

TOWN OF VERNON CONNECTICUT



INLAND WETLANDS AND WATERCOURSES REGULATIONS

Inland Wetlands Regulations
Amendments through October 8, 2006
Available via internet
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**TOWN OF VERNON
INLAND WETLANDS AND WATERCOURSES REGULATIONS**

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SECTION 1 - TITLE AND AUTHORITY

- 1.1 These Regulations shall be known as the "Inland Wetlands and Watercourses Regulations of the Town of Vernon."

- 1.2 These Regulations have been prepared by the Vernon Inland Wetlands Commission in accordance with the provisions of an Act Concerning Inland Wetlands and Water Courses (Public Act 72-155, as amended: Public Act 73-571: Public Act 74-133;Public Act 75-387 and Public Act 87-533) and as authorized by the Vernon Town Council in accordance with an ordinance adopted on May 6, 1974.

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SECTION 2 - DEFINITIONS

As used in these regulations:

- 2.1 Applicant: The Applicant must be the property owner, the property owner's agent, the Town of Vernon, or someone with a direct financial interest in the subject property. Said interest shall be explained. Written permission for this Application must be obtained from the property owner if the Applicant is not the property owner.
- 2.2 "Bog" means a poorly drained area containing an accumulation of organic material and characterized by an association of plants recognized as bog species, listed in the booklet titled, Inland Wetland Plants of Connecticut (May, 1973).
- 2.2A "Buffer" means a vegetated area inclusive of trees, shrubs, and herbaceous vegetation that exists or is established to protect a watercourse, intermittent watercourse, or wetland.
- 2.3 "Clear Cutting" means the cutting down or removal of eighty per cent (80%) or more of all trees and/or vegetation in the area of activity.
- 2.4 "Commencement of activity" mean: The undertaking and completion of at least ten percent (10%) of quantifiable portions of all of the activities authorized by, and enumerated on, a permit granted by the Commission. The Commission shall have the final authority to determine if the authorized activity has commenced within the required time frame as outlined in Section 4.9 of these Regulations
- 2.5 "Commission" means the Inland Wetlands Watercourses Commission of the Town of Vernon.
- 2.6 "Deposit" includes, but shall not be limited to fill, grade, dump, place, discharge or emit.
- 2.7 "Discharge" means the emission of any water, substance or material into waters of the Town, whether or not such substance causes pollution.
- 2.8 "Feasible" means able to be constructed or implemented consistent with sound engineering principles.
- 2.9 "License" means the whole or any part of any permit, certificate of approval, or similar form of permission, which may be required by any person by the provision of these regulations and CGS 22a-36-45a inclusive.
- 2.10 "Marsh" means an area normally covered with shallow water, subject to seasonal variations, that contains an association of herbaceous, soft-stemmed plants recognized as marsh vegetation. Typical examples of marsh species are listed in the booklet titled, Inland Wetland Plants of Connecticut (May, 1973).

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- 2.11 "Material" means any substance, solid or liquid, organic or inorganic, including, but not limited to soil, sediment, aggregate, land, gravel, clay, bog, mud, debris, sand, refuse, vegetation, and waste.
- 2.12 "Person" means any person, firm, partnership, association, corporation, company, organization or legal entity of any kind, including Municipal Corporation, governmental agencies, or subdivisions thereof.
- 2.13 "Pollution" means harmful thermal effect or the contamination or rendering unclean or impure of any waters of the Town by reason of any waste or other materials discharged or deposited therein by any public or private sewer or otherwise so as directly or indirectly come in contact with waters of the Town.
- 2.14 "Prudent" means economically and otherwise reasonable in light of the social benefits to be derived from the proposed Regulated Activity, provided cost may be considered in deciding what is prudent and further provided a mere showing of expense will not necessarily mean an alternative is imprudent.
- 2.15 "Regulated Activity" means any operation within or use of a wetland or watercourse involving clear cutting, removal of material, deposit of material, or any obstruction, construction, alteration, or pollution of such a wetland or watercourse, but shall not include the specified activities in Connecticut General Statutes (CGS) Section 22a-40 and the specified activities in Vernon Wetlands Regulations Sections 3.2 & 3.3, subject to the conditions therein. Furthermore:
- 2.15.1 Any clearing, grubbing, filling, grading, paving, excavating, constructing, depositing or removal of material, or discharging of stormwater on land within one hundred (100) feet measured horizontally from the boundary of a wetlands, watercourse, or intermittent watercourse or two hundred (200) feet measured horizontally from the boundary of the Hockanum River, Ogden Brook, Tankerhoosen River, Gage's Brook, Railroad Brook, Walker Reservoir West, Walker Reservoir East, and Valley Falls Pond is a Regulated Activity.
- 2.15.2 The Commission may rule that any activity that alters the existing rate or quality of any stormwater discharge conveyed to a Regulated Area or is likely to impact or affect wetlands or watercourses is a Regulated Activity.
- 2.15.3 The Commission may rule that any other activity, whether located within the Regulated Area or outside the Regulated Area, that is likely to impact or affect wetlands or watercourses is a Regulated Activity.
- 2.16 "Regulated Area" means (1) Any area defined as wetlands, watercourse, or intermittent watercourse in these Regulations and CGS Chapter 440 Wetlands and Watercourses Section 22a-36-22a-45; (2) Areas within one hundred (100) feet measured horizontally of the boundary of a wetland, watercourse, or intermittent

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watercourse; (3) Areas within two hundred (200) feet measured horizontally from the boundary of the Hockanum River, Ogden Brook, Tankerhoosen River, Gage's Brook, Railroad Brook, Walker Reservoir West, Walker Reservoir East, and Valley Falls Pond; And (4) the Commission may rule that any area in which is located a Regulated Activity that is likely to impact or affect wetlands or watercourses per Section 2.15.3 is a Regulated Area.

- 2.17 "Remove" includes, but shall not be limited to, drain, excavate, mine, dig, dredge, suck, bulldoze, clear-cut, or blast.
- 2.18 "Rendering unclean or impure," means any alterations of the physical, chemical, or biological properties of any of the waters of the Town, including, but not limited to, change in odor, color, turbidity, or taste.
- 2.19 Retention Basin: Any natural or man-made structure which helps control storm water discharge by containing it in a fixed area and allowing the water to percolate into a well-drained soil or flowing downstream after peak run-off from a storm has occurred.
- 2.20 "Significant Activity" means:
- 2.20.1 An activity involving a deposition of material which will or may have a substantial adverse effect on the Regulated Area or on another part of the inland wetland or watercourse system, or
 - 2.20.2 Any activity involving a removal of material which will or may have a substantial adverse effect on the Regulated Area or on another part of the inland wetland or watercourse system, or
 - 2.20.3 Any activity which substantially changes the natural channel or may inhibit the natural dynamics of a watercourse system, or
 - 2.20.4 Any activity which substantially diminishes the natural capacity of an inland wetland or watercourse to support desirable biological life, prevent flooding, supply water, assimilate waste, facilitate drainage, and/or provide recreation and open space, or
 - 2.20.5 Any activity which would result in degrading a watercourse or the surface and/or groundwater of an inland wetland, such degradation to be measured by the standards of the Water Compliance Division of the Connecticut Department of Environmental Protection, where applicable.
- 2.21 "Soil Scientist" means an individual duly qualified in accordance with standards set by the Federal Office of Personal Management
- 2.22 "Swamp" means an area with the water table at or near the surface of the ground throughout most of the year and containing vegetation dominated by an association

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of trees and/or shrubs recognized as swamp species. Typical examples of swamp species are listed in a booklet titled, Inland Wetland Plants of Connecticut (May, 1973).

- 2.23 "Upland Review Area" means: (1) The area extending one hundred (100) feet measured horizontally from the boundary of any wetlands, watercourse, or intermittent watercourse; (2) The area extending two hundred (200) feet measured horizontally from the boundary of the Hockanum River, Ogden Brook, Tankerhoosen River, Gage's Brook, Railroad Brook, Walker Reservoir East, and Valley Falls Pond; Or (3) any other non-wetlands or non-watercourse area in which is an activity likely to impact or affect wetlands or water-courses per Section 2.15 and 2.16.
- 2.24 "Waste" means sewage or any substance, liquid, gaseous, solid or radioactive, which may pollute or tend to pollute any of the waters of the Town.
- 2.25 "Watercourse" means rivers, streams, brooks, waterways, lakes, ponds, marshes, swamps, bogs, and all other bodies of water, natural or artificial, vernal or intermittent, public or private, which are contained within, flow through, or border upon the state or any portion thereof, not regulated pursuant to Sections 2a-28 to 22a-35, inclusive.
- 2.25.1 Intermittent watercourses shall be delineated by a defined permanent channel and bank and the occurrence of one or more of the following characteristics: (a) evidence of scour or deposits of recent alluvium or detritus, (b) the presence of standing or flowing water for a duration longer than a particular storm incident, and (c) the presence of hydrophytic vegetation.
- 2.25.2 A retention or detention basin created as part of a land use development shall be considered a watercourse after construction of said basin.
- 2.26 "Wetlands" means land, including submerged land, not regulated pursuant to sections 22a-28 to 22a-35, inclusive, which consists of any of the soil types designed as poorly drained, very poorly drained, alluvial, and Floodplain by the National Cooperative Soils Survey.

