

1st Draft Wakefield Stormwater Management and

Erosion Control Regulations

May 2, 2007

1. Purpose

- (1) To protect the quality and quantity of surface waters, reservoirs, and ground water, maintain the integrity of aquatic living resources and ecosystems, and to preserve the physical integrity of receiving streams and water bodies;
- (2) To require that NEW DEVELOPMENT, REDEVELOPMENT and all land conversion activities maintain the natural hydrologic characteristics of the land to reduce flooding, stream bank erosion, siltation, nonpoint source pollution, property damage, and to maintain the integrity of stream channels and aquatic habitats;
- (3) To establish decision-making processes surrounding land development activities that protect the integrity of the watershed and preserve the health of water resources, and
- (4) To minimize the total amount of LAND DISTURBANCE.

The United States Environmental Protection Agency has identified sedimentation from land disturbance activities and polluted stormwater runoff from land development and redevelopment as major sources of water pollution, impacting drinking water supplies, natural habitats, and recreational resources. Regulation of activities that result in the disturbance of land and the creation of stormwater runoff is necessary for the protection of the Town of Wakefield water bodies and groundwater resources, to safeguard the health, safety, and welfare of the general public and protect the natural resources of the Town. These regulations address the issues mentioned above and as referenced in the Stormwater Management and Erosion Control Bylaw of the Town of Wakefield.

2. Authority

A) The Regulations contained herein have been adopted by the Wakefield Stormwater Authority in accordance with the Town of Wakefield Stormwater Management and Erosion Control Bylaw.

B) These Stormwater Regulations may be periodically amended by the Wakefield Stormwater Authority in accordance with the procedures outlined in Section 4.0 of the Town of Wakefield Stormwater Management and Erosion Control Bylaw

3. Administration

A. The Town of Wakefield shall administer, implement and enforce these Regulations. Projects and activities approved by the Wakefield Stormwater Authority shall be deemed in compliance with the intent and provisions of these Stormwater Management and Erosion Control Regulations.

B. The Wakefield Stormwater Authority may require Operations and Maintenance Plans including the identification of proposed Maintenance Easements as part of the Land Disturbance application. The Operations and Maintenance Plans will contain a maintenance agreement specifying the person responsible for operation and maintenance of the stormwater management systems and shall remain on file with the Wakefield Stormwater Authority and shall be an ongoing requirement. Maintenance easements will be shown in the Operations and Maintenance Plan. Maintenance easements will be recorded with the Middlesex County Registry of Deeds prior to issuance of a Certificate of Completion by the Wakefield Stormwater Authority.

C. The Applicant will publish a notice in the local newspaper that the Wakefield Stormwater Authority is accepting comments on the Land Disturbance Permit. The Land Disturbance Permit shall be available for inspection by the public during normal business hours at the Town Hall for 5 business days from the notice. A public hearing is not required. The public may submit their comments within the time that the Land Disturbance Permit is available for inspection. Comments may be submitted to the Wakefield Stormwater Authority during business hours.

D. Filing an application for a land disturbance permit grants the Wakefield Stormwater Authority or its agent, permission to enter the site to verify the information in the application and to inspect for compliance with permit conditions.

E. No permit shall be issued by the Wakefield Stormwater Authority for projects that are actively under review or pending decisions from the Conservation Commission or the Planning Board until those decisions have been concluded.

F. The Wakefield Stormwater Authority shall take final action on an Application within 30 days if review from Conservation Commission or Planning Board is not required. Failure to take action shall be deemed to be approval of said Application. Upon certification by the Town Clerk that the allowed time has passed without the Wakefield Stormwater Authority's action, the Land Disturbance Permit shall be issued by the Wakefield Stormwater Authority.

G. The Wakefield Stormwater Authority shall take final action on an Application within 10 days of final decision(s) from Conservation Commission and/or Planning Board if the project was under review by the Conservation Commission and/or the Planning Board. Failure to take action shall be deemed to be approval of said Application. Upon certification by the Town Clerk that the allowed time has passed without the Wakefield Stormwater Authority's action, the Land Disturbance Permit shall be issued by the Wakefield Stormwater Authority.

