

## Chapter 6: Assessment of Local Regulations and Practices

### 6.1 Assessment of Local Regulations

This chapter provides an evaluation of local regulations and bylaws related to water quality and controlling non-point sources of pollution for each of the five project communities. Table 6-1 is a checklist of local bylaws and regulations. Table 6-2 is a more detailed checklist of local stormwater and erosion control regulatory and non-regulatory measures. The regulatory assessment follows after Tables 6-1 and 6-2.

It should be noted that EPA's Phase II Stormwater Regulations came into effect in July of 2003. All five towns in the watershed were required to file for a permit under this program. Communities must implement six minimum control measures, including:

- Public Education and Outreach
- Public Involvement and Participation
- Illicit Discharge Detection and Control
- Construction Site Runoff Controls
- Post-Construction Runoff Controls
- Pollution Prevention/Good Housekeeping

**Table 6-1: Checklist of Local Bylaws and Regulations**

Bylaws/Regs	Ashland	Framingham	Natick	Sherborn	Wayland
<b>Aquifer/Water Resource District</b>	Groundwater district: Special Permit for > 2500 sq. ft. or 15% impervious	No	Yes	Zone 1 &2 wellhead protections	Yes and Wellhead protection
<b>Flood Plain District</b>	Yes	Yes: Special Permit for residential	Yes	Yes	Yes
<b>Wetlands</b>	General Bylaw and ConsComm Regs	General Bylaw and ConsComm Regs	Gen. Bylaw & Cons Comm Regs: No-disturb w/in 25 ft. and no- build within 15 ft; no alteration w/in 100 ft. of vernal pond	General Bylaw and ConsComm Regs	Condition that certain land within 100 ft of resource area may not be built upon or altered
<b>Stormwater Management</b>	No-disturb within 20 ft. of BVW or bank  Site Plan Review >6 parking spaces  Subdivision: DEP BMP standards	No-alteration/no work w/in 30ft – 100 ft of WL resources Site Plan Review: BMP for >5 parking spaces  Subdivision: extensive	Site Plan Review: no standards  Subdivision: limited	No-alteration area w/in 50 ft. of resource area Site Plan Review: Business & Wireless Districts: limited Subdivision: extensive	Site Plan Review and Subdivision: somewhat limited

*(Table continued on next page)*

**Table 6-1: Checklist of Local Bylaws and Regulations (continued)**

<b>Bylaws/Regs</b>	<b>Ashland</b>	<b>Framingham</b>	<b>Natick</b>	<b>Sherborn</b>	<b>Wayland</b>
<b>Hazardous Materials</b>	Hazardous Materials Plan for Groundwater Recharge District	Site Plan Review	Fire Department Regs.: Has Chemical Recycling Plan	Must address in Environmental Statement for Wireless Facilities application	Storage not allowed in Aquifer Protection District (APD). Use allowed by Special Permit in APD.
<b>Title 5 (local more stringent than state)</b>	Same as state	Same as state	Same as state	Same as state	Same as state
<b>Underground Storage Tanks</b>	Board of Health Regulates	Fire Department Regulation	Fire Department and Selectmen Regulate	Fire Department Regulates	Fire Department Regulates
<b>Stormwater Management Plan</b>	Submitted to EPA: July, 2003	Submitted to EPA: May, 2003	Submitted to EPA July, 2003	Submitted to EPA March, 2003	Submitted to EPA: July 2003

**ASSESSMENT OF LOCAL REGULATIONS AND PRACTICES**

**6.1.1 ASHLAND**

**Water Resource Protection Areas**

Ashland’s zoning bylaw contains a Groundwater Recharge District for the protection of groundwater resources and a Floodplain District.

**Groundwater Protection District (Section 282-43)**

The Groundwater Recharge District is a zoning overlay district which provides protection for existing and potential groundwater recharge areas in Ashland. The district bylaw prohibits high-risk land uses such as landfills, automobile service stations, and hazardous materials storage in drinking water supply recharge areas and requires special permits for other uses that pose a potential risk to water quality. Any permitted use within the district must “reduce erosion of topsoil and the subsequent sedimentation of surface water bodies.”

A special permit is required within the district if more than 2500 square feet or more than 15% of the lot will be made impervious.





Flood Plain District (Section 282-36)

The Flood Plain District consists of the 100-year flood plain for the Sudbury River. Commercial and industrial uses allowed by right are restricted. Residential uses are allowed by special permit from the Planning Board.

**Stormwater Management/ Erosion Control**

Town Bylaw (Section 282-31)

The Erosion Control section of the town bylaws mandates that site design, materials, and construction processes shall be done without causing erosion damage, sedimentation or uncontrolled surface water runoff. The following standards apply:

- Special permit from the Planning Board is required for all construction on slopes of > 3:1, granted only if adequate provisions to prevent erosion, soil instability, uncontrolled surface water runoff
- All slopes 10% or > resulting from site grading must have a minimum of 4" topsoil and vegetative cover or retaining walls; performance bond required and requirements for minimum\_\_ % hillside area re-vegetation. Example: Slope of between 10-14.9 % requires 25% re-vegetation cover
- No area totaling 2 acres or > shall have existing vegetation clear stripped or filled unless an agricultural use or unless incidental to construction under a current building permit

Site Plan Review (Section 282-6)

Ashland's Site Plan review regulations apply to the construction, enlargement or change of use of structures within the town's commercial and industrial districts. It also applies to mixed use developments within the commercial areas of town as well as to any project that requires the creation of 6 or more parking spaces. The Site Plan review regulations include the following performance standards related to stormwater, including:

- Adequate measures to prevent pollution of surface or ground water, minimize erosion and sedimentation, and to prevent changes in groundwater levels, increased volume and rate of runoff and potential for flooding, and neighboring properties are not adversely affected

Subdivision Regulations (Section 344-14,344- 17)

Section IV (Design Standards) of Ashland's Subdivision Regulations addresses stormwater management and erosion control in several ways. It calls for "due regard" for natural features such as waterways. The Drainage section mandates that:

- All "culverts, storm drains and related facilities" shall be designed to meet best management stormwater practices as outlined in the Department of Environmental Protection's (DEP) 2001 Stormwater Policy and Technical Handbook.
- Subdivision lots must be developed in such a way to maximize stormwater recharge on the lot and to minimize overland runoff to adjoining lots, streets, or water courses.

- Peak flows, runoff volumes and rates shall not exceed predevelopment conditions

### **Wetlands Protection**

#### Town Bylaws (Section 280-1)

Ashland has adopted a General Bylaw for wetlands protection and the Ashland Conservation Commission has adopted wetlands regulations. Additional values protected include erosion and sedimentation control, recreation, aesthetics, and agricultural values. The town's bylaw features a no-disturb zone within 20 feet of a bordering vegetated wetland or bank.

### **Hazardous Materials and Underground Storage Tanks**

#### Hazardous Materials(Town Bylaws, Section 280-6)

Ashland has adopted a General Bylaw to provide for the safe storage and handling of hazardous materials, including Underground Storage Tanks. The town has also adopted a Hazardous Materials Plan for uses within the Groundwater Recharge District. Provisions within the bylaw severely restrict the storage of hazardous materials within that district.

#### Underground Storage Tanks

Board of Health regulations require testing of underground storage tanks prior to property transfer.

### **Title 5**

Ashland is 95 % sewered. The town has not adopted regulations to supplement Title 5.

### **Other Regulations of Note**

Cluster development are allowed on parcel or parcels of at least 5 acres or greater, with minimum of 50% open space, overall building lot coverage of no more than 5% and no lot to have greater than 25% slope.

## **6.1.2 FRAMINGHAM**

### **Water Resource Protection Areas**

Framingham has a Flood Plain District. Commercial and industrial uses are somewhat restricted and residential uses are granted only through a special permit from the Planning Board.

#### Site Plan Review (Section IV-H)

Site Plan Review applies to any new structure or alteration to an existing structure that creates any off-street parking and less than 8,000 square feet of gross floor area. Any residential development of 5 parking spaces or greater or alteration of an existing parking facility or off-street loading facility or vehicle storage is also subject to Site Plan Review. Framingham requires an Environmental Impact Statement under its Site Plan Review process that must provide a description and evaluation of potential impacts on

surface water quality and ground water adjacent to or directly affected by the proposed development. Mitigation measures must also be submitted in the statement. Environmental Impact Standards for water resources dictate that no project creates any “significant” emission of water pollutants or any other significant environmental adverse impacts.

Framingham’s subdivision regulations also include extensive water quality considerations under the required Community and Environmental Impact statement, including the following:

- The applicant must describe the groundwater resource in terms of quantity, quality and whether the project’s projected density will significantly lower the water table in the area
- Where a proposed subdivision lies within a watershed or zone of contribution of a public water supply, freshwater pond, or within 400 feet of a private well, the subdivider must provide a determinant of nutrient loading compared to the carrying capacity of the waters affected

### **Stormwater Management/Erosion Control**

#### **Site Plan Review (Section IV-H)**

Any development or redevelopment creating 5 parking spaces or greater under Site Plan Review in Framingham must comply with the following Environmental Standards:

- The proposed development must not increase the potential for erosion, flooding or sedimentation, either on-site or on neighboring properties and shall not increase rates of runoff from the site, to the satisfaction of the Framingham Town Engineer and Board of Public Works. Provisions for attenuation of runoff pollution and groundwater recharge must be included in the proposal. As of 2002, proposed developments must meet the latest state and federal best management practices for water quality mitigation.
- In addition, the EIS for the Site Plan Review must include identification of potential impacts regarding on-site and off-site flooding, erosion and/or sedimentation resulting from alterations to the site, including grade changes and increases in impervious areas.

