THE BUZZARDS BAY PROJECT

SAMPLE BYLAWS AND REGULATIONS

JANUARY 1989

Credits

Wilbur G. Tirrell, Legal Specialist

Thomas A. Pisaturo, Comprehensive Planning Manager

Stephen C. Smith, Executive Director

William S. Napolitano, Senior Environmental Planner

Anne Dufresne, Secretary

This report was prepared by the Southeastern Regional Planning and Economic Development District (SRPEDD) with funding from the U.S. Environmental Protection Agency Buzzards Bay Project. It is the third in a series of reports published by SRPEDD for the Buzzards Bay Project. The other reports are "Inventory of Local Regulations Pertaining to Water Quality in Buzzards Bay," (April, 1987), and "Technical Resource Manual: A Reference for Buzzards Bay Communities," (August, 1987).

THE BUZZARDS BAY PROJECT

US Environmental Protection Agency
WQP-2100
John F. Kennedy Federal Building
Boston, MA 02203

Massachusetts Executive Office of
Environmental Affairs
100 Cambridge Street
Boston, MA 02202

FOREWORD

In 1984, Buzzards Bay was one of four estuaries in the country chosen to be part of the National Estuary Program. The Buzzards Bay Project was initiated in 1985 to protect water quality and the health of living resources in the bay by identifying resource management problems, investigating the causes of these problems, and recommending actions that will protect valuable resources from further environmental degradation. This multi-year project, jointly managed by United States Environmental Protection Agency and the Massachusetts Executive Office of Environmental Affairs, utilizes the efforts of local, state, and federal agencies, the academic community and local interest groups in developing a Master Plan that will ensure an acceptable and sustainable level of environmental quality for Buzzards Bay.

The Buzzards Bay Project is focusing on three priority problems: closure of shellfish beds, contamination of fish and shellfish by toxic metals and organic compounds, and high nutrient input and the potential pollutant effects. By early 1990, the Buzzards Bay Project will develop a Comprehensive Conservation and Management Plan to address the Project's overall objectives: to develop recommendations for regional water quality management that are based on sound information, to define the regulatory and management structure necessary to implement the recommendations, and to educate and involve the public in formulating and implementing these recommendations.

The Buzzards Bay Project has funded a variety of tasks that are intended to improve our understanding of the input, fate and effects of contaminants in coastal waters. The Project will identify and evaluate historic information as well as generate new data to fill information gaps. The results of these Project tasks are published in this Technical Series on Buzzards Bay.

This report represents the technical results of an investigation funded by the Buzzards Bay Project. The results and conclusions contained herein are those of the author(s). These conclusions have been reviewed by competent outside reviewers and found to be reasonable and legitimate based on the available data. The Management Committee of the Buzzards Bay Project accepts this report as technically sound and complete. The conclusions do not necessarily represent the recommendations of the Buzzards Bay Project. Final recommendations for resource management actions will be based upon the results of this and other investigations.

David A. Fierra

David Fierra, Chairman, Management Committee
Environmental Protection Agency

TABLE OF CONTENTS

I. INTRODUCTION

In the past, many water quality studies and pollution control methodologies (including state and federal regulations) have focused upon and dealt with municipal and industrial wastes. These types of wastes, received by collection systems and discharged by pipe into waterways, are referred to as point sources for pollution.

While point source pollution does pose a problem in the Buzzards Bay area, studies conducted within the past decade have revealed an increased significance of pollution sources considered natural or uncontrollable. These non-point sources, such as agricultural runoff, runoff from street drains, waste discharges from boats and failing septic systems are presenting serious water quality problems to the inner embayments and subwatershed areas of the Buzzards Bay region. Elevated coliform levels from farm animal wastes, the presence of gas, oil and heavy metals from stormwater flushing and roadway runoff and eutrophication associated with nutrient loading and failing septic systems have all been identified as major concerns in the Buzzards Bay basin.

Much of the intensive study that has brought non-point source pollution to light has been conducted through the EPA Buzzards Bay Project. This research effort has provided the impetus to identify and evaluate the effects of non-point source pollution in this geographical region. This research, in conjunction with the expertise and insights provided by local officials, citizen groups and academic centers, has provided cities and towns in the Buzzards Bay region with a springboard from which to embark upon proper management programs.

As our understanding of the embayments and their environs has increased, the technical resources at our disposal have also increased. Several efforts have been made to incorporate the best available technology into the context of local bylaws and regulations (the Falmouth Nutrient Loading Provision addressing the potential nitrate pollution eminating from a subdivision is an example). Such an approach to regulating is not, however, a cure all or a permanent fix.

Science and nature are not static, but subject to constant change. In order to be effective, our local bylaws and regulations will have to keep pace with these changes.

This booklet, then, is a guide. It is a tool to be utilized, improved upon and amended. It is one more step in helping the reader address the ever-changing needs in his or her community.

II. LOCAL REGULATION OF ENVIRONMENTAL ISSUES

Cities and towns are corporate bodies with powers which may be exercised in the public interest, but which may be subject to limitations imposed by general laws and applicable special acts. This local power may be used to enforce state law or regulations of state agencies with the force of law. A city may enact an ordinance or a town may adopt a bylaw to further the purposes of a general law as well as to manage local affairs.

State and federal regulation of environmental concerns often depend upon local participation and upon controls which are enacted and enforced by zoning bylaws, general bylaws and by rules and regulations of local agencies.

A local board of health has broad regulatory powers in the public interest and may make reasonable health regulations, but local rules may be enforced only to the extent they further the purposes of general law. Generally, effective enforcement is by way of injunction rather than by fine. A recent survey of Buzzards Bay towns indicates that boards of health are being underutilized as a mechanism to control non-point source pollution.

General ordinances and bylaws, which are binding upon the activities of all persons within municipal boundaries, are enacted to promote the general welfare rather than to regulate land use. A general bylaw should have an identified public purpose, contain reasonable provisions to accomplish that purpose and not be inconsistent with state law. A general bylaw is often a local expression of a legislative concern of the general court which enhances the powers and gives a local mandate for enforcement by local agencies. In general, the state retains enforcement authority for most environmental matters. However, local agencies may have an important role in the enforcement of state law, even if ultimate enforcement authority remains at the state level. Some statutes authorize local officials to adopt and enforce regulations, and some authorize the adoption of regulatory ordinances and bylaws.

Zoning ordinances and bylaws may be enacted to conserve health; to prevent overcrowding of land; to provide for water, water supply, drainage, sewerage,

open space and conservation of natural resources; and to prevent blight and pollution of the environment.

A zoning bylaw may be adopted to protect designated land areas with critical environmental concerns from inappropriate uses of land. Generally, this purpose is accomplished by the designation of resource districts with identified boundaries within which permitted uses are subject to general protective conditions. Uses authorized by special permit are identified and subject to specific requirements and conditions and other uses are prohibited. Rather than requiring a site determination of applicability, all land within the district is subject to the provisions of the bylaw.

Unless a restriction is reasonably related to ending identified detrimental effects from activities otherwise acceptable, a city or town has limited authority to regulate possibly detrimental potential uses. The power of a board of health to regulate potential threats to public health is not general in nature. It is not reasonable for local bylaws or ordinances to regulate or restrict practices solely on the basis of a perceived applicability sometime in the future. On the other hand, some degree of planning is possible in zoning bylaws and ordinances and zoning districts may be established for the specific purpose of protecting a natural resource (e.g. groundwater), and the provisions of a bylaw may influence the future quality and character of the identified district.

However, no regulation has validity, be it a statute, a bylaw or ordinance, or a regulation of an enforcement authority, unless it meets the test of purpose, means or impact.

PURPOSE - The purpose must address a legitimate public interest.

MEANS - The means authorized must be reasonably adapted to the accomplishment of the purpose.

IMPACT - There must be a reasonable balance between the public benefit and restrictions put upon private interests.

Home Rule Amendment

The Home Rule Amendment to the Massachusetts Constitution is one of the strongest declarations in this country of the right of local control. Of particular interest are Sections 1 and 6 of Article II of the Articles of the Amendment. Sections 1 and 6 read as follows:

> Section 1. Right of Local Self-Government--It is the intention of this article to reaffirm the customary and traditional liberties of the people with respect to the conduct of their local government and to grant and confirm to the people of every city and town the right of self-government in local matters, subject to the provisions of this article and to such standards and requirements as the general court may establish by law in accordance with the provisions of this article.
>
> Section 6. Governmental Powers of Cities and Towns--Any city or town may, by the adoption, amendment or repeal of local ordinance or bylaws, exercise any power or function which the general court has power to confer upon it, which is not inconsistent with the constitution or laws enacted by the general court in conformity with powers reserved to the general court by section eight, and which is not denied, either expressly or by clear implication, to the city or town by its character. This section shall apply to every city and town, whether or not it has adopted a charter pursuant to section three.

An example of the use of the Home Rule Amendment is the Dennis Wetlands Protection Bylaw. The Dennis bylaw is a general bylaw modeled on the Wetlands Protection Act (MGL Ch. 131, Section 40). It has been upheld in Massachusetts by the Supreme Judicial Court, in the case Lovequist v. Conservation Commission, Town of Dennis, 1979 Mass. Adv. Sh. 2210, 393 N.E.2d 858 (1979). The court expressly ruled that the Dennis bylaw was not in conflict with the

Zoning Act (MGL Ch. 40A) or the Wetlands Protection Act (MGL Ch. 131, Sec. 40), which the court recognized as merely a minimum level of wetlands protection in the Commonwealth.*1

As development pressures increase in the Buzzards Bay watershed, protecting land and water resources becomes increasingly important. The wide authority of the Home Rule Amendment and the court's decision, with respect to the Dennis bylaw, invite municipalities to consider adopting wetlands protection bylaws or bylaws addressing other environmental concerns such as erosion and sedimentation control, aquifer and well protection, wildlife and recreation and aesthetics.

---

*1 Gregor I. McGregor, Esq., Use of Municipal Home Rule for Environmental Protection, Mass. Association of Conservation Commissions.

III. THE PROCESS OF ADOPTING A BYLAW OR REGULATION

Zoning Proposals*1

The first step in adopting a zoning proposal is to file the proposal with the city council or board of selectmen. A proposal may be filed by a number of interested parties including, but not limited to: a city council or board of selectmen; a zoning board of appeals; a planning board; any individuals whose land would be affected by the proposal, or; ten or more registered voters.

Within fourteen days of receipt, the city council or board of selectmen must submit the zoning proposal to the planning board for review. The planning board must hold a public hearing within 65 days of receipt to give interested parties a chance to express the views of the proposal. In cities, the city council or a committee designated for such purpose may also be required to hold a public hearing.

Notice of the public hearing, in the form of newspaper advertisements, a posting in the city or town hall and mail notices to various government agencies, must be given in each of two successive weeks prior to public hearing. The notice must contain the subject matter, time, place and date of the hearing. In addition, the place where the text and map(s) of the proposal can be inspected must be identified.

The planning board shall submit a report with recommendations to the city council or town meeting. However, the legislative body may proceed to adopt, amend or reject the zoning proposal in the absence of a planning board report if 21 days have elapsed since the public hearing. It is important to note that the planning board's report must include recommendations on whether or not a proposal should be adopted.

---

*1 The description in this section is abbreviated. A more complete description is contained in The Process of Adopting a Zoning Proposal, Vol. 4, No. 2, EOCD Land Use Manager (February, 1987). See also MGL Chapter 40A, Section 5.

The adoption of a zoning proposal requires a two-thirds vote of the local legislative body, except where such body is a council of less than 25 members in which case a three-fourths vote may be required. If a town meeting fails to vote upon a zoning proposal within six months (ninety days for a city or town council) of the planning board hearing, no action can be taken on that proposal until a new public hearing, including proper notice, is held.

A zoning proposal which is not approved may not be considered within two years from the date of the unfavorable action unless the adoption of the zoning proposal is recommended in the final report of the planning board.

After a zoning bylaw has been adopted, the proposal shall be submitted to the Attorney General for approval. The submittal to the Attorney General shall include a statement explaining the proposal. Ordinances are not reviewed by the Attorney General. A copy of the approved bylaw or ordinance must be posted or published in a newspaper and sent to the Department of Community Affairs by the city or town clerk.

General Bylaws and Ordinances

The process of adopting a general bylaw or ordinance is much less complicated than that required for a zoning proposal. A general bylaw must simply be placed on town meeting warrant. This can be done by the selectmen or by twenty registered voters. There are no requirements for review by the planning board, public hearings or public notice. Approval of a general bylaw is by simple majority. It should be noted that general bylaws must still be reviewed and approved by the Attorney General. While the process of adopting a bylaw is prescribed by state law, cities, through local ordinances, may impose more stringent standards upon the adoption of a general ordinance.

Regulations

In order for a local board to adopt or amend its rules and regulations, the board needs to publish a public hearing notice in a local newspaper once in each of two successive weeks. The first published date of notice must be

fourteen days prior to the date of the public hearing. The notice should contain the time and place of the public hearing as well as information on the subject matter. The board, after the public hearing, may, by simple majority: vote to approve as prepared; vote amend due to comments received from the public hearing; to take the matter under study, or; disapprove the proposed regulation.

The board, unless clearly provided for in local laws, has sole responsibility for adoption or amendment to its rules and regulations. The rules and regulations shall establish the size, format, contents, style, specifications, number of copies and submission procedures. The regulations cannot be inconsistent with existing state and local laws and a copy shall be provided to the town or city clerk.

The requirements for a board of health are slightly different, in that the regulation itself must be published once in a local newspaper in the week prior to the hearing.

IV. PROTECTION OF WETLANDS FROM INAPPROPRIATE USES

1. Local Enforcement of the Wetlands Protection Act (MGL, Ch. 131, Sec. 40)

Prior to the enactment of wetlands legislation, it was accepted public practice to "improve" wetlands by filling swamps and draining wetlands. The "town dump" was often the favored method of land reclamation.

The Wetlands Protection Act was enacted with the intent and purpose of ensuring that earth removal, fill or alteration should not take place without due consideration of the effect of such operations upon the wetland resources, and in particular on water supply, groundwater, flood control, and the protection of shellfish and wildlife habitat.

The statute identifies protected areas as bogs, freshwater and coastal wetlands, swamps, wet meadows, and marshes, which are identifiable by physical characteristics wherever located.