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SECTION 3 - GENERAL PROVISIONS

- 3.1 These Regulations establish a permit system by which the Town of Vernon shall regulate certain activities, which may adversely affect the wetlands and watercourses within the Town.
- 3.2 The following operations and uses are permitted in wetlands and watercourses as non-regulated uses, provided they do not disturb the natural indigenous character of the land:
- 3.2.1 Conservation of soil, vegetation, water, fish, shellfish, and wildlife;
- 3.2.2 Outdoor recreation, including play and sporting areas, fields, trails, nature study, hiking, horseback riding, swimming, skin diving, camping, boating, water skiing, trapping, hunting, fishing and shell fishing, where otherwise legally permitted and regulated.
- 3.3 The following operations and uses are permitted in wetlands and watercourses, as of right:
- 3.3.1 Construction and operation by water companies or municipal water supply systems of dams, reservoirs and other facilities necessary for the impounding, storage and withdrawal of water in connection with public water supplies, except as provided in the General Statues.
- 3.3.2 Agricultural exemptions limited to uses essential to farming operations but specifically not to include:
- 3.3.2.1 Erection of buildings not directly related to farming operation,
- 3.3.2.2 Relocation of watercourses with continual flow,
- 3.3.2.3 Filling or reclamation of wetlands or watercourses with continual flow,
- 3.3.2.4 Clear cutting of timber except for the expansion of agricultural cropland,
- 3.3.2.5 Mining of topsoil, peat, sand, gravel or similar material from wetlands or watercourses for the purposes of sale.
- 3.3.3 Boat anchorage or mooring.
- 3.3.4 Uses incidental for the enjoyment and maintenance of property, such property defined as the largest minimum lot size permitted anywhere in the Town. Such incidental uses shall include maintenance of existing

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structures and landscaping but shall not include the removal or deposition of material exceeding five (5) cubic yards from or onto a wetland or watercourse, or the diversion or alteration of a watercourse.

- 3.3.5 Grazing, farming nurseries, gardening and harvesting of crops and farm ponds of three acres or less essential to the farming operation, and activities conducted by, or under the authority of, the Department of Environmental Protection (DEP) for the purposes of wetlands or watercourse restoration or enhancement, or mosquito control. The provisions of this subdivision shall not be construed to include road construction or relocation or watercourses with continual flow, filling or reclamation of wetlands or watercourses with continual flow, clear cutting of timber except for the expansion of agricultural crop land, the mining of top soil, peat, sand, gravel, or similar material from wetlands or watercourses for the purposes of sale.
- 3.4 Nothing in these Regulations shall be deemed to prohibit the continuance of uses, building or structures regulated under the provisions of these Regulations, which exist as of the date of the adoption of these Regulations.
- 3.5 Nothing in these Regulations shall be deemed to preclude the necessity to comply with any other codes, regulations, restrictions or procedures that may be required by any other regulatory authority, whether municipal, state, or federal. Such compliance is solely the responsibility of the Applicant.
- 3.6 The Commission of the Town of Vernon, hereafter, the Commission, is the agency designated to promulgate, amend, administer, and enforce regulations for the protection of the wetlands and watercourses within the Town. Such action shall be in accordance with the provisions of the Connecticut General Statutes (CGS), and with applicable guidelines established from time to time by the Department of Environmental Protection (DEP).
- 3.7 Areas to be regulated are shown on a map, on file in the office of the Town Clerk, entitled "Inland Wetlands and Watercourses Map, Town of Vernon, Connecticut", which is declared to be part of these Regulations. Due to the scale of this map, it shall not be construed as the final definition of the Wetlands and Watercourses within the Town, but rather as a starting point for the Commission to clarify the regulated areas within the Town. Clarification shall be in accordance with Section 4.2 of these regulations. Boundaries of Regulated Areas on this map shall be established by the Commission in accordance with the procedures of the Connecticut General Statutes (CGS).
- 3.8 No regulations of the Vernon Commission shall become effective or be established until after a public hearing in relation thereto is held by the Commission. At the hearing, parties in interest and citizens shall have an opportunity to be heard. Notice of such hearing will be advertised in accordance with Section 4.4.5 of these Regulations. Regulations shall become effective at such time as is fixed by the

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Commission after such hearing, provided that such regulation shall be filed in the office of the Town Clerk. The Commission shall also state upon its record why such a change in the Regulations was made.

- 3.9 No member of the Commission shall participate in the hearing or decision of the Commission upon any matter in which he/she is directly or indirectly interested in a personal or financial sense. In the event of such disqualification, such fact shall be entered on the records of the Commission. The Quorum required by Section 8.1 of these regulations will then be reduced by the number of disqualification(s) for each specific hearing or decision.

- 3.10 If an activity authorized by a permit granted under these Regulations also needs Planning and Zoning Commission (PZC) approval, no work pursuant to the inland wetland watercourses permit is authorized until such approval is received.

- 3.11 If any application to the Planning and Zoning Commission (PZC) involves any activity regulated under the wetlands statutes, an Application for this activity must be filed with the Wetlands Commission on or before the day the PZC Application is filed.

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SECTION 4 - IMPLEMENTATION

4.1 When A Permit Is Required

Any person wishing to undertake a Regulated Activity or substantially modify a permit, as determined by the Inland Wetlands Commission (IWC), or to conduct such activity within a Regulated Area shall apply for a permit to the Commission. The Commission may rule that any other activity located within the regulated Area, or in any other non-wetland or non-watercourse area, is likely to impact or affect wetlands or watercourses and is a Regulated Activity for which a permit is required per Sections 2.15 & 2.16.

4.2 How Regulated Areas Are Determined

4.2.1 A Regulated Area is any area, which is:

4.2.1 A wetland as defined in Section 2, of these Regulations or

4.2.1.2 A watercourse as defined in Section 2, of these Regulations, or

4.2.1.3 Within the Upland Review Area (URA) per Sections 2.15 & 2.16.

4.2.2 An area is assumed to be regulated if it is:

4.2.2.1 Shown as a Regulated Area on the Inland Wetlands and Watercourse Map, or

4.2.2.2 Known to be or suspected to be a Regulated Area as defined in Section 4.2.1.

4.2.3 The decision as to whether the land in question is actually a Regulated Area will be determined at the time an Application is reviewed by the Commission.

4.2.4 A Regulated Area, which was filled subsequent to February, 1974 without a permit under these Regulations remains a Regulated Area.

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4.3 Application Procedure

4.3.1 The Application shall be filed with the Office of the Town Planner. The date of the receipt of the Application will be the date of the next regular meeting providing said meeting is at least three (3) business days after the filing of the application or thirty five (35) days after said filing, whichever is sooner.

4.3.2 **Fee schedule:**

4.3.2.1 The Commission shall from time to time establish a fee schedule as may be suitable to special circumstances in regard to such activities as required to receive, process, review and evaluate Applications and development activities.

4.3.2.2 The Commission establishes the following standard fee schedule effective October 8, 2006, which shall remain in effect until further notice.