#### **Subdivision Regulations (Section VI)**

Under its Community and Environmental Impact Statement, Framingham mandates that the applicant describe the type of existing surface drainage, water and wetland resource areas, and control of quantity and quality of runoff from the site. Mitigation measures, including maximizing ground water recharge, must be provided but no measurable standards are given. In addition, the applicant must describe any groundwater resource in terms of quantity and quality, and whether the proposed subdivision will lower the water table in the area. The EIS also requires that any subdivision within a watershed or zone of contribution of a public water supply determine the amount of nutrient loading generated by the project versus the carrying capacity of the receiving waters.

Within the Definitive Plan submission, the applicant must show how the project will meet the 2001 DEP Stormwater Policy Standards as well as acceptable engineering standards in order to address water quantity/ quality through good site planning, BMPS and non-structural measures as well. Erosion controls are to be shown on the recorded definitive plan.

### **Wetlands Protection**

#### Town Bylaw (Article V, Section 18)

Framingham has adopted a local bylaw and regulations. The bylaw has established a no alteration/no work zone within 30-feet of the resource area affected and the Commission may extend this up to 100 feet. The town engineer reviews all applications to the Conservation Commission for stormwater best management practices and the Commission has been requiring the use of total suspended solids removal through the use of such units as Vortech and Downstream Defenders on a routine basis for projects within their jurisdiction. For onsite erosion controls, the Commission now uses Biofence instead of hay bales to prevent the spread of invasive plants. Conversations with the Conservation Agent indicated that stormwater runoff into North Pond is a continuing pollution problem, that the town needed to do a better job upgrading older catch basins and increasing the frequency of catch basin cleaning within the North Pond sub-basin. Nutrient inflows into Lake Cochituate via Snake and Beaverdam Brooks were also cited as a continuing problem.

### **Hazardous Materials and Underground Storage Tanks**

#### Hazardous Materials and Underground Storage Tanks (Section IV-H-2)

Framingham has adopted a chemical and hazardous materials recycling plan that follow state code regulations and is regulated by the Fire Department. All applications under Site Plan Review include review for hazardous materials use. Underground storage tanks are permitted through the Board of Selectmen and enforced by the Fire Department.

### **Title 5**

Framingham is about 95% sewered. The only remaining area without sewers is in the northwest corner of the town, which abuts North Pond. The Board of Health follows the state septic code and estimates that it inspects, upon transfer of title, or permits between 10 -20 septic systems in northwest Framingham each year.

### **Stormwater Management Plan**

The town submitted its Phase II Stormwater Management Plan (SWMP) in May of 2003. For the year period July 2003-June 2004, the town has committed itself to the following minimum control measures:

- Public Education and Outreach: Distributing and storm water flyer and survey to 25% of municipal households in association with the SuAsCo Watershed Council
- Public Involvement and Participation: Circulate a storm water traveling display at three locations in the community for 3 months each

- Develop a bylaw to prohibit illicit discharges into storm drains and develop a plan to continually detect and eliminate illicit discharges
- Construction Site Runoff Controls: Modify the Zoning Bylaw to include reference to DEP Stormwater Management Policy ( for Post-Construction runoff as well)
- Post-Construction Runoff Controls: Develop an inspection plan and evaluation procedure for existing structural BMPs
- Pollution Prevention/Good Housekeeping: Develop a litter bylaw and coordinate awareness with in conjunction with SuAsCo Watershed Council

By 2008, Framingham will have completed the following under its SWMP:

- Completed and shown a stormwater video at a public meeting and on cable TV
- Participated in a local and regional Stormwater Super Summit in conjunction with SuAsCo Watershed Council
- Shown its Stormwater Traveling Display in public places for one year and held a storm water photo contest for high school students
- Developed a storm water poster contest for fifth grade students
- Developed and presented bylaws for town approval banning illicit discharges to storm drains and modified current zoning to reference DEP Stormwater Standards to control construction and post construction runoff
- Developed and distributed a brochure to the public to increase public awareness of illicit discharges
- Implemented a plan to detect and eliminate illicit discharges to storm drain
- Implemented a drainage master plan for post construction runoff control
- Trained town DPW employees on effective good housekeeping practices
- Increased frequency of spring and fall street sweeping and catch basin cleanings and documented all cleanings and debris collected

### **Other Regulatory Practices**

- Framingham requires the minimization of impervious surfaces in its Highway Overlay District.
- Open Space Residential Design is allowed within the R-3 and R-4 zoning districts

- Planned Unit Developments allowing higher density, mixed use, projects with open space and natural feature protection are allowed on a parcel or contiguous parcels of at least 50-acres in the Manufacturing (M), Business (B) or Light Manufacturing (M-1) zoning districts, by 2/3 vote at town meeting.

### **6.1.3 NATICK**

#### **Water Resource Protection Areas**

Natick has both a Flood Plain and Aquifer Protection District under its bylaw for the protection of ground water sources. The Flood Plain District applies to the Charles River watershed and is outside of the Lake Cochituate watershed area.

##### *Aquifer Protection District (Section III-A-5)*

The Aquifer Protection District overlays primarily the Residential Single-A (15,000 square foot minimum lot size) and the Residential Single-B (20,000 square foot lot size) zoning districts in Natick. The land surrounding Lake Cochituate and Fiske Pond, which flows into it is almost entirely composed of land zoned Residential Single-A. The district bylaw prohibits high risk land uses such as the disposal of on-site wastes, storage of petroleum products other than for heating purposes, disposal of liquid wastes except for those allowed under Title 5, the storage of road salt, the permanent removal of or regarding of soil cover below 5-feet existing high water level, junk yards, trucking and bus terminals and car washes, among others. The underlying uses in the district, the construction of single family homes and accessory buildings, are permitted by-right. A Special Permit from the Zoning Board of Appeal is required to make any lot more than 20% impervious, on the condition that all water shall be recharged to the aquifer to compensate for all impervious lot coverage greater than 20%.

#### **Stormwater Management /Erosion Control**

##### *Site Plan Review (Section VI-DD)*

The Planning Board is the Special Permit Granting Authority for projects using Site Plan Review in the Highway Overlay Districts. These districts include the Town House Cluster Development and Highway Mixed Use I and II sub-districts. Some parts of these districts are in the Lake Cochituate watershed and Aquifer Protection Overlay District. The only standards for stormwater for Site Plan Review indicate that a proposed project “shall not create problems of water runoff or erosion on the site in question or other sites.” No other standards or design guidelines are listed in the zoning bylaw.

##### *Subdivision Regulations (Section V)*

Natick lists no specific stormwater or erosion control requirements within its Subdivision Rules and Regulations.

#### **Wetlands Protection**

Natick has adopted a General Bylaw for wetlands protection and the Natick Conservation Commission has adopted wetlands regulations. All lands within 25-feet of a wetlands resource area are subject to a policy of no-disturbance under the bylaw and a 15-foot no-build zone extends beyond the no-disturb area. Parking areas and driveways are not counted as structures in the no-build zone. The Natick wetlands bylaw also prohibits any alteration of land within 100-feet of a certified vernal pool.

## **Hazardous Materials and Underground Storage Tanks**

### *Hazardous Materials*

Natick has a chemical recycling plan in place that is regulated by the Fire Department. The town severely restricts the storage of hazardous materials within its Water Protection District.

### *Underground Storage Tanks*

The Board of Selectmen issue permits for underground storage tanks and Board of Health Regulations require testing of tanks prior to property transfer.

## **Title 5**

Natick is approximately 85-90 % sewered under the Massachusetts Water Resources Authority. It does rely primarily on town well fields for its drinking water supply. The town has not adopted regulations to supplement state Title 5 regulations.

## **Stormwater Management Plan**

Natick submitted its Phase II Stormwater Management Plan in July of 2003. Located within the Charles River and Sudbury-Assabet-Concord (SuAsCo) watersheds, the town has chosen to work closely with the SuAsCo Watershed Community Council, as has Framingham. Both Lake Cochituate and Fiske Pond are named as priority water bodies within the town's stormwater plan, Lake Cochituate for Priority Organics, Organic Enrichment and Low Dissolved Oxygen and Fiske Pond for Noxious Aquatic Plants. During its first full year, July 2003- June 2004, Natick has completed the following tasks under its SWMP:

- **Public Education and Outreach:** Added links to the town water supply website, provided a Community Hotline to report stormwater problems, distributed a stormwater flyer to 75% of Natick homes
- **Public Involvement and Participation:** Established a Storm Water Committee and displayed a storm water traveling display for exhibit at three locations in Natick for three months each
- **Illicit Discharge and Detection:** Natick is in the process of locating, mapping and sampling dry-weather discharges from its municipal storm drain network as well as hydraulic modeling for flood prone areas. The SuAsCo Watershed Community Council has a five-year education program to inform watershed residents of the dangers of illegal dumping. The town has started to map the location of all septic systems, create a database to track septic system maintenance and mandate regular septic maintenance procedures. Natick's plan indicates that it will present a drafted Illicit Discharges Bylaw to Town Meeting in Year Three of the SWMP, 2005 -2006.
- **Construction Site Stormwater Runoff:** The Department of Public Works began reviewing all construction activities on weekly basis during Year One of the plan and a Soil and Erosion Control Bylaw draft will be presented to Town Meeting in Year Three of the SWMP, 2005-2006.

- Post Construction Site Controls: No actions were taken for this element during the first year of the SWMP but the town is scheduled to begin inspecting and documenting all town maintained structural BMPs every two years, beginning July 2004. A Bylaw to Limit Post Construction Runoff will be sent to Town Meeting for approval in Year Three of the plan.
- Pollution Prevention /Good Housekeeping: For the past year, Natick has begun to sweep all streets once per year, matching its past schedule of maintenance. The downtown area has been scheduled to be swept once per month and Year Three of the SWMP calls for the sweeping of all major streets twice per year and parking lots once per year.
- Investigate Town Owned BMPs for Retrofit Opportunities: Natick began inspecting town-owned structural BMPs on an annual basis in 2003. Its SWMP calls for it to implement two structural BMP stormwater retrofit projects during 2000- 2008, the last year of the plan. The town plans on drafting and presenting a Private Structural BMP Maintenance Bylaw during Year Three of the SWMP, 2005-2006.

