans shall be sent by certified mail or hand delivered to the Reading Conservation Commission."
2. Stamped or properly metered (no date) legal-sized envelopes addressed with the names and addresses of the abutters as shown in the Certified Abutters List available from the Reading Assessors office, and all parties of legal interest, including the owners, the applicants and their representatives, shall be provided to the Commission.
3. Wetland areas, buffer zone, roadways and building corners shall be flagged and numbered, each with its own color. Colors in the field shall match colors noted on the plan, and wetland boundaries shall be flagged every twenty feet.
4. The applicant shall provide a point-by-point written evaluation of the impact of the proposed project on values protected by the Bylaw. These values are:
 - a. Protection of private and public water supply,
 - b. Protection of ground water,
 - c. Flood control,
 - d. Storm damage prevention,
 - e. Protection of fisheries,

SECTION 5 NOTICE OF INTENT

C. Filing Procedure, Continued

- 4.f. Protection of wildlife habitat,
- g. Erosion control, and
- h. Prevention of pollution.

D. Administrative Review for Completeness

1. If the Administrator or a Commissioner determines that a Notice of Intent or an Abbreviated Notice of Intent or an Abbreviated Notice of Resource Area Delineation is incomplete or improper, he or she may return the entire filing, in which case all required time periods for processing the submitted Notice of Intent or Abbreviated Notice of Intent or Abbreviated Notice of Resource Area Delineation will no longer be applicable.

E. Public Hearings

1. A public hearing shall be held by the Conservation Commission within twenty-one days of receipt of the minimum submittal requirements for a complete filing. Notice of the time and place of the public hearing shall be given by the Commission at the expense of the applicant not less than five business days prior to such public hearing, by publication in a local newspaper, and by mailing notices to abutters, the applicant, and the owner.
2. All hearings held under the Wetlands Protection Act, M.G.L. Chapter 131, Section 40, as it applies, may also be held simultaneously under Section 5.7 of the Reading General Bylaws.
3. After opening the public hearing, if the Commission determines that additional information is needed, the Commission may:
 - a. Continue the public hearing, at the applicant's expense, to a future date to be specified at the hearing. All requested information shall be submitted no less than six business days prior to the date of the continuance; or
 - b. Deny the project because the applicant failed to provide the necessary information that the Commission requested.

F. Decision

1. The Commission shall issue a decision on a Notice of Intent, an Abbreviated Notice of Intent, or an Abbreviated Notice of Resource Area Delineation within 21 days of the close of the public hearing or, where Notice has also been filed under MGL Chapter 131, Section 40, within 3 business days of receipt of a written Notification of File Number from DEP, whichever comes later.

SECTION 5 NOTICE OF INTENT

F. Decision, Continued

2. The Commission may decide to deny permission for the activity proposed under a Notice of Intent or an Abbreviated Notice of Intent in accordance with Section 5.7.8 of the Reading General Bylaws. The Commission may decide to issue an Order of Conditions permitting the proposed activity in accordance with Section 5.7.9 of the Reading General Bylaws.
3. The Commission may issue an Order of Resource Area Delineation that determines that the wetland resource area boundaries set forth in an Abbreviated Notice of Resource Area Delineation have been identified and delineated according to the definitions in Section 5.7 of the Reading General Bylaws and these Regulations, or the Commission may modify the delineation submitted.”

SECTION 6 PLANS AND TECHNICAL DATA

A. General

1. Plans submitted to accompany a Notice of Intent, an Abbreviated Notice of Intent, or an Abbreviated Notice of Resource Area Delineation shall include a complete description of the wetlands resource areas, the proposed activity, and the effect of the proposed activity on the resource areas and the interests protected under the Bylaw

B. Minimum Requirements

The following items are set forth as minimum standards, and are not intended to be a complete and final presentation (for minor projects, the Commission may waive some of the following requirements). The applicant may submit, or be required to submit, further information that will assist in the review. All applications should include the original material and eleven copies. The applicant, upon submission of the Notice of Intent, shall provide:

1. Drawings:

- a. Drawings shall be stamped and signed by a qualified Professional Civil Engineer registered by the Commonwealth of Massachusetts. The Conservation Commission may waive this requirement upon written request of the applicant if, in its determination, it is deemed unnecessary.
- b. All drawings shall include a block with the title designating the name of the project, its location, and the name(s) of the person(s) preparing the drawings and the date prepared, including all revision dates, a legend, scale(s), and reference datum (e.g. NGVD).
- c. The applicant shall provide an 8-1/2" x 11" photocopy sheet of that portion of the USGS quadrangle map showing the location of the proposed activity, with the location clearly marked. This sheet shall be labeled the "Locus Map."