Local enforcement of the statute is a function of the conservation commission, which has the authority to make the determination that an activity is or is not significant in environmental effect, and to impose conditions in order to mitigate such activities. In the role of local enforcement agency of the statute, the conservation commission follows the regulations promulgated by the Department of Environmental Quality Engineering, which have the force of law.

2. Non-Zoning Wetlands Bylaw

Non-zoning wetlands bylaws and ordinances which further the legislative objectives of the Wetlands Protection Act are useful as local expressions of environmental policy and support for the conservation commission. Such a local law may be adopted by a majority vote of a town meeting or municipal council. The authority of the conservation commission is similar to that under the statute.

The wetlands bylaw adopted by the Town of Dennis in 1975 is a non-zoning restraint which imposes conditions upon the use of land for activities which might otherwise be permitted under the zoning and land use regulations of the town. The bylaw has been challenged on this point and upheld since it is a local law which furthers the intent and purposes of the Wetlands Protection Act, in that it is designed to protect groundwater, among other resources. The passage of a bylaw of this type does not invalidate the state law or supercede it. The statute remains in full force and effect. One advantage of a Dennis type bylaw is that it can broaden the coverage of Wetlands Protection Act by adding values such as erosion control, recreation and aesthetics to the wetlands values already recognized in the Act. In 1988 Dennis adopted a more comprehensive bylaw based on the model prepared by the Massachusetts Association of Conservation Commissions.

Another example of a local wetlands bylaw has been adopted by the Town of Amherst. The Amherst bylaw further broadens the protected wetland resources to include isolated wetlands which are not currently regulated by the Wetlands Protection Act and land within 100 feet for land subject to flooding. The Amherst bylaw also provides a mechanism to increase coordination between local boards on wetlands protection matters and gives the conservation commission the authority to levy fees based upon the complexity of a project and the difficulty of review. Furthermore, the bylaw gives the conservation commission the authority to require security to insure that the conditions of its permit are fulfilled. (See Appendix A - Town of Amherst - Wetlands Protection Bylaw)

3. Wetlands Zoning Bylaw

The zoning bylaw can also be used to protect wetlands and other environmental resources. This is accomplished by establishing overlay districts for specifically designated areas. These districts are superimposed over the underlying zoning and impose additional requirements on the use of land in those districts including the establishment of a special permit requirement for specified uses. The special permit process allows a designated special permit granting authority to use discretion in the approval of those uses. It can also impose additional reasonable conditions which are appropriate to the

achievement of the purposes of the overlay district. Uses not identified as permitted by right or special permit are deemed prohibited.

The Town of Carver has adopted a wetlands overlay district as part of its zoning bylaw. This overlay district represents a basic resource protection district which contains the necessary elements of a zoning bylaw, including: a statement of purpose; delineation of the district boundaries; a list of permitted uses, and; a list of uses allowed by special permit.

The statement of purpose of the Carver bylaw is general in nature. It is good practice to specify in more detail special conditions (such as wetland or groundwater concerns) which are found in the resource district.

It is important to note that district boundaries must be identified on a map which becomes part of the zoning bylaw. Language explaining the reasons for the location of district boundaries (such as soil conditions, elevation, etc.) should be avoided as it tends to create ambiguity and has no legal significance. Although certain land within the district may not be deemed to be "wetland" by the Conservation Commission under the wetlands statute, all land areas within the boundaries established by the town meeting are subject to zoning regulation. (See Appendix B - Town of Carver Zoning Bylaw, Wetlands District)

V. GROUNDWATER PROTECTION

One of the foremost concerns of the citizens of any community in Massachusetts is the protection of the surface and drinking water resources within their cities or towns. For most communities, this means establishing some form of groundwater protection program.

Coastal communities face an additional burden in formulating a groundwater protection plan; they must also consider the potential impacts of groundwater discharges on coastal waters, estuaries and embayments.

Just as densely populated urban areas characteristically differ from lakefront, coastal and rural/agricultural areas, so will their specific needs in developing and implementing a groundwater protection plan. Road runoff, leaking underground storage tanks and chemical hazards are most commonly mentioned as sources of groundwater contamination in urbanized areas. Lakefront areas often have problems with failed septic systems while some common rural concerns tend to be herbicide and pesticide application and animal feedlots. Coastal communities are troubled by such problems as boat discharges in their harbors as well as failed septic systems along embayments. Yet, most communities contain some mix of urban, rural and waterfront land, compounding the problem of formulating a groundwater protection strategy. A comprehensive approach, therefore, is a necessity in attempting to protect the groundwater resources of any community from the myriad of potential concerns.

There are a number of invaluable tools available to city and town boards or local committees to aid in identifying and mapping their groundwater resources and developing a protection strategy.

To definitively map a groundwater resource area (such as the breadth of an aquifer) in the best possible manner, one would need to conduct appropriate hydrogeological testing and apply the skills of a geologist or engineering consultant. Such mapping procedures may include extensive drilling, sinking of test wells, and detailed subsurface geological profiling. This is time consuming and costly but would need to be done in a critical situation such as delineating a sole source aquifer. However, mapping for the purpose of

establishing protective zoning districts can usually be done using available information that produces reliable, conservative results. In many areas, the existing data and interpretation are adequate in defining and mapping resource/recharge areas for municipal water supply protection.

United States Geological Survey topography maps of the appropriate quadrangles can be used for their contours and physical features, which are necessary to map watershed boundaries and groundwater divides. USGS Hydrologic Investigation Atlases and Surficial Geology maps, where available, are also useful sources of information. The Hydrologic Atlases are map compilations of hydrologic information including some and occasionally all of the following: bedrock geology, surficial geology, bedrock contours, water table contours, aquifer lithology, saturated thickness, typical yields, and well locations. Soil Conservation Service (SCS) maps show the surface soil textures which can be indicative of permeable soils best suited for recharge. Land use patterns can be obtained from MacConnell Land Use Maps.

Once specific resource protection needs have been defined, a zoning bylaw with the explicit purpose of protecting the defined groundwater resource can be constructed. This is perhaps the best way to regulate identified and potential uses which may injure the valuable public resource of groundwater. A detailed groundwater resource district map shall be adopted as part of this zoning bylaw. The board may also look at present and proposed development of land within the mapped resource district and evaluate potential hazards to groundwater associated with current or potential land use. Accepted, prohibited and special permit uses can be defined within the text of the bylaw.

Other mechanisms to protect groundwater resources are possible. Areas deemed to be essential to water supply and to groundwater supply may be protected in the public interest by the local conservation commission under the wetlands act and local wetland bylaws. The local boards of health enforce state law and local rules relative to individual septic systems, but may also adopt regulations in respect to the number of on-site systems in developments.

In general, a board of health is concerned more with proper operation and maintenance in specific case by case situations, but it must also consider the effect of significant numbers of individual systems upon each other and on the community as a whole. Although a planning board does not usually consider public health concerns outside of a proposed subdivision, a board of health may trigger such an inquiry in its recommendations to the planning board for consideration of subdivisions (including the impacts of site runoff and drainage on groundwater resources).

The board of health may also suggest conditions to a conservation commission to be imposed upon proposed wetland activities.

When a board of health has a policy of groundwater protection expressed in its regulations and makes recommendations for this purpose in reports submitted to the planning board relative to approval of subdivisions, then the planning board and the board of health, through cooperative interaction, become important elements in guiding future growth of a municipality.

Model Zoning Bylaw for the Purpose of Groundwater Protection (See Appendix C - Conservation Law Foundation, Model Groundwater Protection Bylaw)

This zoning bylaw is intended to protect groundwater by establishing resource protection district boundaries and regulations to protect and preserve water resources.

Although the expressed purpose of this bylaw is to protect and preserve water supplies, the term "water supply" is not defined. State law puts general oversight over sources of water supply with the Department of Environmental Quality Engineering (DEQE). Although the term "water source" may be defined as an aquifer, it is doubtful if an agency of local government has authority to designate a "source" as a "water supply" as does the state. The substitution of the term "water resources" for "water supplies" is recommended, and a suitable definition for this term should be added to the bylaw, under Section 3, "Definitions".

Section 4.3 emphasizes the importance of establishing well defined boundaries for a protection district during the preparation of the bylaw and accompanying map. It is important to remember that boundaries are established as accepted by town meeting and can be changed only by town meeting vote.

Section 5, "Permitted Uses," contains some important language in terms of types of development and maximum lot coverage allowed in the water resource protection district. Permitted uses are less risk intensive uses which are more compatible to the intent and purpose of the bylaw. Maximum lot coverage standards are very important in that increased amounts of impervious surface will lessen the recharge capabilities of the water resource area and increase surface runoff.

Section 6, "Prohibited Uses," outlines those uses which are deemed incompatible with the intent and purpose of the district due to their risk intensive nature (i.e. - chemical storage, hazardous wastes, landfills, road salt storage, animal feedlots, junk yards, etc.). This section can be amended to include specific areas of concern as necessary within the city or town proposing this bylaw.

Section 7, "Special Permits," defines the uses, unless expressly prohibited in Section 6, which may be permitted within the district under the rules and regulations of the designated special permit granting authority.

Subdivision Regulations Related to Nutrient Loading (<u>See Appendix D - Falmouth Subdivision Regulations, Nutrient Loading Standards and Provisions of the Town Zoning Bylaw</u>)

The Town of Falmouth, with a number of seasonal homes, seasonal home conversions and septic system concerns, has added nutrient loading standards to its subdivision regulations and Zoning Bylaw to address concerns over the impacts of nutrients upon freshwater ponds, streams, coastal waters and overall water quality in the Buzzards Bay Drainage Basin.

Nutrients are a known and proven source of eutrophication (caused by algal bloom) in lakes, ponds, streams and coastal embayments. The federal

government, through the Environmental Protection Agency (EPA), has established minimum water quality safety standards for nutrients such as nitrates and phosphates. These standards are directly applicable to protecting the quality of surface waters as well as public water supplies. Nutrient loading provisions, such as Falmouth's, effectively establish a desired number of septic systems per acre. This is determined by calculating the amount of nutrient input versus nutrient dispersion per area considered. Some communities in Massachusetts and other states have set nutrient loading limits at 10 parts per million, which is the federal standard. Falmouth's limit is currently 5 parts per million.

In Falmouth, the nutrient loading provisions are considered in the review of subdivision site plans by the planning board. While these regulations address a legitimate concern, they would be more appropriate as regulations of the board of health. As previously mentioned, not only does the board of health already have statutory power under Title V, but it is empowered under MGL 111 to protect the public health and safety.

In order to utilize a provision such as nutrient loading, the town boards will require information relative to the proposed site, such as: soils profile; groundwater elevations; proximity of public or private water supply wells; proposed number of septic systems; and proposed source of on-site water supply.

It is important that criteria for nutrient loading potentials be based upon the best scientific methodology available as is relative to potential adverse environmental effects of a proposed subdivision.

Regulating Underground Storage Tanks (<u>See Appendix E - Southeastern Regional Planning and Economic Development District, Model Bylaw for Inspection of Underground Storage Tanks</u>)

MGL Chapter 40, Section 21, Clause 1 enables towns to adopt bylaws to manage the "prudential affairs" of the town - a broad class of miscellaneous subjects placed under municipal jurisdiction.

Selectmen already have direct statutory power over gasoline storage tanks from a fire protection standpoint. Adopting this model as a general bylaw will give authority to regulate bulk storage of gasoline and hazardous materials from a public health basis.

It's hoped that local boards of selectmen and health will work closely together on this - which is why reference is made to both in the model bylaw. If this model is adopted as an amendment to a general bylaw, it requires a majority vote of town meeting.

Section 1 sets the purpose of the bylaw - to protect surface and groundwater resources from contamination.

Section 2 establishes leaking tanks as a public nuisance - an important legal point because boards of health may respond to nuisance conditions.

Licenses for existing tanks are granted by the Board of Selectmen. Since these licenses are issued on a permanent basis - subject to annual renewal - additional conditions cannot reasonably be imposed on their use. This bylaw would authorize boards of health to inspect existing storage tanks, with inspection costs paid by the town.

Town meeting should appropriate funds for a contractor to test tanks for leaks. As existing tanks wear out and are no longer used, the number of tests performed will eventually decrease to zero.

Section 3 deals with standards for constructing and testing new tanks. In this case, testing requirements can be made a license condition. The selectmen may specify a routine testing schedule - paid for by the owner - and may even require a leak detection system if the tank is in an area where a leak would pose a major threat to the water supply.

Some underground tanks - for instance, home heating tanks - are too small to require a license. The bylaw requires that they be constructed of corrosion-resistant material.

Sections 4 and 5 provide that leaking tanks no longer be used and that penalties may be levied.

Notices of the bylaw's adoption should be sent to those holding storage tank licenses and to all home heating oil tank installers in the town.

The model bylaw may be presented in other formats. For example, the bylaw may simply authorize the board of health to adopt rules and regulations for inspecting fuel storage tanks. The particulars of how and when tests are made, and the fee structure, would be included in the regulations.

In summary, the model bylaw:

- recognizes leaking fuel storage tanks as a problem needing correction,
- authorizes local boards to address the problem by adopting rules and regulations for inspection of existing tanks and design considerations for new tanks,
- enables local boards to set fees and establish penalties.

This gives a strong legal basis for boards of selectmen and boards of health to adopt rules and regulations to implement the program. The board of selectmen, because they are the licensing board for underground storage tanks, should consider design standards; the board of health, in the role as the protectors of public health and safety, should be responsible for an inspection program.

As an adjunct to this bylaw, cities and towns should consider adopting zoning amendments to ban underground storage tanks in identified water supply/groundwater protection districts.

VI. EARTH REMOVAL

Earth removal operations result in changes to natural topography often leaving land areas in unsuitable condition for reuse. Commercial sand and gravel removal operations can also pose a serious threat to soil and water resources. The dry, sandy areas where such operations are developed are often important recharge or watershed sites. If too much soil is removed the groundwater table may be exposed or insufficient cover may remain, thus allowing unrenovated surface water runoff to come in contact with the groundwater. During the course of normal earth removal activities, stockpiles of topsoil and sand may be exposed to the elements. Without proper management, erosion and sedimentation can become a serious problem.

