



Town of Palmer

Bondsville, Depot Village, Thorndike & Three Rivers
“The Town of Seven Railroads”

Town Council

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August 11, 2008

Sponsor: Planning Board

TOWN ORDINANCE 2008-04

AMENDMENT TO THE CODE OF ORDINANCES OF THE TOWN OF PALMER

BE IT ENACTED BY THE PALMER TOWN COUNCIL

That the Code of Ordinances of the Town of Palmer be amended to add Chapter 145, §1-12 – Stormwater Management Ordinance – Large Development Projects, as follows:

Note: Underlined text denotes text to be added and text with a strikethrough denotes text to be deleted.

§ 145-1 PURPOSE AND AUTHORITY

1. Purpose

- A. The purpose of this Ordinance is to better manage land development in order to protect, maintain, and enhance the public health, safety, and general welfare of the citizens of Palmer by establishing minimum requirements and procedures to control the adverse impacts associated with stormwater runoff before, during, and after construction.
- B. The proper management of stormwater runoff will meet the following objectives:
1. Reduce the adverse water quality impacts of stormwater discharges to rivers, lakes, reservoirs and streams in order to attain federal water quality standards;
 2. Prevent the discharge of pollutants, including hazardous chemicals, into stormwater runoff;
 3. Minimize the volume and rate of stormwater which is discharged, to rivers, streams, reservoirs, lakes, and combined sewers that flows from any site during and following development;
 4. Prevent erosion and sedimentation from land development, and reduce stream channel erosion caused by increased runoff;
 5. Provide for the recharge of groundwater aquifers and maintain the base flow of streams;

6. Provide stormwater facilities that are attractive, maintain the natural integrity of the environment, and are designed to protect public safety;
 7. Maintain or reduce pre-development runoff characteristics after development to the extent feasible;
 8. Minimize damage to public and private property from flooding;
 9. Ensure that these management controls are properly maintained;
 10. Inform the public about the value and benefits of groundwater recharge and pollution reduction and clean water.
- C. As a means to the objectives described above, stormwater best management practices that mimic natural hydrology (i.e., nonstructural and small-scale upland management approaches) should be considered as first-line practices. Given appropriate soils and conditions, all opportunities to use nonstructural and small-scale upland management designs must be exhausted prior to exploring end-of-pipe stormwater management approaches.
- D. It is the intent that upon having followed the guidance of the Ordinance that the applicant will have done sufficient planning and documentation for Conservation Commission review (where there is jurisdiction) and for U.S. Environmental Protection Agency review where a National Pollution Discharge Elimination System construction general permit is required.

§ 145-2 APPLICABILITY

1. Applicability

This Ordinance shall be applicable to all land disturbance uses requiring Site Plan Approval, and any residential uses, including residential additions that create land disturbances and result in greater than a 25% increase in floor area, vehicle traffic, parking, number of tenants, and/or number of employees.

Prior to the issuance of any site plan approval or building permit for any proposed development, a stormwater management permit, or a determination of inapplicability of the requirement for a stormwater management permit, must be approved by the applicable Permit Granting Authority. No person shall, on or after the effective date of this Ordinance, initiate construction activity or development activities without first complying with this Ordinance.

2. Exemptions

The following activities are exempt from the requirements for submittal and approval of an erosion and sediment control plan and a stormwater management plan under § 145-4, but must comply with the design requirements and performance standards in § 145-6 and 145-7:

- A. Any agricultural activity which is consistent with an existing, approved soil conservation plan prepared or approved by the Natural Resource Conservation Service;
- B. Any logging which is consistent with a existing timber management plan approved

- under the Forest Cutting Practices Act by Massachusetts Department of Environmental Management;
- C. Repairs to any stormwater treatment system deemed necessary and ordered by the Palmer Department of Public Works;
 - D. Any emergency activity that is immediately necessary for the protection of life, property or the environment, as determined by the Department of Public Works.

3. Authority

The Town of Palmer's Planning Board shall administer and implement this Ordinance. Any powers granted to or duties imposed upon the Planning Board may be delegated in writing and enforced by the Planning Board or its employees or agents.

§ 145-3 DEFINITIONS

The following definitions describe the meaning of the terms used in this Ordinance:

Adverse Impact means any effect on waters or wetlands, including their quality, quantity, surface area, species composition, aesthetics or usefulness for human or natural uses which are or may potentially be harmful or injurious to human health, welfare, safety or property, to biological productivity, diversity, or stability or which unreasonably interfere with the enjoyment of life or property, including outdoor recreation.