#### **6.1.4 SHERBORN**

##### **Water Resource Protection Areas**

Sherborn's zoning bylaw contains a Flood Plain District. The town also has a Groundwater Protection Bylaw as Sherborn relies completely on private wells for its drinking water supply.

##### **Flood Plain District (Section 5.5.2)**

The Flood Plain District consists mainly of the 100-year flood plain for the Charles River and for Farm and Little Farm Ponds. Residential uses are allowed, but the area of the flood plain allowed to be used to meet minimum lot area is restricted. No part of the Flood Plain District may be used to meet minimum lot area requirements in Business Districts, but the Zoning Board of Appeals may grant a Special Permit allowing any underlying allowed use if it finds that the land is not subject to seasonal or periodic flooding.

##### **Groundwater Protection Bylaw (General Bylaw, Chapter 21)**

The Groundwater Protection Bylaw adopted by Sherborn ensures the protection of the town's drinking water supply by regulating the removal of underground fuel storage tanks and the maintenance and registration of above ground tanks through regulations enforced by the Fire Department. The bylaw also largely prohibits the storage of hazardous waste in Sherborn or the importation of plowed snow from other towns to prevent de-icing chemicals and salts from entering the groundwater underlying the town.

##### **Stormwater Management /Erosion Control**

##### **Site Plan Review (Section 5.3.1)**

Sherborn reviews drainage, without specific standards, in its Preliminary and Final Site Plan Review requirements. Site Plan Review is required for all applications for a Building Permit that call for any new commercial construction or exterior alterations to an existing commercial structure. Section 5.8.8 of the bylaw also requires that stormwater runoff attenuation be included when siting wireless communications facilities.

#### Subdivision Regulations (Section 4.1)

The Sherborn Subdivision Design Standards include extensive consideration for stormwater and erosion control management. For groundwater protection, all subdivisions must reduce by the extent possible paved areas, encroachments on wetlands or floodplains, volume of cut and fill and areas in which vegetation will be disturbed. Applicants must submit an erosion and sedimentation control plan with the Definitive Plan that details measures to control erosion and sedimentation emphasizing phased construction practices, temporary and permanent ground cover, sedimentation control devices and measures to restrict nutrient loading in down gradient groundwater to a maximum of five milligrams per liter nitrate-nitrogen. All lots within the proposed subdivision must be laid out ensure maximum groundwater recharge. Drainage systems must be designed to allow adequate groundwater recharge within the subdivision to maintain existing water levels in the area of private wells in and downstream of the subdivision. Retention/detention basins require a waiver from the Planning Board: natural drainage strategies are encouraged instead.

#### **Wetlands Protection**

Sherborn has adopted a General Bylaw for wetlands protection and the Sherborn Conservation Commission has adopted wetlands regulations. The town's bylaw features a 50-foot no-alteration zone starting at the edge of the protected wetland resource area.

#### **Hazardous Materials and Underground Storage Tanks**

##### Hazardous Material and Underground Storage Tanks (Town Bylaws, Chapter 21)

The town's Groundwater Protection Bylaw was enacted in 1992 to provide for the safe storage and handling of hazardous materials, including Underground Storage Tanks. The town limits severely the amount of hazardous waste that can be stored within Sherborn and the disposal of solid waste in-ground is prohibited except for vegetative wastes. Road salt, de-icing chemicals, pesticides, and fertilizers and hazardous must all be stored in covered facilities with impermeable floors. Underground and above ground storage tanks are regulated and tracked through the Fire Department.

#### **Title 5**

Sherborn is 100% unsewered and relies on individual septic systems for waste water disposal. The town has adopted regulations that supplement Title 5. For example, six feet of soil is required between the bottom of the septic system leaching area and the ground water table, which is more restrictive than Title 5.

#### **Stormwater Management Plan**

The town submitted its Phase II Stormwater Management Plan in February of 2003 with EPA. Actions noted under the six element of the plan include:

- **Public Education and Outreach:** For all five years of the SWMP, informative literature regarding stormwater pollution and its prevention will be made available at town hall and on the town website. The Cable TV Advisory Committee will have advertisements run on the local cable station as to the availability of stormwater information from both sources.

- **Public Participation and Outreach:** Within the first year of the plan, all town boards and committees will review the SWMP and introduce it at their public meetings. For all five years, the Recycling Committee will inform the public about proper disposal of household pollutants and continue to host the town's annual Household Hazardous Waste Collection.
- **Illicit Discharge Detection and Elimination:** By the fifth year of the SWMP, the town will locate and map all storm drain outfalls. By the end of the first year, June 2004, Sherborn will have inspected all catch basins, manholes and culverts and recorded their size, condition and any unknown connections. By June 2005, the town will develop a program to trace and identify sources of any connections to the town's stormwater system. By 2006 and ongoing, the town will begin removing illicit connections to its stormwater system. During 2004, the Conservation Commission and the Groundwater Protection Committee will review its bylaws and recommend bylaw changes on how to comply with the SWMP
- **Construction Site Runoff and Post Construction Storm Water Management:** By the end of 2004, the Planning Board will have reviewed its existing rules and regulations and made recommendations for changes to comply with the SWMP. The Building Inspector will have designed a program to inspect for SWMP compliance, with enforcement to begin in spring of 2005.
- **Good Housekeeping:** The Town Manager will develop and implement a program to prevent or reduce pollutant runoff from municipal operations, with participation by all Boards and Departments, with annual evaluations and a report from the Town Manager.

#### **Other Regulations of Note**

- Sherborn allows Open Space Subdivisions by Special Permit from the Planning Board on lot or contiguous lots of at least 6-acres or more.
- All subdivision applications must conform to the intent and proposals of the Sherborn Master and Open Space Plans as much as practicable.

#### **6.1.5 WAYLAND**

##### **Water Resource Protection Areas**

Wayland's zoning bylaw includes an Aquifer Protection District and a Floodplain District.

##### **Floodplain District (Section 198-302)**

A Floodplain District that includes all land and water in Wayland subject to seasonal or periodic flooding by the Sudbury River, except for temporary excavations, whose surface lies below elevation 124 feet above mean sea level. Some uses are restricted within the Floodplain District.

Groundwater Protection District (Section 198-1603)

The Aquifer Protection District (APD) is a zoning overlay district which protects Wayland's groundwater resources. The district comprises areas in the Wayland where liquids or water-soluble materials placed on or below the surface of the land will migrate to the town's municipal wells if pumping is sufficiently heavy and prolonged.

Regulated uses include any change in use in a residential lot that will render impervious more than 15% of the lot or 2,500 square feet, whichever is greater, would require Site Plan Approval. No residential lot shall exceed 30% impervious coverage of the upland area of the lot within the APD. Groundwater recharge for runoff from the impervious section of the parcel must be provided and it must not degrade groundwater quality. The same standard applies to all new use and change of uses in new and non-residential construction. All new residential projects of greater than 5-units and all non-residential developments in the APD must use "Storm Water Management Standards" and BMPs that will treat one-inch of runoff and remove 80% of Total Suspended Solids (TSS). Special Permits are required from the Planning Board to site a golf course, cluster development or Planned Unit Development (PUD) within this overlay district.

Sanitary landfills, junk/salvage yards, storage of certain deicing chemicals, snow disposal, dry cleaning on premises in non-self contained units, plating, and other hazardous uses are prohibited.

Lake Cochituate does not abut the Groundwater Protection District. It is entirely within the Residential A-20 District in Wayland.

**Stormwater Management and Erosion Control**

Site Plan Approval (Section 198-302)

Site Plan Approval in the town bylaw applies to all Special Permit applications, substantial alterations to parking, loading and vehicle access, or any change in use of an existing or vacant lot. Conservation Cluster and Planned Unit Developments and affordable housing applications within certain districts are not subject to Site Plan Approval. Single-family and two-family residential homes are exempt from Site Plan Approval as well.

Site Plan Approval standards include measures "adequate" to prevent pollution surface water or groundwater, to minimize erosion and sedimentation to prevent changes in groundwater levels and increased runoff and to minimize potential for flooding. Drainage must be designed to maximize groundwater recharge and to prevent any increase in the rate and volume of runoff at the site's perimeter.

Subdivision Regulations (Section IV-Design Standards)

Wayland's Storm and Surface Drainage Design Standards calls for the design and installation of stormwater systems that "provide adequate disposal of surface water, including control of erosion, flooding and standing water from or in the subdivision and adjacent lands." Retention areas are required when development of an area will increase runoff substantially to downstream areas and must be designed to handle a 100-year storm event.

## **Wetlands Protection**

### *Town Bylaw (Chapter 194)*

Wayland has adopted a General Bylaw for wetlands protection and the Commission has passed wetlands regulations. The bylaw specifically defines Wet Meadows as a wetland resource area. The Bylaw allows the town to issue a Wetlands and Water Resources Permit in conjunction with an Order of Conditions that allows the Commission to set conditions that lands within its jurisdiction not be altered. The Bylaw also allows the Commission to require a bond or covenant to secure performance of the Order of Conditions and the Wetlands and Water Resources Permit.

### *Hazardous Materials and Underground Storage Tanks (Section 198-1603)*

Underground Storage Tanks are prohibited within the Aquifer Protection District. The town has adopted strict procedures for the safe handling, transport and documentation of hazardous materials within the Aquifer Protection District.