4.3.2.2.1	Wetlands Redesignation	\$150.00
4.3.2.2.2	Modification of a Redesignation	\$ 75.00
4.3.2.2.3	Wetlands Permit	
4.3.2.2.3.1	Wetlands Permit for a Non-Significant Activity & No public Hearing	\$125.00
4.3.2.2.3.2	Wetlands Permit for a Non-Significant Activity & public Hearing	\$200.00
4.3.2.2.3.3	Wetlands Permit for a Significant Activity < ½ Acre of Disturbance in Regulated Area/Wetlands	\$250.00
4.3.2.2.3.4	Wetlands Permit for a Significant Activity between ½ < 2 Acres of Disturbance in Regulated Area/Wetlands	\$500.00
4.3.2.2.3.5	Wetlands Permit for a Significant Activity > 2 acres of Disturbance in a Regulated Area/Wetlands	\$800.00

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| 4.3.2.2.4 | Modification of a Wetlands Permit where original approval was granted less than 5 years from the date of submittal | |
| 4.3.2.2.5 | Amendment of Regulations | \$150.00 |
| 4.3.2.2.6 | Notification of abutters | \$ 1.00
(per each notification) |
| 4.3.2.2.7 | CGS 8-26 Subdivision Review | \$ 50.00 |
| 4.3.2.2.8 | State Mandatory Fee (CGS22a-27j) | \$ 30.00 |
- 4.3.2.3 If an application involves more than one request, the total fee for the application shall include the sum of the fees required for each request.
- 4.3.2.4 In addition to the standard fees for the processing of an application, the Applicant may be required to pay an additional fee to cover the costs of technical services and consultants if one or more of the following thresholds are met.
- A Technical Review may be required for any regulated activity:
- | | |
|-----------|--|
| 4.3.2.4.1 | Within 200 feet of identified waterways of concerns, specifically, Ogden Brook, Gages Brook, Railroad Brook, Walker Reservoir, Valley Falls Pond, the Hockanum River and Tankerhoosen River or; |
| 4.3.2.4.2 | That is proposed in a use district (specified in Section 4 of the Zoning Regulations) where the proposed activity in its entirety exceeds the impervious coverage thresholds established in such relevant district or; |
| 4.3.2.4.3 | That is part of an activity that in its entirety would have a parking requirement of greater than 40 parking spaces or; |
| 4.3.2.4.4 | Where a structure is proposed within 100 feet of a wetland or watercourse or; |
| 4.3.2.4.5 | Where the aggregate square footage for all structures on any parcel exceeds 25,000 or; |
| 4.3.2.4.6 | Within 200 feet of a body of water identified in the Town of Vernon 2005 Vernal Pool Verification Study or; |

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- 4.3.2.4.7 That would result in the direct filling of wetlands greater than 0.25 acres (with or without a proposed mitigation/restoration plan) or;
 - 4.3.2.4.8 That would result in the disturbance of greater than 1 acre of upland review area for a wetland or a watercourse or;
 - 4.3.2.4.9 Which includes off-street parking or loading spaces within 100 feet of a wetland or watercourse or;
 - 4.3.2.4.10 That has the potential to effect those areas identified as significant natural resources in the Town of Vernon Plan of Conservation and Development or;
 - 4.3.2.4.11 Any application in which additional technical evaluations are determined by the Commission to be necessary to fulfill the Town requirements for processing the application and/or may be necessary to obtain a satisfactory evaluation of the Application.
- 4.3.2.5 Whenever an application establishes criteria identified in 4.3.2.4.1 to 4.3.2.4.11, the Town Planner will provide an estimated cost for technical services and consultants. The Commission will review said estimate and determine the necessary scope of services and establish an appropriate additional fee.
- 4.3.2.6 **Monitoring and Compliance Fees:**
- In addition to the standard and additional fees for the processing of an Application, the Applicant may be required to pay a monitoring and compliance fee to cover the costs of technical services and consultants that the Commission considers necessary for: construction inspection and post-construction monitoring, and/or environmental monitoring during construction and post-construction maintenances inspection or intervention, for a period of five (5) years after a final Certificate of Occupancy is issued and all bonds are released. The Town Planner will provide the Commission with an estimate of the anticipated costs. The Commission will review said estimate and determine a monitoring fee. Payment of the monitoring fee shall be a condition of approval; no work shall be performed until paid.
- 4.3.2.7 The additional fees required under Sections 4.3.2.4 will be paid to the Town of Vernon prior to further proceeding on the application. Upon completion of the technical review and/or other services, a determination of the costs incurred will be performed and any

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excess will be refunded to the applicant. During the course of the application review, if the fee as set by the Commission is found to be insufficient, the Commission may review and revise such fee as appropriate.

4.3.2.8 If the fees required under Section 4.3.2.8 are not paid in a timely fashion as to allow the Commission to comply with provisions of CGS 8-7d, such failure may be ground for the Commission to deny the application without prejudice. Any partial fees paid may be credited towards a subsequent application.

4.3.2.9 The Commission may, in determining standard, additional, monitoring fees, may take into consideration:

4.3.2.9.1 Such application is substantially similar to one previously filed and withdrawn, or denied without prejudice;

4.3.2.9.2 The previous application had paid all fees in full;

4.3.2.9.3 Minimal additional staff time will be needed for review and processing the application;

4.3.2.9.4 The application is from a municipal entity;

4.3.2.9.5 The application pertains to a non-profit entity.

4.3.3 Application must be made by the property owner of record or the duly authorized representative of such owner.

4.3.4 The Application shall be submitted in such form as required by the Commission, or in the form of a letter to the Commission if no such requirement is made. The following information shall be included with the Application:

4.3.4.1 The Applicant's name, address and telephone number.

4.3.4.2 The date of the Application.

4.3.4.3 The name and address of the owner of record of the property, if other than the Applicant, and written authorization for the Application.

4.3.4.4 The Applicant's interest in the land, whether it be ownership, fee, lease, option, or any other legal document which describes the interest.

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- 4.3.4.5 A detailed description of the activity or use for which a permit is required.
- 4.3.4.6 A map of the proposed use or activity, drawn to a scale large enough to show the proposed detail, and showing the following, as a minimum:
 - 4.3.4.6.1 The location of the site within the Town of Vernon, including distance and direction from an identifying landmark such as a street intersection.
 - 4.3.4.6.2 The nature and extent of the proposed activity.
 - 4.3.4.6.3 The location of the Regulated Areas, wetlands and watercourses on the subject property and within the Upland Review Area (URA) per Sections 2.15 & 2.16 on all adjoining properties, as indicated on the Inlands & Watercourses Map.
 - 4.3.4.6.4 Structures, existing and proposed, on the subject parcel.
 - 4.3.4.6.5 Elevations by every two-foot (2') contour, both existing and proposed.
 - 4.3.4.6.6 All drainage to be engineered. (e.g. culverts, catch basins, etc.)
 - 4.3.4.6.7 Areas where material may be deposited or removed, as well as the quantity of material involved.
 - 4.3.4.6.8 All proposed construction within the Regulated Area.
 - 4.3.4.6.9 Areas of significant vegetation.
- 4.3.4.7 If the extent of the proposed Regulated Activity exceeds one half (1/2) acre, the map shall be drawn by a licensed surveyor and/or professional engineer, registered in the State of Connecticut.
- 4.3.4.8 The Applicant is required to determine the exact location of the Regulated Areas on the land including, but not limited to soil survey of the site by a qualified Soil Scientist. This survey shall include the location and dimensions of all borings taken, a description of the soils found therein, date data was taken, and staked in the field.

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- 4.3.4.9 The names and addresses of owners of record of property within five hundred (500) feet of the proposed activity.
- 4.3.4.10 Any reasonable measures which would mitigate the impacts of the Regulated Activity and which would:
 - 4.3.4.10.1 Prevent or minimize pollution or other environmental damage;
 - 4.3.4.10.2 Maintain or enhance existing environmental quality;
 - 4.3.4.10.3 In the following order of priority: Restore, enhance, and create productive wetland or watercourse resources.
- 4.3.5 The map of Regulated Areas entitled, "Inland Wetlands and Watercourses Map, Vernon, Connecticut", delineates the general location and boundaries of inland wetlands and the general location of watercourses. Copies of this map are available for inspection at the office of the Town Clerk or the Inland Wetlands Commission (IWC). In all cases, the precise location of Regulated Areas shall be determined by the actual character of the land, the distribution of wetland soil types, and location of watercourses. The Commission may use aerial photography, remote sensing imagery, resource mapping, soils maps, site inspection observations or other information in determining the location of the boundaries of wetlands and watercourses.
 - 4.3.5.1 If any person disputes the designation of any part of his land as a regulated area, he may request the Commission to redesignate the regulated area. Such request shall be made on the form required to appear before the Commission by the owner of record of the property or his designated representative.
 - 4.3.5.2 Petitions requesting changes or amendments to the "Inland Wetlands and Watercourses Map, Vernon, Connecticut" shall contain the information outlined in Section 4.3.4.
 - 4.3.5.3 Any person who submits a petition to amend the "Inland Wetlands and Watercourses Map, Vernon, Connecticut", shall bear the burden of proof for all requested map amendments. Such proof may include, but is not limited to, professional interpretation of aerial photography and remote sensing imagery, resource mapping, soils mapping, or other information acceptable to the Commission. If such person is the owner, developer or contract-purchaser of the land, which is the subject to the petition, or if such person is representing the interests of such an owners, developer or purchaser, in addition to the information required in Section 4.3.5 the petition shall include documentation by a Soil Scientist of the distribution of wetlands soils on said land. Such documentation shall at a minimum include the report of the soil

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scientist documenting the location of wetland soils on the land and a map of the said land indicating the flag locations set by the Soil Scientist and defining the boundaries of wetland soil types.