Whenever earth removal activities are significant to wetland values, the conservation commission may prohibit or impose conditions on operations. However, earth removal operations frequently occur on upland sites, outside of the conservation commission's jurisdiction.

Most cities and towns require earth removal permits, authorized by a general bylaw. Many municipalities also regulate earth removal by zoning provisions. Typically, an earth removal bylaw authorized by Chapter 40, Section 21 (17) of the General Laws, provides for the establishment of a local permit authority, usually the selectmen (often a "gravel committee" or the conservation commission). The thrust of the bylaw is usually directed more to the safety of the operation than it is to the impact upon the environment.

On the other hand, an earth removal provision that is part of the zoning bylaw will be directed at the effect of an operation on the land, and usually requires a special permit granting authority. The special permit granting authority establishes requirements and conditions which must be met before a permit may be issued. A special permit granting authority should consider not only the detrimental effects of noise, dust and vibration associated with the operation, but also the possibility of waste land areas being created, injury from the removal of topsoil resulting in unnatural topography, pollution and/or depletion of groundwater, and problems of soil erosion and sedimentation.

Earth removal operations involve pits, access and temporary roads, and wide spread land changes. In most cases, a removal operation is followed by a subdivision plan. Consequently, the planning board is the most appropriate special permit granting authority. (See Appendix F - Model Earth Removal Zoning Bylaw)

VII. STORMWATER RUNOFF

The subdivision of land into residential or commercial building lots is subject to the approval of local planning boards. The control of stormwater runoff through the provision of adequate drainage and the control of soil erosion are among the areas of concern that the planning board should address. It is important to note, however, that a planning board's decision must be based on reasonable rules and regulations, rather than a generalized concern that the "public interest" would be served by disapproval (Vitale v. Planning Board of Newburyport, 1980 Mass. App. Ct. Adv. Ch. 1693).*1

Under the provisions of Chapter 41, Section 81Q, of the General Laws, a planning board may adopt or amend subdivision regulations by vote of the board subject to public hearing and notice requirements. Generally, these regulations include the standards that a development is expected to meet, the information that must be provided, and the procedures that must be followed in order to obtain approval of the planning board.

The authority of the planning board and that of the local board of health may overlap with regard to water pollution that may result from drainage in a subdivision. The planning board may not approve a subdivision plan that the board of health has disapproved on the grounds of inadequate drainage design. However, if a subdivision plan violates established rules and regulations of the planning board that are duly authorized to prevent water pollution, the planning board may disapprove it irrespective of board of health approval (Patelle v. Planning Board of Woburn, 6 Mass. App. Ct. 951, 1978); Fairbairn v. Planning Board of Barnstable, 5 Mass. App. Ct. 171, 1977).*2

A planning board's authority, with respect to drainage, is generally limited to drainage within and coming into a subdivision. The Subdivision Control Act

---

*1 Legal Handbook for Boards of Health, Conservation Law Foundation, (June, 1982) page 21.

*2 Ibid.

defines drainage as the "control of surface water within the tract of land to be subdivided." The board of health has much broader authority to address problems which result from stormwater which goes out of a subdivision.*3

In spite of the overlapping authority of a planning board and board of health to deal with stormwater runoff, it is appropriate that the rules and regulations of the planning board address this issue in detail. First, a planning board's disapproval must be based on a violation of its rules and regulations. Second, information generated by the planning board will be useful to the board of health as it makes its review.

As a general conclusion, a planning board is on firmer ground if its regulations for stormwater runoff are derived from statutory authority contained in the town's zoning bylaw. Such authority would best be located in sections of the zoning bylaw that deal with natural resource protection.

The objective of the sample drainage regulations described in this report is to maintain the volume and rate of stormwater runoff at its natural or pre-development level. These regulations can be adopted as basic principles to supplement the technical specifications normally included in subdivision regulations. A sample for this approach is contained in Appendix G. Another approach is to adopt regulations containing detailed technical specifications. This method is illustrated by the sample regulations found in Appendix H.

The regulations described in Appendix H establish performance standards for stormwater runoff. A developer is then given discretion as to how to meet the performance standards. The regulations also require that the planning board be given detailed information on the site, including the maximum elevation of the groundwater table and a soil profile analysis, in order to allow the planning board to evaluate the proposed drainage design.

---

*3 Local Authority for Groundwater Protection, Mass. Audobon Society (July, 1984), p. 8.

A related objective of the sample regulations in Appendix H is to protect the water quality of receiving streams and water bodies. Settling basins or other means to remove pollutants are required as a part of the drainage facilities for large parking areas or streets subject to heavy traffic. Oil separator manholes and sedimentation basins, capable of removing 80 percent of waterborne sediment, are required prior to the outfall of stormwater to receiving water courses.

The Town of Wellfleet has carried this concept one step further by adopting a bylaw that prohibits construction activities that cause runoff, except from natural pre-existing water courses, to flow into any wetland regulated by the Wetlands Protection Act. The Wellfleet bylaw also requires that uncontaminated runoff be directed to recharge the groundwater on the lot where it originates. (See Appendix I - Wellfleet Stormwater Bylaw)

VIII. INSPECTION OF SEPTIC SYSTEMS

The board of health is an agency of local government established by state law, which has been authorized broad powers over public health and environmental concerns. The board of health is also the local agency responsible for enforcing Title V. State law empowers a board of health to adopt and enforce reasonable health regulations, most of which concern the local enforcement of statutes or regulations of state agencies, which have the force of law and which relate to public health issues, such as minimum standards for housing, wells, drinking water, sewers, sewage disposal, refuse disposal, air pollution and other public health and environmental concerns.

If rules adopted by a board of health relate to the achievement of a desired result in the public interest, they are considered reasonable. The enforcement of a state law or regulation, or the prevention of a condition injurious to public health is reasonable purpose.

Title V, the State Environmental Code, regulates the disposal of sanitary wastes.*1 Years ago, Title V permitted leaching fields of septic systems for summer homes to be 80 percent the design size of that for year-round homes. This was in part because the groundwater table is lower during summer, giving more time for the soil to filter wastes.

Now, however, summer homes along rivers, lakeshores and coastal ponds are being converted for year-round use - yet their leaching fields are inadequate for the water volumes generated. This increases the amount of phosphates and nitrates entering the water body and possibly nearby drinking water wells and coastal ponds.

Some communities must now spend public funds to correct these situations. Constructing a public sewer system or water supply system is an expensive burden. The yearly costs for operating and maintaining them cannot be overlooked either. An alternative which should not be dismissed is a regular program of septic system inspection and maintenance.

---

*1 Title V is a minimum standard. Local regulations can be more strict.

One approach to the inspection of on-site septic systems is to require inspection at the time of a change in occupancy. This can be accomplished with the cooperation of public utilities. When present occupants vacate a building and service accounts with utilities are terminated, new accounts are not established until an after inspection, and notification to the utility of compliance or until a waiver is granted. (See Appendix J - Model Board of Health Rules)

A variant on this approach is to implement a policy of inspections at the time of real estate transfers. The Chatham Board of Health has adopted regulations for this purpose. However, these regulations may be inconsistent with statutes that govern the sale and transfer of land in Massachusetts (generally Chapter 183 of the General Laws, Alienation of Land). While a board of health may require an owner/occupant of a premise to maintain a sewage system in operable condition (CMR 410-750), it is unclear if an owner can be made responsible for an inspection in order to convey real estate by deed. The requirement for inspection and certification of smoke alarms is a similar public safety inspection. However, this inspection has been specifically required by state law. (See Appendix K - Chatham Board of Health Rules)

A provision of the Sanitary Code of the Marion Board of Health requires that septic systems in seasonal units that are converted to year-round use must be inspected by a qualified engineer or sanitarian prior to the commencement of construction. If it is determined that the septic system has failed, provisions for its repair or replacement must be made. Other systems must be reinspected during the time of probable maximum high ground between six and twelve months after the issuance of the occupancy permit. (See Appendix L - Marion Sanitary Code, Conversion of Seasonal Homes)

IX. HARBORS AND TIDEWATERS

The Department of Environmental Quality Engineering (DEQE) has general care and supervision of harbors and tidewaters of the commonwealth. Local harbormasters are appointed by the selectmen or the mayors to enforce state law and local regulations, if any. Permanent moorings, wharves, etc. require state approvals, but local harbormasters issue permits for temporary moorings. Marinas are operated under license from the Division of Water Pollution Control chiefly for the purpose of ensuring adequate sanitary waste facilities.

Most water-related uses are considered as public rather than private rights, and are regulated by state law. However, selectmen and city councils have statutory authority to adopt regulations, grant licenses, and establish fees without local bylaw or ordinance authority in order to control the taking of shellfish, eels and sea worms, and to establish areas for such activities.

Although the Town of Plymouth has adopted a harbor bylaw, which is enforced by the harbormaster, this regulation is concerned chiefly with boat speeds, portion, public facilities, and boating activities in general. Most of the regulations, including the minimal provisions relating to pollution, could be adopted by the selectmen without bylaw authority. Regulations which need sanction of a bylaw or ordinance should be avoided because amendments have to go through the same legislative procedure. (See Appendix M - Plymouth Harbor Bylaw)

The Town of Edgartown has adopted an amendment to the zoning bylaw that creates a "surface water district." The purpose of the district is to: "encourage appropriate water dependent uses of the Town's harbors, bays and ponds, to protect and enhance the environmental quality (sic) of those waters, to minimize potential adverse effects on marine flora and fauna and wildlife habitat, to promote the safety of navigation on said waters, and to minimize flooding and other storm-related hazards."

A number of recreation and water dependent activities, such as fishing, aquaculture, shellfish propagation, and services to vessels from land-based

facilities, are established by the bylaw as permitted uses. Uses that may have a more significant impact of the town's water areas, such as marinas and piers, are subject to a special permit process with the planning board serving as the special permit granting authority.

As the special permit granting authority, the planning board can impose conditions on uses that require a special permit. An example of such conditions may be a requirement that marinas have marine waste pump-out facilities.

The bylaw gives the town a tool to prevent over-use of surface water areas. Areas such as shellfish beds can be protected from potentially isruptive activities, such as boat moorings. In addition, the amount and nature of recreational boating activity can be regulated. The bylaw has been approved by the Attorney General. (See Appendix N - Edgartown Zoning Bylaw, Surface Water District)

THE SKIPPER OF MARION.

MODEL WETLANDS PROTECTION BYLAW

(Based upon a bylaw adopted by the Town of Amherst, Massachusetts)

D-5 WETLAND PROTECTION BYLAW

5.00 Purpose

The purposes of this bylaw are to protect the wetlands, related water resources, and adjoining land areas in the Town of ___(town)___ by prior review and control of activities deemed by the Conservation Commission likely to have a significant or cumulative effect upon wetland values, including but not limited to the following: public water supply, private water supply, groundwater, flood control, erosion and sedimentation control, storm damage prevention, prevention of water pollution, fisheries, wildlife, wildlife habitat, recreation, and aesthetic values; these values area to be known collectively as the "wetland protected by this bylaw."

5.01 Jurisdiction

Except as permitted by the Conservation Commission or as provided in this bylaw, no person shall remove, fill, dredge, build upon, or alter the following resource areas:

a. Any freshwater wetland, riverine wetland, marsh, wet meadow, bog or swamp, or within one hundred (100) feet of said areas;

b. Any bank or beach, or within one hundred (100) feet of said areas;

c. Any lake, river, pond, or stream, whether intermittent or continuous, natural or man-made;

d. Any land under aforesaid waters;

e. Any land subject to flooding or inundation by groundwater, surface water, storm flowage, or within one hundred (100) feet of said areas;

f. Isolated wetlands including kettle holes, or within one hundred (100) feet of said areas;

g. Seasonal wetlands, or within one hundred (100) feet of said areas.

5.02 Exceptions

The application and permit required by this bylaw shall not be required for maintaining, repairing, or replacing, but not substantially changing or enlarging (more than 50% of structure area), an existing or lawfully located structure or facility used in the service of the public to provide electric, gas, water, telephone, telegraph or other telecommunication services, sanitary sewers and storm sewers, provided that the structure or facility is not substantially changed or enlarged, provided that written notice has been given to the Commission at least forty-eight (48) hours prior to commencement of work, and provided that the work conforms to performance standards in regulations adopted by the Commission.

The application and permit required by this bylaw shall not be required for maintaining, repairing, or replacing, but not substantially changing or enlarging (more than 50% of structure area), an existing or lawfully located structure or facility used in the service of the public to provide electric, gas, water, telephone, telegraph or other telecommunication services, sanitary sewers and storm sewers, provided that the structure or facility is not substantially changed or enlarged, provided that written notice has been given to the Commission at least forty-eight (48) hours prior to commencement of work, and provided that the work conforms to performance standards in regulations adopted by the Commission.

The application and permits required by this bylaw shall not apply to emergency projects necessary for the protection of the health or safety of the public, provided that the work is to be performed by or has been order to be performed by an agency of the Commonwealth or a political subdivision thereof, provided that advance notice, oral or written, has been given to the Commission prior to commencement of work or within twenty-four (24) hours after commencement, provided that the Conservation Commission or its agent certifies the work as an emergency project, provided that the work is performed only for the time and place certified by the Conservation Commission for the limited purposes necessary to abate the emergency, and provided that within twenty-one (21) days of commencement of an emergency project a permit application shall be filed with the Commission for review as provided in this bylaw. Upon failure to meet these and other requirements of the Commission, the Commission may, after notice and public hearing, revoke or modify an emergency project approval and order restoration and mitigation measures.

The application and permit required by this bylaw shall not be required for work performed for the normal maintenance or improvement of lands in agricultural use.

5.03 Requests for Determinations and Applications for Permits

Any person desiring to know whether or not a proposed activity or an area is subject to this bylaw may request in writing a determination from the Commission. Such a request for determination shall contain data and plans specified by the regulations of the Commission.

The Commission in an appropriate case may accept as the request under this bylaw the Request for Determination of Applicability filed under the Wetlands Protection Act, G.L. Ch. 131, Sec. 40.

Written application shall be filed with the Commission to perform activities regulated by this bylaw affecting resource areas protected by this bylaw. The application shall include such information and plans as area deemed necessary by the Commission to describe proposed activities and their effects on the environment. No activities shall commence without receiving and complying with a permit issued pursuant to this bylaw.