Best Management Practice (BMPs) are structural or biological devices that retain, temporarily store, and/or treat stormwater runoff to reduce the quantity and/or improve the quality of stormwater runoff. BMPs, as recognized by both the U.S. Environmental Protection Agency and the Massachusetts Department of Environmental Management, can also be non-structural practices, such as a maintenance procedure, that reduce pollutants at their source. BMPs are further described in a stormwater design manual, *Stormwater Management, Volume Two: Stormwater Technical Handbook* (March, 1997, Mass. Department of Environmental Protection, as may from time to time be updated or amended or by any similar descriptions for such practices as may be adopted by the Mass. Department of Environmental Protection to replace or supplement this guide).

Construction Activity is disturbance of the ground by removal or moving of vegetative surface cover or topsoil, grading, excavation, clearing or filling.

Design Storm is a rainfall event of specified size and return frequency that is used to calculate the runoff volume and peak discharge rate to a BMP.

Detention is the temporary storage of storm runoff in a BMP, which is used to control the " peak discharge rates, and which provides gravity settling of pollutants.

Disturbance is any land clearing, grading, bulldozing, digging or similar activities.

Drainage Area means that area contributing runoff to a single point measured in a horizontal plane, which is enclosed by a ridgeline.

Drywell is similar to an infiltration trench but smaller with inflow from a pipe; commonly covered with soil and used for drainage areas of less than 1 acre such as roadside inlets and rooftops runoff.

Easement means a grant or reservation by the owner of land for the use of such land by others for a specific purpose or purposes, and which must be included in the conveyance of land affected by such easement.

Flow Attenuation means prolonging the flow time of runoff to reduce the peak discharge.

Hydrology model may include one of the following:

- TR-20, a watershed hydrology model developed by the Natural Resources Conservation Service act that is used to route a design storm hydrograph through a pond;
- TR 55, or Technical Release 55, "Urban Hydrology for Small Watersheds" is a publication developed by the Natural Resources Conservation Service to calculate stormwater runoff and an aid in designing detention basins;
- Hydrocad.

Impervious Surfaces are developed areas, such as pavement or rooftops, that prevent the infiltration of water into the soil.

Infiltration is the downward movement of water from the surface to the subsoil.

Infiltration Trench is a stormwater management excavation filled with aggregate that removes both soluble and particulate pollutants. Trenches are not intended to trap coarse sediments.

Outfall is the terminus of a storm drain or other stormwater structure where the contents are released.

Peak Discharge is the maximum instantaneous rate of flow during a storm, usually in reference to a specific design storm event

Permeable Soils are soil materials with a sufficiently rapid infiltration rate so as to greatly reduce or eliminate surface and stormwater runoff. These soils are generally classified as NRCS hydrologic soil types A and B.

Permit Granting Authority is the Town of Palmer Planning Board for all land or building uses, and additions that result in greater than 25% increase in floor area, vehicle traffic, parking, number of tenants, and/or number of employees or when a project requires Site Plan approval. Authorized Administrative Agency can include Department of Public Works, Planning Board, or its employees or agents.

Person is any individual, association, partnership, corporation, company, business, organization, trust, estate, administrative agency, public or quasi-public corporation or body, the Commonwealth or political subdivision thereof.

Retention is the holding of runoff in a basin without release except by means of evaporation, infiltration, or emergency bypass.

Start of Construction is the first land-disturbing activity associated with a development, including land preparation such as: clearing and grubbing, grading and filling; installation of streets and walkways; excavation for basements; footings, piers or foundations; erection of temporary forms; and installation of accessory buildings such as garages.

Swale is a natural depression or wide shallow ditch used to temporarily store, route, or filter runoff.

§ 145-4 PERMIT PROCEDURES AND REQUIREMENTS

1. Permit Required

No land owner or land operator shall receive any of the building, grading, or other land development permits required for land disturbance activities, and no land owner shall commence land disturbance activities, without approval of a Stormwater Management Permit from the Granting Authority and meeting the requirements of this Ordinance.