- 4.3.6 When an Application is filed to conduct or cause to be conducted a Regulated Activity upon an inland wetland or watercourse, any portion of which is within the watershed of a water company as defined in Section 16-1 of the General Statutes, the Applicant shall provide written notice of the Application to the water company provided such water company has filed a map showing the boundaries of the watershed on the land records of the municipality in which the application is made and with the inland wetlands agency of such municipality. Such notice shall be made by certified mail, return receipt requested, and shall be mailed within seven days (7) of the date of the application. The water company, through a representative, may appear and be heard at any hearing on the Application.

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4.4 Review Procedures.

- 4.4.1 At any time prior to the review, the Commission may require the Applicant to provide more information related to the Application.
- 4.4.2 If the Commission finds, on the basis of the evidence before it that a proposed use or activity does not involve any Regulated Activity or a Regulated Area, permission to proceed shall be granted, subject to limitation or revocation if it is later determined by the Commission that a Regulated Activity is a consequence of that permitted use. The Commission's decision, including reasons for finding that a Regulated Activity will not take place shall be made in accordance with Section 4.5.
- 4.4.3 If the Commission finds, based on the evidence before it, that the proposal involves a Significant Activity, the Applicant shall be required to submit such additional information as the Commission deems necessary to properly evaluate the proposal. A Significant Activity includes, but is not limited to, an activity which may cause:
 - 4.4.3.1 Substantial turbidity, siltation or sedimentation in a stream, lake or reservoir, the destruction or impairment of an identified aquifer or recharge area, a substantial reduction of an inland wetland or watercourse's natural flood storage capacity, the construction or alteration of a watercourse or channel which might result in increasing the volume or velocity of water leading to upstream or downstream flooding; or
 - 4.4.3.2 A decrease in the minimum low flow of a watercourse during periods of drought; or
 - 4.4.3.3 The actual or potential pollution of an aquifer or watercourse; or
 - 4.4.3.4 A reduction of the natural capacity of an inland wetland or watercourse to support desirable biological life and/or function effectively as a part of the total wetland eco-system, including loss of productivity of an economic resource; or
 - 4.4.3.5 A loss of unique areas and/or undisturbed areas valuable for scientific or educational purposes; or
 - 4.4.3.6 A reduction of the area's suitability for recreation, which may result from destruction of wildlife habitat, scenic values, or historic features; or
 - 4.4.3.7: A conflict with the community plan of development or open space plan, which may result from incompatible uses, loss of amenities; or

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- 4.4.3.8 The creation of conditions that may adversely affect the health, welfare, and safety of the individual or of the community, which may be incurred when unsuitable development occurs in swamps, marshes, along watercourses, or in areas subject to flooding.
- 4.4.4 A public hearing is required on all Applications involving a Significant Activity and all redesignations of the Regulated Area. All Applications are subject to the timing requirements of Section 22a-42a of the C.G.S.
- 4.4.5 The Inland Wetlands agency shall not hold a public hearing on an Application for a non-significant activity unless the Inland Wetlands agency determines that:
 - 4.4.5.1 That the proposed activity may have a significant impact on wetlands, watercourses or;
 - 4.4.5.2 A petition signed by at least twenty five (25) persons requesting a hearing is filed with the agency not later than fourteen days (14) after the submission of such Application or;
 - 4.4.5.3 The agency finds that a public hearing regarding such Application would be in the public interest. Such hearing shall be held no later than sixty-five days (65) after the receipt of such Application.

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4.5 Evaluation of Proposed Activities

- 4.5.1 The Commission shall consider the following in making its decision on the Application:
- 4.5.1.1. Information included with the Application.
 - 4.5.1.2. Additional information submitted by the Applicant at the request of the Commission.
 - 4.5.1.3 Evidence and/or testimony at the public hearing, if any.
 - 4.5.1.4 Any reports from other agencies and commissions deemed relevant by the Commission.
 - 4.5.1.5 The Applicant's purpose for, and any feasible and prudent alternatives to, the proposed Regulated Activity which alternatives would cause less or more environmental impact to wetlands and watercourses.
 - 4.5.1.6 On the relationships between short-term and long-term impacts of the proposed Regulated Activity on wetlands or watercourses and the maintenance and enhancement of long-term productivity of such wetlands or watercourses.
 - 4.5.1.7 The loss of wetland or watercourse resources caused by the proposed Regulated Activity, including the extent to which the Regulated Activity would foreclose a future ability to protect, enhance or restore such resources.
 - 4.5.1.8 Any mitigation measures which may be considered as a condition of issuing a permit for the Regulated Activity. The mitigation measures to be considered as measures to:
 - 4.5.1.8.1 prevent or minimize pollution or other environmental damage;
 - 4.5.1.8.2 maintain or enhance existing environmental quality;
 - 4.5.1.8.3 the following in order of priority, restore, enhance and create productive wetland or watercourse resources.
 - 4.5.1.9. Character and degree of injury to, or interference with, safety, health or the reasonable use of property that is caused or threatened by the proposed action, limited to a consideration of

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these factors specifically as they relate to the proposed regulated activity.

4.5.1.10 The impacts of the proposed regulated activity and future activities made inevitable by the proposed regulated activity on off site wetlands and watercourses.

4.5.2 The Commission shall also consider the proposed environmental impacts of the proposed development. The considerations which will be examined in order to estimate the environmental impact of a proposed Regulated Activity include, but are not limited to:

4.5.2.1 The amount of material to be removed or deposited and the projected effect on the water table and drainage patterns.

4.5.2.2 The danger of erosion

4.5.2.3: The likelihood of siltation and leaching, and any resulting adverse effects on water quality and aquatic life (e.g. harmful and unpleasant algae growths).

4.5.2.4 The nature of any material to be removed or deposited. What effect can the material be expected to have on flood control, on water supply and quality, and on aquatic organisms and other wildlife.

4.5.2.5 The likelihood of any changes in the velocity, volume, or course of water flow, or in the water table, and any consequences such changes may have for the capacity of the wetland or watercourse to help control flooding and to purify and supply water. (E.g., will water circulation be reduced and toxic bacteria develop as a result? Will Plankton and fish be able to move downstream unimpeded by any physical, thermal, or chemical obstruction?).

4.5.2.6 Existing flood encroachment lines, flood plain and stream-belt zoning, and requirements for dam construction.

4.5.2.7 The likelihood of any changes in the physical, chemical or biological properties of the water or soil and the implications such changes may have for water quality and for aquatic organisms and other wildlife.

4.5.2.8 The likelihood of any change in the suitability of the area for recreational and aesthetic enjoyment.

4.5.2.9 The likelihood of any change in the alkalinity/acidity level, turbidity, bacteria count, or temperature of the water, or any alteration of its

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odor, color, or taste, and the effect any such change may have on aquatic organisms or other wildlife, water supply and quality, or recreational enjoyment.

- 4.5.2.10 The existing and desired quality and use of the water in and near the affected area.
- 4.5.2.11 Any reasonable measures which would mitigate the impacts of the regulated activity and which would:
 - 4.5.2.11.1 Prevent or minimize pollution or other environmental damage;
 - 4.5.2.11.2 Maintain or enhance existing environmental quality;
 - 4.5.2.11.3 In the following order of priority: Restore, enhance, and create productive wetland or watercourse resources. Within wetlands and regulated areas, plantings must conform to those listed in Appendix A.
- 4.5.2.12 Prevention of negative impacts or mitigation procedures that may be implemented by providing a buffer, as described in "Appendix B. Design Standards Recommended for a Watercourse Protection Buffer," to protect the water quality and functioning of watercourses as natural resources:
 - 4.5.2.12.1.1 The Commission hereby recognizes the function and importance of vegetated areas adjacent to watercourses to prevent and mitigate erosion, siltation, pollution and temperature change and recommends retention or establishment of buffers to protect and enhance watercourses as natural resources.
 - 4.5.2.12.2 The Commission may require the provision of a buffer along a watercourse if proposed activities and/or development may create negative impacts on a watercourse that could be prevented or mitigated by provision of a buffer.
- 4.5.2.13 Prevention of negative impacts or mitigation procedures that may be implemented by providing a buffer, as defined in Section 2.2A, to protect wetlands as natural resources.

