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Chapter 147

WETLANDS PROTECTION BYLAW RULES

ARTICLE I General Provisions

§147-1 Statutory Authority

These regulations are promulgated under the authority of the Home Rule Amendment Article LXXXIX(89), of the amendments of the Constitution of Massachusetts, 1966, and in accordance with the 2006 Harvard Wetlands Bylaw as amended and shall be effective upon the fulfillment of all legal requirements for their effectiveness.

§147-2 Purpose

A. These regulations are promulgated to create a uniform process and to clarify and define the provisions of the 2006 Wetlands Bylaw as amended, hereafter called the "Bylaw", administered by the Harvard Conservation Commission, hereafter called the "Commission".

Because the Massachusetts Wetlands Protection Act was designed to be used throughout the Commonwealth and because, by necessity, Acts by the State Legislature often must balance conflicting interests, the special needs and circumstances of specific municipalities may not be adequately addressed.

This additional protection is important to Harvard for several reasons:

- (1) Almost all Harvard residents are served by private wells and septic systems. Of the more than 1800 housing units in Harvard, only 64 have hook-ups to public wells. Unlike cities/towns with a few municipal wells which have protection zones around them, **each one of our private wells must be protected.**
- (2) Bare Hill Pond, designated a "Great Pond" by the State, offers boat access to the general public and swimming off a town beach for residents, and is an important natural and recreational asset to the town and the Commonwealth. Due to the location of a town well adjacent to the pond, the pond is protected by State Zone 2 Aquifer Regulations protecting public water supplies.
- (3) As the home of headwaters to streams that carry water through a good portion of northeastern Massachusetts, Harvard is blessed with relatively high quality surface water and a responsibility to protect these headwaters. Water in Harvard flows into three large watersheds that ultimately drain to the Atlantic at Newburyport via the Nashua, Concord and Merrimack Rivers.
- 4) Bowers Brook, Harvard's major perennial stream, flows across the length of Harvard from south to north. Extensive wetlands of red maple swamp and hummocked shrub

swamp extend around many portions of the watercourse and serve to regulate the stream's flow, cleanse the water and provide habitat for diverse wildlife. From Pin Hill to Grove Pond in Ayer is designated a MA NHESP BioMap Core Area and the wetland north of Route 2 is a State-designated Priority Habitat Area.

- (5) Riparian habitat bordered by scrub-shrub and emergent wetlands is found along the Nashua River in Bolton Flats and the Oxbow National Wildlife Refuge and along Bowers Brook and Bennets Brook.
- (6) In the southeast quadrant of Harvard flood control dams protecting the Assabet River have created a 103 acre pond complex and equivalent acreage of freshwater marsh. This entire Delaney Wildlife Management Area is designated a MA NHESP 2006 Priority Habitat of State Listed Rare Species and the portion north of Finn Road is designated a "Significant Habitat" under the Massachusetts Endangered Species Act.
- (7) There are numerous vernal pools within the boundaries of Harvard which are critical wildlife breeding habitat. These ephemeral pools, which can range in size from large puddles to multi-acre ponds, are of special value because their unique characteristics provide essential breeding habitat to a number of invertebrate and amphibian species that can live nowhere else. A host of additional wildlife species also use these pools and adjacent uplands and many species of amphibians live their lives within range of their natal pool, migrating back to the pool only for a few days each year for breeding purposes.

B. The Bylaw sets forth a public review and decision-making process to protect wetlands and adjoining land areas by controlling activities deemed likely to have a significant (or cumulative) impact on wetland values, including, but not limited to the following:

- (1) Protection of public and private water supplies
- (2) Protection of groundwater
- (3) Flood control
- (4) Erosion control
- (5) Storm damage control and prevention
- (6) Prevention of pollution
- (7) Protection of land containing wildlife (wildlife habitat)
- (8) Recreation
- (9) Protection of aesthetics.

to be referred to collectively as "the interests" of the Bylaw and the "resource area values".

§147-3 Waivers from Rules and Regulations

Strict compliance with these rules may be waived, modified or altered when, in the judgment of the Commission, such action is in the public interest and is consistent with the intent and purpose of the Bylaw. The burden of establishing the basis for a waiver, modification or alteration is on the petitioner to establish by a clear preponderance of the evidence. Any request for a waiver, modification or alteration must be submitted to the Commission in writing on Form C. The

Commission shall act on the request within 30 days of the date of receipt, and will provide the applicant either by certified mail or hand delivery, its written decision.

ARTICLE II Definitions

§147-4 Terms Defined

The following definitions shall apply in the interpretation of this Bylaw.

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

Adjoining land area, also referred to as the Buffer Zone - That area of land extending 100 feet horizontally outward from the boundary of any AREA defined as "Freshwater Wetlands". This term shall also include that area of land extending 200 feet horizontally outward from the boundary of any vernal pool, river, pond and lake.

Alter - Shall include without limitation, the following actions when undertaken in areas subject to this Bylaw:

- (1) removal, excavation or dredging of soil, sand, gravel or aggregate material of any kind;
- (2) changing of pre-existing drainage characteristics, flushing characteristics, salinity distribution, sedimentation patterns, flow patterns or flooding characteristics;
- (3) drainage or other disturbance of water level or water table;
- (4) dumping, discharging or filling with any material which may degrade water quality;
- (5) placing of fill or removal of material which could alter elevation;
- (6) driving of piles, erection of buildings or structures of any kind;
- (7) placing of obstructions or objects in water;
- (8) destruction or dislocation of plant life, including cutting and trimming of trees and shrubs except as needed for safety, (excluding vista pruning as defined in 310 CMR, 10.04) and the introduction of invasive species.
- (9) changing water temperature, biochemical oxygen demand or other physical, biological or chemical characteristics of any waters or wetland.
- (10) any activities, changes or work which may cause or tend to contribute to pollution of any body of water or ground water.
- (11) incremental activities that have, or may have, a cumulative adverse impact on the resource area protected by the Bylaw.