The Commission in an appropriate case may accept as the application and plans under this bylaw the Notice of Intent and plans filed under the Wetlands Protection Act, G.L., Ch.131, Sec. 40.

At the time of an application request, the applicant shall pay a filing fee specified in regulations of the Commission. This fee is in addition to that required by the Wetlands Protection Act, G.L., Ch.131, Sec. 40. In addition, the Commission is authorized to require the applicant to pay the costs and expenses of any expert consultant deemed necessary by the Commission to review the

costs and expenses of any expert consultant deemed necessary by the Commission to review the application. The Commission may waive the filing fee and costs and expenses for an application or request filed by a government agency, and may waive the filing fee for a request for determination filed by a person having no financial connection with the property which is the subject of the request.

5.04 Public Notice and Hearings

An application or a request for determination shall be hand delivered or sent by certified mail to the Commission. The Commission shall notify all abutters according to the most recent records of the assessors, including those across a traveled way or body of water. The notice to abutters shall state where the request or application, including any accompanying documents, may be examined or obtained. When a person requesting a determination is other than the owner, the request, the notice of the hearing, and the determination itself shall be sent by the Commission to the owners as well as to the person making the request.

The Commission shall conduct a public hearing on any application or request for determination, with written notice given at the expense of the applicant, five (5) working days prior to the hearing, in a newspaper of general circulation in the Town of __(town)__. The Commission in an appropriate case may combine its hearing under this bylaw with the hearing conducted under the Wetlands Protection Act, G.L., Ch.131, Sec. 40.

The Commission shall commence the public hearing within twenty-one (21) days from receipt of a completed application or request for determination, unless the applicant extends the twenty-one (21) day time period by a signed written waiver.

The Commission shall have authority to continue the hearing to a certain date announced at the hearing or to an unspecified date, for reasons stated at the hearing, which may include the receipt of additional information offed by the applicant or others, information and plans required of the applicant, deemed necessary by the Commission in its discretion, or comments and recommendation of boards and officials listed in Section 6. If a date for continuation is not specified, the hearing shall reconvene within twenty-one (21) days after the submission of a specified piece of information or the occurrence of a specified action. The date, time and place of said continued hearing shall be published in a newspaper of general circulation in the Town of (town)___, five (5) working days prior to the continuation, at the expense of the applicant, and written notice shall be sent to any person who so requests in writing.

The Commission shall issue its permit or determination in writing within twenty-one (21) days of the close of the public hearing thereon.

5.05 Coordination with Other Boards

Any person filing a permit application or a request for determination with the Commission shall provide written notice thereof at the same time, by certified mail or hand delivery, to the Board of Selectmen, Planning Board, Zoning Board of Appeals, Board of Health, Town Engineer, and Building Commissioner. The Commission shall not take final action until such boards and officials have had fourteen (14) days from receipt of notice to file written comments and recommendations with the Commission, which the Commission shall take into account but which shall not be binding on the Commission. The applicant shall have the right to receive any such comments and recommendations, and to respond to them at a hearing of the Commission, prior to final action.

5.06 Determination, Permits, and Conditions

The Commission shall have the authority, after a public hearing, to determine whether a specific parcel of land contains or does not contain resource areas protected under this bylaw. If the Commission finds that no such resource areas area present, it shall issue a negative determination.

If the Commission, after a public hearing on the permit application, determines that the activities which area the subject of the application are likely to have a significant or cumulative detrimental effect upon the wetland values protected by this bylaw, the Commission within twenty-one (21) days of the close of the hearing, shall issue or deny a permit for the activities requested. If it issues a permit, the Commission shall impose conditions which the Commission deems necessary or desirable to protect those values, and all activities shall be done in accordance with those conditions.

The Commission is empowered to deny a permit for failure to meet the requirements of this bylaw, for failure to submit necessary information and plans requested by the Commission; for failure to meet the design specification, performance standards, and other requirements in regulations of the Commission; for failure to avoid or prevent significant or cumulative detrimental effects upon the wetland values protected by this bylaw; and where no conditions are adequate to protect those values.

A permit shall expire three years from the date of issuance. Notwithstanding the above, the Commission in its discretion may issue a permit expiring five years from the date of issuance for recurring or continuous maintenance work, provided that annual notification of time and location of work is given to the Commission. Any permit may be renewed once for an additional one year period.

For good cause the Commission may revoke or amend a permit issued under this bylaw after public notice and public hearing, and notice to the holder of the permit.

The Commission in an appropriate case may combine the permit or other action on an application issued under this bylaw with the Order of Conditions or other action issued or taken under the Wetlands Protection Act, G.L., Ch.131, Sec. 40.

5.07 Regulations

After public notice and public hearing, the Commission shall promulgate rules and regulations to accomplish the purposes of this bylaw. These regulations shall be consistent with the terms of this bylaw. The Commission may amend the rules and regulations after public notice and public hearing.

Failure by the Commission to promulgate such rules and regulations or a legal declaration of their invalidity by a court of law shall not act to suspend or invalidate the effect of this bylaw.

Unless otherwise stated in this bylaw or in the rules and regulations promulgated under this bylaw, the definitions, procedures, and performance standards of the Wetlands Protection Act. G.L., Ch.131, Sec. 40 and associated Regulations, 310 CMR 10.00 as promulgated April 1983, shall apply.

5.08 Definitions

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

The term "person" shall include any individual, group of individuals, association, partnership, corporation, company, business organization, trust, estate, the Commonwealth or political subdivision thereof to the extent subject to town bylaws, administrative agency, public or quasi-public corporation or body, this municipality, and any other legal entity, its legal representatives, agents, or assigns.

The term "alter" shall include, without limitation, the following activities when undertaken to, upon, within or affecting resource areas protected by this bylaw:

a. Removal, excavation or dredging of soil, sand, gravel, clay, minerals, or aggregate materials of any kind;

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

c. Drainage, or other disturbance of water level or water table;

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

e. Placing of fill, or removal of material, which would alter elevation;

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

g. Placing of obstructions or objects in water;

h. Destruction of plant life including cutting of trees;

i. Changing water temperature, biochemical oxygen demand, or other physical, chemical, or biological characteristics of surface and groundwater;

j. Any activities, changes or work which may cause or tend to contribute to pollution of any body of water or groundwater.

5.09 Security

As part of a permit issued under this bylaw, in addition to any security required by any other municipal or state board, agency or official, the Commission may require that the performance and observance of the conditions imposed hereunder be secured wholly or in part by a proper bond or deposit of money or negotiable securities or other undertaking of financial responsibility sufficient in the opinion of the Commission.

In addition or in the alternative, the Commission may accept as security a conservation restriction, easement, or other covenant enforceable in a court of law, executed and duly recorded by the owner of record, running with the land to the benefit of this municipality and observed before any lot may be conveyed other than by mortgage deed.

5.10 Enforcement

The Commission, its agents, officers, and employees shall have the authority to enter upon privately owned land for the purpose of performing their duties under this bylaw and may make or cause to be made such examinations, surveys, or samplings as the Commission deems necessary.

The Commission shall have authority to enforce this bylaw, its regulations, and permits issued thereunder by violation notices, administrative orders, and civil and criminal court actions.

Upon request of the Commission, the Selectboard and the Town Counsel will take legal action for enforcement under civil law. Upon request of the Commission, the Chief of Police shall take legal action for enforcement under criminal law.

Municipal boards and officers, including any police officer or other officer having police powers, shall have authority to assist the Commission in enforcement.

Any person who violates any provision of this bylaw, regulations thereunder, or permits issued thereunder, shall be punished by a fine of not more than three-hundred dollars ($300). Each day or portion thereof during which a violation continues shall constitute s separate offense, and each provision of the bylaw, regulations, or permit violated shall constitute a separate offense. This fine may be in addition to any levied under the Wetlands Protection Act, G.L., Ch.131, Sec. 40.

In the alternative to criminal prosecution, the Commission may elect to utilize the non-criminal disposition procedure set forth in G.L., Ch.40, Sec. 21D.

5.11 Burden of Proof

The applicant for a permit shall have the burden of proving by a preponderance of credible evidence that the work proposed in the application will not have any significant or cumulative detrimental effect upon the wetland values protected by this bylaw. Failure to provide adequate evidence to the Commission supporting this burden shall be sufficient cause for the Commission to deny a permit or grant a permit with conditions.

5.12 Relation to the Wetlands Protection Act

This bylaw is adopted under the Home Rule Amendment of the Massachusetts Constitution and the Home Rule statues, independent of the Wetlands Protection Act, M.G.L., Ch.131, Sec. 40, and the regulations thereunder.

5.13 Severability

The invalidity of any section or provision of this bylaw shall not invalidate any other section or provision thereof, nor shall it invalidate any permit or determination which previously has been used.

Section 11.0 **Wetland District**

11.1 **Purpose**

The purpose of this Wetland District is to insure that development of land within the district will not endanger the health, safety or welfare of the occupants of such land as well as of the general public, and is intended to encourage the most appropriate uses of land in Carver. The Wetland District is considered to be superimposed over the other districts shown on the zoning map, as a recognition of special conditions which exist in the overlaying district.

11.2 DISTRICT DELINEATION

The Wetland District is defined as the area shown on the map designated Wetlands adopted as part of the zoning by-law of the Town of Carver on October 19, 1978 (as amended to April 14, 1980).

11.3 PERMITTED USES

Any use permitted in the underlying district of low flood-damage potential and causing no obstruction to flood flows, provided there are no structures, fill, or storage of materials or equipment required, such as:

1. Agricultural uses such as farming, grazing, truck farming, horticultural, and cranberry related activities.

2. Forestry and nursery uses.

3. Outdoor recreational uses, including fishing, boating, play areas.

4. Conservation of water, plants, wildlife.

5. Wildlife management areas, foot, bicycle, and/or horse paths.

6. Temporary non-residential structures used in connection with fishing, growing, harvesting, storage, or sale of crops raised on the premises.

7. Buildings lawfully existing prior to the adoption of these provisions.

11.4 USES BY SPECIAL PERMIT

Any use permitted in the underlying district by issuance of a special permit from the board of appeals as special permit granting authority (SPGA). Such special permit shall be subject to conditions determined by the special permit granting authority to be necessary to protect human life and property from the hazards of periodic flooding, to preserve the natural flood control characteristics, and the flood storage capacity of the floodplain, and to preserve and maintain the groundwater table and water recharge areas within the floodplain.

No structure or building shall be erected, constructed, substantially improved, reconstructed, or otherwise created or moved; no earth or other materials dumped, filled, excavated, or transferred, unless a special permit is granted by the SPGA.

1. The proposed use shall comply in all respects to the provisions of the underlying district in which the land is located.

2. Within 10 days of the receipt of the application, the SPGA shall transmit one copy of the development plan to the Conservation Commission, Board of Health, Town Engineer. No action shall be taken until reports have been received from the above boards or until 35 days have elapsed.

3. All encroachments, including fill, new construction, substantial improvements to existing structures, and other development are prohibited unless certification by a registered professional engineer is provided by the applicant demonstrating that such encroachment shall not result in any increase in flood levels during the occurrence of the 100 year flood.

4. All development, including structural and nonstructural activities, shall be in compliance with Chapter 131, Section 40 of the Massachusetts General Laws and with the requirements of the Massachusetts State Building Code pertaining to the construction in the floodplains.

APPENDIX B

APPENDIX C

MODEL AQUIFER PROTECTION DISTRICT BY-LAW/ORDINANCE

Adapted from Conservation Law Foundation of New England, Inc. and Groveland Aquifer Protection by-law, Spring 1987.

Section 1: Authority

This by-law/ordinance is adopted by the town/city of _____ _____ under its home rule powers, its police powers to protect the public health, safety and welfare, and under powers authorized by Mass. Gen. Laws Ch. 40A as amended.

Section 2: Purposes

The purposes of this by-law/ordinance are to protect public health from the contamination of existing and potential public and private water supplies and to protect the general welfare by preserving limited water supplies for present and future use.

Section 3: Definitions

3.1 "Animal feedlot" means a plot of land on which twenty-five or more livestock per acre are kept for the purposes of feeding.

3.2 "Aquifer" means a geologic formation, group of formations or part of a formation which contains sufficient saturated permeable material to yield significant quantities of potable ground water to public or private wells.

3.3 "Disposal" means the deposit, injection, dumping, spilling, leaking, incineration or placing of any hazardous material into or on any land or water so that such hazardous material or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including ground water.

3.4 "Ground water" means all the water beneath the surface of the ground.

3.5 "Hazardous materials" means any substance or combination of substances, including any liquid petroleum product, that, because of quantity, concentration or physical, chemical or infectious characteristics, poses a significant present or potential hazard to water supplies or to human health if disposed of into or on any land or water in this town/city. Any substance deemed a "hazardous waste" in Mass. Gen. Laws Ch. 21C shall also be deemed a hazardous material for purposes of this by-law/ordinance.

3.6 "Impervious" means impenetrable by water.

3.7 "Leachable wastes" means waste materials, including solid wastes, sewage, sludge and agricultural wastes, that are capable of releasing water-borne contaminants to the surrounding environment.

3.8 "Recharge area" means any area of porous, permeable geologic deposits, especially, but not exclusively, deposits of stratified sand and gravel, through which water from any source drains into an aquifer, and includes any wetland or body of surface water surrounded by or adjacent to such area, together with the watershed of any wetland or body of surface water adjacent to such area.

3.10 "Solid wastes" means useless, unwanted or discarded solid materials with insufficient liquid content to be free flowing, including, for example, rubbish, garbage, scrap materials, junk, refuse, inert fill material and landscape refuse.

Section 4: Delineation of Ground Water Protection District

4.1 For the purposes of this by-law/ordinance, there is hereby established within the town/city of _____ an overlay district consisting of certain ground water protection areas, including aquifers and recharge areas, which are delineated on a map dated _____, entitled "Aquifer Protection District, Town/City of _____" and which shall be considered as superimposed over other districts established by the zoning by-laws/ordinances of this town/city. This map, as it may be amended from time to time, is on file with the office of the town/city clerk, and, with any explanatory material thereon, is hereby made a part of this by-law/ordinance.

4.2 Uses otherwise not permitted in the portions of a zoning district superimposed by this district shall not be permitted in this district.