4. Procedures

A Land Disturbance Permit issuance is required prior to any activity disturbing 12,000 square feet or more of land or as listed in Section 5 of the Stormwater and Erosion Control Bylaw. The site owner or his Agent shall file for the permit with the Wakefield Stormwater Authority. While application may be made by a representative, the permittee must be the owner of the site.

A. Applications: An application shall be made to the Wakefield Stormwater Authority in a form and containing information as specified in the Regulations adopted by the Wakefield Stormwater Authority respectively and shall be accompanied by payment of the appropriate application and review fees. The fee shall be collected by the Wakefield Stormwater Authority prior to any review. Applicants shall submit an additional complete application to the Board and/or Commission which is currently reviewing other permits for the same project.

1. A Land Disturbance Permit Application package shall include:

- a. a completed Application Form with original signatures of all owners;
- b. a list of abutters, certified by the Assessors Office;
- c. five (5) copies of the Erosion and Sediment Control Plan as specified in Section 4.0(E) of these regulations;
- d. five (5) copies of the Stormwater Management Plan as specified in Section 4.0(F) of these regulations;
- e. five (5) copies of the Operation and Maintenance Plan as specified in Section 4.0(G) of these regulations,
- f. payment of the application and review fees; and,
- g.

2. One (1) copy each of the Application Form, the Stormwater Management Plan, the Operation & Maintenance Plan and the list of abutters must be filed with the Town Clerk for all Land Disturbance Permits. The Major Land Disturbance Permit Application Package will also be submitted to any other Boards or Commissions reviewing the project.

B. Information Requests: The Wakefield Stormwater Authority may request such additional information as is necessary to enable the Wakefield Stormwater Authority to determine whether the proposed land disturbance activity will protect water resources and meet the objectives of the Stormwater Management and Erosion Control Bylaw and Regulations.

C. Determination of Completeness. The Wakefield Stormwater Authority shall make a determination as to the completeness of the application and adequacy of the materials submitted within 5 business days. No review shall take place until the application has been found to be complete.

D. Project Changes. The permittee, or their Agent, must notify the Agent of the Wakefield Stormwater Authority in writing of any change or alteration of a land-disturbing activity before the change or alteration occurs. If the Agent of the Wakefield Stormwater Authority determines that the change or alteration is significant, based on the design requirements listed in Section 4.0(E) and Section 4.0(F) of the Regulations the Agent of the Wakefield Stormwater Authority may require that an amended application or a full application be filed in accordance with this Section. If any change or alteration from the Land Disturbance Permit occurs during land disturbing activities, including significant changes in schedule, the Agent of the Wakefield Stormwater Authority may require the installation of interim erosion and sedimentation control measures before considering the change or alteration.

E. Erosion and Sediment Control Plan. The Erosion and Sediment Control Plan shall contain sufficient information to describe the nature and purpose of the proposed development, pertinent conditions of the site and the adjacent areas, and proposed erosion and sedimentation controls. The applicant shall submit such material as is necessary to show that the proposed development will comply with the design standards and contain the information listed below.

a. Standards. The Erosion and Sediment Control Plan shall be designed to meet the latest edition of the Massachusetts Stormwater Management Policy and the accompanying latest edition of the *Massachusetts Stormwater Management Handbooks*.

b. Contents.