2. Application Requirements

Application for approval of a Stormwater Management Permit:

All plans shall be prepared, signed, and sealed by a Massachusetts registered engineer or landscape architect, whichever is appropriate. Submissions shall include four (4) sets of the materials outlined below:

- A. The Planning Board shall be the Stormwater Management Permit Granting Authority for the following development projects:
 - i. All development and/or additions that result in greater than a 25% increase in floor area, vehicle traffic, parking, number of tenants, and/or number of employees.
 - ii. All subdivision lots and all lots adjacent and/or contiguous to land subject to subdivision approval

- B. All Stormwater Management permit applications requiring review by the Planning Board shall consist of the following:
 - i. An existing conditions plan;
 - ii. An erosion and sediment control plan, which shall contain sufficient information to describe the nature and purpose of the proposed development (see §145-5 and §145-6);
 - iii. A stormwater management plan, which shall contain supporting computations, drawings, and sufficient information describing the manner, location, and type of measures in which stormwater runoff will be managed from the entire development (see §145-5 and §145-7);
 - iv. An ongoing operation, maintenance, and inspection agreement (see §145-8);
 - v. A non-refundable stormwater management permit application fee of two-hundred dollars (\$200.00);
 - vi. An application review fee (See §145-4.8 for information).

The erosion and sediment control plan and the stormwater management plan

shall be submitted, and clearly labeled, along with other documents required for site plan review. The plans shall serve as the basis for all subsequent construction.

- C. The applicant may request, and the appropriate Permit Granting Authority may grant a waiver from any information requirements it judges to be unnecessary to the review of a particular plan.

§ 145-5 PROCEDURE FOR REVIEW AND APPROVAL

- A. The procedures for review and approval of stormwater management permits shall be consistent with the review procedures of the appropriate Permit Granting Authority.
- B. The appropriate Permit Granting Authority may refer copies of the stormwater management application to a competent professional authority for review, and shall consider any comments submitted by the competent professional authority during the review period.
- C. The Planning Board shall hold a public hearing for the stormwater permit concurrent with the site plan and special permit hearing. This hearing will be conducted as prescribed by state law *MGL, Chapter 40A*.

1. Criteria for Review of Stormwater Permits

In addition to other criteria used by the Permit Granting Authority in making permit decisions for the uses specified in this Ordinance, the Permit Granting Authority must also find that the Erosion and Sediment Control Plan and the Stormwater Management Plan submitted with the permit application meet the following criteria:

- A. The Erosion and Sediment Control Plan and the Stormwater Management Plan are consistent with the Purposes and Objectives of this Ordinance in §145-1.
- B. The Erosion and Sediment Control plan meets the Design Requirements in §145-6.
- C. The Stormwater Management Plan meets the Performance Standards described in §145-7.

2. Planning Board Action

The Planning Board's action, rendered in writing, shall consist of either:

- A. Approval of the Stormwater Management Permit Application based upon determination that the proposed plan meets the purposes in §145-1 and the requirements and standards in §145-6 and §145-7, and will adequately protect the water resources of the community and is in compliance with the requirements set forth in this ordinance;
- B. Approval of the Stormwater Management Permit Application subject to any conditions, modifications or restrictions required by the Permit Granting Authority which will ensure that the project meets the purposes in §145-1 and the requirements and standards in §145-6 and §145-7, and adequately protects water resources, as set forth in this ordinance;
- C. Disapproval of the Stormwater Management Permit Application based upon a determination that the proposed plan, as submitted, does not meet the purposes in §145-1 and the requirements and standards in §145-6 and §145-7, or adequately protect water resources, as set forth in this ordinance.

3. Inspections

The applicant shall receive a written timeline for the following required inspections within the Stormwater Management Permit's Conditions of Approval. Note that the initial inspection will occur concurrently with Planning Board site plan and/or special permit review and be included as part of the normal review fees. The permits Conditions of Approval shall identify, but not be limited to, the following inspections:

- i. Erosion and Sediment Control Inspection, after site clearing, rough grading and final grading to verify that erosion and sediment control practices are in accordance with the plan;
- ii. Bury Inspection, prior to backfilling of any underground drainage or stormwater conveyance structures, and in coordination with the Department of Public Works;
- iii. Final Inspection, when all work, including construction of stormwater management facilities and landscaping have been completed. Final inspection shall include a full, dated TV inspection of all stormwater pipes installed.

Inspections are to be conducted and reports are to be prepared by the applicant's engineer and submitted to the Planning Board for review. Inspection reports must be approved by the Planning Board or its agent before the applicant proceeds to the next stage of construction.

4. Right-of-Entry for Inspection

When any new drainage control facility is installed on private property, or when any new connection is made between private property and a public drainage control system or sanitary sewer, the filing of an application shall be deemed as the property owner's permission to the Permit Granting Authority or Authorized Enforcement Agency for the right to enter the property at reasonable times and in a reasonable manner for the purpose of the inspection. This includes the right to enter a property when it has a reasonable basis to believe that a violation of this Ordinance is occurring or has occurred, and to enter when necessary for abatement of a public nuisance or correction of a violation of this Ordinance.