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- 4.5.3 Whether a particular effect on an inland wetland or watercourse is serious enough to warrant a given restriction on its use will depend in part on the exact nature of the particular area. Areas involved in Applications submitted under these Regulations will be evaluated concerning their importance to the locality, region, and state, using the following criteria and any others considered by the Commission to be appropriate.
- 4.5.3.1 Water Supply - the extent to which a Regulated Area serves or has the potential to serve as part of the service or ground water supply system.
 - 4.5.3.2 Recharge and Discharge Value - the extent to which a Regulated Area serves as a recharger, discharger, or purifier of ground or surface water.
 - 4.5.3.3 Flood Control - the extent to which a Regulated Area serves as a sponge or buffer zone during times of heavy rains and flooding.
 - 4.5.3.4 Natural Habitat - the extent to which a Regulated Area provides fish, birds, or other animals with food and breeding areas.
 - 4.5.3.5 Recreation - whether a Regulated Area should be available as a recreational area. The suitability of the area for nature study, hiking, horseback riding, water sports, camping, hunting, fishing or other outdoor recreational activities will be considered, as well as the scenic and historical value of the area.
 - 4.5.3.6 Open Space - the scarcity of open space in the surrounding area.
 - 4.5.3.7 Size - the size of a wetland area.
- 4.5.4 In order to grant a permit, with or without restriction, the Commission must find:
- 4.5.4.1 That a feasible and prudent alternative does not exist, and
 - 4.5.4.2 That no preferable location on the subject parcel exists, or, in the case of a significant activity, that no other location would reasonably be required, and
 - 4.5.4.3 That no further technical improvements in the plan or safeguards for its implementation are possible or be required, and
 - 4.5.4.4 That the public benefit of the proposed activity justifies any possible degradation of the wetlands and/or watercourse.

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- 4.5.5 In the event the Commission does not receive sufficient information to make a decision within the time required in Section 4.6.1 and 4.6.2, it shall deny the permit.

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4.6 Notification of Decision

- 4.6.1 In cases where a public hearing is not involved, the Commission shall take action within sixty-five (65) days from the date of receipt of the Applications. All Applications for a change in the Inland Wetlands Regulations or boundaries are subject to the timing requirements of Sections 22a-42a of the Connecticut General Statutes (CGS).
- 4.6.2 In cases where a public hearing is involved, a decision on the Application shall be rendered within thirty five (35) days after the close of the hearing. All Application for a change in the Inland Wetlands Regulations or boundaries are subject to the timing requirements of sections 22a-42a of the Connecticut General Statutes.
- 4.6.3 The Applicant shall be notified of the Commission's decision by certified mail within fifteen (15) days of the date of the decision, and the Commission shall cause notice of their order in issuance, denial, revocation or suspension of a permit to be published in a daily newspaper having a general circulation in the Town of Vernon.
- 4.6.4 The Commissioner of the Department of Environmental Protection (DEP) shall be notified within a reasonable amount of time of all map and regulation changes, and of all decisions on permits (i.e. grant, modify, deny, etc.), which shall have included the reason for the decision.
- 4.6.5 No work in relation to any permit that is granted shall be allowed to commence until the time period for appealing in Section 4.7 has expired.
- 4.6.6 In the case of an Application which is denied on the basis of the record that a finding that there may be feasible and prudent alternatives to the proposed Regulated Activity which have less adverse impact on wetlands or watercourses, the inland wetlands agency shall place on the record in writing the types of alternatives which the Applicant may investigate, provided this shall not be construed to shift the burden from the Applicant to prove that he is entitled to the permit or to present alternatives to the proposed Regulated Activity.

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4.7 Appealing Decision of the Commission

Any aggrieved person may Appeal a decision of the Commission, within fifteen (15) days after such decision is published, to the Superior Court for the judicial district where the effected wetland or other Regulated Area lies. Such appeal is available to the applicant or to a concerned citizen or a group of citizens.

4.8 Reassessment

Any owner of wetlands and watercourses who may be denied a license or permit in connection with a Regulated Activity affecting such wetlands and watercourses shall, upon written application to the Board of Assessors of the Town of Vernon, be entitled to a re-evaluation of such property to reflect the fair market value thereof in light of the restriction placed upon it by the denial of such license or permit, effective with respect to the next succeeding assessment list of the Town, provided further that the Town may require as a condition therefor the conveyance of a less than fee interest of such land pursuant to the provisions of Section 7-13B to 7-131K, inclusive, of the Connecticut General Statutes (CGS), as amended.

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4.9 Time Limits

- 4.9.1 All activities authorized by a permit issued by the Commission shall commence within two (2) years of the effective date of the permit.
 - 4.9.1.1 The Commission shall establish the effective date of the permit at the time of approval.
 - 4.9.1.2 Extensions of time may be granted by the Commission for an approved permit, providing however, that each such extension does not exceed one year.
 - 4.9.1.3 The Town Planner shall be notified in writing when work authorized by the permit begins and when the 10 percent (10%) threshold for the "Start of Construction" is met.
 - 4.9.1.4 Any Regulated Activity shall be completed within one year (1) from the date of the start of construction.
 - 4.9.1.4.1 One (1) extension of time may be granted by the Commission for an approved permit, providing however, that such extension does not exceed one year (1).
- 4.9.2 The permit shall be effective for five years (5) from the effective date.
 - 4.9.2.1 Time extensions shall be granted by the Commission providing the total time of the permit shall not exceed ten years from the original effective date of the original permit unless:
 - 4.9.2.1.1 The agency finds that there has been a substantial change in circumstances which requires a new permit Application or;
 - 4.9.2.1.2 An enforcement action has been undertaken with regard to the Regulated Activity for which the permit was issued.
- 4.9.3 Permits issued to the Town of Vernon, or its agents, for routine annual maintenance activities or emergency repairs within a wetlands or Regulated Area, shall not be subject to the requirements of Section 4.9.2.
- 4.9.4 The effective date of the original approval for any permit shall be considered the start of the time frames for this Section and subsequent modifications shall not alter that date or time frames.

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SECTION 5 - ENFORCEMENT

- 5.1 Application for a permit shall constitute permission for, and consent to, agency inspections of the site of the proposed activity at any reasonable time before or after the granting of a permit. The owner, Applicant or their agent shall have the license or permit readily available and shall produce it for inspection by the Commission's representative upon request.
- 5.2 If the Commission finds that any person is conducting or maintaining any activity, facility or condition which is in violation of the Inland Wetlands and Watercourses Regulations, the Commission may issue a written order, by certified mail, to such person maintaining such facility or condition, to correct such facility or condition. Within ten (10) days of the issuance of such order the agency shall hold a hearing to provide the person an opportunity to be heard and show cause why the order should not remain in effect. The Agency shall consider the facts presented at the hearing and within ten (10) days of the completion of the hearing notify the person by certified mail that the original order remains in effect, that a revised order is in effect, or that the order has been withdrawn. The original order shall be effective upon issuance and shall remain in effect until the Commission affirms, revises, or withdraws the order. The issuance an order pursuant to this Section shall not delay or bar an action pursuant to Section 5.3 of these regulations.
- 5.3 Any person who commits, takes part in, or assists in any violation of any provision of the Town of Vernon Inland Wetlands and Watercourses Regulations shall be fined not more than one thousand dollars (\$1,000.00) for each offense. Each violation of said regulations shall be a separate and distinct offense, and, in the case of a continuing violation, each day's continuance thereof shall be deemed to be a separate and distinct violation. The Superior Court, in an action brought by the Commission, shall have jurisdiction to restrain a continuing violation of said regulations and to issue orders directing the violation to be corrected or removed. All costs, fees and expenses in connection with such action shall be assessed as damages against the violator.

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SECTION 6 - BOND AND INSURANCE

- 6.1 The Applicant, upon approval of the permit, and at the discretion of the Commission, may be required to file a performance bond in an amount and with sureties and in a form approved by the Commission.
- 6.2 The bond and sureties shall be conditioned on compliance with all provisions of these regulations and conditions imposed on the approval of the permit.
- 6.3 The Applicant may be required to certify that he has public insurance against liability, which might result from the proposed operation or use covering any and all damages, which might occur within five (5) years of completion of such operations, in an amount to be determined by the Commission commensurate with the projected operation.

SECTION 7 - CONFLICT AND SEVERANCE

- 7.1 Where there is a conflict between the provision of these regulations and those of any other applicable statute, ordinance, or regulation, the provisions of the statute, ordinance, or regulation which imposes the greatest restriction on the use of the wetland or watercourse shall govern.
- 7.2 The invalidity of any word, clause, sentence, section, part, or provision of these Regulations shall not affect the validity of any other part, which can be given effect without such invalid part or parts.

SECTION 8 - QUORUM

- 8.1 A simple majority of the duly appointed members of the Commission shall be present to consider any application.

SECTION 9 - EFFECTIVE DATE

- 9.1 The effective date of these regulations is June 12, 1974.