4.3 Where the bounds of the Aquifer Protection District, as delineated on the Aquifer Protection District map, are in doubt or in dispute, the burden of proof shall be upon the owner(s) of the land in question to show where they should properly be located. At the request of the owner(s), the town/city may engage a professional hydrogeologist or soil scientist to determine more accurately the location and extent of an aquifer or recharge area and may charge the owner(s) for all or part of the cost of the investigation.

Section 5: Permitted Uses

5.1 Within the Aquifer Protection District, the following uses are permitted, subject to the provisions of Section 6

provided that all necessary permits, orders and approvals required by local State and Federal law are also obtained:

(a) conservation of soil, water plants and wildlife;

(b) outdoor recreation, not involving the use of motor vehicles or motor boats, including boating, fishing, nature study and hunting where otherwise legally permitted;

(c) foot, bicycle and horse paths and bridges;

(d) maintenance and repair of any existing structure, provided there is no increase in impervious pavement;

(e) normal operation and maintenance of existing water bodies and dams, splash boards, and other water control, supply and conservation devices;

(f) residential development, permitted in the underlying district, provided that no more than 10 percent of a building lot (including the portion of any new street abutting the lot) is rendered impervious and that in unsewered areas the maximum permitted density shall be one dwelling unit per acre;

(g) farming, gardening, nursery, conservation, forestry, harvesting and grazing uses, provided that fertilizers, herbicides, pesticides, manure and other leachable materials are not stored outdoors and that the use of such materials in non-domestic applications is approved by special permit.

Section 6: Prohibited Uses

6.1 Within the Aquifer Protection District, the following uses are prohibited:

(a) storage of liquid petroleum products of any kind except for storage in a free-standing container within a building of fuel for the heating of that building;

(b) disposal of hazardous materials;

(c) storage of hazardous wastes, as defined in Mass. Gen. Laws Ch. 21C, as amended;

(d) disposal of solid wastes other than brush or stumps;

(e) disposal of leachable wastes except for subsurface waste disposal from one-family or two-family residential units;

(f) storage of road salt or other deicing chemicals;

(g) disposal of snow that contains deicing chemicals and that has been brought in from outside the District;

(h) industrial uses that discharge process wastewater on site;

(i) outdoor storage of fertilizers, herbicides and pesticides, and outdoor uncovered storage of manure;

(j) animal feedlots;

(k) dry cleaning establishments;

(l) chemical and bacteriological laboratories;

(m) metal plating establishments;

(n) boat and motor vehicle service, washing and repair establishments;

(o) junk and salvage yards;

(p) the rendering impervious of more than 10% of any lot; and

(q) mining of land except as incidental to a permitted use.

Section 7: Special Permit Uses

7.1 The following uses, unless prohibited by a specific provision of Section 6, may be permitted by a special permit from the (Special Permit Authority), under such conditions as the (SPA) may require:

(a) commercial and industrial activities permitted in the underlying district and involving the manufacture, storage, transportation or use of any hazardous material other than hazardous wastes as defined in Mass. Gen. Laws Ch. 21C.

(b) the application of pesticides for uses that are non-domestic provided that all necessary precautions shall be taken to prevent hazardous concentrations of pesticides in the water and on the land within the Aquifer Protection District as a result of such application, such precautions to include, but not be limited to, erosion control techniques, the control of runoff water (or the use of pesticides having low

solubility in water), the prevention of volatilization and redisposition of pesticides and the lateral displacement (i.e. winddrift) of pesticides; and

(c) the application of fertilizers for uses that are non-domestic provided that such application shall be made in such a manner as to minimize adverse impacts on surface water and ground water due to nutrient transport and deposition or sedimentation;

(d) nonconforming uses existing at the effective date of this by-law may be expanded only to the extent allowed by special permit, and then only if the proposed expansion shall not be more detrimental to the water supply than the existing use;

(e) one nonconforming use of a structure, building, or property may be changed to another nonconforming use only by special permit and only if the proposed new use shall be less detrimental to ground water than the prior use;

(f) if any nonconforming use ceases for any reason for a period of two years, such land and buildings shall thereafter be used and developed only in accordance with the terms of this Aquifer Protection By-law;

(g) wherever a nonconforming use is changed to a permitted use, such use shall not thereafter revert to a nonconforming status.

8.1 Procedures for Issuance of Special Permits

(a) Each application for a Special Permit shall be filed with the Town Clerk for transmittal to the Special Permit Authority and shall be accompanied by 6 copies of all accessory documentation. Such Special Permit shall be granted if the SPA determines that the intent of this by-law as well as its specific criteria are met;

(b) the SPA shall hold a public hearing on each application within 65 days of its receipt from the Town Clerk in conformance with Massachusetts General Laws, Chapter 40A, Section 9;

(c) notice of public hearing shall be given by publication, posting, and first-class mailing to "parties of interest" as defined in Section 11 of Chapter 40A. The SPA shall act upon each application within 90 days of the public hearing or of any continuance thereof.

Failure of the SPA to take final action upon such application within the 90-day period shall be deemed to be a grant of the Special Permit applied for.

(d) Before issuing a Special Permit, the SPA

(1) may consult with or engage the services of any professional engineer, hydrogeologist knowledgeable individuals, including the Conservation Commission, Board of Health, Town Engineer, and Fire Chief, or other knowledgeable officials or individuals. The expenses of any such professional shall be paid by the private party or town board requesting the special permit or building permit;

(2) shall find that the proposed use

(a) is in harmony with the purpose and intent of this by-law and will not adversely affect the purpose of the Aquifer Protection District;

(b) will not, during construction or thereafter, have any adverse environmental impact on the aquifer or recharge areas of the Aquifer Protection District.

(3) shall be assured by the applicant that provision shall be made to protect against toxic or hazardous materials discharge or loss resulting from corrosion, accidental damage, spillage, or vandalism. The applicant shall provide the Board with the following information:

(a) A list of hazardous materials that will be present at the location, their estimated quantity, and expert evidence that alternative, less hazardous materials have been evaluated and are not practical.

(b) Where hazardous materials are to be used, documentation that the systems to transfer, use, and store these materials have been designed by a registered professional engineer.

(c) Evidence that provisions have been made to protect against gradual or sudden hazardous materials discharge or loss resulting from routine use, accidental damage, spillage or

vandalism through measures such as secure

storage areas, contingency provisions, and emergency preparedness plans.

(d) For any toxic or hazardous wastes to be produced in quantities greater than those associated with normal household use, evidence of the availability and feasibility of disposal methods that are in conformance with Massachusetts General Law, Chapter 21C.

4. Where application of fertilizers, pesticides, herbicides, or other potential contaminants is of sufficient quantity to be deemed a threat to ground water quality, the SPA may require installation of monitoring wells. Such test wells shall be located by a professional geologist, hydrogeologist, or engineer trained and experienced in hydrogeology. Sampling shall be conducted by an agent of the Board of Health. The installation, sampling and any required regular testing shall be at the expense of the applicant and/or owner of the property.

Provisions from Subdivision Regulations (Falmouth Planning Board)

a. Determination of nutrient loading: Determination of nutrient loading shall be required:

1. If a portion or all of the proposed development lies within the watershed zone of contribution of a freshwater or coastal pond or embayment; or

2. If a portion or all of the development lies within the watershed or zone contribution of a public water supply well (s) (either existing or proposed).

When required, the Environmental and Economic Impact Statement shall determine the nutrient loading of the proposed subdivision and compare it to the carrying capacity of receiving waters, setting forth the probable impact or effect of the proposed subdivision on the receiving waters (ground or surface) over a period of time assuming the subdivision is completed and all lots built upon.

Determination of nutrient loading shall be done using available loading estimates from county, state or federal performance standards and shall include, at a minimum:

i. The existing condition of the water body or water supply, including physical characteristics and water chemistry;

ii. The expected change in the condition of the water body or water supply as a result of the proposed development;

iii. The comparison, on a per acre basis, of the total nutrient loading from the proposed development with:

a. The existing and potential loading from all other developments and acreage within the recharge area of the water supply or water body;

b. The loading rate which would be expected to produce critical eutrophic levels in a water body or in the case of water supply, the loading rate which would produce nitrate-nitrogen levels in excess of five (5) parts per million in the groundwater.

iv. The proposal of measures to reduce nutrient loading if iii. above indicates that the per-acre loading rate from the proposed development will equal or exceed the critical loading rate when combined with existing and potential development within the water's recharge area.

In determining total nutrient loading of a development and critical eutrophic levels, the following standards shall be used: *

a. Loading per person: 5 lbs Nitrogen per person per year; .25 lbs Phosphorus per person per year for sewage disposal systems within 300 feet of the shoreline. Persons per dwelling unit = 3.0.

b. Loading from lawn fertilizers: 3 lbs Nitrogen per 1000 square feet per year.

c. Loading from road run-off: .19 lbs Nitrogen per curb mile per day; .15 lbs Phosphorus per curb mile per day.

d. Critical eutrophic levels: Fresh water concentration, total Phosphorus = .02 mg/litre; salt water concentration, total Nitrogen = .75 mg/litre.

e. Critical level for drinking water = 5 parts per million.

* Unless the applicant demonstrates to the Planning Board that given the nature of the proposed project and/or receiving waters, other standards are appropriate.

MODEL GENERAL BY-LAW

Underground Storage Tanks

The purpose is to ensure compliance with minimum health, safety and welfare standards.

Section 1 **Purpose**

1.1 The purpose of the by-law is to ensure compliance with minimum standards for health and safety and to prevent nuisances which affect public water supplies, and to protect surface and groundwater resources from contamination.

Section 2 **Existing Underground Storage Tanks**

Boards of Health shall adopt regulations allowing for inspection of storage tanks.

2.1 The Board of Health shall adopt rules and regulations for the periodic inspection of storage tanks for petroleum products, solvents, acids, industrial chemicals or other similar products requiring storage permits to protect public health and safety because of the nature of the stored materials, and for testing to determine if liquids are leaking into the soil or groundwater and creating a public nuisance.

APPENDIX E

The Board of Health may inspect storage tanks to determine if liquids are leaking.

2.2 All tanks for the storage of petroleum products, solvents, acids, industrial chemicals or other similar products requiring permits to protect public health and safety because of the nature of the materials stored that are licensed for use prior to the date of adoption of this bylaw as provided by MGL Chapter 148 Section 12 shall/will be subject to periodic inspection by the Board of Health.

The purpose of such inspections shall be to determine if liquids are escaping to the surrounding soil or groundwater thereby creating a public nuisance. The inspection of such storage tanks may include the performing of pressure or other tests. Such inspections shall be performed at no cost to the owner or operator of the storage tank.

The frequency of inspections will be determined by the Board of Health which shall consider the expected lifespan of the storage tank, the type of material being stored, proximity to sources of water supply and indications that leakage may have occurred.

Section 3 New Underground Storage Tank Installations

New storage tanks need license from Board of Selectmen. MGL Ch. 148 concerns fire protection re: any product which may generate explosive vapors and requires licensing.

3.1 All tanks for the storage of petroleum products, solvents, acids, industrial chemicals or other similar products requiring permits to protect public health and safety because of the nature of the materials stored, shall require an annual license from the Board of Selectmen under MGL Chapter 148 Section 13. The Board may consider the recommendations of the Board of Health.

Underground tanks greater than 50 gallons to store gasoline and the like should be made of corrosive-resistant material.

3.2 All such underground tanks installed for the storage of more than fifty gallons of gasoline or other petroleum products, solvents, acids, industrial chemicals or other similar products requiring permits to protect public health and safety because of the nature of the materials stored, shall be constructed of corrosion resistant materials.

New tanks be inspected regularly by the Board of Health.

3.3 The Board of Health shall adopt regulations to provide for the testing of the structural integrity of the storage tank following installation and at such other times as deemed appropriate by the Board of Health in view of the expected lifespan of the storage vessel, the corrosiveness of material being stored and proximity to sources of water supply. Such tests may include the application of pressure to the tank, or other methods acceptable to the Board.

Monitoring facilities may be required by the Board of Health.

3.4 Provision for monitoring facilities (such as observation wells or vapor detectors) capable of detecting the leakage of stored liquids into the adjoining soil or groundwater may be required. The need for such facilities may be determined by the Board of Health based upon the following:

- o Capacity of the storage tank
- o Proximity to sources of water supply
- o Type of liquid being stored
- o Frequency of pressure (or other) testing

Section 4 Discontinued Use of Leaking Tanks

Leaking tanks shall no longer be used.

4.1 No tank used for the storage of petroleum products, solvents, acids, or other similar products, hazardous industrial chemicals or wastes, whether located above or below ground, shall be continued in use if it is determined that such materials are leaking into the soil or groundwater. The owner shall forthwith remove the contents from such leaking tank or take such other action as may be required by the Board of Health to abate the condition.

Section 5 Penalty

Violators may be fined under MGL 40, S. 21.

5.1 Whoever violates any of the provisions of this bylaw shall be subject to a fine of not more than Three Hundred Dollars for each offense. Each day that an underground storage tank is found to be in violation of this bylaw shall be considered a separate offense.

Amendment to the Zoning Bylaw - Earth Removal

APPENDIX F

1.0 PURPOSE - To protect the public interest in the preservation of natural resources, to conserve the value of land, to prevent the destruction and irretrievable loss of historic and archaeological assets, to ensure that permanent changes in the surface contours of land resulting from the removal and alignment of earth materials will leave land in a safe and convenient condition for appropriate reuse without requiring excessive and unreasonable maintenance or danger of damage to public and private property, and also to provide that earth removal activities shall be conducted in a safe manner with due regard to safety and with minimal detrimental effect upon the neighborhood in which the activities are located.

2.0 DEFINITIONS

"Earth Removal" shall mean the moving of earth, defined as clay, gravel, loam, sand, sod, soil, stone or any other earth materials from one location to another within the boundaries of a lot or tract of land as well as the moving of earth off any said lot or tract of land.

"Erosion" means the detachment and movement of soil or rock fragments by water, wind, ice or gravity.

"Sediment" means solid material, either mineral or organic, that is in suspension, is transported, or has been moved from its site or origin by erosion.