Applicant – The person or entity requesting a Determination of Applicability or a Wetland Permit. The term Applicant and the term Petitioner shall be interchangeable for purposes of these regulations.

Bog - as defined in M.G.L. Chapter 131 §40 paragraph 5 shall apply for this regulation.

Freshwater Wetlands - wet meadows; swamps; bogs; marshes; vernal pools; banks; reservoirs; lakes; ponds of any size; rivers; streams; creeks; beaches; dunes; land subject to flooding; land under water bodies; areas where ground water, flowing or standing surface water or ice provide a significant part of the supporting substrate for a plant community for at least five months of the year. For the purpose of this Bylaw, fresh water wetlands shall also include non-bordering vegetated wetlands .

Inundation by ground water - The presence of ground water at or near the surface of the ground at least six months of the year.

Isolated Land Subject to Flooding - The definitions given in 310 CMR 10.57(2)(b) shall apply to this regulation except that the minimum volume of 1/4 acre-feet does not apply when the area is known to be part of the ground water system.

Resource Area – Wetlands and all adjoining land area (or buffer zone)

Water Pollution - the changing of water temperature, biochemical oxygen demand (BOD), and/or other physical, biological or chemical characteristics of the water.

B. The definitions given in 310 CMR 10.04 for the following shall apply to this regulation: dredge, fill, flood control, freshwater wetlands, lake, land subject to flooding (except for isolated land subject to flooding), marsh, meadow, pond (except that the size threshold of 10,000 square feet shall not apply), private water supply, public water supply, river, stream.

ARTICLE III Request for Determination of Applicability

§147-5 General

Any person who desires a determination as to whether these regulations apply to an area, or work to be performed in an area, shall file with the Commission plans and specifications as required under M.G.L.Chapter 131 §40 and as further defined below.

§147-6 Filing Procedure

- A. Two (2) original copies of Massachusetts WPA Form 1 Request for Determination of Applicability (RDA) and Harvard Forms A,B,C, D, E and F accompanied by the appropriate filing fee (Form F) payable to the Town of Harvard.
- B. The petitioner shall provide eight (8) copies of the narrative and the accompanying plans, one (1) for each of the Commission members. The petitioner shall provide an additional copy, for a total of nine (9), if the project is within 200' of Bare Hill Pond for review by the Bare Hill Pond Watershed Management Committee.
- C. All copies shall be double sided when possible.
- D. The petitioner shall provide signed Form D granting the Harvard Conservation Commission or its consultants access to the area for which the RDA has been filed at any time from receipt of Application through the expiration of the Determination of Application, if applicable.
- E. The submission must be made by Certified Mail addressed to 13 Ayer Road, Harvard, MA 01451 or delivered by hand to the Commission Agent . The application date will be recorded as the date when the Agent receives the application.

- F. To satisfy newspaper postings the application must be received by 12:00 pm. on Monday, a week prior to the Thursday meeting of the Commission.
- G. Two (2) complete copies shall be submitted to the Department of Environmental Protection, 627 Main Street, Worcester, MA 01608.

§147-7 Notice to abutters

- A. The petitioner shall provide as part of the Request for Determination a certified list of abutters within 300 feet of the project location to whom notification of intent to file has been sent.
- B. The Notice to abutters shall be on Form B. The petitioner(s) shall provide copies of the signed receipts from abutters or certificate of mailing, as proof of notification no later than the date of the public hearing

§147-8 Public Hearing

- A. The commission shall hold a public hearing on the Request for Determination of Applicability (RDA) and shall issue a written determination within twenty-one (21) days of the receipt of the Request. Prior to making the Determination, the Commission may require the submittal of additional data deemed pertinent to that determination. The Commission's determination shall be issued on WPA Form 2. At any time after an RDA is filed, Commission members may enter onto the land in the performance of their official duties.
- B. In the event that the Commission determines that snow cover, ice or other weather conditions prevent the verification of the wetland line the Commission shall continue the hearing to a date certain when the Determination can be made. In the case that the Applicant objects to a continuance or delay, the hearing shall be closed and the Commission shall take action on the information available.
- C. The Applicant will be required to pay a local newspaper of general circulation and the Town of Harvard for posting on the Town's website for the current cost of advertising the hearing. The Applicant will be notified of the amount for posting on the Town's website prior to the hearing. The Applicant will be billed directly from the local newspaper for the cost of the advertised hearing.

§147-9 Appeal

The decision may be appealed according to the provisions of the Massachusetts General Laws, See Article X, below.

**ARTICLE IV
Application for Harvard Wetland Permit**

§147-10 General

Any person who desires a permit shall file with the Commission plans and specifications as required under M.G.L. Chapter 131 § 40 and as further defined below.

§147-11 Filing Procedure

- A. Two (2) original copies of WPA Form 3 Notice of Intent (NOI) or WPA Form 4 Abbreviated Notice of Intent, or WPA Form 4A Abbreviated Notice of a Resource Area Delineation (ANRAD) with accompanying plans and pertinent data and Harvard Forms A,B,C (if needed), D, E, and F accompanied by the State mandated filing fee, plus additional Harvard filing fees (Form F), and a check payable to the Registry of Deeds for the appropriate sum to record the Order shall be presented with the application.
- B. The Petitioner shall provide eight (8) copies of the narrative and the accompanying plans, one (1) for each of the Commission members. The petitioner shall provide an additional copy, for a total of nine (9), if the project is within 200' of Bare Hill Pond for review by the Bare Hill Pond Watershed Management Committee.
- C. All copies shall be double sided when possible.
- D. The Petitioner shall provide signed Form D granting the Harvard Conservation Commission or its consultants access to the project site under consideration for permit at any time from receipt of Application through the issuance of a Certificate of Compliance.
- E. The submission must be made by Certified Mail addressed to 13 Ayer Road, Harvard, MA 01451 or delivered by hand to the Commission Agent. The application date will be recorded as the date when the Agent receives the application.
- F. To satisfy Newspaper postings the application must be received by 12:00 pm. on Monday, a week prior to the Thursday meeting of the Commission.
- G. Two (2) complete copies shall be submitted to the Department of Environmental Protection, 627 Main Street, Worcester, MA 01608.