## **Title V**

Wayland is 100% unsewered. The town's Board of Health regulations largely match those of the state Title V re. A Special Permit is required for individual on-site sewage disposal systems in the Aquifer Protection District serving all uses in residential districts which discharge more than 550 gallons per day per 40,000 square feet of lot area; and individual on-site sewage disposal systems (in compliance with Title V of the State Environmental Code) serving business, industrial, or institutional uses in all other districts which discharge more than 1,000 gallons per day per 40,000 square feet of lot area.

## **Stormwater Management Plan**

Wayland filed its Phase II Stormwater Plan in July of 2003. The following includes some of the actions listed by the town to fulfill the six elements of the plan:

- **Public Education and Outreach:** The town will develop a standard notice for all Town Board meetings noting stormwater related considerations for projects to be reviewed, create a stormwater flyer in conjunction with SuAsCo Watershed Community Council, prepare and distribute public stormwater information to area businesses, and develop a stormwater educational video with SuAsCo.
- **Public Involvement and Participation:** Create and maintain a component of the town web page to disburse information and notices regarding storm water, convene an annual Storm Water Summit with all Town Boards and Committees
- **Illicit Discharge and Detection:** develop a stormwater system map showing location of all outfalls and receiving waters, develop and adopt a stormwater bylaw to address illicit discharges to the storm drain system, monitor outfalls during dry weather flows to detect discharges, develop applicable stormwater standards under the Wetlands Bylaw, investigate contribution of sprinkler systems to illicit runoff

- **Construction Site Runoff:** Develop, coordinate and enforce a program to reduce pollutants in runoff from construction sites of 1-acre or greater, including site operator training, site inspection and reporting procedures.
- **Post Construction Stormwater Management:** Develop and implement strategies which include structural and or non-structural BMPs appropriate to Wayland, draft and adopt a bylaw to address post-construction runoff from new development and redevelopment, coordinate Wayland town Boards review of proposed drainage for all development, including some minimum standards such as the DEP 1997 Stormwater Policy or similar guidance document.
- **Good Housekeeping:** Develop controls to minimize the discharge of pollutants from streets, municipal parking areas, maintenance and storage areas, fleet and maintenance shops, salt/sand storage areas and snow disposal areas; develop format for town Boards to evaluate the impact of the SWMP and its BMPs; develop an annual nonpoint source reduction training program for all applicable town departments and conduct an annual workshop.

### **Other Land Use Regulations of Note**

All Preliminary and Definitive Subdivision Plans must conform with the content and meaning of the town's Master Plan, Conservation Plan and Recreation Plan

### **6.2 Stormwater Infrastructure and Roadway Maintenance**

Roadway runoff routinely carries contaminants such as oil, gasoline, heavy metals, pet waste, lawn and garden fertilizers, road salt, and sand into the wetlands and waterways where stormwater is discharged. Local governments and the Massachusetts Highway Department maintain and upgrade roadways within the project sub-basins. A regular program of catch basin cleaning street sweeping can remove pollutants before they enter waterways.

Table 6-3 provides local schedules for street sweeping and catch basin cleaning, and provides information on catch basin design, whether the town has a map of its storm drain system. Table 6-4 is a summary of local road salting practices.

**Table 6-3: Stormwater Infrastructure and Maintenance**

Town	Storm Drains Mapped?	Catch Basin Cleaning Schedule	Approx. % Catch Basins w/Oil/Grease Removal	Street Sweeping Schedule
Ashland	Yes	1-2 times/year 7/03: Obtained Coastal Pollution Remediation Grant to increase frequency	<1 %	2 times/year
Framingham	Being done	1 time/year	5 %	2 times/year
Natick	Will be under Phase II SW Plan	1 time/year	NA	1-2 times/year  Downtown: 1time/month
Sherborn	Newer streets only	2 times/year	< 1%	2 times/year
Wayland	Being done	1time/year	0 %	1time/year Main and secondary streets: 4 times/year

**Table 6-4: Town De-Icing Programs**

<b>Town</b>	<b>Roads Maintained by State</b>	<b>Local Sand: Salt Ratio</b>	<b>Has Covered Salt Storage Facility?</b>
<b>Ashland</b>	Route 126, Route 135, 1 mile of Quaterville Road	5:1 Liquid Calcium Chloride used	Yes
<b>Framingham</b>	About 10% of all lane miles	5:1 near Lake Cochituate	Yes
<b>Natick</b>	Route 9, MA Pike, 2 sections of Route 135 (until 2005 only)	7:1 More salt (Calcium Chloride) used on hills	Yes
<b>Sherborn</b>	None	5:1 Calcium Chloride used	Yes
<b>Wayland</b>	About 20 % of lane miles	3:1 less sand used near Lake Cochituate	Yes

### 6.3 Other Local Practices

#### 6.3.1 Household Hazardous Waste, Waste Oil Collection and Other Practices

Improper disposal of household hazardous wastes and used motor oil can be a significant source of water pollution. Dumping of these materials into storm drains can negatively affect water quality. All of the project towns have adopted programs to address the collection of waste oil and household hazardous wastes. Local waste collections are usually held in the spring and/or fall and a wide variety of wastes are collected. The Lake Cochituate watershed communities have also adopted, to varying degrees, other nonpoint source pollution prevention practices. Table 6-5 summarizes these practices.

**Table 6-5: Other Nonpoint Source Pollution Prevention Practices**

	Bird feeding Bylaw?	Pet waste collection bylaw?	Freq. of HH HazWaste Collection?	Watershed Education Programs?	Water quality bylaw changes in last 2 Yrs?	Composting program?
<b>Ashland</b>	No	No	1/month	Phase II SWMP	No	No
<b>Framingham</b>	Yes under Phase II	Yes under Phase II	2x/yr	Phase II SWMP	EIS now addresses	No
<b>Natick</b>	No	No	1x/yr and has Recycle Center	Phase II SWMP	No	Yes
<b>Sherborn</b>	No	No	2x/yr	Phase II SWMP	No	Yes
<b>Wayland</b>	No	No	2x/yr	Phase II SWMP	Limited use of sprinkler systems	Yes

#### 6.4 Codes and Ordinances Worksheet Summary

The urbanization of the Lake Cochituate watershed over time has resulted in a shift away from natural, pervious surfaces to hard impervious surfaces such as roads, driveways, roofs and parking lots. Studies have indicated that increasing impervious cover within a watershed has negative impacts on the quality of its lakes, rivers and streams. Communities that strive for sustainable development, economic growth which also protects natural resources, often find it difficult to maintain this balance.

Local land use codes and regulations often conflict with the goal of sustainable development. Municipal zoning bylaws have often placed the needs of our automobile oriented society ahead of the preservation of ecological systems by requiring wide roads, numerous parking spaces, and large lot subdivisions.

Some communities are choosing to reevaluate their regulations with the goal of achieving more sustainable development practices. MAPC staff conducted an analysis of the five towns in the Lake Cochituate watershed using the Center for Watershed Protection’s Codes and Ordinances Worksheet (COW) method. The COW is an audit of how development actually happens in a community. Development practices are evaluated and compared to those that would support sustainable site design practices and points are given for the use of improved practices. The COW analysis is somewhat subjective and should be modified for each community. Some information asked for is not available within the zoning or town bylaws, which also affects scores. The following are some of the COW highlights for each of the five towns. Complete COW Analysis worksheets are included in the Appendices.

## **Ashland**

Ashland mandates wide street widths, higher parking ratios, wide sidewalks, requires higher setback distances, and does not mandate tree preservation for new subdivisions. The town does limit street length, limits right of way widths, allows some flexibility in setting the number of parking spaces, limits the amount of impervious parking area, allows open space design subdivisions and allows for flexible design, requires onsite treatment of runoff in new subdivisions, buffers streams (Rivers Protection Act), encourages the conservation of open space and requires the treatment of stormwater quality before it is discharged.

### **6.4.2 Framingham**

Framingham still requires wide streets/ROWs, wide cul-de-sacs, has high parking requirements, wide sidewalks and longer driveway requirements. The town does require that parking lots be landscaped, allows the use of open space designs in several areas, requires sidewalks on one side only, allows the discharge of roof top runoff to yard areas, has stream buffer protection (Rivers Protection Act) encourages minimizing clearing at development sites, promotes land conservation with density bonuses, requires the treatment of stormwater quality before it is discharged and limits floodplain development.

### **6.4.3 Natick**

Natick requires wide streets, ROWs, cul-de-sacs, mostly higher parking ratios, does not promote shared parking methods, has mostly higher setback requirements and wider sidewalks. The town does have smaller parking stall width requirements, mandates that parking lots be landscaped, promotes open space development, allows for narrower driveways of pervious materials, allows discharge of roof top runoff to yards, has an active stream buffer bylaw, encourages preservation of natural vegetation at some residential sites, requires tree preservation for subdivisions, and requires stormwater quality treatment under site plan review but with no standards.

### **6.4.4 Sherborn**

Sherborn requires wider ROW widths, has higher parking ratios, does not require parking lots to be landscaped, has higher setback requirements and requires wider driveways. The town does encourage efficient street layout, allows smaller cu-de-sacs, has criteria for stormwater swales, allows the use of open space design and flexible open space design criteria, uses narrower sidewalks, allows pervious driveways, allows roof top runoff to be discharged to yards, encourages vegetation and tree preservation in its grading practices, provides open space incentives, requires the treatment of stormwater quality before discharge and restricts flood plain development.

### **Wayland 6.4.5**

Wayland mandates wider streets, allows longer street lengths, does not allow shared parking arrangements, has higher dimensional parking stall requirements, has generally higher setback distances, requires wider sidewalks on both sides of street, and has

wider driveway requirements. The town does allow for smaller cul-de-sacs, narrower ROWs, requires landscaping of parking lots, uses open space plan development and flexible open space design criteria, requires preservation of trees and vegetation, includes land conservation incentives and mandates the treatment of stormwater quality before discharge.