3.0 ACTIVITIES REQUIRING A SPECIAL PERMIT

1. Except as provided otherwise in this bylaw no clay, gravel, sand, sod, soil, stone or other earth materials shall be removed without the issuance of a special permit from the planning board as special permit granting authority (SPGA).

2. This section shall not apply to the moving of earth materials under the provision of a duly approved subdivision plan, to work necessary for the construction of streets and the installation of utilities, to such work in connection with the excavation and grading of land incidental to construction of a duly permitted structure, nor to work performed in normal and usual construction, maintenance or improvement of land in cranberry related activities or other agricultural use.

4.0 SPECIAL PERMIT REQUIREMENTS

1. Applications for special permits for earth removal shall be on such forms or in such manner as the special permit granting authority may specify in its rules and regulations and shall be submitted together with all required exhibits and site plans.

2. The special permit granting authority shall determine that the proposal generally conforms to the principles of good engineering, sound planning and correct land use, and that the applicant has means to implement the proposal if a special permit is granted or to restore the site to an appropriate condition including grading, loaming, seeding or other alternative landscaping as may be required as a condition to the special permit. Applicants may be required to submit a proposal for the reuse of land upon the completion of earth removal operations, and may be required, as a condition to the special permit, to guarantee that the land shall be in a suitable physical form by posting a suitable bond in an amount determined by the SPGA.

3. No special permit for the removal of earth shall be granted unless the SPGA finds the proposed earth removal operation is not contrary to the best public interest of the inhabitants of the City (Town) of _____. For this purpose, a removal operation may be considered contrary to such public interest which:

a. will be injurious or dangerous to the public health and safety;
b. will produce noise, dust or other effects observable at the lot lines to a degree seriously objectionable or detrimental to the normal use of adjacent property;
c. will cause an increase of sediment disposition beyond the boundaries of the site or in any wetland, water course or waterbody;
d. will result in a change in topography and cover which will be disadvantageous to the most appropriate use of the land on which the operation is conducted; or
e. will have a material adverse effects on the health and safety of persons living in the neighborhood or on the use or amenities of adjacent land.

4. The SPGA shall consider the following elements of an earth removal operation and may include specific requirements relative thereto as conditions to a special permit:

a. adequate provision for drainage during and after completion of operations;
b. adequate provision for soil erosion and sediment control during and after completion of operations;
c. lateral support of banks and satisfactory final slopes;
d. maintenance of a minimum of six feet of cover over maximum groundwater levels;
e. provision for off-street parking;
f. siting and final removal of temporary structures;
g. adequate posting of dangerous areas;
h. adequate fences and barriers at work faces;
i. adequate dust control on site;
j. provision for stockpiles of top soil;
k. provision for restoration of top soil to final surface;
l. provision for the determination of surplus top soil;

m. provision for the disposal of stumps, boulders and other residual material;

n. provision for adequate buffer areas along public and private ways and at adjoining property lines;

o. hours of operation;

p. designated access routes to site;

q. regulation of suitable covers on loaded vehicles to prevent spillage and dust;

r. dust control on access roads and such other conditions deemed appropriate by the SPGA.

5.0 SITE PLAN

1. A site plan shall be submitted in the quantities and in the form required by the rules and regulations of the special permit granting authority.

2. The site plan shall include, but not be limited to, pertinent information on the following: lot boundaries, names of abutting owners, streets contiguous to the site, vegetation, existing and proposed roadways, existing and proposed buildings, location of sources of water, depth to groundwater, sewage disposal, parking, loading areas, easements and rights-of-way, walls, fences, ditches, streams, ponds, known sites of historic or archaeological significance, and known permanent monuments, and other cross-sections, profiles, and contour maps needed to describe the proposal.

3. Such plan(s) shall be prepared by a registered engineer. The site plan shall show existing, intermediate and final ground levels with those of adjacent properties and shall indicate natural surface water flows and drainage ditches if any.

4. The plan shall include an erosion and sediment control plan which will be adequate to retain all sediment within the boundaries of

the site and away from wetlands, watercourses and waterbodies, both during and after earth removal operations.

6. REVIEW BY OFFICIAL BOARDS - Applications for special permits for earth removal operations shall be submitted by the SPGA to the following officials of the City (Town) of _____ for review and recommendations:

Board of Selectmen
Board of Health
Planning Board
Conservation Commission
Historical Commission
Chief of Police

The failure of any such official to make a recommendation within 45 days of receipt shall be deemed lack of opposition thereto.

Section X.X.X.—Storm Drainage

1. Drainage improvements shall be designed to ensure that the peak rate of storm runoff from the entire site for a 50-year, 24-hour storm event shall not exceed the rate of runoff from the site in its condition prior to development. Due regard shall be paid to maintaining the natural infiltrative capacity of the soil and to minimizing the volume of storm runoff discharged from the site. Drainage calculations using the USDA "Modified Soil Cover Complex Method" shall be submitted to the planning board.

2. Natural and man-made water bodies and drainage ways shall be protected against damage from erosion and sedimentation. A plan for the control of soil erosion during and after construction shall be prepared which describes measures and techniques to be used to minimize erosion. In general, such plans shall be designed to minimize disturbed areas, to stabilize and revegetate disturbed areas and to retain sediment within the development site.

SUBDIVISION RULES AND REGULATIONS

A. Drainage and Runoff Control

1. General Requirement. Approval of subdivision plans may be denied until the Planning Board is assured that adequate provisions will be taken to maintain the volume and rate of runoff at its natural or existing level. The objective of this regulation is to maintain the integrity of natural drainage patterns, in order to provide adequate stormwater drainage, prevent flooding, and avoid alteration of existing stream channels.

2. Drainage Plan. A drainage plan shall be prepared by a Registered Professional Engineer, showing existing and proposed streets, lots, two (2') foot contours, and other pertinent data; the drainage limits and acreage of the area tributary to each stormwater inlet and culvert; location and type of inlets proposed; and location, size, length, invert elevations, and slope of proposed drains and culverts; structural details of inlets, manholes, pipe, headwalls, and all other drainage structures required to complete the plan shall be attached.

3. Procedure. (May be modified by the Planning Board to suit the problems and needs of a particular subdivision.)

   a) An estimate of the present rate and volume of runoff, as well as an estimate of the rate and volume of runoff that would occur from the proposed subdivision, shall both be submitted along with supporting data. The runoff calculations shall be developed using the "Modified Soil Cover Complex Method" described in Guidelines for Soil and Water Conservation in Urbanizing Areas of Massachusetts, Appendix B, published by the Soil Conservation Service. These calculations shall be on the runoff produced from a 100-year storm event. In calculating the runoff and drainage

requirements, the developer shall consider the impact of septic systems on the ability of the soil to absorb additional stormwater, as well as any upstream runoff which may impact on the subdivision.

b) In order to control the rate and volume of stormwater runoff from the development site, the developer may elect any method which can be demonstrated to control the required amount of runoff, to the satisfaction of the Planning Board or the Board's agent. In each instance, the method or methods elected shall be suitable to the site and subject to the approval of the Planning Board.

c) The system may make use of gutters, inlets, culverts, catch basins, manholes, subsurface piping, surface channels, natural waterways, and detention basins, open or stone-filled. The Board will not approve any design or component which in its opinion does not meet the standards of engineering practice, will not function without frequent maintenance, or is unsuited to the character of the subdivision.

d) In general, the design of pipes shall be such as to provide for a flow of water at speeds between two (2) and twelve (12) feet per second; the minimum grade shall be not less than 0.4 percent for pipes twelve inches (12") and less in diameter, and 0.25 percent as absolute minimum; the minimum pipe diameter shall be twelve inches (12"), except that ten-inch (10") pipe may be used to connect a single catch basin across the street; catch basins shall have a two-and-one-half-feet (2.5') sump below invert; and all drop manholes or inlets with a drop of six feet (6') or more shall be provided with a splash pad. Catch basins or inlets shall be spaced along both sides of a street at approximately 400 feet intervals, and located at all low points and corner roundings at street junctions.

e) Streets shall be graded to provide for expeditious runoff of water, except that settling basins or other means of removing pollutants shall be used in draining large parking areas or

streets subject to heavy traffic or other sources of pollutants. Roof drains may be connected to the drainage system, but no industrial or domestic waste shall be discharged to or allowed to enter storm drains.

f) Storm drains and cross culverts shall be designed based on a 25-year frequency storm. Detention/retention basins shall be designed based on a 100-year frequency storm. All stormwater shall pass through an oil separator manhole prior to outfall. The manhole shall have convenient, paved vehicular access. Also, prior to discharge, all stormwater shall pass through a sedimentation basin capable of removing 80 percent of the waterborne sediment. Permanent easements and provisions for vehicular access shall be provided along the entire length of ditches and storm drain lines. No increase in stormwater runoff over pre-development conditions will be permitted for up to the 100-year storm event. Evidence of this shall be submitted to the Planning Board in the form of calculations for pre-development versus post development for all channels leaving the site, and any other design points required by the Board.

4. Lot Drainage. Lots shall be prepared and graded in such a manner that development of one shall not cause detrimental drainage on another; if provision is necessary to carry drainage to or across a lot, an easement or drainage right-of-way of a minimum width of twenty feet (20') and proper side slope shall be provided. Storm drainage shall be designed in accord with the specifications of the Board. Where required by the Planning Board or the Board of Health, the applicant shall furnish evidence that adequate provision has been made for the proper drainage of surface and underground waters from any lot or lots. Stormwater shall not discharge overland across lot lines.

Drainage conveyances and easements shall be provided to convey stormwater to the nearest permanent stream or municipal drainage system.

B. Groundwater and Soil Profile. Maximum groundwater-table elevation and soil profile shall be established. All elevations shall be determined with reference to true mean sea level.

1. Soil profile must be illustrated per Appendix N for all test holes as dug.

2. The lowest floor elevation of the proposed buildings(s) shall be at least two (2) feet above the maximum groundwater elevation.

3. If the groundwater elevation is higher than acceptable, the developer's engineer may submit with his preliminary plan a proposed underdrain system that will lower the maximum water table elevation to an acceptable level. The Board will evaluate the proposed sub-drainage system in terms of its expected useful life, maintenance requirements, and the effect that lowering of the groundwater table on the site will have on adjacent lots.

4. The groundwater table determinations shall be made at a sufficient number of places to truly reflect the elevation of the water table. Except where Board of Health requirements are more stringent, a minimum of two determinations shall be made. A minimum of one determination per 3 acres shall be made of tracts larger than 5 acres.

5. Unless the Board of Health requires otherwise, the developer shall notify the Board of Health at least forty-eight (48) hours prior to the time the groundwater tests are to be made, and shall also provide safe and convenient access to the test sites.

6. The date of each test, the existing and proposed grade elevation, the elevation of water encountered or the bottom elevation of a dry hole, and the results of soil profile analysis will be indicated on the report submitted.

7. In order to observe fluctuations of the water table, a representative number of test holes as required by the Board shall remain open until construction of the subdivision is completed by means of the following: perforated standpipes with a nominal diameter of four (4) inches shall be inserted in the designated holes, and they shall be capped and marked for protection and ease of location.

8. Location of all groundwater level tests will be shown on the topographical plan. These test locations must be located by at least two (2) coordinates from fixed reference points.

9. Percolation Tests. The Planning Board or Board of Health may require percolation tests be taken on some or all the lots within the proposed subdivision. Two copies of a report showing the location and results of the tests shall be submitted with the plans. Tests shall be made in accordance with current town regulations governing percolation tests and septic system installation, and be performed by or under the supervision of a professional engineer or registered sanitarian. If percolation tests are required, the developer shall notify the Board of Health in accordance with its rules and regulations.

C. Erosion and Sedimentation

1. General Requirements. These requirements may be waived; however, in a subdivision with excessive slope or a subdivision which abuts or includes a stream(s), wetlands or pond(s), or where major earth work is anticipated, an erosion and sedimentation analysis shall be presumed necessary unless a waiver is received. Approval of a subdivision plan may be denied until the existing average annual erosion and the expected average annual erosion during and after construction is determined. The developer may be required to submit an erosion and sediment control plan, if based on the analysis of erosion potential the Board determines that sedimentation will have an impact on nearby wetlands, streams, ponds, and other water bodies.