§147-12 Incomplete Application

An application must include, at a minimum, in a properly executed Notice of Intent (WPA Form 3) and/or Abbreviated Notice of Intent (WPA Form 4), and/or Abbreviated Notice of a Resource Area Delineation (WPA Form 4A) the items required under Article IV of these Regulations and properly executed Harvard Forms A, B with a certified list of abutters, C (if needed), D, E and F unless a waiver is granted by the Commission, pursuant to §147-3 of these regulations. If the Commission determines that an application is incomplete or improper it shall notify the Applicant within twenty-one (21) days of the date of receipt. The Commission may, at its discretion:

- A. Return the entire application, in which case all the required time periods for processing the application will become invalid.
- B. Require that 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.
- C. Continue the public hearing at the Applicant's expense, for a period to be determined by the Commission.

§147-13 Notice to abutters

- A. The Petitioner shall provide as part of the application a certified list of abutters within 300 feet of the project location to whom notification of intent to file has been sent.

B. The Notice to abutters shall be on Form B. The Petitioner(s) shall provide copies of the signed receipts from abutters or certificate of mailing, as proof of notification no later than the date of the public hearing.

§147-14 Notice to Town Boards

The Petitioner shall, if permits from other Town boards are required for the project, file simultaneously with those boards (unless such applications were filed prior to filing with the Commission). Any information or plans communicated to those boards shall also be sent to the Commission by the Petitioner. The Commission may also require the petitioner to submit complete copies of the application and all of its accompanying data to the Fire Department or the Bare Hill Watershed Management Committee. Should the petitioner fail to submit copies to any board, department or committee required by the Commission, the application may be treated as an incomplete application under §147-12 above.

§147-15 Consultant Review Fees

A. If, after receiving an Application for a Wetland Permit or Request for Determination, the Commission determines that in order to review that Application or Request it requires technical advice unavailable from municipal employees, it may employ outside consultants pursuant to M.G.L. c. 44, §53G. The Commission may, by majority vote, require that the applicant pay a reasonable fee for the employment of outside consultants. Whenever possible, it shall work cooperatively with the Applicant to identify appropriate consultants. The outside consultant may be employed to review the application or request, to evaluate it and to make recommendations to the Commission regarding any changes s/he would suggest to better effectuate the interests of the Bylaw.

B. A review fee may be imposed only if:

- (1) the work of the consultant consists of review of studies and/or plans prepared on behalf of the applicant or independent studies on behalf of the Commission, recommended changes to any such study and/or recommendations as to any changes to the plans;
- (2) the work is in connection with the applicant's specific project, and
- (3) all written results and reports are made part of the record before the Commission.

C. A review fee may be imposed only after the Commission has complied with the applicable provisions of the Uniform Procurement Act, M.G.L. c. 30B, §§ 1-19, except for professional services which are exempt from the competitive procurement requirements of said M.G.L. c. 30B.

D. All fees assessed pursuant to this Paragraph shall be reasonable in light of:

- (1) the complexity of the proposed project as a whole;
- (2) the complexity of particular technical issues;
- (3) the area or resource areas subject to protection to be affected;
- (4) the size and character of the site;
- (5) the projected construction costs, and
- (6) fees charged by similar consultants in the area.

E. Any invitation for bids or request for proposals shall indicate that award of the contract is

contingent upon payment of a consultant review fee by the Applicant. If the Applicant fails to pay the review fee within ten (10) days of receiving written notification of selection of a bidder or offeror, the Commission may deny the Application or Request.

F. Prior to paying the consultant review fee, the Applicant may appeal the selection of the consultant to the Board of Selectmen.

- (1) The grounds for such an appeal shall be limited to claims that the consultant selected has a conflict of interest or does not possess the minimum, required qualifications.
- (2) The minimum qualifications shall consist either of an educational degree in or related to the field at issue or three (3) or more years of practice in the field at issue or a related field.
- (3) The required time limits for action upon the Application or Request by the Commission shall be extended by the duration of the appeal. In the event that no decision is made by the Board of Selectmen within thirty (30) days following the filing of the appeal, the selection made by the Commission shall stand.

G. Each consultant review fee shall be deposited in a special account established by the Town Treasurer pursuant to M.G.L. c. 44, §53G:

- (1) Funds from the special account may be expended only for the purposes described in §147-15B, above, and in compliance with the Uniform Procurement Act, M.G.L. c. 30B, §§ 1-19, if applicable.
- (2) Within thirty (30) days of the issuance of the Certificate of Compliance or of such time as the Applicant formally withdraws the proposal, the Applicant shall receive a final report of funds in the special account and shall be paid any unspent excess in the account, including accrued interest.
- (3) The Town Accountant shall submit annually a report of the special account to the Board of Selectmen and the Town Administrator for their review. This report shall be published in the Annual Town Report.

§147-16 Setbacks

These setbacks from the edge of wetlands are the minimum and may be extended further if deemed necessary for the protection of the interests of the Bylaw by the Commission. These setbacks may be waived, modified or altered in extraordinary circumstances if the Petitioner establishes by a preponderance of the evidence that the project cannot be accomplished with any other design and there will be minimal adverse impact on the interests of the Bylaw.