The Erosion and Sediment Control Plan shall contain the following information:

1. Names, addresses, and telephone numbers of the owner, applicant, and person(s) or firm(s) preparing the plan.
2. Title, date, north arrow, names of abutters, scale (1"=20' or 1"=40'), legend, and locus map (1"=800').
3. Location and description of natural features including:
 - a. Watercourses and water bodies, wetland resource areas, riparian zones and all floodplain information, including the 100-year flood elevation based upon the most recent Flood Insurance Rate Map, or as calculated by a professional engineer for areas not assessed on these maps;
 - b. Existing vegetation of various kinds including tree lines, shrub layer, ground cover and herbaceous vegetation, and trees with a caliper twelve (12) inches or larger, noting specimen trees and forest communities;
 - c. 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, Potential Vernal Pools and Priority Habitats of Rare Species within five hundred (500) feet of any construction activity.
4. Lines of existing abutting streets showing drainage and driveway locations and curb cuts.

5. Existing soils (type, hydrologic group, erodibility) and the volume and nature of imported soil materials.
6. Topographical features including existing and proposed contours at intervals no greater than two (2) feet with spot elevations provided when needed.
7. Steep slopes for pre-development and post-development conditions, delineated by 0%-15%, 15%-25%, and over 25%.
8. Surveyed property lines showing distances and monument locations, all existing and proposed easements, rights-of-way, and other encumbrances, the size of the entire parcel, and the delineation and number of square feet of the land area to be disturbed.
9. Drainage patterns, watersheds and sub watersheds, with calculations of proposed land disturbance within each sub watershed and areas of soil to be disturbed in each watershed throughout the duration of the proposed land disturbance activity.
10. Location and details of erosion and sediment control measures with a narrative of the construction sequence/phasing of the project, including both operation and maintenance for structural and non-structural measures, interim grading, and material stockpiling areas.
11. Path and mechanism to divert uncontaminated water around disturbed areas, to the maximum extent practicable.
12. Location and description of and implementation schedule for temporary and permanent seeding, vegetative controls, and other temporary and final stabilization measures.
13. A description of construction and waste materials expected to be stored on-site. The Plan shall include a description of controls to reduce pollutants from these materials, including storage practices to minimize exposure of the materials to stormwater, and spill prevention and response.
14. A description of provisions for phasing the project where 12,000 square feet of contiguous area or greater is to be altered or disturbed.
15. Plans, reports, and calculations must be stamped and certified by a qualified professional as defined under EROSION AND SEDIMENTATION CONTROL PLAN in Section 2 of the Stormwater Management and Erosion Control Bylaw.
16. Such other information as is required by the Wakefield Stormwater Authority.

F. Stormwater Management Plan. The Stormwater Management Plan shall contain sufficient information to describe the nature and purpose of the proposed development, pertinent conditions of the site and the adjacent areas, and proposed best management practices for the permanent management and treatment of stormwater. The Stormwater Management Plan shall contain sufficient information for the Wakefield Stormwater Authority to evaluate the environmental impact, effectiveness, and acceptability of the measures proposed by the applicant for reducing adverse impacts from stormwater. The Plan shall be designed to meet the Massachusetts Stormwater Management Policy or the latest edition of (Town of Wakefield) Design Standards (Appendix A) and Landscape Design Standards (Appendix B), whichever is more stringent in the protection of the town's environmental and infrastructure resources, for execution of the provisions of this Bylaw. The Stormwater Management Plan shall fully describe the project in drawings, and narrative. The applicant shall submit such material as is required below.

a. Standards. The Stormwater Management Plan shall be prepared in accordance Massachusetts Stormwater Management Policy or the latest edition of (Town of Wakefield) Design Standards (Appendix A) and Landscape Design Standards (Appendix B), whichever is more stringent in the protection of the town's environmental and infrastructure resources.

b. Stormwater Management Plan Requirements. The Stormwater Management Plan shall contain the following information:

1. A locus map, at a scale of 1"=800'.
2. The existing zoning, and land use at the site.
3. The proposed land use.
4. The location(s) of existing and proposed easements.
5. The location of existing and proposed utilities.