2. Procedure. (May be modified by the Planning Board to suit problems and needs of a particular subdivision.)

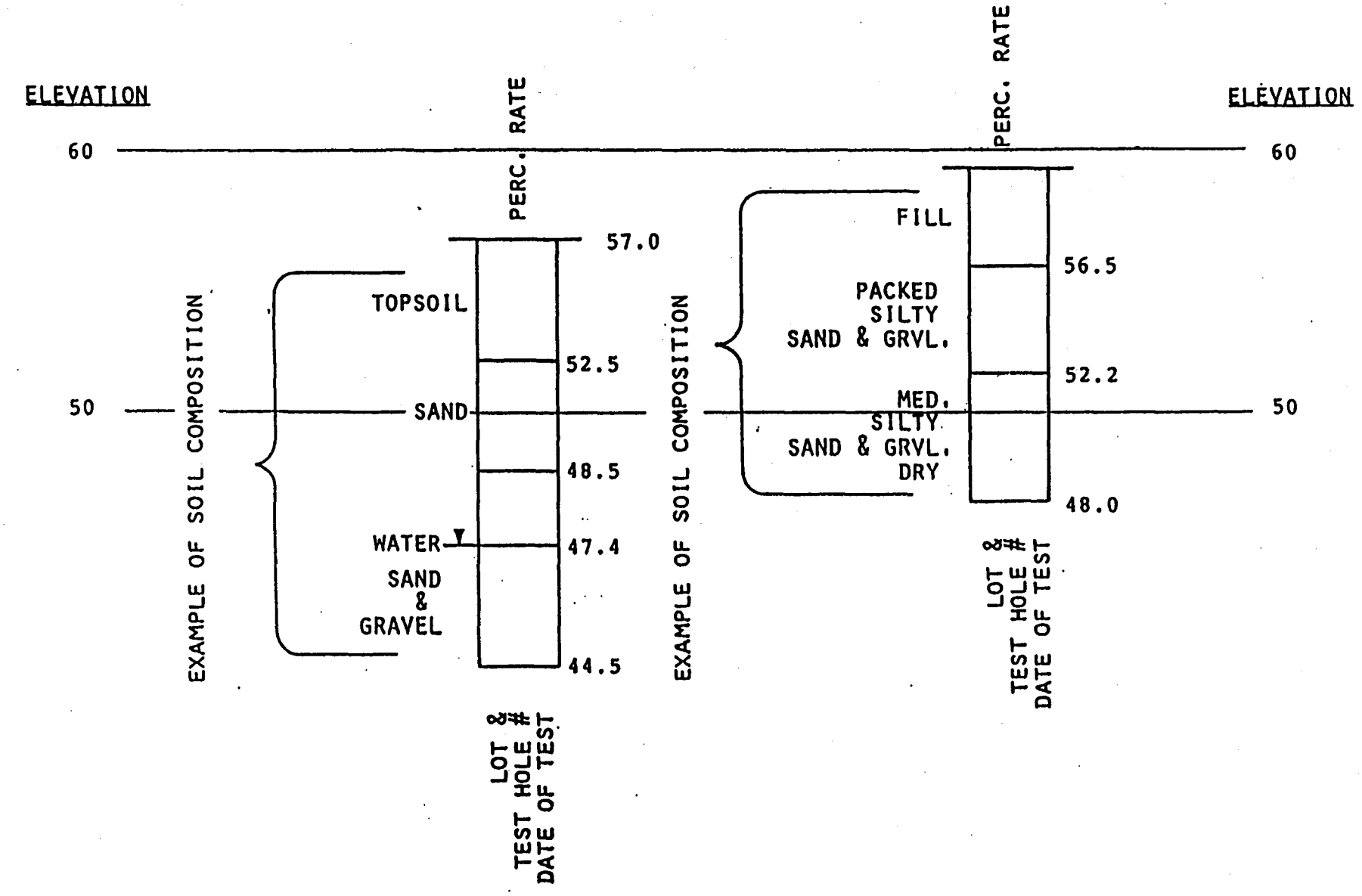
a) Using the methods described in Guidelines for Soil and Water Conservation in Urbanizing Areas of Massachusetts, Appendix J, published by the Soil Conservation Service, the developer shall use the Universal Soil Loss Equation to estimate the present annual soil loss from the site, as well as the estimated annual soil loss from the site while under construction and after construction is completed.

b) The developer shall submit as part of the Definitive Plan a soil erosion and sedimentation control plan, if the Board determines that erosion due to development activity will be excessive or significant to wetlands, streams, ponds, or other water bodies. This plan shall consist of a drawing certified by a registered civil engineer, identifying appropriate control measures and their location. Also, the drawing shall show all natural drainageways and water bodies in and adjacent to the proposed subdivision. The drawing shall be at a scale of one inch (1") equals forty feet (40'), and show the existing and proposed topography at two-foot (2') contour intervals.

c) If erosion and sedimentation control measures are required, they shall be adequate to retain all erosion within the subdivision and away from nearby water systems, both during and after construction. A timetable outlining anticipated construction activity and associated erosion and sedimentation control measures shall be submitted to the Board. All work shall be subject to periodic inspection by the Board or Board's agents.

TYPICAL SOIL PROFILES

APPENDIX N



Wellfleet Annual Town Meeting, April 28 - May 8, 1986
Warrant
Article 71. To see if the Town will vote to amend the General By-laws by adding the following as Section 30 of Article VII:

APPENDIX I

"In order to protect the quality of the waters of the harbor and other wetlands within the town limits, no road or other surface shall be regraded, constructed, or maintained in such a manner as to divert or direct the flow of runoff, defined as including storm water or any other surface waters, excepting natural pre-existing water courses, into any wetland, as defined in Massachusetts General Laws Chapter 131, Section 40. Uncontaminated runoff shall be directed in such a way as to recharge the groundwater within the lot where it originates and in such a manner as not to alter natural runoff into any wetland, nor to cause erosion, pollution or siltation into or towards any wet land."

or do or act anything thereon. (By Request of the Natural Resources Task Force)

Passed by voice vote, May 8, 1986

APPENDIX J

RULES OF THE BOARD OF HEALTH

Regulation providing for inspection of residential on-site septic systems upon changes in occupancy

1. The Board of Health of the Town of ....., acting under the authority of General Laws Chapter III Section 31 and Title Five of the Environmental Code hereby adopts the following regulation to implement a policy of on-site septic system inspections.

2. Whenever land with a residential structure thereon, containing one or more residential dwelling units, is vacated by an occupant, or within thirty (30) days of an anticipated change in occupancy by sale, lease, or otherwise a change in tenancy, sub-surface septic systems on the site shall be certified by the Board of Health as being in compliance with the minimum standards of said Title Five and the rules of the Board.

3. No public utilities shall be restored or billing transferred, except as deemed necessary by the Board of Health, until such time as the utility company has been notified by the Board after an inspection, that the premises are in compliance, or a temporary waiver granted.

4. This regulation shall not apply to new construction which was completed and found in compliance not less than five (5) years prior to the date of the change of occupancy.

Town of Chatham
Board of Health

MAR 1 7 1986

APPENDIX K

The Chatham Board of Health voted to adopt the following Regulation at its meeting held on August 26, 1985, under the authority of Chapter 111, Section 31, to better protect the Public Health of the inhabitants of the Town of Chatham, Massachusetts. Regulation to become enforceable on January 1, 1986.

REGULATION

The inspection of existing Commercial and Residential sewage disposal systems shall be the responsibility of the Owner prior to Real Estate Transfers.

Purpose

To determine and to protect the Public Health from potential and present sources of pollution to ground water or salt water from existing sewage disposal systems, the Board of Health requires that the Owner(s) of a developed property in Chatham, Massachusetts order an Inspection of the existing septic system prior to the time of transfer of that property.

For the purpose of this regulation, reference is made to the standards and provisions of Title V of the State Sanitary Code, and to the existing regulations of the Chatham Board of Health Regulations for Sub-Surface Sewage Disposal.

After an inspection by a Registered Professional Engineer or Sanitarian that Engineer or Sanitarian shall file a Certificate of Compliance/Inspection Form with the Board of Health with copies to the Seller, Buyer, and Assessor's office stating whether the system is in Good, Marginal, or Failed condition.

If it is determined by the Board of Health that the system constitutes a danger to the Public Health, the board shall order the Owner to make repairs/ replacement of the system. If the work is not completed within the time designated by the Board of Health, the board may impose fines and/or repair/replace the system at the expense of the Owner. Regulations of the Board of Health shall apply to all repairs or replacement of the system.

In addition to any other remedy, the Board of Health may take any enforcement action deemed appropriate, including but not limited to Criminal Procecution, to seek a fine in accordance with Chapter 111, Section 31, or Civil Action in the Courts of the Commonwealth for injunctive relief or money damages or both, or both Civil and Criminal enforcement.

The Board of Health is authorized to issue Notices of Violation, Cease and Desist orders, or other Administrative enforcement orders to compel compliance with the terms of these Regulations.

This regulation, however, shall not be effective at the conveyance or devise of the property to the Surviving Spouse or any of the Decendants of the Property Owner and further, shall not apply to a sale under power of sale contained in a bonafide mortgage effecting the property.

Instructions

1. The Inspection by the Registered Engineer or Sanitarian should take place no more than ninety(90) days nor less than thirty (30) days prior to the transfer of property. The Board of Health must receive the Inspection Certificate Form within seven (7) days of the Inspection. In addition, the copies must be given to the Owner, to the Buyer, and the Assessor's Office at that time. Inspection/Certificate Forms are provided by the Board of Health.

2. If the Inspection finds evidence of sewage on the surface or draining into any waterways or wet lands, the Board of Health shall determine within fourteen (14) days after receiving the Inspection Forms, whether or not the system constitutes a danger to the Public Health and should be repaired/replaced. By the end of the time period, the Board of Health, or its Agent, must notify the Owner by Certified Mail whether or not the system must be repaired/replaced.

3. If the Inspection finds the system to be "Marginal", the Board of Health will decide within fourteen (14) days after receiving the Inspection Form whether or not the system constitutes a danger to the Public Health and should be repaired/replaced. Before the end of that time period the Board of Health, or its Agent, shall notify the Owner by Certified Mail whether or not the system must be repaired/replaced.

4. The amount of allowable time for the repair or replacement will be determined by the Board of Health and will be contained in the letter of notification to the Owner. A copy of the Notification will be filed at the Town Assessor's Office.

5. If repair/replacement is required, upon completion of that work, the Health Agent must inspect and signify, in written form, that satisfactory repairs have been made.

6. Any system having been installed and having received final inspection approval by the Board of Health or its Agent within 24 months, shall be exempt from this Regulation, provided additional living space has not been added to the residence in question.

Earl J. Ruddock, Chairman

Frederick H. Connelly, Jr.

George W. Goodspeed, Jr.

Marion Sanitary Code

for the
Sub-surface Disposal of Sanitary Sewage,
the Drainage of Storm Water,
and the Protection of Marion Waters

SECTION II: Definitions

2.10: Unless otherwise defined in this Sanitary Code, all terms used shall have the definitions stipulated in Massachusetts Wetlands Regulations 310 CMR 10 and Massachusetts Sanitary Regulations 310 CMR 15. **(11/1/88)**

2.20: The terms listed below used in the Marion Sanitary Code are defined as follows:

FAILED SYSTEM

A failed system is defined as a septic system in which there is either evidence of sewage flow to the surface or evidence that the septic system is in such a state of disrepair that it cannot function as originally intended. A failed system is a danger to the public health. **(11/1/88)**

GOOD SYSTEM

A good system is defined as a septic system that conforms to all current Title V and Marion Sanitary Code provisions, and is functioning properly. **(11/1/88)**

MARGINAL SYSTEM

A marginal system is defined as a septic system having one or several problems, including, but not limited to: the system could not be judged because the system has been out of use for such a period of time that it cannot be determined if it operates properly; there are problems with the individual components of the system or with the system's location; records show excessive pumping (more than two (2) times within any ninety (90) day period for residential or commercial property, except for required grease trap maintenance for commercial property); the presence of visible Ferric Sulfide stains; the system is inadequate to service the structure(s) to which it is connected; system is located within one hundred (100) feet of a domestic water supply well, coastal wetland or coastal bank, or within seventy-five (75) feet of a wetland or

SEASONAL DWELLING

A seasonal dwelling is defined as any dwelling that has not been winterized through the installation of insulation and/or a heating system. A seasonal dwelling is further defined as any dwelling which, at the time of the adoption of these regulations, is not customarily occupied on a continuous basis for at least nine months of the year. **(11/1/88)**

SECTION III: Procedures

3.20: CONVERSION OF SEASONAL HOMES

3.20.1: Any dwelling to be converted from seasonal use to the capacity for year-round occupation, or to have it's use expanded from seasonal use to year-round use must have its septic system(s) inspected by a qualified sanitarian or engineer prior to the commencement of any conversion construction or extention of use. **(12/6/88)**

a) The qualified engineer or sanitarian upon completing the inspection shall report in writing to the Board of Health whether the system is in a GOOD, MARGINAL, NON-CONFORMING or FAILED condition.

i) If the inspection finds the system to be in a FAILED condition the owner must notify the Board of Health within ten (10) days whether the system is to be repaired or replaced.

3.20.2: Any dwelling that is converted from seasonal use to year-round use served by a septic system that was found to be in a GOOD or NON-CONFORMING condition under the provisions of MSC 3.20.1 must be inspected by a qualified sanitarian or engineer during the time of probable maximum high ground water between six (6) and twelve (12) months after the date of the issuance of the occupancy permit for the expanded use. **(11/1/88)**

APPENDIX M

HARBOR BY-LAWS

TOWN OF PLYMOUTH

DEFINITIONS:

Moorings: Shall mean (1) place where buoyant vessels are secured other than a pier; (2) the equipment and/or process used to secure a vessel, other than by anchoring, consisting of a block of anchor placed on the bed of a body of water, to which is affixed a buoy or float, to which is affixed a pennant.

Anchor: To secure a vessel to the bed of a body of water by dropping an anchor therefrom, which is designed or intended to be hauled back aboard when said vessel is not at anchor.

Plymouth Harbor: All areas of the harbor and muncipal water ways contiguous thereto over which the Town of Plymouth may exercise its powers, excepting, however, those areas under specific lease to private persons or owned privately.

I. GENERAL REGULATIONS

A. Speed

1. Check your wake at all times.

2. Maximum Speed Limit - is 6 M.P.H. in Plymouth Harbor. A speed regulations sign reading "SPEED LIMIT-6 M.P.H." will be placed on the west side of the channel, 1,000 feet southwest of Nun No. 14. A sign reading "WELCOME TO PLYMOUTH, CHECK YOUR WAKE AT ALL TIMES" will be placed at the entrance of the Harbor, locus about 1,000 feet north of Nun No. 8. These signs will be place at these locations from June 1st to October 1st of each year.

B. Water Skiing

1. Water skiing will not be permitted in posted areas or anchorages.

C. Harbor Pollution

1. Oil shall not be dumped or pumped overboard in any harbor area.

2. Untreated sewage, rubbish, debris garbage or dead fish shall not be discharged into Plymouth Harbor.

3. Boats or vessels shall not run their engines with propellers engaged while tied to the docks. Boats requiring dock trials may do so with permission of the Harbor Master in each instance.

4. Derelict boats, motors, etc., shall not be allowed in the harbor or on the shores.

D. Berthing

1. Tie-up periods at Town Floats will be limited to 15 minutes. A tie-up time limit at the Town Floats or Piers for visitors at night, or boats with breakdowns, will be limited by discretion of the Harbor Master.

2. All visiting craft entering Plymouth Harbor are subject to the direction of the Harbor Master who shall be consulted before anchoring or tying to any of the facilities or moorings.

3. All draggers while moored at docks shall have their trawl boards swung inside rails at all times.

4. Boat moorings cannot be rented out by owners and are assignable, when not in use, by the Harbor Master.

5. Boats shall not be tied to docks in dead storage without special permission from the Board of Selectmen. Any boat so illegally tied up for over four (4) weeks' time, will upon notice from the Harbor Master, be removed.

E. Float, Pier and Ramp Areas

1. Fishing gear, equipment, or any other matter shall not be allowed to remain on the docks or floats for over twenty-four (24) hours without permission of the Harbor Master.