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SECTION 10 - MINOR MODIFICATIONS

- 10.1 Wetlands permit modifications, which in the opinion of the Building Inspector, the Town Planner and Town Engineer, are of such a minor nature that neither the wetlands nor the public health and safety will be adversely affected, are exempt from obtaining commission approval; said modification must be approved in writing by all three department heads.
- 10.2 Modifications may be granted in accordance with Section 22a-42a of the CGS when the conduct of such activity would result in no greater than a minimal impact on any wetland or watercourse.
- 10.2.1 Any person receiving such approval from such agent shall, within ten days (10) of the date of such approval, publish, at the applicant's expense, notice of the approval in a newspaper having a general circulation in the Town wherein the activity is located or will have an effect.
- 10.2.2 Any person may appeal such decision of such agent to the Inland Wetlands Agency within fifteen days (15) after the publication date of the notice and the Inland Wetlands Agency shall consider such appeal at its next regularly scheduled meeting, provided such meeting is not earlier than three (3) business days after receipt by such agency or its agent of such appeal. The Inland Wetlands Agency shall, at its discretion, sustain, alter, or reject the decision of its agent or require an Application for a permit in accordance with these Regulations.

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APPENDIX A

WETLANDS PLANTINGS

NATIVE WETLAND PLANTS

FOR THE HOCKANUM RIVER WATERSHED

Prepared by The Vernon Conservation Commission March, 2000

The purpose of this document is to ensure that proper native plantings will be used within wetlands and regulated areas, will create wildlife habitats, and will preclude the planting of invasive exotic species. The document is applicable for wetland restorations and detention basins. Included are three tables, one for trees, one for shrubs, and one for herbaceous plants.

The enclosed data was extracted from a document that was furnished by the U.S. Fish and Wildlife Service, Silvio O. Conte National Fish and Wildlife Refuge. The document was entitled "Planting Guide to Native Wetland Plants of the Connecticut River Watershed For Wetland Restoration Use" dated February, 1997. The document contained detailed descriptions about each plant and planting instructions.

Additional resources which are useful to select plants which will attract specific birds and mammals are: National Audubon Society's "The Bird Garden", by Stephen W. Kress; and "American Wildlife & Plants: A Guide to Wildlife Food Habits" by Alexander C. Martin, Herbert S. Zim and Arnold L. Nelson.

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Table 1: Guide to native wetland trees of the Northeast

Common name	Scientific name	Scrub/shrub wetland	Forested wetland	Moist soils through spring	Moist soils through out growing season	Tolerates occasional flooding *	Low velocities tolerated	Medium velocities tolerated	High velocities tolerated	Full sun required	Prefer full sun	Prefer partial shade	Partial shade tolerant	Full shade tolerant	Suggested on center spacing
Red maple	<i>Acer rubrum</i>	X	X	X	X	X				X		X			15-20'
Silver maple	<i>Acer saccharinum</i>	X	X		X	X	X			X		X			15-20'
River birch	<i>Betula nigra</i>	X	X		X	X	X		X						15-20'
Black ash	<i>Fraxinus nigra</i>	X	X		X	X	X		X						15-20'
Green ash	<i>Fraxinus pennsylvanica</i>	X	X		X	X	X				X				15-20'
Black gum	<i>Nyssa sylvatica</i>	X	X	X	X	X				X		X			15-20'
Black spruce	<i>Picea mariana</i>	X	X		X	X	X			X		X			15-20'
Swamp white oak	<i>Quercus bicolor</i>	X	X		X	X	X			X		X			15-20'
Pin oak	<i>Quercus palustris</i>	X	X		X	X	X		X						15-20'
Black willow	<i>Salix nigra</i>	X	X		X	X	X		X						15-20'
American larch	<i>Larix laricina</i>	X	X		X	X	X			X		X			15-20'
American hemlock	<i>Tsuga canadensis</i>	X	X	X	X	X					X		X		15-20'
Balsam fir	<i>Abies balsamea</i>	X	X		X	X	X				X		X		15-20'
Cottonwood	<i>Populus deltoides</i>	X	X		X	X	X		X						15-20'

* Occasional flooding up to 18" for approximately 25 percent of the growing season

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Table 2: Guide to native wetland shrubs of the Northeast

Common name	Scientific name	Scrub/shrub wetland	Forested wetland	Wet meadow	Drought tolerant	Moist soils through spring	Moist soils through out growing season	Tolerates occasional flooding *	Tolerates permanent flooding	Low velocities tolerated	Medium velocities tolerated	High velocities tolerated	Prefers full sun	Prefers partial shade	Partial shade tolerant	Full shade tolerant	Suggested on center spacing
Speckled alder	<i>Alnus rugosa</i>	X	X			X	X		X			X		X			6'
Shadblow/Serviceberry	<i>Amelanchier canadensis</i>		X	X	X	X	X							X		X	6'
Red chokeberry	<i>Aronia arbutifolia</i>	X	X	X	X	X	X					X		X			6'
Black chokeberry	<i>Aronia melanocarpa</i>	X	X	X	X	X	X					X		X			6'
Buttonbush	<i>Cephalanthus occidentalis</i>	X	X		X	X	X	X	X			X	X		X		6'
Sweet pepperbush	<i>Clethra alnifolia</i>	X	X	X	X	X	X					X	X			X	6'
Silky dogwood	<i>Cornus amomum</i>	X	X		X	X	X		X			X		X			6'
Red osier dogwood	<i>Cornus sericea</i>	X	X		X	X	X		X			X		X			6'
Winterberry holly	<i>Ilex verticillata</i>	X	X		X	X	X					X	X		X		6'
Common spicebush	<i>Lindera benzoin</i>		X	X	X	X	X						X		X		6'
Swamp azalea	<i>Rhododendron viscosum</i>	X	X			X	X	X				X		X			6'
Pussy willow	<i>Salix discolor</i>	X	X		X	X	X		X			X					6'
Common elderberry	<i>Sambucus canadensis</i>	X	X		X	X	X					X		X			6'
Meadowsweet	<i>Spirea latifolia</i>	X	X		X	X	X					X					6'
Highbush blueberry	<i>Vaccinium corymbosum</i>		X	X		X	X						X		X		6'
American cranberry	<i>Vaccinium macrocarpon</i>	X				X	X	X	X			X					6'
Nannyberry	<i>Viburnum lentago</i>		X	X	X	X	X						X		X		6'
Northern arrowwood	<i>Viburnum recognitum</i>	X	X		X	X	X					X		X			6'
American cranberrybush	<i>Viburnum trilobum</i>	X	X		X	X	X					X		X			6'
Sand bar willow	<i>Salix exigua</i>		X			X	X		X	X	X	X					6'
Purple osier willow	<i>Salix purpurea</i>	X	X	X	X	X	X		X	X		X		X			6'
Bankers willow	<i>Salix X cotteti</i>	X	X	X		X	X		X	X		X		X			6'
Swamp rose	<i>Rosa palustris</i>	X	X			X	X					X					6'
Northern bayberry	<i>Myrica pensylvanica</i>	X	X		X	X	X					X		X			6'
Wild raisin	<i>Viburnum cassinoides</i>		X	X		X	X		X			X		X			6'
Mountain holly	<i>Nemopanthus mucronatus</i>		X	X		X	X					X		X			6'

* Occasional flooding up to 18" for approximately 25 percent of the growing season

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Table 3: Guide to native wetland herbaceous plants of the Northeast