## **6.5 Recommended Protection Measures**

### **6.5.1 Site Planning**

Proper site planning can help ensure that developments achieve environmental protection and stormwater management goals. Site planning that integrates comprehensive stormwater management into the process from the outset is the most effective approach to reduce and prevent potential pollution and flooding problems. Early stormwater management planning will generally minimize the size and cost of structural solutions.

The Stormwater Handbook (DEP/MCZM, 1997) cites the following goals for site planning in relation to prevention of stormwater pollution. These goals can be incorporated into site plan review and subdivision regulations:

- Avoid construction and development in sensitive areas (e.g. buffer zones, natural drainageways, steep slopes and porous and erodable soils)
- Reduce and minimize impervious surfaces
- Include specific Best Management Practices (BMP) requirements
- Reproduce pre-development hydrological conditions
- Fit the development to the terrain
- Preserve and utilize natural drainage systems

Zoning can be used to limit the amount of impervious surface, limit development in sensitive areas such as steep slopes and can include provisions to regulate impacts such as sedimentation and erosion, and water quality impacts from parking lots. Zoning bylaws can encourage site design that is protective of environmental resources through criteria for site plans and major developments and provisions for flexible or cluster development.

Subdivision regulations can exacerbate stormwater runoff problems by requiring excessively large street widths and curb and gutter drainage. Subdivision regulations should aim for flexibility while ensuring safety. Projects should be required to minimize cut and fill, the dimension of paved areas and the area over the vegetation is disturbed. Although overall adoption of a Stormwater Overlay District, such as the ones adopted by Dedham and suggested for Wilmington may offer a uniform procedure for dealing with stormwater for all typed of development, the model subdivision regulations from the towns of Sudbury and Rowley are offered as models. Framingham and Sherborn have strong subdivision regulations already in place.

## 6.5.2 Bylaws and Regulations

The findings and recommendations from the town regulatory reviews are provided below.

### **ASHLAND**

#### **Findings**

- Special Permit required for adding 2500 square feet or more impervious surface in Groundwater Recharge District.
- Wetlands regulations include No Disturb Zone for areas within 20-feet of Bordering Vegetated Wetland or Bank areas
- Town has Hazardous Materials Storage Plan within Groundwater Recharge District.
- Subdivision regulations follow stormwater best management practices of Department of Environmental Protection (DEP) and Massachusetts Coastal Zone Management in Stormwater Policy and Technical Handbook of 2001.
- Site Plan Review regulations are comprehensive for stormwater and erosion for commercial, industrial and for those requiring 6 or more parking spaces.

#### **Recommendations**

- Ashland may wish to reevaluate its land use development codes and ordinances to see if current development practices are environmentally sustainable. A site planning roundtable committee made up of representatives from the town, development and environmental communities could identify existing development rules, compare them to principles of “smart growth” and better site design, determine if changes could or should be made to local bylaws and then negotiate to reach consensus on what those changes need to be. The town could follow up on the preliminary Codes and Ordinances analysis that was performed for this report as a tool to help facilitate their own research. See COW analysis findings and worksheet to follow up. (Center for Watershed Protection)
- Site plan regulations should be strengthened to include any land disturbance of 10,000 square feet or more as regulatory threshold.
- Ashland should consider adopting a bylaw governing discharges to its municipal storm drain system. ( MA Attorney General’s Model Bylaw)
- Town bylaws do not currently address illicit connections to the municipal storm drain system, or post construction storm water management from new development (other than subdivisions) or redevelopment and should be considered. ( MA Attorney General’s Model Bylaw)

- The town should consider amending its zoning bylaw to include regulation of stormwater, erosion control and flooding for individual lots created through the Subdivision Approval Not Required (ANR) process. The City Engineer or designee must approve a stormwater/flood control management plan or grant a waiver prior to the issuance of a building permit for the lot. (Gloucester, MA Model Ordinance)
- The town may want to consider the adoption of an overall Stormwater Overlay District and regulate all stormwater and erosion controls through a permit issued by the Conservation Commission and a Stormwater Officer. All land disturbances, with a few exemptions, would require a Stormwater Management Permit. (Dedham, MA Model Bylaw)
- The town may wish to consider adopting a Stormwater Management District that would be similar to an overlay zoning district for Groundwater Protection. All new development and redevelopment would require a stormwater mitigation permit. Permits would be issued by the Planning Board for development under its jurisdiction and by the Building Inspector for projects outside the Planning Board's jurisdiction. Permit requirements would be based on the nine Stormwater Management Standards for the DEP Stormwater Policy and the specific requirements would vary by type and extent of development. The permit would include the use of post-construction runoff controls, inspection program, and documented history of compliance or non-compliance. (SEA memo to Wilmington, MA)

## **FRAMINGHAM**

### **Findings**

- Wetlands bylaw allows no alteration/ no work zone next to wetland resource areas of 30-feet which may be extended to 100-feet by the Conservation Commission.
- Site Plan Review for new and redevelopment projects creating 5 or more parking spaces or greater than 8,000 square feet require meeting Environmental Impact Standards based on "latest accepted state and federal best management practices for water quality mitigation and management."
- Subdivision regulations require all new projects' storm water management systems to meet DEP Storm Water Management Policy Standards.

### **Recommendations**

- Framingham may wish to reevaluate its land use development codes and ordinances to see if current development practices are environmentally sustainable. A site planning roundtable committee made up of representatives from the town, development and environmental communities could identify existing development rules, compare them to principles of "smart growth" and better site design, determine if changes could or should be made to local bylaws

and then negotiate to reach consensus on what those changes need to be. The town could follow up on the preliminary Codes and Ordinances analysis that was performed for this report as a tool to help facilitate their own research. ( Center for Watershed Protection)

- Site plan regulations should be extended to include any land disturbance of 10,000 square feet or more as regulatory threshold.
- Framingham should complete drafting of and adopt a bylaw governing discharges to its municipal storm drain system. ( MA Attorney General's Model Bylaws)
- Finish drafting bylaws to address illicit connections to the municipal storm drain system, post construction storm water runoff management from new development (other than subdivisions) or redevelopment and should be considered. (MA Attorney General's Model Bylaws)
- The town should consider amending its zoning bylaw to include regulation of stormwater, erosion control and flooding for individual lots created through the Subdivision Approval Not Required (ANR) process. The City Engineer or designee must approve a stormwater/flood control management plan or grant a waiver prior to the issuance of a building permit for the lot. (Gloucester, MA Model Ordinance)
- The town may want to consider the adoption of an overall Stormwater Overlay District and regulate all stormwater and erosion controls through a permit issued by the Conservation Commission and a Stormwater Officer. All land disturbances, with a few exemptions, would require a Stormwater Management Permit. (Dedham, MA Model Bylaw)
- The town may wish to consider adopting a Stormwater Management District that would be similar to an overlay zoning district for Groundwater Protection. All new development and redevelopment would require a stormwater mitigation permit. Permits would be issued by the Planning Board for development under its jurisdiction and by the Building Inspector for projects outside the Planning Board's jurisdiction. Permit requirements would be based on the nine Stormwater Management Standards for the DEP Stormwater Policy and the specific requirements would vary by type and extent of development. The permit would include the use of post-construction runoff controls, inspection program, and documented history of compliance or non-compliance. (SEA memo to Wilmington, MA)

## **NATICK**

### **Findings**

- Special Permit required for any project seeking greater than 20% impervious coverage within Aquifer Protection District. Special Permit in Aquifer Protection District also required for any commercial or industrial use with requirements not to compact soils, prevent siltation and loss of groundwater recharge.

- Wetlands bylaw allows for no-disturb zone within 25-feet of any wetland resource area except floodplain or riverfront areas. Wetland bylaw also allows 15-foot no-build zone within 15-feet of any no-disturb area and no alteration within 100-feet of any certified vernal pond.
- Some protection against runoff and erosion within Aquifer Protection District, but no standards given.

## Recommendations

- Natick may wish to reevaluate its land use development codes and ordinances to see if current development practices are environmentally sustainable. A site planning roundtable committee made up of representatives from the town, development and environmental communities could identify existing development rules, compare them to principles of “smart growth” and better site design, determine if changes could or should be made to local bylaws and then negotiate to reach consensus on what those changes need to be. The town could follow up on the preliminary Codes and Ordinances analysis that was performed for this report as a tool to help facilitate their own research. (Center for Watershed Protection)
- Subdivision Regulations need to be strengthened in respect to stormwater management. The regulations need to incorporate strong, measurable standards, such as those in the DEP Stormwater Policy Standards. Reference could be made to the Subdivision Regulations currently being used by Sherborn and Framingham as models.
- Site Plan regulations should be strengthened to include any land disturbance of 10,000 square feet or more as regulatory threshold. The Site Plan Review Regulations should include stormwater impacts in the list of issues reviewed. The town should develop a list of to ensure each construction project has specifically addressed methods to reduce erosion, sedimentation, water quality impacts and stormwater runoff. Requirements on the list would have to be met for the building permit to be issued. Reference could be made to the Framingham Site Plan Review regulations.
- Natick should consider accelerating its SWMP schedule by adding bylaws in during 2004-2005 to address discharges to its municipal storm drain system, stormwater management and land disturbance and post-construction stormwater management of development and redevelopment. (MA Attorney General’s Model Bylaw)
- The town should consider amending its zoning bylaw to include regulation of stormwater, erosion control and flooding for individual lots created through the Subdivision Approval Not Required (ANR) process. (Gloucester, MA Model Ordinance)
- The town may want to consider the adoption of an overall Stormwater Overlay District and regulate all stormwater and erosion controls through a permit issued by the Conservation Commission and a Stormwater Officer. All land

disturbances, with a few exemptions, would require a Stormwater Management Permit. (Dedham, MA Model Bylaw)

- The town may wish to consider adopting a Stormwater Management District that would be similar to an overlay zoning district for Groundwater Protection. All new development and redevelopment would require a stormwater mitigation permit. Permits would be issued by the Planning Board for development under its jurisdiction and by the Building Inspector for projects outside the Planning Board's jurisdiction. Permit requirements would be based on the nine Stormwater Management Standards for the DEP Stormwater Policy and the specific requirements would vary by type and extent of development. The permit would include the use of post-construction runoff controls, inspection program, and documented history of compliance or non-compliance. (SEA memo to Wilmington, MA)

## **SHERBORN**

### **Findings**

- Subdivision regulations regarding stormwater management are strong and include requirements for evaluating 100-year storm runoff for downstream inputs, a preference for using natural treatment for runoff infiltration versus using constructed detention/retention areas, and minimizing impervious areas.
- Site Plan Review regulations in Sherborn take surface water disposal and drainage into account for expansion of a current business use, and within the town's Flood Plain District along the Charles River. The zoning regulations used to site a wireless communications facility requires that stormwater runoff impacts must be cited within the application.
- The town's wetlands bylaw includes a 50-foot no alteration zone starting from the edge of the wetland resource area.