2. Technical Data shall include the following:

- a. A narrative explanation, all necessary calculations, and the data upon which these calculations are based;
- b. A description of any alterations to the 100-year flood storage capacity on the site, and a description of the construction sequence. If a change of flood storage capacity is proposed, the effects of this change of storage on downstream channels and culverts and adjacent properties must be determined;
- c. Maximum groundwater elevations must be shown. The calendar dates of measurement, samplings, and any percolation tests shall be included;

SECTION 6 PLANS AND TECHNICAL DATA

B. Minimum Requirements, Continued

- d. Soil characteristics in representative portions of the site, including location and depth of sample sites, and soil profile analysis;
- e. A stormwater management plan and calculations of run-off characteristics based on the 2-year, 10-year, 25-year, and 100-year storm events must be included. Run-off characteristics are to be calculated for pre- and post-development conditions. Calculations for both rates and volume should be included, and methods should be appropriate for the nature and size of the site;
- f. Hydrographs that illustrate run-off characteristics before and after the proposed activity;
- g. An erosion control plan shall be submitted describing all methods to control erosion and siltation on the site;
- h. Watershed maps shall include an outline of the watershed areas related to the proposed activity;
- i. Geological data, including, but not limited to, depth of bedrock, location of rock outcropping, presence of aquifer, and direction of flow.

3. Site Plan

The applicant shall submit a site plan, at a scale of 1" = 40', or, when appropriate (e.g. small house lots, details), 1" = 20', showing the following items:

- a. Existing and proposed contours (in contrasting and identified symbols) at intervals no greater than 2 feet.
- b. The delineation of all wetlands, lands subject to flooding, water bodies, waterways, ditches, creeks, rivers, streams whether permanent or intermittent, vernal pools and ponds whether natural or man-made. The upland boundary of all wetlands. The wetland area shall also be marked in the field with visible, labeled markers in a contrasting color at least every 20 feet.
- c. A delineation of all alterations, including replication/replacement areas proposed in or having an impact on wetlands, the sequencing, and the square footage;
- d. A delineation of the floodplain, including compensatory storage areas, the sequencing, and the square footage;
- e. Existing stone walls, buildings, arid rock outcroppings;

SECTION 6 PLANS AND TECHNICAL DATA

B. Minimum Requirements, Continued

- f. Location, extent and area of all existing and proposed structures, roadways, paved areas, septic and sewer systems, wells, tanks, and utility easements;
- g. Proposed lowest elevations for cellars or floors;
- h. Existing and proposed location, rim elevation and invert elevation of all catch basins, drains, culverts and other drainage structures upstream and downstream of the site, as well as on-site;
- i. Location and square footage of areas to be removed, dredged, filled or otherwise altered in any way;
- j. Proposed pollution control devices on-site, such as hooded catch basins, oil absorption pillows, detention/retention basins, flow dissipaters, or vegetative buffers;
- k. Cross sections showing existing and proposed slope, elevations, bank, and bottom conditions of each watercourse to be altered. Locations of cross sections;
- l. Location of any fill material that will be stored on site;
- m. Exact location and elevation of Bench Mark used for survey;
- n. One copy of the site plan prepared in visible colors for presentation at the public hearing and for public education.