6. The site's existing & proposed topography with contours at 2 foot intervals.
7. The existing site hydrology.
8. A description & delineation of existing stormwater conveyances, impoundments, and wetlands on or adjacent to the site or into which stormwater flows.
9. A delineation of 100-year flood plains, if applicable.
10. An estimate made by a Licensed Soil Evaluator of seasonal high groundwater elevation in each area to be used for stormwater retention, detention, or infiltration.
11. The existing and proposed vegetation and ground surfaces with runoff coefficient for each.
12. A drainage area map showing pre and post construction watershed boundaries, drainage area and stormwater flow paths.
13. A description and drawings of all components of the proposed drainage system including:
 - a. locations, cross sections, and profiles of all brooks, streams, drainage swales and their method of stabilization,
 - b. all measures for the detention, retention or infiltration of water,
 - c. all measures for the protection of water quality,
 - d. the structural details for all components of the proposed drainage systems and stormwater management facilities,
 - e. notes on drawings specifying materials to be used, construction specifications, and typicals, and
 - f. expected hydrology with supporting calculations.
14. The proposed improvements including location of buildings or other structures, impervious surfaces, and drainage facilities, if applicable.
15. The Timing, schedules, and sequence of development including clearing, stripping, rough grading, construction, final grading, and vegetative stabilization.
16. A maintenance schedule for the period of construction.
17. Any other information requested by the Wakefield Stormwater Authority.

G. Operation and Maintenance Plans

An **Operation and Maintenance Plan** (O&M Plan) for the permanent storm water management system is required at the time of application for all projects. The maintenance plan shall be designed to ensure compliance with this Bylaw and that the Massachusetts Surface Water Quality Standards contained in 314 CMR 4.00 are met in all seasons and throughout the life of the system. The Wakefield Stormwater Authority shall make the final decision of what maintenance option is appropriate in a given situation. The Wakefield Stormwater Authority will consider natural features, proximity of site to water bodies and wetlands, extent of impervious surfaces, size of the site, the types of stormwater management structures, and potential need for ongoing maintenance activities when making this decision. Once approved by the Wakefield Stormwater Authority the Operation and Maintenance Plan shall be recorded at the Middlesex County Registry of Deeds by the permittee shall remain on file with the Wakefield Stormwater Authority and shall be an ongoing requirement. The Operation and Maintenance Plan shall conform to the requirements listed below. Stormwater management easements shall be provided by the property owner(s) and shall be sufficient in location and extent to carry out the required maintenance.

a. Operation and Maintenance Plan Requirements. An Operation and Maintenance Plan 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 operations 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 the purpose and location of each.
 - e. The signature(s) of the owner(s).

b. Stormwater Management Easement(s).

1. Stormwater management easements shall be provided by the property owner(s) as areas are 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; and
 - c. direct maintenance access by heavy equipment to structures requiring regular cleanout maintenance.
2. The purpose of each easement shall be specified in the maintenance agreement signed by the property owner.
3. Stormwater management easements are required for all areas used for off-site stormwater control, unless a waiver is granted by the Wakefield Stormwater Authority.
4. Easements shall be recorded with the Middlesex County Registry of Deeds prior to issuance of a Certificate of Completion by the Wakefield Stormwater Authority.

c. Changes to Operation and Maintenance Plans

1. The owner(s) of the stormwater management system must notify the Wakefield Stormwater Authority or its Agent of changes in ownership or assignment of financial responsibility.
2. The maintenance schedule in the Maintenance Agreement may be amended to achieve the purposes of this Stormwater Management and Erosion Control Bylaw and Regulations by mutual agreement of the Wakefield Stormwater Authority and the Responsible Parties. Amendments must be in writing and signed by all Responsible Parties. Responsible Parties shall include owner(s), persons with financial responsibility, and persons with operational responsibility. Once the amended Plan is signed the Wakefield Stormwater Authority shall file it at the Registry of Deeds at the expense of the current owner(s).

d. Annual Report Submittal

The Responsible Parties must submit annual reports regarding the inspection and maintenance of the BMPs for which they are responsible. The reports must include:

1. Descriptions of the condition of the BMPs,
2. Descriptions of maintenance performed and,
3. Receipts for maintenance performed.