Wetland dependant structures (drains, outfalls, weirs), fences, and structures necessary for upland access where reasonable alternative access unavailable	0 – foot setback
No disturb zone in which there shall be undisturbed natural vegetation, except for vernal pools shall be	50 – foot setback 100- foot setback
Driveways, roadways, structures	75 – foot setback
Chemical Free zone – no fertilizers, lawn chemicals, etc.	100 – foot setback
Above or Underground storage of gasoline, oil other fuels and hazardous materials	100 – foot setback

§147-17 Public Hearing

- A. The Commission shall hold a public hearing on the Application for a Permit within twenty-one (21) days of the receipt of the Application. Prior to the issuance of an Order of Conditions, the Commission may require the submittal of additional data deemed pertinent to the Order of Conditions. The Commission's decision shall be issued on WPA Form 5. At any time after an Application for a Permit is filed, Commission members may enter onto the land in the performance of their official duties.

- B. In the event that the Commission determines that snow cover, ice or other weather conditions prevent the verification of the wetland line or other plan specifications, the Commission shall continue the hearing to a date certain when a determination can be made. In the case that the Applicant objects to a continuance or delay the hearing shall be closed and the Commission shall take action on the information available.

- C. The Applicant will be required to pay a local newspaper of general circulation and the Town of Harvard for posting on the Town's website for the current cost of advertising the hearing. The Applicant will be notified of the amount for posting on the Town's website prior to the hearing. The Applicant will be billed directly from the local newspaper for the cost of the advertised hearing.

§147-18 Appeal

The decision may be appealed according to the provisions of the Massachusetts General Laws, *See* Article X, below.

**ARTICLE V
Vernal Pools**

§147-19 Presumptions of a vernal pool

The term "vernal pool" is defined in Chapter 119-9 of the code of the Town of Harvard. It is not necessary for a pool to be certified by the Massachusetts Natural Heritage and Endangered Species program to enjoy protection. It shall be the Applicant's responsibility to indicate the location of possible vernal pools and vernal pool habitat on the subject property.

§147-20 Overcoming the presumption

For the purposes of overcoming the presumption of a vernal pool habitat the Commission will consider:

- A. Evidence that the ponding area does not hold water for at least two (2) continuous months when not in a period of extended drought.

- B. Evidence that vernal pool species do not breed or have not bred in the ponding area.

- C. Evidence that the ponding area could not be a viable breeding site for vernal pool species due to incompatible physical, chemical, biological, or other persistent conditions at the site in most years.

§147-21 Challenges to the presumption

Many of the indicators of vernal pool habitat are seasonal. For example, certain salamander egg clusters are only found between late March and late May. Wood frog chorusing only occurs between late March and May, and then only at night. Consequently, failure to find evidence of breeding must be tied explicitly to those periods during which the evidence is most likely to be available. Accordingly, in the case of challenges to the presumption of vernal pool habitat, the Conservation Commission may require that the determination be postponed until the appropriate time period consistent with the evidence being presented. The Commission may also require its own site visits as necessary to confirm the evidence plus the use of consultants as needed.

ARTICLE VI Wetland Replication

§147-22 History

The history of wetland replication is mixed. Scientific reviews conclude that for the most part replications fail to reproduce the range of values – in quantity and quality – of the wetlands they are intended to replace, in particular, difficulties in replicating proper hydrological conditions in a consistent and enduring fashion seem to be a major source of the problem.

§147-23 Conditions for Replication

The Commission shall strongly discourage any plan that requires wetland replication.

In those rare instances where replication is approved by the Commission the following conditions must be met:

- A. The replicated wetland must be constructed in full and conditionally approved prior to construction of any structures. At a minimum the replicated wetland must reproduce all the values and functions of the original wetland as determined by the Commission. The Commission may require that additional values and functions be incorporated into the replication design.
- B. In particular, in circumstances where replacement of specific functions and values would require substantial amounts of time before being completely replicated (for example, those provided by large mature trees) the Commission may require additional compensation of area, functions, values, etc. beyond those required in other sections of the Bylaw and its regulations.
- C. In most cases the minimum area of replication must be at least 1.5x as large as the area of the original resource that will be destroyed. The actual area ratio of replacement shall be decided on a case-by-case basis in accordance with §147-23 A and B, above.
- D. A qualified wetland scientist, employed by the Applicant shall be required by the Commission during the construction of the wetland replication area. The credentials of the wetland scientist shall be submitted to the Commission for approval prior to the start of construction.
- E. Erosion control barriers shall be placed around the proposed wetland replication area prior to start of construction
- F. Prior to the start of wetland construction detailed measurements of the depth of the soil O and A horizons within the wetland to be lost during construction shall be conducted. The project shall use this information to determine the suitability of these horizons for reuse in the replication area and to calculate the need for additional soil materials. The top twelve inches (12”) of soil from the original wetland must be transplanted with soil structure- especially lamination and density profile- intact to the replication area. This is intended to preserve plant, invertebrate and planktonic communities of the wetland and inhibit the blossoming of “invasive species.