5. Application Review Fees

Applicants must pay an "application review fee" consisting of the reasonable costs incurred by the Permit Granting Authority for employment of outside professional expertise and/or consultants engaged to assist in the review of an application in accordance with *MGL Chapter 44, Section 53G*. Review fees are based on a fee schedule as detailed in Article 12 of the Town of Palmer Planning Board Rules and Regulations.

§ 145-6 EROSION AND SEDIMENT CONTROL AND STORMWATER MANAGEMENT PLANS

The application for a stormwater management permit shall consist of submittal of an Erosion and Sediment Control Plan and a Stormwater Management Plan, prepared by a professional engineer licensed by the Commonwealth of Massachusetts, which meets the design requirements provided by this Ordinance.

1. Contents of the Erosion and Sediment Control and Stormwater Management Plans

The Erosion and Sediment Control Plan and Stormwater Management Plan shall include sufficient information to evaluate the environmental characteristics of the affected areas, the potential impacts of the proposed development on water resources; and the effectiveness and acceptability of measures proposed for managing stormwater runoff before, during, and after construction. The plans must be designed to meet the Massachusetts Stormwater Management Standards as set forth in Section 29-6 and 29-7 of this Ordinance and the DEP *Stormwater Management Handbook Volumes I and II*. The applicant shall certify on the drawings that all clearing, grading, drainage, construction, and development shall be conducted in strict accordance with the plan. The minimum information submitted for support of these plans shall be as follows:

- A. Contact information
- B. Locus map
- C. The existing zoning, and land use at the site
- D. The proposed land use
- E. The location(s) of existing and proposed easements
- F. The location of existing and proposed utilities
- G. The site's existing & proposed topography with contours at 2 foot intervals
- H. The existing site hydrology
 - I. A description & delineation of existing stormwater conveyances, impoundments,
 - J. A delineation of 100-year flood plains, if applicable
 - K. Estimated seasonal high groundwater elevation (November to April) in areas to be used for storm water retention, detention, or infiltration
 - L. The existing and proposed vegetation and ground surfaces with runoff coefficient for each
 - M. A drainage area map showing pre and post construction watershed boundaries, drainage area and storm water flow paths
 - N. A description and drawings of all components of the proposed drainage system including:
 - (1) locations, cross sections, and profiles of all brooks, streams, drainage swales and their method of stabilization
 - (2) all measures for the detention, retention or infiltration of water
 - (3) all measures for the protection of water quality
 - (4) the structural details for all components of the proposed drainage systems and storm water management facilities
 - (5) notes on drawings specifying materials to be used, construction specifications, and typicals
 - (6) expected hydrology with supporting calculations
 - (7) proposed improvements including location of buildings or other structures, impervious surfaces, and drainage facilities, if applicable
 - (8) a description of construction and waste materials expected to be stored on-site, and a description of controls to reduce pollutants from these materials including storage practices to minimize exposure of the

- materials to storm water, and spill prevention and response
- (9) timing, schedules, and sequence of development including clearing, stripping, rough grading, construction, final grading, and vegetative stabilization
- (10) a maintenance schedule for the period of construction.

§ 145-7 EROSION AND SEDIMENT CONTROL PLAN DESIGN REQUIREMENTS

- 1. The design requirements of the Erosion and Sediment Control Plan are:**
 - A. Minimize total area of disturbance.
 - B. Sequence activities to minimize simultaneous areas of disturbance.
 - C. Minimize peak rate of runoff in accordance with the MA DEP Stormwater Policy.
 - D. Minimize soil erosion and control sedimentation during construction. Prevention of erosion is preferred over sedimentation control.
 - E. Divert uncontaminated water around disturbed areas.
 - F. Maximize groundwater recharge.
 - G. Install, and maintain all Erosion and Sediment Control measures in accordance with the manufacturers specifications and good engineering practices.
 - H. Prevent off-site transport of sediment.
 - I. Protect and manage on and off-site material storage areas (overburden and stockpiles of dirt, borrow areas, or other areas used solely by the permitted project are considered a part of the project).
 - J. Comply with applicable Federal, State and local laws and regulations including waste disposal, sanitary sewer or septic system regulations, and air quality requirements, including dust control.
 - K. Prevent adverse impact from the proposed activities to habitats mapped by the Massachusetts Natural Heritage & Endangered Species Program as Endangered, Threatened or of Special concern, Estimated Habitats of Rare Wildlife and Certified Vernal Pools, and Priority Habitats of Rare Species.
 - L. Institute interim and permanent stabilization measures. Stabilization measures shall be instituted on a disturbed area of the site as soon as practicable but no more than 14 days after construction activity has temporarily or permanently been completed on that portion of the site.
 - M. Properly manage on-site construction and waste materials.
 - N. Prevent off-site vehicle tracking of sediments.
- 2. There are two general guides to conservation measures and erosion and sediment control practices: 1. *The Massachusetts Erosion and Sediment Control Guidelines for Urban and Suburban Areas* (May 2003, Massachusetts Department of Environmental Protection, as updated or amended); and 2. Chapter 6 of the *Massachusetts Nonpoint Source Pollution Management Manual* located at <http://projects.geosyntec.com/NPSManual/> (May 2006, Massachusetts Department of Environmental Protection, as updated or amended). These guides are hereby incorporated by reference as part of this Ordinance, and shall furnish additional criteria and information.**