H. Review Fee Schedule

The following fee schedules are minimum fees. The Wakefield Stormwater Authority may require higher fees if deemed necessary for proper review of an application or to ensure compliance.

Lot Area Fee	Professional Review Fee	Application
Less Than 3 Acres	\$ ____.	\$ ____.
3 to 10 Acres	\$ ____.	\$ ____.
Greater than 10 Acres	\$ ____.	\$ ____.
Resubmittal/Amendment Filing Fee	\$ ____	Review Fee \$ ____

5. Inspection and Site Supervision

All inspections will be conducted by an Agent of the Wakefield Stormwater Authority.

A. Preconstruction Meeting. Prior to clearing, excavation, construction, or any land disturbing activity requiring a permit, the applicant, the applicant's technical representative, the general contractor, pertinent subcontractors, and any person with authority to make changes to the

project, shall meet with the Wakefield Stormwater Authority or its designated Agent to review the permitted plans and proposed implementation.

B. Wakefield Stormwater Authority Inspection. The Wakefield Stormwater Authority or its designated Agent shall make inspections as hereinafter required and shall either approve that portion of the work completed or shall notify the permittee wherein the work fails to comply with the approved plans and any conditions of approval. One copy of the permit plans and conditions of approval signed by the Wakefield Stormwater Authority shall be maintained at the site during the progress of the work. A copy of the NPDES Construction General Permit and Stormwater Pollution Prevention Plan (if applicable) shall be kept on site as well. In order to obtain inspections, the permittee shall notify the Agent of the Wakefield Stormwater Authority at least three (3) working days before each of the following events:

1. Erosion and sediment control measures are in place and stabilized;
2. Rough Grading has been substantially completed;
3. Final Grading has been substantially completed;
4. Bury Inspection: prior to backfilling of any underground drainage or stormwater conveyance structures.
5. Close of the Construction Season; and
6. Final landscaping (permanent stabilization) and project final completion.

C. Final Inspection. After the stormwater management system has been constructed and before the surety has been released, the applicant must submit a record plan detailing the actual stormwater management system as installed. The applicant must submit an explanation detailing any differences between the plans approved with the permit and the as-built plans. This explanation must be stamped by a Professional Engineer. The Wakefield Stormwater Authority or its Agent shall inspect the system to confirm its "as-built" features. This inspector shall also evaluate the effectiveness of the system in an actual storm. If the inspector finds the system to be adequate he shall so report to the Wakefield Stormwater Authority which will issue a Certificate of Completion.

If the system is found to be inadequate by virtue of physical evidence of operational failure, even though it was built as called for in the Stormwater Management Plan, it shall be corrected by the permittee before the performance guarantee is released. If the permittee fails to act the Town of Wakefield may use the surety bond to complete the work. Examples of inadequacy shall be limited to: errors in the infiltrative capability, errors in the maximum groundwater elevation, failure to properly define or construct flow paths, or erosive discharges from basins.

D. Permittee Inspections. The permittee or his/her Agent shall conduct and document inspections of all control measures no less than weekly or as specified in the permit, and prior to and following anticipated storm events. The purpose of such inspections will be to determine the overall effectiveness of the Erosion and Sedimentation Control Plan, and the need for maintenance or additional control measures. The permittee or his/her Agent shall submit monthly reports to the Wakefield Stormwater Authority or designated Agent in a format approved by the Wakefield Stormwater Authority. The Wakefield Stormwater Authority may require, as a condition of approval, that an Environmental Site Monitor, approved by the Wakefield Stormwater Authority, be retained by the applicant to conduct such inspections and prepare and submit such reports to the Wakefield Stormwater Authority or its designated Agent.

E. Access Permission. To the extent permitted by state law, and as authorized by the owner at the time of the application or other party in control of the property, the Wakefield Stormwater Authority, its Agents, officers, and employees may enter upon privately owned property for the purpose of performing their duties under this Bylaw and may make or cause to be made such examinations, surveys or sampling as the Wakefield Stormwater Authority deems reasonably necessary to determine compliance with the permit.