SECTION 7 - ORDER OF CONDITIONS and ORDER OF RESOURCE AREA DELINEATION

A. Definition

1. An Order of Conditions is a document issued by the Conservation Commission, after receipt and review of a Notice of Intent or an Abbreviated Notice of Intent, that permits, regulates, requires, and/or prohibits activities under the Commission's jurisdiction. An Order of Conditions shall be valid for a period of three years from the date of issuance.
2. An Order of Resource Area Delineation is a document issued by the Conservation Commission, after receipt and review of an Abbreviated Notice of Resource Area Delineation, that confirms or modifies the delineation submitted. An Order of Resource Area Delineation shall be valid for a period of three years from the date of issuance.

B. Pre-Construction Requirements

1. The Conservation Commission shall receive proof that the Order of Conditions has been recorded at the Middlesex South Registry of Deeds showing date and instrument number(s) and/or Certificate number(s) of the recording.
2. The applicant shall inform the Reading Conservation Commission, in writing, of the names, addresses, business and home telephone numbers of both the project supervisor who will be responsible for ensuring on-site compliance with this Order, and his/her alternate. This list will be kept current, and the Reading Conservation Commission shall be notified of all changes.
3. A pre-construction meeting shall take place between the contracting agent and the Conservation Administrator for the purpose of reviewing the requirements of the Order of Conditions and establishing a general construction schedule.
4. Proof of receipt of a DEP file number and proper registration with the Massachusetts Natural Heritage Program--Appendix A--(if the site of the proposed work is shown on the most recent Natural Heritage Program Map of Estimated Habitats of State-Listed Rare Wetlands Wildlife) shall be provided to the Reading Conservation Commission prior to any work subject to an Order of Conditions.

C. Copies

1. A copy of the Order of Conditions shall be kept on site at all times.

SECTION 7 - ORDER OF CONDITIONS and ORDER OF RESOURCE AREA DELINEATION

D. Requests for Plan Change

1. After the Commission has issued an Order of Conditions for a proposed activity, if changes are proposed in the activity, the applicant must notify the Commission in writing requesting approval for these changes. The applicant must submit with the request adequate site plans, calculations, data, descriptions of the proposed changes, and any other information that the Commission may require to understand the proposed changes and to make the determination. No work shall be done on the subject area until the Commission has reviewed and approved the changes.
2. The Commission shall review the proposed changes and may determine:
 - a. That the plan change is insignificant and the Order of Conditions requires no Amendment; or
 - b. That the plan change is significant and the Order of Conditions requires an Amendment; or
 - c. That the plan change is sufficiently different from the approved plan that a new Notice of Intent or Abbreviated Notice of Intent must be filed.
3. The applicant shall be notified of the decision of the Commission within 21 days of the receipt of the applicant's notification of the changes.
4. If the Commission decides that the plan change requires an Amendment of the Order of Conditions or a new Notice of Intent or Abbreviated Notice of Intent, a public hearing shall be held in accordance with Section 5.D of these Regulations. If the applicant anticipates that the Commission will require an Amendment, the applicant may request that the Commission bypass the determination under Section 7.D.2 and proceed directly to the public hearing for the Amendment. If the applicant anticipates that the Commission will require a new Notice of Intent or Abbreviated Notice of Intent, the applicant may file the new Notice without first undergoing the determination process in Section 7.D.2.

E. Extensions

1. The Commission may issue an Extension Permit for an Order of Conditions or Extension Permit for a period of up to three years to an applicant who has demonstrated reasons for such a permit. The Commission may deny an Extension to a project that has not commenced within the original time limit. The applicant must apply in writing for an Extension Permit at least 30 days prior to expiration (note: application for an Extension Permit may trigger a redelineation of the wetlands).

SECTION 7 - ORDER OF CONDITIONS and ORDER OF RESOURCE AREA DELINEATION

E. Extensions, Continued

2. For projects upon which work has not yet begun within three years of the issuance of an Order of Conditions or an Order of Resource Area Delineation, and for which an Extension Permit has been requested, the Commission may review the wetland resource area delineations before granting an Extension Permit. If the Commission finds that a delineation is no longer valid, the Commission may amend the Order of Conditions or Order of Resource Area Delineation before granting an Extension Permit, following the procedure set forth in Section 7.D. above, or may deny the Extension

F. Appeals

1. Any person may appeal an Order of Conditions to Superior Court. according to the provisions of Massachusetts General Laws, Chapter 249, Section 4.