- G. Soil materials to be reused (from the wetland to be lost during construction) shall be removed and placed in the prepared replication area within one (1) day. If this is not possible, these soils shall be stockpiled for the minimum amount of time feasible and kept loosely covered and moist at all times. Each day any soils are stockpiled the project manager shall notify the Commission in writing of the stockpiling, the volume of soils stockpiled, the reason therefore, and the expected duration of the stockpiling. The notification shall contain a certification signed by the wetland scientist that s/he has inspected the stockpile that day and that it is loosely covered and moist.
- H. The proposed replication area shall be excavated to a depth of one (1) foot below the proposed final grade, as specified in the specification and plans submitted as part of the Application and referred to in the Order of Conditions (OOC). The subsoil within the replication area shall be examined by the wetland scientist to determine whether it is fine textured (fine sandy loam or finer, as defined by NRCS standards). If the subsoil is course textured, it shall be replaced with fine textured material to allow for the development of a capillary fringe between the groundwater and the soil surface.
- I. Following placement of topsoil a minimum of forty-eight (48) hours shall pass prior to planting of wetland vegetation to allow for rebound of buried or compacted peat. The final grade shall be adjusted as necessary.
- J. The wetland scientist shall visit the replication area weekly following planting and seeding for the duration of the first growing season to determine the need for irrigation and additional fertilization and to inform the site contractor of these requirements.
- K. Erosion control structures shall be removed upon stabilization of the replication area to allow free circulation of water between the wetland replication area and the adjacent natural wetland
- L. The wetland scientist shall inspect the wetland replication area twice (2) each year during late spring and during the mid to late summer of the first two (2) full growing seasons. A written report shall be submitted to the Commission at the end of each growing season
- M. A bond shall be posted that will enable the Commission to complete the replication should the Applicant fail to fulfill obligations set forth in the Order of Conditions. The amount of the bond shall be determined by the Commission (See Article XII, below).

ARTICLE VII

Plans

§147-24 Plan Requirements

Plans shall adequately describe the proposed activity and its effect on wetlands and related water resources and adjoining land areas. The following items are set out as a minimum standard, and are not intended to be a complete and final presentation as to what a plan would show. The Applicant may submit, or be required to submit to the Commission, any additional information which would assist in the review and which is deemed necessary to determine the proposed effect on the interests protected by the Harvard Wetlands Bylaw. All applications shall include:

A. General Information Required

The Applicant upon submission of the application may be required to provide the following:

- (1) All drawings shall be drawn with the title designating the name of the project, location and names of the person(s) preparing the drawings and the date prepared, including the latest revision date. The Commission may require that plans and calculations be prepared and

stamped by a registered Professional Engineer (PE) or other registered professional when in its judgment, the complexity warrants this certification. Registered Professional Engineers shall indicate the engineering discipline in which they are certified. Plans depicting proposed drainage systems must be certified by a registered Professional Civil Engineer.

- (2) An 8 1/2" x 11" photocopy of the U.S.G.S. quadrangle sheet, showing the location of the proposed project.
- (3) An 8 1/2" x 11" section of the Tax Assessors map on which the site of the proposed activity is outlined in red.

B. Technical Data

The technical data shall be in narrative form with calculations submitted as necessary to substantiate the designs proposed and shall include:

- (1) Descriptions of any alterations to the 100 year flood storage capacity of the site. If a change of flood storage capacity is proposed, demonstrate compensatory storage at every stage in the flood plain.
- (2) Maximum ground water elevation must be given for projects that include excavation or fill within the buffer zone. The calendar dates of measurement, sampling and percolation tests shall be included for projects with septic systems.
- (3) Soil characteristics in representative portions of the site including depth of peat, muck, and organic matter in wetland areas.
- (4) Storm water management plan and calculations of runoff characteristics based on the following frequency criteria:
 - (a) on site drainage systems - ten (10) year
 - (b) roadway cross-culverts - twenty-five (25) year
 - (c) retention/detention basins – two (2) year and 100 year runoff characteristics should be calculated for pre- and post development conditions using either:
 - [1] The Rational Method for sizing of culverts and other drainage structures, exclusive of the retention and/or detention facilities, when the development will result in an impervious area of less than five acres; or
 - [2] The standard methodologies described in the U.S. Soil Conservation Service Technical Release No.55. Urban Hydrology for small watersheds, or in the U.S. Soil Conservation Service National Engineering Handbook, Section 4 for sizing of all culverts and drainage structures when the development will result in an impervious area of greater than five acres and for the sizing of all retention and/or detention facilities.
 - [3] Other methods of calculations will be considered by the Commission based on site-specific requirements.
- (5) Hydrographs that illustrate runoff characteristics before and after the proposed activity.
- (6) An erosion control plan shall be submitted describing all methods to control erosion and siltation on site during construction and until the site is stabilized.

C. Site Plan

The applicant shall submit a site plan, at a scale of 1"=not more than 40', showing the following items:

- (1) When excavation, fill or other construction is proposed, existing and proposed contours (in contrasting symbols) shall be shown in feet above sea level or relative to a datum with intervals no greater than two feet. Date of ground survey shall be given.
- (2) Delineation of all wetlands, lands subject to flooding, water bodies, waterways, ditches, creeks, rivers, streams, and ponds, whether natural or man-made, continuously or intermittently flowing. The upland boundary of all bordering vegetated wetlands shall also be shown. The 100-year flood elevation shall be shown.
- (3) A delineation of the 100-foot and 200 foot (if required by §147-4 A.) buffer zones.
- (4) A delineation of all alterations proposed in or having an impact on wetlands.
- (5) Existing stone walls, buildings, rock ridges and outcroppings shall be shown.
- (6) Location, extent and area of all existing and proposed structures, roadways, paved areas, septic systems, wells, tanks and utility easements.
- (7) Proposed lowest elevation of cellars or floors.
- (8) Existing and proposed location, rim elevation and invert elevation of all catch basins, drains, culverts, and other drainage structures immediately upstream and downstream of the site, as well as those on-site.
- (9) Details and locations for all temporary erosion controls proposed.
- (10) Proposed permanent pollution control devices on-site, such as: hooded catch basins, flow dissipaters, or vegetative buffers.
- (11) Cross-sections showing existing and proposed slope, elevations, bank and bottom conditions of each watercourse to be altered. Locations of cross sections shall be specified.
- (12) Proposed location of any fill material which will be stored on site.
- (13) The "limit of work" line shall be shown.
- (14) All plans submitted to the Commission for review shall, when possible, be in color or highlighted with transparent marker pen as follows:
 - a. Blue: Wetland line
 - b. Dotted Blue: 50 foot setback from wetland line
 - c. Dotted Green: 75 foot setback from wetland line
 - d. Green: 100 foot (and 200 foot, if required) setback from wetland line
 - e. Orange: hay bale line

ARTICLE VIII Permits and Decisions

§147-25 Imposition of Conditions

As part of a permit issued pursuant to this Bylaw, the Commission shall impose such conditions as are necessary to protect the value of the wetlands, related water resources and adjoining land areas under its jurisdiction.