### **Recommendations**

- Sherborn may wish to reevaluate its land use development codes and ordinances to see if current development practices are environmentally sustainable. A site planning roundtable committee made up of representatives from the town, development and environmental communities could identify existing development rules, compare them to principles of "smart growth" and better site design, determine if changes could or should be made to local bylaws and then negotiate to reach consensus on what those changes need to be. The town could follow up on the preliminary Codes and Ordinances analysis that was performed for this report as a tool to help facilitate their own research. (Center for Watershed Protection)
- The town should follow up on its Storm Water Management Plan recommendations and create bylaws to address illicit discharge and detection, construction site stormwater runoff, and post construction stormwater

management in new development/redevelopment. The MA Attorney General's Model bylaws offer a starting point.

- Sherborn should extend its Site Plan Review regulations to match its subdivision stormwater and erosion standards for all development or redevelopment that involve any land disturbance of 10,000 square feet or more.
- The town should consider amending its zoning bylaw to include regulation of stormwater, erosion control and flooding for individual lots created through the Subdivision Approval Not Required (ANR) process. The City Engineer or designee must approve a stormwater/flood control management plan or grant a waiver prior to the issuance of a building permit for the lot. (Gloucester, MA Model Ordinance)
- The town may want to consider the adoption of an overall Stormwater Overlay District and regulate all stormwater and erosion controls through a permit issued by the Conservation Commission and a Stormwater Officer. All land disturbances, with a few exemptions, would require a Stormwater Management Permit. (Dedham, MA Model Bylaw)
- The town may wish to consider adopting a Stormwater Management District that would be similar to an overlay zoning district for Groundwater Protection. All new development and redevelopment would require a stormwater mitigation permit. Permits would be issued by the Planning Board for development under its jurisdiction and by the Building Inspector for projects outside the Planning Board's jurisdiction. Permit requirements would be based on the nine Stormwater Management Standards for the DEP Stormwater Policy and the specific requirements would vary by type and extent of development. The permit would include the use of post-construction runoff controls, inspection program, and documented history of compliance or non-compliance. (SEA memo to Wilmington, MA)

## **Wayland**

### **Findings**

- Wetlands bylaw calls for a "wetlands and water resources permit" and is issued in conjunction with Order of Conditions. Conditions for permit are flexible and may include that "certain lands, or portions thereof, not be built upon or altered..."
- Subdivision regulations allow for "adequate disposal of surface water to the satisfaction of the Planning Board and retention areas are required when development of an area, "in the opinion of the Planning Board" will increase runoff substantially to downstream areas. The detention area must be sized to accommodate a 100-year storm event.
- The town has strong stormwater and erosion control requirements within the Aquifer Protection District but stormwater quality standards should be better defined.

## Recommendations

- Wayland may wish to reevaluate its land use development codes and ordinances to see if current development practices are environmentally sustainable. A site planning roundtable committee made up of representatives from the town, development and environmental communities could identify existing development rules, compare them to principles of “smart growth” and better site design, determine if changes could or should be made to local bylaws and then negotiate to reach consensus on what those changes need to be. The town could follow up on the preliminary Codes and Ordinances analysis that was performed for this report as a tool to help facilitate their own research.( Center for Watershed Protection)
- Wayland’s Subdivision Stormwater Regulations and its Site Plan Review regulations outside of the Aquifer Protection District need to be strengthened in respect to stormwater management. Specific standards for stormwater runoff need to be adopted for both subdivisions and outside the Aquifer Protection District. Framingham’s Site Plan Review Regulations and Subdivision Regulations could serve as a good model.
- Wayland should follow the schedule outlined in its SWMP and add bylaws to address discharges to its municipal storm drain system, land disturbance and post-construction stormwater management of development and redevelopment. The MA Attorney General’s model stormwater bylaws offer a good template.
- The town should consider amending its zoning bylaw to include regulation of stormwater, erosion control and flooding for individual lots created through the Subdivision Approval Not Required (ANR) process. (Gloucester Model Ordinance)
- The town may want to consider the adoption of an overall Stormwater Overlay District and regulate all stormwater and erosion controls through a permit issued by the Conservation Commission and a Stormwater Officer. All land disturbances, with a few exemptions, would require a Stormwater Management Permit. (Dedham, MA Model Bylaw)
- The town may wish to consider adopting a Stormwater Management District that would be similar to an overlay zoning district for Groundwater Protection. All new development and redevelopment would require a stormwater mitigation permit. Permits would be issued by the Planning Board for development under its jurisdiction and by the Building Inspector for projects outside the Planning Board’s jurisdiction. Permit requirements would be based on the nine Stormwater Management Standards for the DEP Stormwater Policy and the specific requirements would vary by type and extent of development. The permit would include the use of post-construction runoff controls, inspection program, and documented history of compliance or non-compliance. (SEA memo to Wilmington, MA)

### 6.5.3 Maintenance and Operations

Roadways and catch basins have typically been designed to move the water off the roadway and into a collection system as quickly as possible. The removal of pollutants became more of a reality with the adoption of the DEP Stormwater Management Policy and Standards in 1997. The DEP standards apply to redevelopment of roadways as well as building sites and require such projects to meet the standards to the maximum extent practicable and to at least improve existing conditions. "Redevelopment" includes "maintenance and improvements of existing roadways, including widening less than a single lane, adding shoulders and correcting substandard intersections and drainage, and repaving.." Under EPA's Phase II Stormwater requirements, one of the six minimum control measures in which MS4 municipalities (such as the five Lake Cochituate watershed towns) must now specify best management practices is for Pollution Prevention/Good Housekeeping for Municipal Operations. Owners or operators of small MS4s must develop and implement cost-effective operation, maintenance, and training programs with the goal of preventing or reducing pollutant runoff from municipal operations. All of the communities have outlined plans for this BMP in their Stormwater Management Plans as outlined in Section 6.1. Full copies of the SWMPs are included in the Appendices.

MAPC recommends that the five local highway departments integrate stormwater improvements into the design of roadway maintenance projects in advance of the timelines targeted within their SWMPs, if possible. Because local budgets are constrained, maintenance activities such street sweeping and catch basin cleaning have been reduced in frequency over time, particularly since the advent of Proposition 21/2 in the 1980s. It is important for roadway managers to prioritize basins and clean priority basins more frequently.

It is imperative that there be good communication between the Planning Board and the Department of Public Works (or Highway/ Sewer Departments) regarding funding and maintenance of BMPs. The DPW needs to provide input on whether structures are practical to maintain. The Finance Committee and Town Meeting need to provide adequate funds.

Issues that need to be resolved include:

- Who will own and maintain the BMP?
- What are the maintenance requirements and does the town have the necessary equipment and expertise?
- Will permits be needed for maintenance?
- Is maintenance adequately funded for the life of the project?

Larry Boutiette of the Natural Resources Conservation Service provides the following advice to communities:

- Involve the DPW early in the process as roads and drainage facilities are being planned. If facilities are to be maintained by the DPW, ensure that the DPW has the equipment and expertise it needs.
- Require developers to prepare a plan that includes details on operation and maintenance of stormwater BMPs. Public Works Departments can use these plans to support their request for maintenance funding.
- Town maintenance of BMPs is probably preferable to homeowner maintenance since the town is best equipped to own, inspect and maintain them.
- The town budget should include a line item for BMP maintenance, specifying the number of basins or devices.
- Drainage areas to critical resources such as Lake Cochituate and its tributary streams should be delineated. Catch basin cleaning and street sweeping schedules should prioritize these critical areas and should also reflect the intensity and nature of land use.
- Ideally, local boards should work together with consistent regulations. This is one of the primary reasons for adopting the stormwater overlay district as it creates one, uniform procedure for dealing with stormwater attenuation and treatment.

Funding constraints for maintenance of stormwater BMPs such as detention basins can be reduced by requiring developers and property owners to pay for future maintenance. Towns can also utilize a betterment system for developments with detention systems and other BMPs. The town would conduct the maintenance, but property owners would be assessed a charge for this maintenance, through their property taxes.

The adoption of a stormwater utility is another option that could be explored. In this method of stormwater financing, property owners are charged a fee for “using” the storm drain network which is usually based on the amount of impervious surface located on their property. The fees collected are used to finance capital and operating expenses needed for local stormwater management. See the Appendices for a full description of stormwater utilities.