SECTION 8 CERTIFICATE OF COMPLIANCE

A. Definition

1. Certificate of Compliance shall mean a written determination made by the Conservation Commission verifying that work has been completed in accordance with an Order of Conditions.

B. Request

1. Upon completion of work under an Order of Conditions, the applicant or owner shall submit a written request for a Certificate of Compliance to the Commission. The applicant or owner may request a Partial Certificate of Compliance for discrete portions of the work under the Order of Conditions. The Commission may require that a request be accompanied by:
 - a. As-built plans (1" = 40' or 1" = 20' scale, corresponding to submission plans) stamped by a registered professional engineer and/or registered land surveyor showing:
 - 1) All structures, buildings, impervious surfaces, and existing grading;
 - 2) Wetlands resource areas and mitigation areas; and
 - 3) Any other elevations or distances the Commission may specify to ensure compliance with the Order of Conditions.
 - b. A written statement by a registered professional civil engineer and/or other qualified professional, as may be required by the Commission, certifying compliance with the approved plans referenced above and this Order of Conditions and setting forth what deviations, if any, exist.
 - c. Any other reports or documents related to the work that are required by the Order of Conditions.

C. Decision

1. Upon receipt of a request for Certificate of Compliance, the Commission shall make a site inspection with the applicant/owner or the representative of the applicant/owner, and shall review the materials submitted with the request. The Commission may issue the Certificate of Compliance within 21 days of the receipt of the request, or may determine that the requirements for the Certificate of Compliance have not been met and deny the request. In the case of a denial, the reasons for the denial shall be issued in writing to the applicant within 21 days of the receipt of the request. If the Order of Conditions contains conditions that continue past the completion of construction, the Certificate shall specify which conditions shall continue in effect. The applicant or owner shall record the Certificate of Compliance at the Registry of Deeds or the Land Court, as appropriate, and shall submit certification of the recording to the Commission.

SECTION 8 CERTIFICATE OF COMPLIANCE

D. Burden of Proof

1. The applicant shall have the burden and obligation of bringing the property into compliance with the Order of Conditions.

SECTION 9 SECURITY

1. A bond or other means of financial responsibility acceptable to the Commission and the Town Counsel, may be required to secure performance of work required by an Order of Conditions. It shall be held by the Town, and shall be released by the Commission only upon satisfactory completion of the work required by the Order, and the issuance of a Certificate of Compliance.
2. The amount of security shall not exceed the cost, as estimated by the Town or their agent, of the required work or of the restoration of affected lands and properties if the work is not faithfully performed as required, whichever is greater.
3. Forfeiture of such bond or security shall be recoverable at suit of the Town in Superior Court, pursuant to the provisions of the Massachusetts General Laws, Chapter 249, Section 4.

SECTION 10 CONSULTANT FEE

1. The Commission may require an applicant to pay a fee for the reasonable costs and expenses borne by the Commission for specific expert engineering and other consultant services deemed necessary by the Commission to make a Determination of Applicability, complete the review of a Notice of Intent or other application or request made pursuant to Reading General Bylaw Section 5.7 or these Regulations. This fee is called the Consultant Fee and shall be in the maximum amount of Twenty-Five Thousand Dollars (\$25,000.00).
2. The specific consultant services may include, but are not limited to, the following:
 - a. Resource area and wetland survey and delineation,
 - b. Analysis of resource area and wetland values,
 - c. Wildlife habitat evaluations,
 - d. Hydrogeologic and drainage analysis, and
 - e. Environmental and land use law.

SECTION 10 CONSULTANT FEE, Continued

3. The Commission may require the payment of the Consultant Fee at any point in its deliberations prior to a final decision. The applicant shall pay the Consultant Fee to the Town to be put into a revolving fund for consultant fees of the Commission, which may be drawn upon by the Commission for specific consultant services approved by the Commission at one of its public meetings.
4. Any unused portion of the Consultant Fee shall be returned to the applicant unless the Commission determines at a public meeting that other action is necessary.
5. Any applicant aggrieved by the imposition of, or size of, the Consultant Fee, or any act related thereto, may appeal according to the provisions of Massachusetts General Laws.
6. The minimum qualifications of any consultant selected by the Commission shall consist either of an educational degree in or related to the field at issue or three or more years of practice in the field at issue or a related field.