§147-27 Denial of Permit

If the Commission deems that the interests stated in the Bylaw are not adequately protected under the terms of the petitioner's proposal, the Commission may refuse to issue a permit. When the Commission votes to deny a permit it shall issue a written decision.

§147-28 Imposition of Time Limits

The Commission may require as a condition of a permit, that certain work shall be performed within specific periods of time.

§147-29 Order of Conditions

Permits issued pursuant to the Bylaw and these regulations may be combined and released within an Order of Conditions which may be issued pursuant to M.G.L. Chapter 131 §40, as amended.

§147-30 Submissions of Copies

The Applicant may be required to send copies of permits and decisions issued pursuant to the Bylaw to the Board of Selectmen, Planning Board, Driveway Inspector, Fire Department, Bare Hill Pond Watershed Management Committee, Board of Health or Building Inspector.

147-31 Extension of Permit

The Commission may issue an Extension Permit for a period of one (1) year provided that a written request for an extension is filed at least thirty (30) days prior to the expiration date of the permit.

§147-32 Revocation or Amendment

The Commission may revoke or amend a permit issued under the Bylaw if any of the following circumstances occur:

A. Revocation

(1) The petitioner and/or his successors fail(s) to comply with the terms of the permit.

- (2) The petitioner and/or his successors fail(s) to comply with the terms of other Town Permits which have been issued for the project and the issuing authority has requested in writing that the Commission revoke the wetlands permit.

B. Amendment

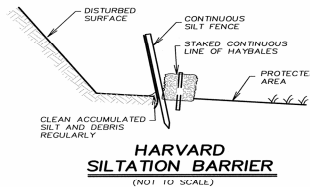
- (1) Relatively minor changes which result in the same or decreased impact on the interests protected by the Act and the Bylaw may be effectuated through an Amendment to the Order of Conditions.
- (2) If the Commission determines that the project purpose or scope has changed substantially or that the interests specified in the Wetlands Protection Act and/or the Harvard Bylaw are not protected, then no Amendment shall issue and the Applicant will be required to file a new Notice of Intent.
- (3) A request to amend an Order of Conditions shall be submitted to the Commission in writing at least seven (7) days prior to the meeting of the Commission at which it is to be initially considered. The request shall include a narrative description of the proposed change(s) along with a site plan showing the original design along with the proposed change(s). A copy of the written narrative and the modified plan should, at the same time, be submitted to the DEP regional office.
- (4) If the Commission determines that a new Notice of Intent is not necessary, the Commission shall publish in a local newspaper, at the Applicant's expense, notice in the same form as utilized for Notices of Intent, to inform the public that an amendment to the Order of Conditions will be considered at a public hearing. In addition the Applicant must follow the same requirements of abutter notification as if a Notice of Intent were filed.
- (5) Under no circumstances will the issuance of an Amended Order of Conditions extend the effective date of the original Final Order of Conditions. The Amended Order shall run with the term of the original Order of Conditions or the effective date of an extended Order of Conditions.

ARTICLE IX **Pre-construction requirements**

§147-33 Conveyance of Requirements

A. The Commission, shall convey all site-specific Pre-construction requirements within the Order of Conditions or the Determination of Applicability. The following general pre-construction requirements apply to all Orders of Conditions unless specifically waived by the Commission:

- (1) Before any clearing, grading, filling or any other construction activity, a continuous Erosion and Sedimentation (E&S) control barrier shall be built according to plans and as presented during the hearing, to control potential surface water flow and intercept sediment from the work area. The preferred E&S barrier is built according to the following diagram:



- (2) Once the E&S barrier is in place, the Agent to the Harvard Conservation Commission should be called (978-456-4106 Extension 3) for inspection and approval to proceed. Please allow five (5) working days for scheduling an inspection. No other work may be undertaken until this approval is complete. The inspection will also include other pre-construction conditions as noted in the Order of Conditions, such as the posting of the DEP file number.

- (3) Following erosion barrier approval, no storage of materials, tree or brush cuttings, or any construction activity may take place outside, on the wetlands side, of the diked area. The erosion control barrier is considered the " limit of disturbance and activity " and absolutely no activity shall take place in that area without the express approval of the Commission.

- (4) As soon as possible, but in no event later than twenty-four (24) hours after each rain storm the erosion barrier shall be inspected and replaced or repaired as needed. Any material accumulated behind the barrier shall be removed promptly and placed appropriately in the work area, not in the wetland or buffer zone; or trucked off site and deposited in an approved upland fill site. Any accidental damage to the erosion barrier must be repaired within one (1) day and no work may proceed on the site until damage to the barrier is corrected. No work will take place during or immediately after rain storms.

ARTICLE X Appeal

§147-34 Appeal of Permit

Any person aggrieved by the decision of the Conservation Commission, whether or not previously a party to the preceding, may appeal according to the Massachusetts General Laws.

§147-35 Appeal Timeframe

The appeal shall be made within ten (10) days of the signing and/or issuance of said decision, whichever is the later. Notice of the appeal and a copy of the complaint shall be sent by Certified Mail, or hand delivered, to the Commission, its authorized representative or assigns, and the Town Counsel so as to be received within the ten (10) day appeal period.

§147-36 Appeals Content

- A. The appeal shall contain any facts pertinent to the issue, a copy of the decision being appealed bearing the date of filing thereof, the complete name and address of the attorney, if any, representing the person filing the appeal, and the relief being sought.
- B. If the complaint is filed by some person or persons other than the original Applicant, appellant or petitioner, such original applicant, appellant and all members of the Conservation Commission shall be named as parties defendant.