§ 145-8 STORMWATER MANAGEMENT PERFORMANCE STANDARDS

1. Minimum Control Requirements

Projects must meet the Standards of the Massachusetts Stormwater Management Policy. These Standards are:

- A. No new stormwater conveyances (e.g. outfalls) may discharge untreated stormwater directly to or cause erosion in wetlands or water of the Commonwealth.
- B. Stormwater management systems must be designed so that post-development peak discharge rates do not exceed pre-development peak discharge rates.
- C. Loss of annual recharge to groundwater should be minimized through the use of infiltration measures including environmentally sensitive design, stormwater best management practices, and good operation and maintenance. The annual recharge from the post-development site should approximate the annual recharge rate from the pre-development or existing site conditions, based on soil types.
- D. For new development, stormwater management systems must be designed to remove 80% of the average annual load (post development conditions) of Total Suspended Solids (TSS). It is presumed that this standard is met when:
 - i. Suitable practices for source control and pollution prevention are identified in a long-term pollution prevention plan, and thereafter are implemented and maintained;;
 - ii. Structural stormwater management best management practices (BMPs) are sized to capture the prescribed runoff volume; and
 - iii. Pretreatment is provided.
- E. Stormwater discharges from areas with higher potential pollutant loads require the use of specific stormwater management BMPs (see Stormwater Management Volume I: Stormwater Policy Handbook). The use of infiltration practices without pretreatment is prohibited.
- F. Stormwater discharges within the Zone II or Interim Wellhead Protection Area of a public water supply and/or near to any other critical areas must utilize certain stormwater management BMPs approved for critical areas. See *Stormwater Management, Volume One: Stormwater Policy Handbook* (March, 1997, Mass. Department of Environmental Protection, as updated or amended). Critical areas are Outstanding Resource Waters (ORWs), shellfish beds, swimming beaches, cold water fisheries and recharge areas for public water supplies.
- G. Redevelopment of previously developed sites must meet the Stormwater Management Standards to the maximum extent practicable. However, if it is not practicable to meet all the Standards, new (retrofitted or expanded) stormwater management systems must be designed to improve existing conditions.
- H. Erosion and sediment controls must be implemented to prevent impacts during disturbance and construction activities.

- I. All stormwater management systems must have a long-term operation and maintenance plan to ensure that systems function as designed.
- J. All illicit discharges to the stormwater management system are prohibited.

When the proposed stormwater discharge may have an impact upon a sensitive receptor, including streams, storm sewers, and/or combined sewers, the DPW may require an increase in these minimum requirements, based on existing stormwater system capacity.

2. Stormwater Design Manual

A stormwater design manual, *Stormwater Management, Volume Two: Stormwater Technical Handbook* (March, 1997, Mass. Department of Environmental Protection, as updated or amended) is hereby incorporated by reference as part of this Ordinance, and shall furnish additional policy, criteria and information including specifications and standards, for the proper implementation of the requirements of this Ordinance.

This manual includes a list of acceptable stormwater treatment practices, including the specific design criteria for each stormwater practice. The manual may be updated and expanded from time to time, based on improvements in engineering, science, monitoring and local maintenance experience, at the discretion of Palmer's Planning Board or the Massachusetts Department of Environmental Protection. Stormwater treatment practices that are designed and constructed in accordance with these design and sizing criteria will be presumed to meet the minimum water quality performance standards.