Common name	Scientific name	Wet meadow	Shallow marsh	Deep marsh	Aquatic bed	Requires moist soils through out growing season	Water depth preferred	Water depth tolerated during drought/flooding	Low velocities tolerated	Medium velocities tolerated	High velocities tolerated	Full sun required	Prefers full sun	Prefers partial shade	Partial shade tolerant	Full shade tolerant	Suggested on center spacing *
Sweetflag	<i>Acorus calamus</i>	X				X	0-6"	0-2'	X			X		X			1-2'
Swamp milkweed	<i>Asclepias incarnata</i>	X				X	0"	0-1'				X		X			1-2'
Marsh marigold	<i>Caltha palustris</i>	X				X	0-6"	0-1'				X		X			1-2'
Bearded sedge	<i>Carex comosa</i>	X				X	0-6"	0-2'	X			X		X			1-2'
Fringed sedge	<i>Carex crinita</i>	X				X	0-6"	0-2'	X			X		X			1-2'
Lurid sedge	<i>Carex lurida</i>	X				X	0-6"	0-2'	X			X		X			1-2'
Tussock sedge	<i>Carex stricta</i>	X				X	0-6"	0-2'	X			X		X			1-2'
Fox sedge	<i>Carex vulpinoidea</i>	X				X	0-6"	0-2'	X			X		X			1-2'
Three-way sedge	<i>Dulichium arundinaceum</i>	X				X	0"-1'	0-2'	X			X		X			1-2'
Joe-pye weed	<i>Eupatoriadelphus spp.</i>	X				X	0"	0-1'				X		X			1-2'
Canada manna grass	<i>Glyceria canadensis</i>	X				X	0-1'	0-2'	X		X						1-2'
Blue flag iris	<i>Iris versicolor</i>	X				X	0-6"	0-2'				X		X			1-2'
Canada rush	<i>Juncus canadensis</i>	X				X	0-1'	0-2'				X					1-2'
Soft rush	<i>Juncus effusus</i>	X				X	0-1'	0-2'	X			X		X			1-2'
Rice cutgrass	<i>Leersia oryzoides</i>	X				X	0-6"	0-2'	X			X		X			1-2'
Cardinal flower	<i>Lobelia cardinalis</i>	X				X	0"	0-1'				X		X			1-2'
Green bulrush	<i>Scirpus atrovirens</i>	X				X	0-6"	0-2'				X		X			1-2'
Woolgrass	<i>Scirpus cyperinus</i>	X				X	0-6"	0-2'			X						1-2'
Blue vervain	<i>Verbena hastata</i>	X				X	0"	0-2'				X					1-2'
Ostrich fern	<i>Metteuccia struthiopteris</i>	X				X	0-6"	0-2'	X			X		X			1-2'
Sensitive fern	<i>Onoclea sensibilis</i>	X				X	0"	0-1'				X		X		X	1-2'
Cinnamon fern	<i>Osmunda cinnamomea</i>	X				X	0"	0-6"						X		X	1-2'
Royal fern	<i>Osmunda regalis</i>	X				X	0-6"	0-1'				X		X		X	1-2'
Marsh fern	<i>Thelypteris thelypteroides</i>	X				X	0-3"	0-3"						X		X	1-2'
Water plantain	<i>Alisma plantago-aquatica</i>		X			X	0-1'	0-2'	X		X						1-2'
Spike grass	<i>Distichlis spicata</i>					X	0-1'	0-2'	X	X	X						1-2'
Spike rush	<i>Eleocharis palustris</i>		X			X	0-1'	0-2'	X			X		X			1-2'
Yellow water lily	<i>Nuphar luteum</i>			X	X	X	2-3'	1-5'	X			X					1-2'
White water lily	<i>Nymphaea odorata</i>			X	X	X	2-3'	1-5'	X			X		X			1-2'
Arrow arum	<i>Peltandra virginica</i>		X			X	0-1'	0-2'	X			X		X			1-2'
Pickeralweed	<i>Pontederia cordata</i>		X			X	0-1'	0-2'	X			X		X			1-2'
The pond weeds	<i>Potamogeton spp.</i>			X	X	X	1-4'	1-6'	X	X		X		X			1-2'
Northern arrowhead	<i>Sagittaria latifolia</i>		X	X		X	1-2'	0-3'	X			X		X			1-2'
Hard-stem bulrush	<i>Scirpus acutus</i>			X		X	1-3'	0-5'	X			X					1-2'
Three-square bulrush	<i>Scirpus pungens</i>		X			X	0-6"	0-2'	X			X					1-2'
Burreed	<i>Sparganium americanum</i>		X			X	0-6"	0-2'	X	X		X		X			1-2'
Smooth cordgrass	<i>Spartina alterniflora</i>					X	0-5'	0-5'	X	X	X	X					1-2'
Saltmeadow cordgrass	<i>Spartina patens</i>					X	0-1'	0-1'	X	X	X						1-2'

TOWN OF VERNON INLAND WETLANDS AND WATERCOURSES REGULATIONS

Table 3: Guide to native wetland herbaceous plants of the Northeast (continued)

Common name	Scientific name	Wet meadow	Shallow marsh	Deep marsh	Spacid bed	Requires moist soils through out growing season	Water depth preferred	Water depths tolerated during drought/flooding	Low velocities tolerated	Medium velocities tolerated	High velocities tolerated	Full sun required	Prefers full sun	Prefers partial shade	Partial shade tolerant	Full shade tolerant	Suggested on center spacing *
Soft-stem bulrush	<i>Scirpus validus</i>	X			X		0-1'	0-2'	X			X					1-2'
Salt-marsh bulrush	<i>Scirpus robustus</i>	X			X		0-2'	0-3'+	X	X		X					1-2'
Narrow-leaved cattail	<i>Typha angustifolia</i>			X	X		6"-1'	0-2'	X			X					1-2'
Common cattail	<i>Typha latifolia</i>	X			X		6"-1'	0-2'	X				X		X		1-2'
Wild cerery	<i>Vallisneria americana</i>			X	X		2-4'	1-6'	X	X			X				1-2'
Swithgrass	<i>Panicum virgatum</i>	X			X		0-6"	0-1'				X		X			1-2'
Inflated sedge	<i>Carex intumescens</i>	X			X		0-6"	0-1'				X		X			1-2'
Hop sedge	<i>Carex lupulina</i>	X			X		0-6"	0-1'				X		X			1-2'
New york ironweed	<i>Vernonia noveboracensis</i>	X			X		0-6"	0-1'									1-2'
Blue-joint reedgrass	<i>Calamagrostis canadensis</i>	X			X		0-6"	0-1'				X					1-2'
Stout wood-reedgrass	<i>Cinna arundinacea</i>	X			X		0-6"	0-1'				X					1-2'

* Spacing is dependent upon the desired density. 1-2' initial spacing will provide dense cover within two growing seasons. Spacings of 2-4' on center will result in initial gaps in vegetation which will fill within two to five years.

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TOWN OF VERNON INLAND WETLANDS AND WATERCOURSES REGULATIONS

Salt marsh and salt tolerant plants*

Trees

<i>Acer saccharin urn Fraxinus</i>	(Silver maple) * *
<i>pennsylvanica Nyssa sylvatica</i>	(Green ash)**
<i>Populus deltoides Quercus</i>	(Black gum) * *
<i>bicolor Quercus palustris</i>	(Cottonwood)** .
	(Swamp white oak) * *
	(pin oak) * *

Shrubs

<i>Amelanchier canadensis Aronia</i>	(Shadbush) * *
<i>arbutifolia Aronia melanocarpa</i>	(Red chokeberry)**.
<i>Cephalanthus occidentalis</i>	(Black chokeberry)**
<i>Clethra alnifolia Lindera benzoin</i>	(Buttonbush)** (Sweet
<i>Myrica pensylvanica Sambucus</i>	pepperbush)
<i>canadensis Vaccinium</i>	(Spicebush)** .
<i>corymbosum Viburnum dentatum</i>	(Bayberry)
	(Common elderberry)**
	(Highbush blueberry)**
	(Northern arrowwood) * *