SECTION 11 SEVERABILITY

1. The invalidity of any section of these Regulations shall not invalidate any other section or subsection, nor shall it invalidate any permit or determination that has been previously issued.
2. If any court of the Commonwealth shall invalidate any provision of the Bylaw or of these Regulations, the Commission shall promulgate additional Regulations, or present to the next Town Meeting after such invalidation, amendments to the Bylaw or Regulations which are designed to comply with any court decision invalidating such provision or Regulation.

SECTION 12 DEFINITIONS

The following definitions shall apply in the interpretation and implementation of this bylaw:

ABUTTER: any property owner whose property touches the subject property. Also, any abutter to said abutters, within three hundred (300) feet of the subject property, and all other parties of legal interest. Also any property owner across a street or road, river, stream, brook, or creek from the subject property.

ACTIVITY: any form of draining, dumping, dredging, damming, discharging, excavating, filling or grading; the erection, reconstruction or expansion of any buildings or structures; the driving of pilings; the construction or improvement of roads and other ways; the changing of run-off characteristics; the intercepting or diverting of ground or surface water; the installation of any utility conduit or system, including but not limited to drainage, sewage and water systems; the discharging of pollutants; the destruction of plant life; and any other changing of the physical, chemical, thermal, or biological characteristics of land or water.

AGRICULTURE: (see 310 CMR 10.04 - the Wetlands Protection Act Regulations definition)

ALTER: to impact any resource area by any activity as defined above.

APPLICANT: any person who files a Request for a Determination of Applicability, Notice of Intent, Abbreviated Notice of Intent, or on whose behalf these forms are filed.

BANK: land adjoining any body of water that serves to confine said water, or where groundwater discharges to the surface or surface water recharges the groundwater.

BOG: a wetland formed where surface drainage is congested. Low oxygen levels and soil temperatures cause incomplete decomposition, resulting in the build-up of fibrous peat. Bog plant species shall include but not be limited to those listed for bogs in Massachusetts General Laws Chapter 131, Section 40.

BORDERING VEGETATED WETLAND: A wetland that touches any: creek, river, stream, whether permanent or intermittent; ditch; pond; or lake; or the bank of any of the preceding wetland resource areas.

BREEDING AREAS: areas used by wildlife for courtship, mating, nesting, or other reproductive activity, and the rearing and development of young.

BUFFER ZONE: land extending one hundred feet horizontally outward from the boundary of any resource area subject to protection under these Regulations except for land subject to flooding or riverfront area.

CERTIFICATE OF COMPLIANCE: a document voted on and issued by the Conservation Commission that certifies that work or a portion thereof has been completed in accordance with an Order of Conditions.

SECTION 12 DEFINITIONS

CONSERVATION COMMISSION: that body of citizens appointed pursuant to M.G.L. Ch. 40, Sec. 8C.

CREEK: any small stream or any intermittent tributary to any brook, river, or stream.

DATE OF ISSUANCE: the date a document is mailed, as evidenced by a postmark, or the date it is hand delivered.

DATE OF RECEIPT: the date of delivery to an office, or usual place of business by mail or hand delivery.

DETERMINATION OF APPLICABILITY:

1. A written finding by the Conservation Commission, after a public meeting, as to whether proposed **WORK** shall require the filing of a Notice of Intent.
2. A written finding by the Conservation Commission, after a public meeting, whether the **AREA** on which proposed work is to be done is significant to the interests described in the Bylaw and Regulations.

DITCH: A man-made trench or furrow dug in the ground that has not altered any creek, river, stream, pond, or lake, or the bank of any of the preceding resource areas, or fresh water wetland. It shall **NOT** include any natural, pre-existing water-carrying channel (e.g., stream, river, brook, including temporary or intermittent streams), or any bank or freshwater wetland that has been altered.