3. Stormwater Management Measures

- A. Stormwater management measures shall be required to satisfy the minimum control requirements. Best Management Practices (BMPs) that mimic natural hydrology must be used unless soil or site conditions make such measures impracticable. All opportunities to use nonstructural and small-scale upland management practices must be exhausted prior to exploring end-of-pipe stormwater management measures such as detention basins and retention basins. Stormwater management measures shall be implemented in the following order of preference:
 - i. Infiltration, flow attenuation, and pollutant removal of runoff on-site to existing areas with grass, trees, and similar vegetation and through the use of open vegetated swales and natural depressions;
 - ii. Use of stormwater on-site to replace water used in industrial processes or for irrigation;
 - iii. Stormwater detention structures for the temporary storage of runoff which is designed so as not to create a permanent pool of water;
 - iv. Stormwater retention structures for the permanent storage of runoff by means of a permanent pool of water; and
 - v. Retention and evaporation of stormwater on rooftops or in parking lots.
- B. Infiltration practices shall be utilized to reduce runoff volume increases. A combination of successive practices may be used to achieve the applicable

minimum control requirements. Justification shall be provided by the applicant for rejecting each practice based on site conditions.

C. Best Management Practices shall be employed to minimize pollutants in stormwater runoff prior to discharge into a separate storm drainage system or water body.

D. All stormwater management facilities shall be designed to provide an emergency overflow system, and incorporate measures to provide a non-erosive velocity of flow along its length and at any outfall.

E. The designed release rate of any stormwater structure shall be modified if any increase in flooding or stream channel erosion would result at a downstream dam, highway, structure, or normal point of restricted stream flow.

4. Specific Design Criteria

Additional policy, criteria, and information including specifications and design standards may be found in the Stormwater Design Manual.

A. Infiltration systems

- i. Infiltration systems shall be equipped with clean stone and or filter fabric adjacent to the soil or other sediment removal mechanisms;
- ii. Infiltration systems greater than 3 feet deep shall be located at least 10 feet from basement walls;
- iii. Due to the potential for groundwater contamination from dry wells, they shall not be an acceptable method for management of runoff containing pollutants;
- iv. Infiltration systems designed to handle runoff from commercial or industrial impervious parking areas shall be a minimum of 100 feet from any drinking water supply well;
- v. Infiltration systems shall not be used as sediment control basins during construction unless specific plans are included to restore or improve the basin surface;
- vi. Infiltration basins shall be constructed with a three foot minimum separation between the bottom of the structure and the seasonal high groundwater elevation, as determined by a certified soil evaluator; and
- vii. Provisions shall be made for safe overflow passage, in the event of a storm which exceeds the capacity of an infiltration system.

B. The applicant shall give consideration in any plan to incorporating the use of natural topography and land cover such as natural swales, and depressions as they exist prior to development to the degree that they can accommodate the additional flow of water.

C. The Planning Board shall give preference to the use of swales in place of the traditional use of curbs and gutters based on a case by case review of stormwater management plans by the Planning Board.

D. Retention and detention ponds shall be designed and constructed in accordance with the criteria of the *Stormwater Management, Volume Two: Stormwater Technical Handbook* (March, 1997, Mass. Department of Environmental Protection, as updated or amended).

- E. The applicant shall consider public safety in the design of any stormwater facilities. The banks of detention, retention, and infiltration basins shall be sloped at a gentle grade into the water as a safeguard against personal injury, to encourage the growth of vegetation and to allow the alternate flooding and exposure of areas along the shore. Basins shall have a 4:1 slope to a depth two feet below the control elevation. Side slopes must be stabilized and planted with vegetation to prevent erosion and provide pollutant removal. The banks of detention and retention areas shall be designed with sinuous rather than straight shorelines so that the length of the shoreline is maximized, thus offering more space for the growth of vegetation;
- F. Where a stormwater management plan involves direction of some or all runoff off of the site, it shall be the responsibility of the applicant to obtain from adjacent property owners any easements or other necessary property interests concerning flowage of water. Approval of a stormwater management plan does not create or affect any such rights.
- G. All applicants for projects which involve the storage or use of hazardous chemicals shall incorporate handling and storage "best management practices" that prevent such chemicals from contaminating runoff discharged from a site into infiltration systems, receiving water bodies or storm drains, and shall include a list of such chemicals in the application.
- H. Runoff from parking lots shall be treated by oil and water separators or other controls to remove oil and sediment;
- I. The basic design criteria methodologies, and construction specifications, subject to the approval of the Department of Public Works and City Engineer, shall be those generally found in the most current edition of the *Stormwater Management, Volume Two: Stormwater Technical Handbook* (March, 1997, Mass. Department of Environmental Protection, as updated or amended).