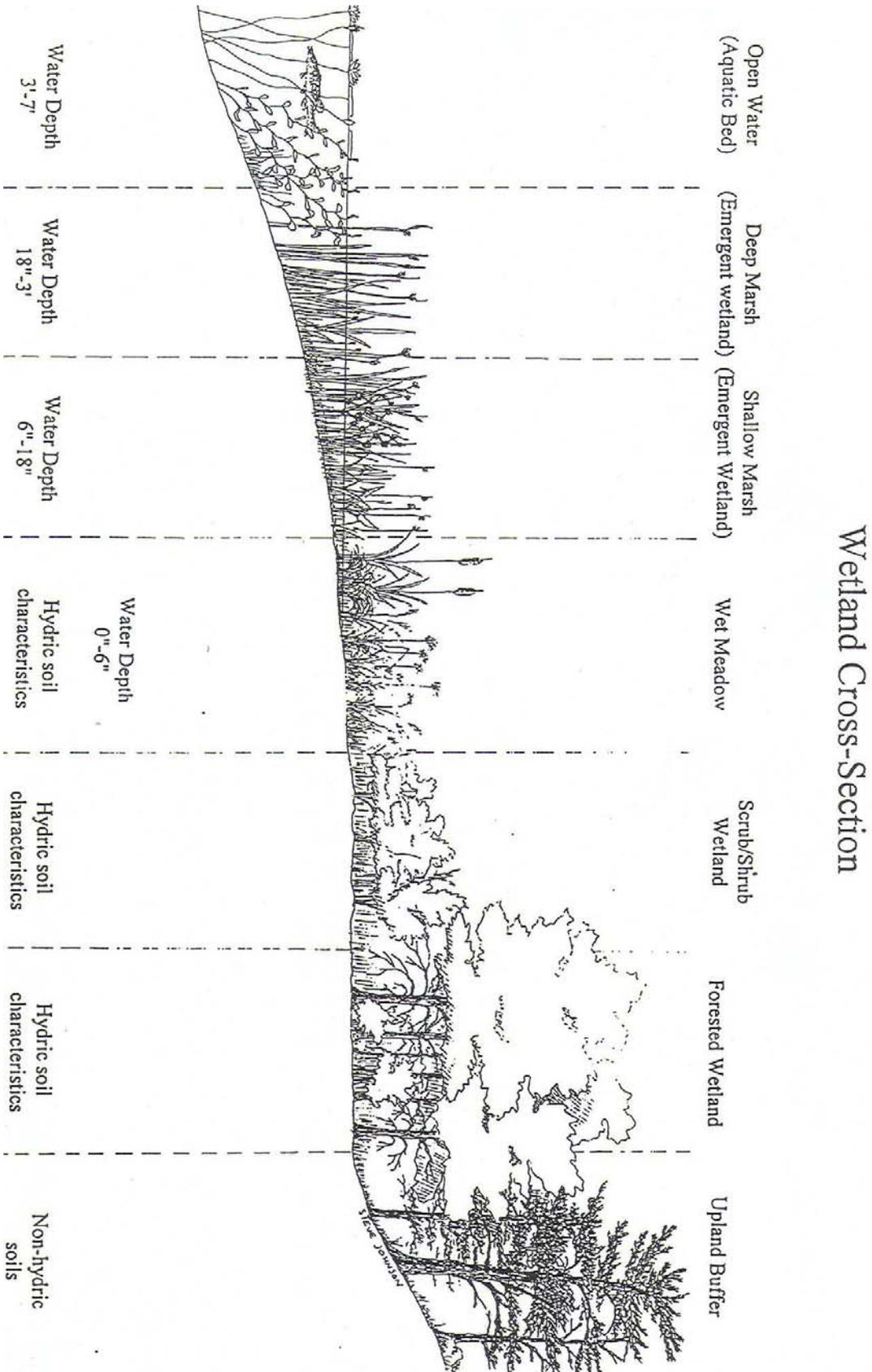
Herbaceous plants *Acorus*

<i>calamus Distichlis spicata</i>	(Sweetflag)* *
<i>Iris versicolor Peltandra</i>	(Spike grass)
<i>virginica Panicum virgatum</i>	(Blueflag iris)**
<i>Pontederia cordata Scirpus</i>	(Arrowarum)**
<i>acutus Scirpus pungens</i>	(Switchgrass)**
<i>Scirpus valid us Scirpus</i>	(Pickerelweed) * * (Hard-
<i>robustus Spartina</i>	stem bulrush)** (Three-
<i>alterniflora Spartina patens</i>	square bulrush) (Soft-stem
<i>Typha angustifolia</i>	bulrush)** (Saltmarsh
<i>Vallisneria americana</i>	bulrush) (Smooth cordgrass)
	(Saltmeadow cordgrass)
	(Narrow-leaf cattail)** (Wild
	celery) * *

*Many of the plants on this list are commonly found in or around brackish and salt marsh settings.

* * These less salt tolerant species would be appropriate for road side plantings where winter salt run-off may effect plantings.

TOWN OF VERNON INLAND WETLANDS AND WATERCOURSES REGULATIONS



TOWN OF VERNON
INLAND WETLANDS AND WATERCOURSES REGULATIONS

APPENDIX B

**DESIGN STANDARDS RECOMMENDED FOR A
WATERCOURSE PROTECTION BUFFER**

Retention of existing vegetation along watercourses, when in a natural state, especially when containing mature trees, is a primary consideration to protect the watercourse from erosion, siltation, pollution and temperature change. In areas where vegetated buffers do not exist, or are of limited width, consideration should be given to the creation of a buffer area. Newly created buffers should include canopy or shade trees, shrubs, and herbaceous plant species suited to the local habitat in three (3) zones of plantings. The recommended minimum width of a watercourse buffer is one hundred (100) feet measured horizontally from the banks of the watercourse and fifty (50) feet measured horizontally related to intermittent watercourses.

Three (3) zones of vegetation recommended within the buffer are:

<u>Zone</u>	<u>Vegetation</u>	<u>Buffer Depth per</u> <u>Type of Watercourse</u>		<u>Additional Depth Adjustment</u> <u>Related to % of Slope</u>
		<u>Perennial</u>	<u>Intermittent</u>	
1	Trees	20'	10'	3' added per 1% of slope
2	Trees & Shrubs	60'	30'	2' added per 1% of slope
3	Grass & herbaceous	20'	10'	1' added per 1% of slope

The standards and specifications for these buffers are modeled after David A. Welsch, "Riparian Forest Buffers", USDA CT-RI publication NA-PR-07-91.

The recommended watercourse protection area with landscape buffer may be reduced when (1) an engineered stormwater management and pollution control system employing technical best management practices (BMP) in compliance with the Connecticut Department of Environmental Protection (DEP) "Stormwater Quality Manual: is provided to treat run-off from a development site; (2) the site is served by a public sewer system; and (3) a reduction of the river protection buffer depth would not result in a significant potential adverse impact to the watercourse.

If the buffer area for a watercourse is either increased or decreased, then the widths of the three (3) vegetation zones should be adjusted accordingly.

**TOWN OF VERNON
INLAND WETLANDS AND WATERCOURSES REGULATIONS**

INLAND WETLANDS REGULATION AMENDMENTS

<u>SECTION</u>	<u>EFFECTIVE DATE</u>	<u>REMARKS</u>
4.4(E)	11/27/79	Publication of notice
4.611 & 27 & 79	DEP	Notification
4.7	11/27/79	Appeals
3.3 (D)	10/9/81	Incidental uses
3.3	10/9/81	Uses by right
3.3 (E)	10/9/81	Submissions of building plan
4.3	3/28/83	Application procedures
4.5	3/28/83	Evaluation of Proposed Activities
4.9	3/28/83	Time limits
1,2,3 4	10/1/87	PA 87-533
Application Forms	10/1/87	PA 87-533
Application Forms	7/1/88	New Fees
4.3	4.47/1/88	New Fees / Procedures for redefining regulated areas (75' buffer strip)
3.11 & 4.3.1	11/1/88	Filing dates/receipt of application
4.9	12/1/88	Annual maintenance emergency work permit
4.5.6.1,23	4/4/89	Deleted
4.6.1	24/4/89	Change timing limits
4.5 & 4.9	11/1/89	Time frames for activities and Commission action
3	2/1/90	Payment of back taxes

**TOWN OF VERNON
INLAND WETLANDS AND WATERCOURSES REGULATIONS**

SECTION	EFFECTIVE DATE	REMARKS
•Application forms	2/1/90	Access to private property
2.1	4/6/90	Add Inland Wetlands Commission
2.12	4/6/90	Regulated area
2.15.1	4/6/90	Retention/detention basins as regulated areas
2.20	4/6/90	Define commencement of activity
4.9.2	4/6/90	Completion of activities
1.3/2.1	2/1/91	Change from CC to IWC
4.3/4.9	11/1/91	Date of approval wetlands beyond site
3.12	6/1/93	Delete Section 3.12
4.3	10/1/93	Fee Structure
4.9	10/1/93	Timing (P.A. 93-305)
10	10/1/93	Minor Modifications
4.3.5.6.3	3/1/94	Off site mapping
2	9/1/95	Def. Wetlands P.A. 95-313
4.1 & 4.3	12/10/95	Redesignations P.A. 95-313
4.3.2	4/1/96	Fee Structure
2,3,4,10	7/15/96	Clear Cutting P.A. 96-157
2,4	4/10/97	P.A. 96-157def. ret. basins
4.4.5.2	8/1/97	P.A. 97-124 (15 days)
3.3.5	2/15/98	P.A.97-289
4.4.5	3/1/2000	P.A. 99-225 (14 days)

**TOWN OF VERNON
INLAND WETLANDS AND WATERCOURSES REGULATIONS**

SECTION	EFFECTIVE DATE	REMARKS
4.4.5.2	2/22/20	Statutory change (timing)
4.5.2.1	11/01/2000	Wetlands Plantings
2	5/1/2001	Applicant
2.2A	10/12/2005	Definition of "Buffer"
2.15	10/12/2005	Regulated Activity
2.16	10/12/2005	Regulated Area
2.23	10/12/05	Upland Review Area
2.25	10/12/05	Intermittent Watercourse
4.1	10/12/2005	When a permit is required
4.2.13	10/12/2005	Upland Review Area (URA)
4.3.4.6.3	10/12/2005	Location of Regulated Areas, wetlands & watercourses
4.5.2.12	10/12/2005	Prevention of negative impacts or mitigation procedures
4.3.2	10/8/06	Fee Schedule