DREDGE: to deepen, widen, or excavate, either temporarily or permanently, within the Zone of Saturation.

EROSION CONTROL: the prevention or reduction of the detachment or movement of soil or rock particles by water, wind, ice, and/or gravity.

FILL:

1. To deposit or to place any material to raise the elevation temporarily or permanently.
2. Anything that fills or is used to fill--especially earth, gravel, or other material used for filling a hole, depression or low area.

FISHERIES: hatcheries and feeding grounds for all species of fresh water fish and shellfish.

FLOOD CONTROL: the prevention or reduction of flooding.

FLOODING: a temporary inundation of water or a rise in the surface of a body of water (or groundwater) such that it covers land not usually under water.

FLOODPLAIN (See also Land Subject to Flooding and Lower Floodplain): an area which floods from a waterway or waterbody, during any event up to and including the 100 year storm event.

SECTION 12 DEFINITIONS

GROUNDWATER: water below the earth's surface in the Zone of Saturation, including land under waterbodies.

HYDRIC SOIL: a soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic (oxygen-lacking) conditions in the upper part of the soil.

HYDROPHYTIC VEGETATION: plant life growing in water and/or saturated soil that is at least periodically deficient in oxygen. Hydrophytic plant species include but are not limited to those listed in Massachusetts General Laws Chapter 131, Section 40.

INTERMITTENT: (as applied to a body of water) does not flow throughout the year, including that portion upgradient or downgradient of any wetlands, waterbodies, or resource areas.

ISSUING AUTHORITY: the Conservation Commission.

LAND SUBJECT TO FLOODING (See also Floodplain and Lower Floodplain):

1. **Bordering Land Subject to Flooding:** an area which floods due to a rise in water level on a waterway or water body during any event up to and including the 100-year storm event; also: Floodplain.
2. **Isolated Land Subject to Flooding:** an isolated depression or a closed basin which serves as a ponding area for run-off or high ground water which has risen above the ground surface.

LOT: an area of land, with defined boundaries, in one ownership.

LOWER FLOODPLAIN: the area within the statistical 10-year flood or within 100 feet of the bank or bordering vegetated wetland, whichever is farther from the waterbody or waterway.

MAJORITY: more than half of the duly-appointed members of the Conservation Commission.

MARSH: an area where ground water is at or near the surface of the ground for a significant part of the growing season or where run-off water from surface drainage frequently collects above the soil surface, and where a significant part of the plant community is made of "hydrophytes" including grasses, sedges, rushes and other emergents. Marsh plant species shall include but not be limited to those listed for marshes in Massachusetts General Laws Chapter 131, Section 40.

MEADOW (WET): see WET MEADOW

MIGRATORY AREAS: those areas used by wildlife moving from one habitat to another.

NOTICE OF INTENT: the written notice by any person intending to remove, fill, dredge or alter, or in any way change the physical, chemical, thermal or biological properties of any area subject to the Bylaw.

SECTION 12 DEFINITIONS

ORDER OF CONDITIONS: the document prepared by the Conservation Commission that regulates or prohibits an activity subject to the Bylaw.

PERSON: any individual, group of individuals, association, partnership, corporation, company, business organization, trust, estate, the Commonwealth whenever subject to this bylaw, or any political subdivision of the Commonwealth whenever subject to this bylaw, administrative agency, public or quasi-public corporation or body, or any other legal entity or its legal representative, agents, or assigns.

PERSON AGGRIEVED: a person who, because of an act or failure to act by the issuing authority, may suffer an injury in fact which is different either in kind or magnitude from that suffered by the general public and which is within the scope of the interests defined by the Bylaw. Said person must specify in writing sufficient facts as to how they may be affected by said act or failure to act.

PLANS: such data, maps, drawings, calculations, specifications, schedules and other materials deemed necessary by the Commission to describe the site and/or the work, to determine the applicability of the Bylaw, or to determine the impact of the proposed work upon the interests of the Bylaw.

POND: any permanent or intermittent open body of fresh water, either naturally occurring or man-made by impoundment, excavation, or otherwise. Basins or lagoons which are part of wastewater treatment plants shall not be considered ponds, nor shall swimming pools or other impervious man-made retention basins.