See the Appendices for Street Sweeper, Catch Basin, Bridge and Roadway Maintenance Practices

#### **6.5.4 Summary of Adequacy of Bylaws/Regulations and Recommended Future Actions**

##### **Ashland**

- Ashland has incorporated the DEP Stormwater Standards into its subdivision review, requires onsite treatment of stormwater, erosion and sedimentation controls and maximization of groundwater recharge for all site plan reviews involving 6 or more parking spaces and has included a 20-foot “no-disturb” rule in its wetland bylaw. The town may wish to further evaluate its land use codes and ordinances using the Center for Watershed Protection’s COW worksheet to help reduce stormwater runoff in the future. Ashland should also look into controlling erosion and stormwater on Approval Not Required lots and extend its site plan review process to all land disturbances of 10,000 feet or more.

Ashland did not have any recommended priority structural Best Management Practices (BMPs) located within the town. The town should survey catch basins and impervious areas within 50-feet of surface waters to check for operational problems and identify runoff problems. Improving non structural practices such as increasing frequency of catch basin cleaning and street sweeping, and improving watershed education practices should be high priorities in the future.

##### **Framingham**

- Framingham requires that subdivision development follows the DEP Stormwater Standards, requires an Environmental Impact Statement for most site plan and special permit applications and has a 30-foot “no work” zone under its wetland bylaw. The town should complete its drafting and adoption of bylaws governing illicit connections to its storm drain system, and post construction runoff from new development (other than subdivisions) or redeveloped areas. The town should consider adopting a town wide Stormwater Overlay District or a Stormwater Management District.

High priority structural BMP action sites in Framingham include Lakeview Road, Saxonville Beach and the A-1 Used Auto Parts site at Rear Beaver Street. Improving non structural practices such as increased frequency of catch basin cleaning, street sweeping and improving watershed education practices should be high priorities.

##### **Natick**

- A Special Permit for projects within the Aquifer Protection District with greater than 20% impervious coverage is required and the town wetlands bylaw has a 25-foot “no disturb” zone. The highest regulatory priorities for the town should be to strengthen its subdivision and site plan review practices to include specific review and measurable standards for stormwater management and erosion control. In addition, the town should consider accelerating its Stormwater Management Plan implementation schedule and adopt bylaws addressing discharges to its municipal storm water system, land use disturbance and post construction stormwater management.

The site at Central Street Used Auto Parts, the Settling Basins at Beaver Dam Brook, and the sites in Pegan Cove Park are all recommended high priority structural BMP locations in Natick. As with the other towns in the Lake Cochituate watershed, improved infrastructure maintenance and residential practices are both critical to improving the health of Lake Cochituate.

### **Sherborn**

- Sherborn's subdivision controls are strong and emphasize using existing features, limiting nutrient loading and reducing disturbed areas. Site plan review for erosion control and stormwater are required within the business, flood plain and wireless communications towers districts and the wetlands bylaw includes a 50-foot no-alteration zone. The town's highest regulatory priority should be to extend its site plan review requirements for all land disturbances of greater than 10,000 square feet and to create bylaws to address illicit discharges to its storm drain system and control post construction storm water management.

There were no high priority structural BMPs recommended for Sherborn under this report. The town should survey catch basins and impervious areas 50-feet of surface waters to check for operational problems and identify runoff problems. Increasing nonstructural BMP maintenance practices such as street sweeping and catch basin cleaning, as well as improving residential watershed practices should be stressed.

### **Wayland**

- There are somewhat limited stormwater controls within Wayland's subdivision regulations with no defined standards in place. Stormwater is reviewed under site plan review for all development (except single and two-family, cluster and Planned Unit Development) of 5,000 square feet or more, but no quantitative standards are given. Non residential lots requiring more than 15% impervious cover or greater than 2500 square feet impervious cover requires a groundwater recharge system in the Aquifer Protection District. The highest regulatory priority should be to strengthen stormwater and erosion regulations, including specific standards, for all subdivision and site plan review applications outside the Aquifer Protection District.

High priority structural BMPs in Wayland include the Town Beach at North Pond and a medium priority site at Route 30 where highway runoff discharges directly into North Pond. The town should survey catch basins within 50 –feet of surface water resources for operational problems and increase the frequency of catch basin cleaning and street sweeping, as well as work with residents to improve healthy watershed practices.

Table 6-2 Summary of Local Stormwater and Erosion Controls

Control Measures	Ashland	Framingham	Natick	Sherborn	Wayland
<b>Stormwater Regulations?</b>	Subdivision Regs.: extensive  Zoning: Site Plan Review	Subdivision Regs. DEP Stormwater Standards Zoning: EIS required for Site Plan Review and SP	Subdivision Regs.: Controls for new lots in Aquifer Protection District ( includes some of Lake Cochituate watershed) Zoning: Some limits in Aquifer Protection District, no specific stormwater standards	Subdivision Regs. : strong controls Zoning: Controls for site plan review for business, flood plan districts and wireless towers	Subdivision Regs. : Limited controls  Zoning: Site plan review (SPR) for anything > 5,000 square feet except single or two-family residential and conservation cluster or planned unit development; surface and groundwater addressed
<b>Require No Increase In Peak Runoff?</b>	Required in Subdivision Regs. Site Zoning: Site Plan Review: >6 parking spaces	Subdivision Regs. DEP Stormwater Standards Zoning: EIS required for Site Plan Review and SP	Subdivision: Not addressed Zoning: Addressed in Aquifer Protection District but with no standards	Subdivision Regs. : yes	Subdivision Regs. : left to Planning Board: may require detention area Zoning: yes, general standards only under SPR
<b>Treatment Required?</b>	Subdivision Regs. : Must treat runoff on-site Zoning: Site Plan Site Plan Review: >6 parking spaces	Subdivision Regs. DEP Stormwater Standards Zoning: EIS required for Site Plan Review and SP	Treatment required for >20% impervious cover in Aquifer Protection District	Subdivision: yes, with emphasis on using existing features, reduced paving, reduced disturbed areas	Subdivision Regs. : use of detention areas Zoning: SPR calls for "adequate measures" for prevention of surface and ground water, but not standards given
<b>Performance Standards for Water Quality?</b>	Subdivision Regs.: DEP Stormwater Standards	Subdivision Regs. DEP Stormwater Standards Zoning: EIS required for Site Plan Review and SP	Not addressed in Subdivision or Zoning Regs.	Subdivision Regs. : Nutrient loading to groundwater restricted to maximum of 5 mg/Liter. Other pollution control devices called for.	Not addressed in Subdivision Regs. or Zoning
<b>Require Erosion/Sedimentation Controls?</b>	Subdivision Regs. : DEP Stormwater Standards Zoning: Site Plan Review: > 6 parking spaces	Subdivision Regs. DEP Stormwater Standards Zoning: EIS required for Site Plan Review and SP	Aquifer Protection District only: "shall not create problems of water runoff or erosion on site in question or others"	Subdivision Regs. : Erosion and Sedimentation Plan required with Definitive Plan, vegetative buffers around surface waters	Subdivision Regs. : calls for control of erosion but no standards Zoning: minimize erosion and sedimentation under SPR but no standards
<b>Maximize Recharge to Groundwater?</b>	Subdivision Regs. : DEP Stormwater Standards Zoning: Site Plan Review: > 6 parking spaces	Subdivision Regs. DEP Stormwater Standards Zoning: EIS required for Site Plan Review and SP	20% impervious cover in Aquifer Protection District requires design to cleanse, filter and recharge aquifer Special Permit conditions for commercial/industrial uses in Aquifer Protection District to prevent soil compaction, siltation of soil, loss of recharge	Subdivision Regs.: Natural patterns of drainage encouraged to maximize local groundwater recharge.	Subdivision Regs. : not addressed  Zoning: SPR calls for prevention of groundwater changes and maximization of groundwater recharge but no standards given; in APD, any non-residential lot with >15% or 2500 square feet impervious needs groundwater recharge system
<b>Minimize Impervious Surface?</b>	In Groundwater Recharge District	Considered in Highway Overlay District Subdivision Regs. DEP Stormwater Standards Other zoning: EIS for Site Plan Review and SP	20% impervious cover in Aquifer Protection District requires design to cleanse, filter and recharge aquifer Special Permit conditions for commercial/industrial uses in Aquifer Protection District to prevent soil compaction, siltation of soil, loss of recharge	Subdivision Regs. : Reduction of paved areas and vegetation disturbance, reduced volume of cut and fill, no encroachment on wetland or floodplain	Subdivision Regs. : not addressed  Zoning: in Aquifer Protection District: Any new use of change of use in a residential lot that will render impervious >15% or 2500 square feet shall require Site Plan Approval
<b>Other Requirements</b>	No building allowed on slopes of > 3:1	Environmental Impact Standards for all Site Plan Review and SP: 5-parking spaces or greater is threshold for EIS project size. Must comply with "latest accepted state and federal BMPs for water quality mitigation and management" : SP for project of 8,000 SF or >		Waiver needed to use detention/retention basins instead of natural drainage strategies	
Other Development Types	Cluster developments by Special Permit; has mixed use district	open space residential design in R-3, R-4 Districts, has open space and recreation district; planned unit development	Planned cluster development	All subdivisions must conform with master plan and open space plan; open space subdivision allowed by Special Permit  -	Conservation cluster district, Planned Development District, Southeast Wayland-Cochituate Planning District

## 7.0 CONCLUSION AND WATERSHED ACTION PLAN SUMMARY

This plan has presented information on the critical issues regarding nonpoint source pollution throughout the watershed of Lake Cochituate, and presented recommendations for a number of actions to address these issues and improve water quality, including structural and non-structural Best Management Practices, as well as regulatory and public education measures. The success of these will depend on the degree to which they are implemented by communities, agencies, businesses, and residents in the watershed. To help focus these efforts, the following matrix presents a watershed action plan based on the priority recommendations of this report. The action plan includes suggested timeframe for implementation of each recommendation over the next one to five years.