§ 145-9 MAINTENANCE

1. Operation, Maintenance and Inspection Agreement

- A. Prior to issuance of any building permit for which stormwater management is required, the Permit Granting Authority shall require the applicant or owner to execute an operation, maintenance and inspection agreement binding on all subsequent owners of land served by the private stormwater management facility. The agreement shall be designed to ensure that water quality standards are met in all seasons and throughout the life of the system. Such agreement shall provide for access to the facility at reasonable times for regular inspections by the Town or its authorized representative and for regular or special assessments of property owners to ensure that the facility is maintained in proper working condition to meet design standards and any provision established. The agreement shall include:
 - (1) The name(s) of the owner(s) for all components of the system.
 - (2) Maintenance agreements that specify:
 - (a) The names and addresses of the person(s) responsible for operation and maintenance.
 - (b) The person(s) responsible for financing maintenance and emergency repairs.
 - (c) A Maintenance Schedule for all drainage structures, including swales and ponds.
 - (d) A list of easements with references to books and pages of the recorded documents with the purpose and location of each.

- (e) The signature(s) of the owner(s).
- (3) Stormwater management easements as necessary for:
 - (a) Access for facility inspections and maintenance.
 - (b) Preservation of stormwater runoff conveyance, infiltration, and detention areas and facilities, including flood routes for the 100-year storm event.
 - (c) Direct maintenance access by heavy equipment to structures requiring regular cleanout.
- (4) Stormwater management easement requirements:
 - (a) The purpose of each easement shall be specified in the maintenance agreement signed by the property owner.
 - (b) Stormwater management easements are required for all areas used for off-site stormwater control, unless a waiver is granted by the Town.
 - (c) Easements shall be recorded with the Registry of Deeds prior to issuance of a Certificate of Completion.
- (5) Changes to Operation and Maintenance Plans
 - (a) The owner(s) of the stormwater management system must notify the Authorized Administrative Agency of changes in ownership or assignment of financial responsibility. The recorded agreement shall require any subsequent owner of the property to report to the appropriate authorized agency and to provide updated information expressing the changes resulting from the new ownership.
 - (b) The maintenance schedule in the Maintenance Agreement may be amended to achieve the purposes of this Ordinance by mutual agreement of the Authorized Administrative Agency and the Responsible Parties. Amendments must be in writing and signed by all Responsible Parties. Responsible Parties must include owner(s), persons with financial responsibility, and persons with operational responsibility.
- B. The agreement shall be recorded by the applicant and/or owner in the land records of the Registry of Deeds.
- C. The agreement shall also provide that, if after notice by the Permit Granting Authority to correct a violation requiring maintenance work, satisfactory corrections are not made by the owner(s) within thirty days, the Town may perform all necessary work to place the facility in proper working condition and place a municipal lien on the affected property as security for all of the costs assumed by the town to perform the work. The owner(s) of the facility shall be assessed the cost of the work and any penalties.

2. Maintenance Responsibility

- A. The owner of the property on which work has been done pursuant to this Ordinance for private stormwater management facilities, or any other person or agent in control of such property, shall maintain in good condition and promptly repair and restore all grade surfaces, walls, drains, dams and structures, vegetation, erosion and sediment control measures and other protective devices. Such repairs or restoration and maintenance shall be in accordance with approved plans.
- B. A maintenance schedule shall be developed for the life of any stormwater management facility and shall state: who shall be legally responsible to perform the maintenance, maintenance to be completed, and the time period for

completion. This maintenance schedule shall be printed on the stormwater management plan.

- C. A record of installation and a rolling log of operation and maintenance activities shall be retained for a minimum of three years. The log shall be made available to the Authorized Enforcement Agency upon request.
- D. Failure to properly maintain practices during and post construction is considered a violation of the stormwater permit.

§ 145-10 PERFORMANCE GUARANTEE

Prior to the issuance of any stormwater management permit, the Planning Board shall require from the developer a surety or cash bond, or irrevocable letter of credit to ensure proper construction of any stormwater management facility. The amount of the security shall not be less than the total estimated construction cost of the stormwater management facility.

In addition, the Planning Board shall require from the developer a surety or cash bond, or irrevocable letter of credit to ensure proper execution of the operation, maintenance and inspection agreement during the first 5 years. The amount of this security will be based on an estimate of annual operation and maintenance costs as determined by the Planning Board's engineer.