2. Swimming will not be allowed from State Pier, Town Pier, or Floats attached to Public Docks, or launching Ramp area in Plymouth Harbor.

3. There will be no soliciting from Town-owned piers, floats, launching ramp and parking areas unless authorized by the Board of Selectmen.

4. Rules for the Ramp and adjacent parking area shall be as follows:
   No Public Drinking
   No Open Fires
   No Camping
   No Cleaning of Fish
   No Littering
   No Swimming
   No Unattended Boats, Floats, Gear, etc.
   No Soliciting

A Sign shall always be posted

listing the above.

F. Conducts

1. Unmuffled noise from engines, outboards, amplifying systems, radios and the like shall be kept at a minimum when in the proximity of piers, floats, anchorages, or ramp area.

2. No person shall operate any motorboat or any vessel in a reckless or negligent manner so as to endanger the life, safety, or property of any person.

G. Fees

1. Commercial interest, party boats, fishing boats, associations or companies using the Town Pier for permanent moorings, float access, or gangways will pay an annual fee fairly determined by the Board of Selectmen.

2. All persons tying tenders at the Town Pier shall be charged an annual fee to be fairly determined by the Board of Selectmen.

II. MOORING REGULATIONS

A. Applications and Permits:

1. No person shall place, maintain or use a mooring within Plymouth Harbor without a permit for said mooring having been issued by the Harbor Master, for which an annual fee of Fifteen ($15.00) Dollars shall be charged; provided, however, the amount of said fee may be determined from time to time by Town Meeting.

2. Applications for moorings in Plymouth Harbor, shall be submitted to the Harbor Master on forms approved by the Harbor Master, which shall include whatever information may be required in the discretion of the Harbor Master for the purpose of properly administering this By-Law.

3. Said applications shall be date stamped upon receipt by the Harbor Master, who shall consider permit applications in the order of their submission. The Harbor Master shall grant permits in the order of submission of applications; provided, however, on the basis of the availability of suitable mooring space for the particular boat.

4. Moorings shall be assigned by the Harbor Master according to the specific requirements of the particular boat, including its length, draft, type, rig or other pertinent requirements.

5. Any applicant agrieved by a decision of the Harbor Master with respect to any decision regarding any application or forfeiture, may receive a hearing before the Board of Selectmen by filing a written request therefor within 30 days following said decision unless the time for filing such request shall be extended by the Board for good cause shown.

6. All moorings shall be placed at the location designated by the Harbor Master.

7. A mooring is not transferable under any circumstances.

8. A mooring is deemed forfeited upon its being abandoned or otherwise left unused for any unreasonable period of time.

B. Specifications - Minimum Requirements

1. Dredged Areas

a. Block or Mushroom

Length of Boat	Mushroom	Cement Block or Equivalent
16' - 20'	150 #	28" x 28" x 18"
21' - 26'	250 #	32" x 32" x 18"
27' - 32'	500 #	36" x 36" x 20"
33' - 38'	800 #	36" x 36" x 24"
39' - 42'	1000 #	42" x 42" x 24"
43' - 55'	2 -- 1000 # on bridle	48" x 48" x 24"
43' - 55'	or 1500 #	
56' and over	Subject to ruling by Harbor Master	

Hairpins or eyes in blocks must be 25 per cent heavier than chain specification.

b. Chain Size

Length of Boat	Diameter	Length of Boat	Diameter
16' - 20'	1/2"	33' - 38'	5/8"
21' - 26'	1/2"	39' - 42'	3/4"
27' - 32'	5/8"	43' - 55'	7/8"
56' and over	Subject to ruling by Harbor Master		

c. Pennant Diameter

Length of Boat	Nylon or Equivalent
16' - 20'	1/2"
21' - 26'	5/8"
27' - 32'	1"
33' - 38'	1 1/8"
39' - 42'	1 1/4"
43' - 55'	1 3/8"
56' and over	Subject to ruling by Harbor Master

d. Scope

Length of chain for flotation buoys -- ocean floor to 2' above maximum high water.
Length of pennant -- 2/3rds of length of boat measured in a straight line from extreme bow chock to stern of boat. This method of measurement to be used with cans, balls or synthetic floation buoys.

2. Non-Dredged Areas (Flats)

a. Block or Mushroom

Length of Boat	Mushroom	Cement Block or Equivalent
Under 16'	50 #	18" x 18" x 12"
17' - 20'	100 #	20" x 20" x 12"
21' - 26'	150 #	28" x 28" x 18"
27' - 32'	200 #	32" x 32" x 18"
33' and over	Subject to ruling by Harbor Master	

b. Chain Size

Length of Boat	Diameter	Length of Boat	Diameter
Under 16'	3/8"-1/2"	21' - 26'	1/2"
17' - 20'	1/2"	27' - 32'	5/8"
33' and over	Subject to ruling by Harbor Master		

c. Pennant Diameter

Length of Boat	Nylon or Equivalent
Under 16'	1/2"
17' - 20'	1/2"
21' - 26'	5/8"
27' - 32'	3/4"
33' and over	Subject to ruling by Harbor Master

d. Scope

Length of Boat	Scope	Length of Boat	Scope
under 16'	30'	21' - 26'	38'
17' - 20'	34'	27' - 32'	40'
33' and over	Subject to ruling by Harbor Master		

e. Boats moored on flats at 2.0' below Mean Low Water shall have their moorings completely buried.

B. 3. Special Areas: Moorings in channels, Hoos Hole, Saquish Head, Goose Point, Cordage Channel or Equivalent tidal areas.

a. Present moorings may stay at existing overall scope. If the Harbor conditions in these areas become congested in the future, moorings shall be shortened in these tidal areas with chain 2' above Mean High Water and the length of Pennant equal to length of boat.

b. Special area moorings for small boats inside the Plymouth Town Wharf Basin and directly opposite the westerly jetty are to have the following regulations:

MOORINGS__To be spaced 20' apart and to have an overall length of scope of 14' from exposed flat to the bow chock of the boat.

MUSHROOM__50# BLOCK--18"x18"x12"

CHAIN__3/8' to 1/2' SCOPE--14'

DIAMETER OF PENNANTS, NYLON OR EQUIVALENT__1/2"

4. All areas

a. The use of spars or stainless steel floats for chain floation shall be prohibited. Only cans, balls, or styrene-type chain floation shall be used. In all types of chain floation buoys, other than metal, chain or a metal rod must be passed thru the buoy connecting the mooring pennant to the mooring chain.

b. All chain floation buoys shall be plainly and clearly visible above any tide level at all times.

c. The above described moorings shall be painted white with a Blue Band, owner's or boat name, and length of boat on can or buoy; also owner's name on mooring block or mushroom anchor.

d. All new complete moorings placed or replaced in any location in Plymouth Harbor after April 1, 1963 shall conform to the regulations: and will placed at a locus designated by the Harbor Master.

e. Winter spars must be installed on all moorings. They shall be painted and identifiable at all times except during ice conditions.

f. Winter spars or buoys shall not be installed prior to September 1st., and must be removed by June 1st.

g. The Harbor Master will inspect all moorings regularly, commencing June 1st through September 1st of each year for floation of cans, balls or buoys, and notify owners in writing by Certified Mail if their cans, balls or buoys do not conform with the Plymouth Harbor Bylaws.

h. All pennants shall be nylon or equivalent with adequate moorings devices, approved by the Harbor Master, to eliminate the hazard of chafing.

i. Owners with defective moorings shall be allowed seven (7) days after receiving notice from the Harbor Master to correct the defective conditions. If the defect is not corrected after this time, the owner will be subject to penalty in conformance with the Code. The Harbor Master, upon finding a defective mooring, shall properly mark said mooring to show danger or obstruction.

j. The Harbor Master shall order owners of moorings to have said moorings (listed) at owner's expense, one each five (5) years for visual inspection by the Harbor Master to determine its condition. In lieu of lifting moorings, replacements may be made. Upon certification of moorings' fitness or replacement, owner may replace mooring at original locus.

k. The Harbor Master shall keep a detailed description of all moorings, their locus and owner's name, telephone number, home and business address, date of mooring and length and rig of the boat.

III. CODE

A. Penalties

1. A fine not to exceed $50.00 may be imposed for first offense infractions or disobedience to this Code of Regulations when State or Federal penalties do not appply. All other fines that are applicable are defined in Chapter 40, Section 21. (Mass. General Laws.)

2. Offenders will be prosecuted by the Harbor Master and all other enforcement agents.

3. Violations of the Plymouth Harbor Bylaws may be sufficient cause for the Harbor Master to refuse an individual or his vessel the use of Town-owned or controlled facilities for such period of time as may be determined by the Harbor Master or the Board of Selectmen, in addition to necessary Court action in cases of violation of the Motor Boat Law.

June 3, 1985

TOWN OF EDGARTOWN

ARTICLE XX - SURFACE WATER DISTRICT

APPENDIX N

PURPOSE

The purpose of this section is to encourage appropriate water dependent uses of the Town's harbors, bays and ponds, to protect and enhance the environmental quality (sic) of those waters, to minimize potential adverse effects on marine flora and fauna and wildlife habitat, to promote the safety of navigation on said waters, and to minimize flooding and other storm-related hazards.

APPLICABILITY

The provisions of this bylaw shall apply to the following waters and govern construction and use in all water bodies and water courses within a line extending from the northernmost point of Cape Pogue to Buoy C"3", thence to Buoy N"4" (buoy positions noted on Chart 13238, 11th edition, December 22, 1984), thence to the town line of Edgartown and Oak Bluffs where it is intersected by a straight line drawn along the line extended from C"3" to N"4" to said intersection thence continuing under the "Big Bridge" along said town line to where said town line intersects the high water mark in Major's Cove.

And all waters within the previously defined area seaward of mean high water, including Edgartown Inner and Outer Harbors, Katama Bay, Edgartown Great Pond, Oyster Pond, Sengekontacket Pond, Upper and Lower Trapps Ponds, Eel Pond, Cape Pogue Bay, Poucha Pond, Caleb's Pond and waters contiguous with the above.

PERMITTED USES

Subject to the Rules and Regulations as are from time to time issued by the Harbormaster pursuant to the authority granted to him under MGL Ch. 91 and, further subject to the granting of licenses and/or permits required by the Town, State or Federal boards or agencies exercising authority granted to them by law other than MGL, Ch. 40A, the following uses are permitted in the Water District:

a. Hunting;
b. Swimming, snorkeling, scuba diving, boating and their instruction;
c. Fishing (all legal species and methods, commercial, family permit or for sport);
d. Launch service;
e. Charter boating and charter fishing;
f. Anchoring and mooring including piles;
g. Aquaculture and shellfish propagation;
h. Services to vessels and persons thereon initiated from a land-based business or facility;
i. Ferry service, sea/float planes and general commercial navigation;
j. Federal, state or municipal aids to navigation;
k. Additions of 10% or less to the gross floor areas of any building having vested real property rights as existing at the time of the adoption of this section.

Also permitted are those uses listed in MGL, Ch. 40A, Sec. 3, which cannot be prohibited.

SPECIAL PERMITTED USES

Subject to the Rules and Regulations as are from time to time issued by the Harbormaster pursuant to the authority granted to him under MGL, Ch. 40A, the following uses may be allowed in the Water District by Special Permit from the Planning Board.

a. Boat launch ramps;
b. Landing facilities for tour boats, charter boats, ferries and private launch services;
c. Marinas;
d. Municipal;
e. Piers;
f. Marine biological and oceanopgraphic research;
g. Vessel service facilities;
h. Temporary uses;
i. Underwater electric or communication cables and underwater freshwater pipes;
j. Salt water intake or discharge pipes;
k. Additions or more than 10% to the gross floor areas of any building having vested real property rights as existing at the time of the adoption of this section.

Such Special Permit shall be granted only after the Planning Board:

a. Reviews the written recommendations of the Harbormaster, Conservation Commission, Marine Advisory Committee, Shellfish Committee, Board of Health and Selectmen. Upon receipt of the Special Permit application, the Planning Board shall forward a copy of the application to each of the above-named authorities for comment. Failure of the Harbormaster, Conservation Commission, Marine Advisory Committee, Shellfish Committee, Board of Health or Selectmen to submit written recommendation to the Planning Board within 21 days of the initial filing of the Special Permit application shall be deemed a favorable recommendation by said authority.

b. Determines that the proposed use is consistent with the provision of the Edgartown Master Plan and the Edgartown Open Space Plan as they are from time to time adopted.

c. Determines that the proposed use is a water dependent use meaning hose uses and facilities which require direct access to, or locations in marine or tidal waters and which therefore cannot be located inland (ref. MGL, Ch. 91, Waterways Law).

DEFINITIONS

For the purpose of this bylaw, the following definitions shall apply:

Vessel Service Facility - A shorefront commercial facility providing one or more of the following: vessel construction, repair or servicing; vessel

storage, hauling and launching; the sale of vessels; the sale of supplies and services for vessels and their equipment and accessories; berthing or dockage facilities for not more than five (5) vessels not being serviced or repaired.

Marina - A facility which provides dockage or berthing for more than five (5) vessels and may also provide the services of a vessel service area (see definition above).

Amend: ARTICLE II. DEFINITIONS

Amend by adding the following phrases to the existing definitions. The proposed new phrases are shown underlined:

4. "Dwelling" is a structure used in whole or in part for human habitation. A dwelling does not include a trailer or mobile home however mounted, or a vessel.

7. A "Structure" is a combination of materials assembled at a fixed location to give support or shelter. A structure includes any building. A fence or wall over six feet high shall be considered a structure; an open terrace not more than thirty inches above grade shall not be considered to be a structure. A vessel shall not be considered to be a structure.

12. "Special Permit Granting Authority" shall be:
The Planning Board for special permits for cluster developments, and for special permits in the beach areas and wetlands; and within the coastal, island road and special places district; and for the Surface Water District.

22. "Vessel": Every description of watercraft, other than a sea/float plane on water, used as a means of transportation on water. Specifically excluded by this definition are floating homes or dwellings.

Amend: ARTICLE III. DISTRICTS

a. Change the present letter j. (being the section saying that all districts are indicated on a Zoning Map on file with the Town Clerk) to letter k. with text unchanged.

b. add a new letter j. as follows:

j. SWD Surface Water District: harbors, bay ponds