ARTICLE XI Final release

§147-37 Request for a Certificate of Compliance

Upon completion of the project, the applicant shall request in writing from the Commission, a Certificate of Compliance, WPA Form 8A. This request shall be accompanied by an "as built" plan and an engineer's certification of the project's compliance with the permit.

§147-38 Decision on Certificate of Compliance

If, after site inspection, the Commission determines that the requirements of the permit have not been satisfactorily met, the request for a final release may be denied. The decision along with the reasons for denial, shall be forwarded to the applicant within twenty-one (21) days of the receipt of the request.

§147-39 Permanent Conditions

The Commission may specify in the Certificate of Compliance, that certain conditions of the permit, such as maintenance of waterways and erosion control, are imposed permanently and do not expire with the issuance of the Certificate of Compliance.

§147-40 Recording of Certificate of Compliance

The person to whom the Certificate of Compliance is issued shall forthwith record the Certificate of Compliance in the Registry of Deeds in the chain of title of the affected property and shall notify the Conservation Commission, in writing, that said recording has occurred.

ARTICLE XII Security and Enforcement

§147-41 Guaranty of performance and observation of conditions

- A. As part of a permit issued under this Bylaw, in addition to any security required by any other Town or State board, agency or official, the Commission may require that the performance and observance of the conditions imposed hereunder may be secured wholly or in part by one or more of the methods described below:
- (1) By proper bond or deposit of money or negotiable securities sufficient in the opinion of the Commission.
 - (2) By a conservation restriction, easement, or other covenant remaining with the land and enforceable in the court of law, executed and duly recorded by the owner of record, to the Town and members of the public, whereby permit conditions shall be performed and observed before any lot may be conveyed other than by mortgage deed. Upon completion of site alterations required in the permit, security for the performance of which was given by bond, deposit, or covenant, or upon the complete performance of the covenants with respect to the site, the Applicant may request and agree to terms of release which the Commission shall determine. If the Commission determines that said alterations have been completed in compliance with the conditions of the permit, it shall release the interest of the Town in such bond and return the bond or deposit to the person who furnished same, or release the covenant, if appropriate.
- B. If the Commission determines that said alterations have not been completed in compliance with the permit, it shall, within forty-five (45) days specify to the Applicant, in writing, the details wherein said alterations fail to comply with the permit.

§147-42 Enforcement

- A. The Commission may issue an Enforcement Order or an Order to Cease and Desist if at any time it becomes aware of any alteration of or work within a resource area protected by the Bylaw that is not pursuant to a valid Order of Conditions. Any member of the Commission may issue an Enforcement Order or an Order to Cease and Desist upon good cause shown.
- B. A public hearing shall be held on the Enforcement Order or Order to Cease and Desist at the next regularly scheduled meeting of the Commission or as soon as practicable if a hearing at the next regularly scheduled meeting is not feasible.
- C. If alteration to the resource area has commenced, the Commission may, as part of the Enforcement Order and/or Order to Cease and Desist, require the landowner and/or person responsible for the alteration to restore the resource area; to replicate the altered resource area; or any other action deemed necessary by the Commission to protect the interests of the Bylaw.

ARTICLE XIII
Availability of Regulations

§147-43 Copies available for purchase

Copies of Chapter 147 Wetlands Protection Bylaw Rules shall be made available for purchase from the Harvard Conservation Commission, 13 Ayer Road, Harvard, MA 01451, for the price of \$7.00 in the form of cash or a check made out to the Town of Harvard.

ARTICLE XIV
Amendments

§147-44 Public Hearing & Vote

These rules and regulations may be amended from time to time by a majority vote of the Conservation Commission. Prior to taking a vote on an amendment, the Conservation Commission shall have a public hearing on the proposed change(s).

FORM A
NOTICE OF FILING

DATE: _____ RE: Property located at _____
FROM: _____
(applicant)

Address _____

Telephone _____

A. Pursuant to the requirements of M.G.L. Chapter 131 §. 40 and /or the Harvard Wetlands Bylaw I am submitting herewith a complete copy of a Request for Determination of Applicability or an Application for a Harvard Wetland Permit. Copies of this complete application have been submitted as required under subsection 147-14 Notice to Town Boards by certified mail or hand delivery as follows:

	Date of Submittal
Conservation Commission (10 copies)	_____
Department of Environmental Protection (2 copies)	_____
_____	_____
_____	_____
_____	_____

(add boards as specified at time of filing)

B. Have the abutters to the property on which the work is proposed, been notified about the filing of this application, on Form B? _____ (attach a certified list of abutters who have been notified).

C. If the owner of the land is other than the Applicant, the owner must either sign this application in the space provided or provide written authorization for the Applicant to apply.

Owner's Signature _____ Date: _____

D. Please check the appropriate box(s):

- Request for Determination of Applicability
- Notice of Intent
- Abbreviated Notice of Intent
- Abbreviated Notice of Resource Area Delineation
- Amendment of the Order of Conditions

E. Have the appropriate Town filing fees been included? _____

FORM B
NOTIFICATION TO ABUTTERS
MASSACHUSETTS WETLAND PROTECTION ACT
AND HARVARD WETLANDS PROTECTION BYLAW

DATE: _____

Certified Mail # _____
or Date of Hand Delivery _____

TO: _____
(abutter) (address)

FROM: _____
(applicant) (address) (Telephone No.)

RE: Property identified on Harvard Assessors Map # _____ Parcel _____
The address of the lot where the activity is proposed is:
_____.