The guarantees required in this section shall include provisions relative to forfeiture for failure to complete work specified in the approved stormwater management plan, for failure to comply with all of the provisions of this Ordinance and other applicable laws and regulations, and for failure to comply with any time limitations. The guarantee for proper construction of any stormwater management facility shall not be fully released without Planning Board review of the final inspection of the completed work by the Applicant's engineer, submission of "As-built" plans, and certification of completion by the Applicant's engineer of the stormwater management facilities being in compliance with the approved plan and the provisions of this Ordinance. The guarantee for the proper execution of the operation, maintenance and inspection agreement shall not be released until after 5 years from the date of completion, and the Planning Board is satisfied that all work has been completed as described in the agreement.

§ 145-11 ENFORCEMENT AND PENALTIES

1. Enforcement

The responsibility for enforcement of this Ordinance falls under the jurisdiction of the Planning Board, Department of Public Works, Zoning Enforcement Officer, Conservation Commission, and/or its employees or agents.

2. Violations

Any development activity that has commenced or is conducted contrary to this Ordinance may be restrained by injunction or otherwise abated in a manner provided by law.

3. Notice of Violation

When the Permit Granting Authority determines that an activity is not being carried out in accordance with the requirements of this Ordinance, it shall issue a written notice of violation to the owner of the property. The notice of violation shall contain:

- A. The name and address of the owner and applicant if different from the owner.
- B. The address when available or the description of the building, structure, or land upon which the violation is occurring.
- C. A statement specifying the nature of the violation.
- D. A description of the remedial measures necessary to bring the development activity into compliance with this Ordinance and a time schedule for the completion of such remedial action.
- E. A statement of the penalty or penalties that shall or may be assessed against the person to whom the notice of violation is directed.

4. Stop Work Orders

- A. Persons receiving a notice of violations will be required to halt all construction activities. This “stop work order” will be in effect until the Permit Granting Authority confirms that the development activity is in compliance and the violation has been satisfactorily addressed. Failure to correct a violation in a timely manner can result in civil, criminal, or monetary penalties in accordance with the enforcement measures authorized in this Ordinance.
- B. Failure to correct a violation within the time limits imposed by the notice of violation shall constitute a public nuisance and subject the violator(s) to all of these statutory and common law remedies available to the town including performance of the necessary measures by the town to correct the violations and imposing the costs thereof on the owner of the property.

5. Penalties

In enforcing this Ordinance, the Authorized Enforcement Agency shall have the following options:

- A. Criminal Complaint: Whoever violates any provision of this Ordinance may be penalized by a complaint brought in the district court. Except as otherwise provided by law and as the district court may see fit to impose, the maximum penalty for each violation, or offense, brought in this manner, shall be three hundred (\$300.00). Each day a violation continues shall constitute a separate offense; or
- B. Non-criminal disposition: Whoever violates any provision of this Ordinance may be penalized by a non-criminal disposition as provided in Massachusetts General Laws, Chapter 40, Section 21D and may be punished by a non-criminal fine of fifty dollars (\$50.00) for the 1st offense, seventy-five dollars (\$75.00) for the 2nd offense, and one hundred dollars (\$100.00) for the 3rd offense. Each day a violation continues shall constitute a separate offense.

6. Appeals

The decision of the Department of Public Works shall be final but is reviewable in the Superior Court in an action filed within sixty (60) days in accordance with MGL C. 249 §4.

7. Restoration of Lands

Any violator may be required to restore land to its undisturbed condition. In the event that restoration is not undertaken within a reasonable time after notice, the Permit Granting Authority may take necessary corrective action, the cost of which shall become a lien upon the property until paid.

8. Holds on Occupancy Permits

Occupation permits will not be granted until corrections to all stormwater practices have been made and accepted by the Permit Granting Authority.

§ 145-12 SEVERABILITY

The invalidity of any section or provision of this Ordinance shall not invalidate any other section or provision thereof.

Matthew J. Lovell, Council President

Patricia A. Kennedy, Interim Town Manager

Adoption History:

Agenda item and First Reading at Regular Town Council Meeting held on June 9, 2008

Public Hearing was warned in Palmer Journal Register on June 27, 2008

Public Hearing was held at 7:00 PM on July 14, 2008 Palmer Town Bldg.

Agenda Item and Second Reading at Regular Town Council Meeting held on August 11, 2008

Vote on Ordinance at Regular Council Meeting August 11, 2008 and entered into the minutes of this meeting approved on September 8, 2008

Posted in public places on August 12, 2008

Notice of adoption published in the Palmer Journal Register on August 21, 2008

Effective Date: September 10, 2008