### 7.1 Recommendations for Ashland

Issue/Problem	Priority	Non-Structural Best Management Practices	Year
Clogging of catch basins & sedimentation	High	<ul style="list-style-type: none"> <li>More frequent street sweeping and catch basin cleaning is recommended for the towns, the Mass. Highway Department, and Mass. Turnpike Authority.</li> <li>Reduced sand and salt application</li> </ul>	1 & Ongoing  1 & Ongoing

Issue/Problem	Priority	Recommended Bylaw/Regulation	Year
Erosion control	Med.	Ashland should consider controlling erosion and stormwater on Approval Not Required lots and extend its site plan review process to all land disturbances of 10,000 feet or more.	1-2

### 7.2 Recommendations for Framingham

Site/Subbasin	Priority	Structural Best Management Practices	Year
Lakeview Road North Pond	High	<ul style="list-style-type: none"> <li>Cleaning of clogged catch basins</li> <li>Installation of deep sump catch basins or hydrodynamic separators to control discharge of suspended solids to North Pond</li> </ul>	1 2-3
Saxonville Beach North Pond	High	<ul style="list-style-type: none"> <li>Control eroding slopes through drainage alterations</li> <li>Control of parking lot runoff near the beach through installation of hydrodynamic separators</li> </ul>	2 3-5
A-1 Used Auto Parts, Beaver Dam Brook	High	<ul style="list-style-type: none"> <li>Intercept sheet flow with berm along stream and channel to series of catch basins set in a pitched swale. TSS removal units with overflow to stream to accompany each catch basin</li> </ul>	3-5

Issue/Problem	Priority	Non-Structural Best Management Practices	Year
Clogging of catch basins & sedimentation	High	<ul style="list-style-type: none"> <li>• More frequent street sweeping and catch basin cleaning is recommended for the towns, the Mass. Highway Department, and Mass. Turnpike Authority.</li> <li>• Reduced sand and salt application</li> </ul>	1 & Ongoing  1 & Ongoing
NSTAR ROW North Pond	Low	<ul style="list-style-type: none"> <li>• Inspect area used for vehicle storage and ensure that adequate erosion and runoff controls are in place</li> </ul>	1-2

Issue/Problem	Priority	Recommended Bylaw/Regulation	Year
Illicit connections  Erosion control	Med.	Framingham should complete its adoption of bylaws governing illicit connections to its storm drain system, and post construction runoff from new development (other than subdivisions) or redeveloped areas. The town should consider adopting a town wide Stormwater Overlay District or a Stormwater Management District.	1-2

### 7.3 Recommendations for Natick

Site/Subbasin	Priority	Structural Best Management Practices	Year
Settling Basins, Beaver Dam Brook	High	<ul style="list-style-type: none"> <li>• Creation of a rock forebay to slow water and allow for settling of sediments</li> <li>• O&amp;M plan to address maintenance of new structure</li> <li>• An alternative solution would be to dredge the basins to restore their original function.</li> </ul>	3-4 ongoing  3-5
Central Street Used Auto Parts, Beaver Dam Brook.	High	<ul style="list-style-type: none"> <li>• Channel drainage with berms on two sides and direct flow to vegetated swale with check dams for TSS removal. Construct detention basin with overflow to stream</li> </ul>	4-5
Pegan Cove Park Pegan Brook	High	<ul style="list-style-type: none"> <li>• Mitigate pollution loads from highly urbanized upstream area with a constructed wetland system containing wetland chambers and detention ponds</li> </ul>	4-5
Pegan Cove Park Pegan Brook, southern tributary	High (Alternative)	<ul style="list-style-type: none"> <li>• As an alternative to the constructed wetland in Pegan Brook, create pond/wetland system in the southern tributary below the railroad bed</li> </ul>	4-5

West Natick Business Center, Beaver Dam Brook.	Med.	<ul style="list-style-type: none"> <li>Three separate sites delineated. All would use combination of catch basins and/or TSS removal units to treat stormwater</li> </ul>	3
Confluence of Saxonville Rail-trail & RR tracks - Pegan Brook	Med.	<ul style="list-style-type: none"> <li>Restore stream channel</li> <li>Create a constructed wetland system to address storm water from north of Downtown Natick</li> </ul>	3 4-5
Channelized brook from RR to Pegan Cove Park Pegan Brook	Low	<ul style="list-style-type: none"> <li>Public education for homeowners</li> <li>Storm drain inserts to capture sediments and trash</li> <li>Creation of small impoundment to treat flows from a 4' culvert south of RR tracks</li> </ul>	Ongoing 1-2
Catch basin and outfall off of Lake Street Pegan Brook	Low	<ul style="list-style-type: none"> <li>Sump needs to be cleaned</li> <li>Rip-rap and or a level spreader needs to be added at the system's outfall</li> </ul>	1 2

Issue/Problem	Priority	Non-Structural Best Management Practices	Year
Clogging of catch basins & sedimentation	High	<ul style="list-style-type: none"> <li>More frequent street sweeping and catch basin cleaning is recommended for the towns, the Mass. Highway Department, and Mass. Turnpike Authority.</li> <li>Reduced sand and salt application</li> </ul>	1 & Ongoing  1 & Ongoing
Duralectric site, Pegan Brook	Low	<ul style="list-style-type: none"> <li>Further investigation of sources of sedimentation and heated water coming from the site; follow-up mitigation and/or enforcement as appropriate.</li> </ul>	1-2

Issue/Problem	Priority	Recommended Bylaw/Regulation	Year
Erosion control, Stormwater management, Illicit discharges	Med.	Natick should strengthen its subdivision and site plan review practices to include review and measurable standards for stormwater management and erosion control. The town should also consider accelerating its Stormwater Management Plan implementation schedule and adopt bylaws addressing discharges to its municipal storm water system, land disturbance, and post construction stormwater management.	1-2

#### 7.4 Recommendations for Sherborn

Issue/Problem	Priority	Non-Structural Best Management Practices	Year
Clogging of catch basins & sedimentation	High	<ul style="list-style-type: none"> <li>More frequent street sweeping and catch basin cleaning is recommended for the towns, the Mass. Highway Department, and Mass. Turnpike Authority.</li> <li>Reduced sand and salt application</li> </ul>	1 & Ongoing
			1 & Ongoing

Issue/Problem	Priority	Recommended Bylaw/Regulation	Year
Erosion control, Illicit discharges Post-construction stormwater management	Med.	Sherborn should extend its site plan review requirements for all land disturbances of greater than 10,000 square feet and to create bylaws to address illicit discharges to its storm drain system and control post construction storm water management	1-2

#### 7.5 Recommendations for Wayland

Site/Subbasin	Priority	Structural Best Management Practices	Year
Town Beach North Pond	High	<ul style="list-style-type: none"> <li>Mitigate parking lot and road drainage with Low Impact Design techniques and installation of a hydrodynamic separator to control discharge of suspended solids and pollutants near the beach</li> </ul>	3-5

Issue/Problem	Priority	Non-Structural Best Management Practices	Year
Clogging of catch basins & sedimentation	High	<ul style="list-style-type: none"> <li>More frequent street sweeping and catch basin cleaning is recommended for the towns, the Mass. Highway Department, and Mass. Turnpike Authority.</li> <li>Reduced sand and salt application</li> </ul>	1 & Ongoing
			1 & Ongoing
Erosion at construction sites, especially ANR's Approval Not Required	Med	<ul style="list-style-type: none"> <li>Erosion control measures such as silt fences and hay bales should be used on all construction sites. The towns should adopt erosion and sedimentation measures that apply even when subdivision approval is not required.</li> </ul>	2

Issue/Problem	Priority	Recommended Bylaw/Regulation	Year
Erosion control	Med.	Wayland should strengthen stormwater and erosion regulations, including specific standards, for all subdivision and site plan review applications outside the Aquifer Protection District.	1-2

## 7.6 Recommendations for Mass. Highway Department

Site/Subbasin	Priority	Structural Best Management Practices	Year
Route 9 draining into Middle Pond and Carling Pd.	Med.	<ul style="list-style-type: none"> <li>Improved pre-treatment with TSS removal BMP's such as hydrodynamic separators or deep sump catch basins</li> </ul>	3-5
Route 30, North/Snake Brook Pond	Med.	<ul style="list-style-type: none"> <li>Control direct discharge of highway runoff through installation of catch basins and hydrodynamic separators</li> </ul>	3-5

Issue/Problem	Priority	Non-Structural Best Management Practices	Year
Clogging of catch basins & sedimentation	High	<ul style="list-style-type: none"> <li>More frequent street sweeping and catch basin cleaning is recommended for the towns, the Mass. Highway Department, and Mass. Turnpike Authority.</li> <li>Reduced sand and salt application</li> </ul>	1 & Ongoing
			1 & Ongoing

## 7.7 Recommendations for Mass. Turnpike Authority

Site/Subbasin	Priority	Structural Best Management Practices	Year
Mass. Turnpike Natick Service Plaza drainage into Middle Pond	Med.	<ul style="list-style-type: none"> <li>Retrofit the drainage system with BMP's for pre-treatment, such as hydrodynamic separators</li> <li>Redesign the drainage ditch to create a vegetated retention area</li> </ul>	3-5
			2-3

Issue/Problem	Priority	Non-Structural Best Management Practices	Year
Clogging of catch basins & sedimentation	High	<ul style="list-style-type: none"> <li>More frequent street sweeping and catch basin cleaning is recommended for the towns, the Mass. Highway Department, and Mass. Turnpike Authority.</li> <li>Reduced sand and salt application</li> </ul>	1 & Ongoing
			1 & Ongoing

## 7.8 Recommendations for Residents and Businesses

Site/Subbasin	Priority	Structural Best Management Practices	Year
Residential and business activities that affect water quality	High	<ul style="list-style-type: none"> <li>Potential pollution sources from residential and business activities such as lawn maintenance, septic system maintenance, car washing, and use and disposal of household chemicals should be addressed by public education measures.</li> </ul>	1 & Ongoing



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