Pursuant to the requirements of the Harvard Wetlands Protection Bylaw and the second paragraph of Massachusetts General Laws Chapter 131 §40, you are hereby notified that the following forms have been filed with the Harvard Conservation Commission:

_____ A Notice of Intent or Abbreviated Notice of Intent seeking permission to remove, fill, dredge, or alter an Area Subject to Protection Under the Wetlands Protection Act (General Laws Chapter 131, §40) and the Harvard Wetlands Protection Bylaw (Chapter 119 of the Code of the Town of Harvard).

_____ An Abbreviated Notice of Resource Area Delineation for confirmamtion of the delineation of a Bordering Vegetated Wetland (BVW) for projects in the buffer zone under the Wetlands Protection Act (General Law Chapter 131, § 40) and the the Harvard Wetlands Protection Bylaw (Chapter 119 of the Code of the Town of Harvard).

_____ A Request for Determination of Applicability of the Harvard Wetlands Protection Bylaw (Chapter 119 of the Code of the Town of Harvard).and the State Wetlands Protection Act (General Laws Chapter 131, §40)

_____ Amendment to the Order of Conditions under the Harvard Wetland Bylaw (Chapter 119 of the Code of the Town of Harvard)

The Harvard Wetlands Protection Bylaw defines abutters as those persons whose property is within 300 feet of the boundary of the property or whose property lies across a traveled way or railroad bed from the property identified above. Notices shall be sent to the most recent owner of the property according to the most recent Assessors record. The list of abutters shall be certified by the Board of Assessors.

The Harvard Conservation Commission will hold a public hearing on the filing within twenty-one (21) days upon receipt of the complete application. Notice of this public hearing will be given at least five (5) days prior to the hearing, in a local newspaper, as well as appear on the Town of Harvard website at www.harvard.ma.us . Plans for this project and a copy of the application are on file with the Land Use Board Office. Copies may obtained from the Applicant's Representative by calling the following telephone number(____)____ between the hours of _____ and _____ on the following days of the week _____. The hearing can be subsequently continued to a later date by the Commission with the agreement of the Applicant.

To Contact the Central Region DEP office call (508)946-2800

FORM C
REQUEST FOR WAIVER
HARVARD WETLANDS PROTECTION BYLAW

Date:

To: Harvard Conservation Commission

From: _____
(name of petitioner)

(address of petitioner)

RE: Harvard Wetlands Rules and Regulations

Request for Waiver

Pursuant to the provisions of §147-3 of the Rules And Regulations for the administration of The Harvard Wetlands Protection Bylaw, I hereby request a waiver from the Commission for compliance with the following section of the regulations as shown on the pages listed.

The waiver is requested for the following reason(s):

Signature of petitioner _____ Telephone # (____) _____

FORM D
PERMISSION FOR ACCESS

TO: Harvard Conservation Commission
13 Ayer Road
Harvard, MA 01451

From: _____

Pursuant to §147-6.D. or §147-11.D. of the Wetlands Protection Bylaw Rules I do hereby grant the Harvard Conservation Commission and/or its consultants access to the project site under consideration for a Determination of Applicability, Notice of Intent, Abbreviated Notice of Intent, Abbreviated Notice of a Resource Area Delineation or an Amendment to the Order of Conditions any time from the receipt of such notice through the issuance of a Certificate of Compliance, Negative Determination, expiration of a Positive Determination and/or a Order of Resource Arae Delineation.

Signed: _____ Date _____
Owner or Authorized Applicant from Form A part C

FORM E

PERMISSION TO BILL APPLICANT DIRECTLY FOR LEGAL NOTICE

TO: Harvard Conservation Commission
13 Ayer Road
Harvard, MA 01451

FROM: _____

I hereby authorize _____ to bill me directly for the legal notice published in the
(Name of Newspaper Company)
_____ Newspaper for a public hearing with the Harvard Conservation Commission
(Name of Newspaper)

Signed: _____
Owner or Authorized Applicant from Form A

part C

FORM F

Wetland filing fees calculation worksheet for work in resource areas

	Fee	Total
<u>Notice of Intent Fees</u>		
1) <i>Single family</i>		
Septic Repair or Upgrade (Enter Fee & Skip to Total Fee)	\$200.00	_____
Construction or alteration involving 500sf or less of construction	\$250.00	_____
Construction or alteration involving more than 500sf of construction	\$400.00	_____
2) <i>Subdivision/mini Subdivision</i>		
Roads and Utilities only	\$1,500.00	_____
Multifamily/Condominium Structures construction	\$1,500.00	_____
3) <i>Commercial or Industrial Projects</i>	\$1,500.00	_____
<u>Additional charges under a Notice of Intent for disturbance within the buffer zone</u>		
1) Disturbance within the buffer zone (Maximum \$1,000.00)	_____sf	x 0.10 = _____
2) Confirmation delineated wetland line	_____linear ft	x 0.50 = _____
3) Alteration or replication of wetlands	_____sf	x 1.00 = _____
TOTAL FILING FEE		_____
Fee doubled if Notice of Intent is filed after work began or an Enforcement Order was issued		_____
<u>Other fees</u>		
Request for an amendment to an Order of Conditions	\$50.00	_____
Request for an extension to an Order of Conditions	\$50.00	_____
Request for a reissued Certificate of Compliance	\$75.00	_____
Request for an Emergency Certificate of Compliance	\$100.00	_____
Request for an Emergency Certification Form	\$100.00	_____
Request for Certificate of Compliance with Expired OOC or Partial Certificate of Compliance	\$50.00	_____
Request for Determination of Applicability (RDA)	\$50.00	_____
Abbreviated Notice of Resource Area Delimitation (ANRAD) (Minimum \$100.00)		
	_____linear ft	x 0.50= _____
Note: These fees are in addition to recording and advertising fees, and to the State Wetlands Program Fees charged under MGL. Ch. 131 Sec.40 and 310 CMR 4.10(8)(n).		
TOTAL FEE PAYABLE TO THE TOWN OF HARVARD		_____