PREVENTION OF POLLUTION: the prevention or reduction of contamination, or the degradation of an area, or change in the physical, chemical, thermal or biological characteristics of land, surface water, or groundwater.

PROTECTION OF FISHERIES: protection of the capacity of an area subject to protection under the Bylaw to prevent or reduce contamination or damage to fish, and to serve as their habitat and nutrient source. (Fish includes all species of finfish and shellfish)

QUORUM: a majority of the duly-appointed members of the Conservation Commission.

RARE SPECIES:

1. Those vertebrate and invertebrate animal species officially listed as endangered, threatened, or of special concern by the Massachusetts Division of Fisheries and Wildlife under 321 CMR 8.
2. Those plant species listed as rare, threatened, or endangered by the Massachusetts Natural Heritage Program.

SECTION 12 DEFINITIONS

REMOVE: to take away by act or process, including removal of vegetation; or to move any type of materials which would change the elevation, either temporarily or permanently.

RESOURCE AREA: an area subject to protection under the Bylaw.

RIVER: a natural course of water that has a continuous or intermittent flow and empties to any wetland, lake, pond or other river.

RIVERFRONT AREA: Shall be as defined in 310 CMR 10.00, as amended.

SHELTER: protection from the elements or predators.

SIGNIFICANT: plays a role in the provision or protection of an interest identified in this bylaw.

STATE LISTED SPECIES: see: Rare Species.

STORM DAMAGE PREVENTION: the prevention of damage caused by water from storms, including but not limited to: erosion and sedimentation; damage to vegetation, property, or buildings; or damage caused by flooding, water-borne debris, or water-borne ice.

STREAM: a body of flowing water including brooks and creeks, whether permanent or intermittent, moving along a hydraulic gradient.

SWAMP: an area where groundwater is at or near the surface of the ground for a significant part of the growing season or where run-off water from surface drainage frequently collects above the soil surface, and where at least 50% of the plant community is made up of hydrophytes including predominantly shrubs and trees. Swamp plant species shall include but not be limited to those listed for swamps in Massachusetts General Laws Chapter 131, Section 40.

VARIANCE: an authorization from the Commission to an applicant for a deviation from the terms of the Bylaw and/or these Rules and Regulations as described in the General Provisions section of these Rules and Regulations.

VERNAL POOL HABITAT: A confined basin depression that holds water for a minimum of eight continuous weeks during the spring and/or summer and that is free of adult fish populations. Vernal pool habitat includes both the maximum annual high water elevation in a non-drought year in the vernal pool and any land within one hundred feet of the maximum annual high water elevation, as further defined in Section 3.J.3 of these Regulations.

WATER SUPPLY: any source of water available, or potentially available, for public or private use.

SECTION 12 DEFINITIONS

WETLANDS: lands where the water table is usually at or near the surface, or the land is covered by shallow water. This shall include swamps, wet meadows, bogs and marshes, creeks, streams, ponds, rivers, and lakes and bordering vegetated wetlands. Wetlands must have one or more of the following three attributes:

1. At least periodically, the land supports predominantly hydrophytic vegetation;
2. The substrate is predominantly undrained hydric soil; and
3. The substrate is saturated with water or covered by shallow water at some time during the growing season of each year.

WET MEADOW: an area where ground water is at the surface for a significant part of the growing season and near the surface throughout the year, and where fifty percent or more of the plant community is composed of hydrophytic vegetation. Wet meadow plant species shall include but not be limited to those listed for wet meadows in Massachusetts General Laws Chapter 131, section 40.

WILDLIFE: all mammals, birds, reptiles and amphibians and animal species, except domesticated species.

WILDLIFE HABITAT: those areas subject to these Regulations which, due to their plant community composition and structure, hydrologic regime, or other characteristics, provide important food, shelter, migratory, travel or overwintering areas, or breeding areas for wildlife.

WORK: activity.

ZONE OF SATURATION: the subsurface zone in which all the pores between the soil particles are filled with water.

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