6. Final Reports

Upon completion of the work, the permittee shall submit a report (including certified as built construction plans) from a Professional Engineer (P.E.), certifying that all erosion and sediment control devices, and approved changes and modifications, have been completed in accordance with the conditions of the approved permit. Any discrepancies should be noted in the cover letter.

7. Certificate of Completion

The Wakefield Stormwater Authority will issue a letter certifying completion upon receipt and approval of the final reports and/or upon otherwise determining that all work of the permit has been satisfactorily completed in conformance with this Bylaw. The Certificate of Completion shall be recorded at the Registry of Deeds by the Owner(s).

8. Surety

The Wakefield Stormwater Authority may require the permittee to post before the start of land disturbance activity, a surety bond, irrevocable letter of credit, cash, or other acceptable security. The form of the bond shall be approved by town counsel, and be in an amount deemed sufficient by the Wakefield Stormwater Authority to insure that the work will be completed in accordance with the permit. If the project is phased, the Wakefield Stormwater Authority may release part of the bond as each phase is completed in compliance with the permit but the bond may not be fully released until the Wakefield Stormwater Authority has received the final report as required and issued a certificate of completion.

9. Waivers

A. The Wakefield Stormwater Authority may waive strict compliance with any requirement or requirements of this by-law or the rules and regulations promulgated hereunder, where such action or actions:

1. are deemed unnecessary due to the minimal impact of the project, character of the project or the natural conditions of the site,
2. are in the public interest, and
3. are not inconsistent with the purpose and intent of this by-law.

B. Any applicant may submit a written request to be granted such a waiver. Such a request shall be accompanied by an explanation or documentation supporting the waiver request and demonstrating that strict application of the by-law does not further the purposes or objectives of this bylaw.

C. All waiver requests shall be discussed and a decision will be made by the Wakefield Stormwater Authority within 30 days of receiving the waiver request.

D. If in the Wakefield Stormwater Authority opinion, additional time or information is required for review of a waiver request, the Wakefield Stormwater Authority may continue a consideration of the waiver request to a date certain announced at the meeting. In the event the applicant objects to a continuance, or fails to provide requested information, the waiver request shall be denied.

10. Enforcement

A. The Wakefield Stormwater Authority or its authorized agent shall enforce this Bylaw, its regulations, orders, violation notices, and enforcement orders, and may pursue all civil and criminal remedies for such violations.

B. Orders. The Wakefield Stormwater Authority or its authorized agent may issue a written order to enforce the provisions of this Bylaw or the regulations there under, which may include:

1. a requirement to cease and desist from the land-disturbing activity until there is compliance with the Bylaw or provisions of the land-disturbance permit;

2. maintenance, installation or performance of additional erosion and sediment control measures;
3. monitoring, analyses, and reporting;
4. remediation of erosion and sedimentation resulting directly or indirectly from the land-disturbing activity;
5. compliance with the Operation and Maintenance Plan.
6. If the enforcing person determines that abatement or remediation of erosion and sedimentation is required, the order shall set forth a deadline by which such abatement or remediation must be completed. Said order shall further advise that, should the violator or property owner fail to abate or perform remediation within the specified deadline, the Town of Wakefield may, at its option, undertake such work, and the property owner shall reimburse the Town's expenses.
7. Within thirty (30) days after completing all measures necessary to abate the violation or to perform remediation, the violator (if different than the property owner) and the property owner shall be notified of the costs incurred by the Town of Wakefield, including administrative costs. The violator or property owner may file a written protest objecting to the amount or basis of costs with the Wakefield Stormwater Authority within thirty (30) days of receipt of the notification of the costs incurred. If the amount due is not received by the expiration of the time in which to file a protest or within thirty (30) days following a decision of the Wakefield Stormwater Authority affirming or reducing the costs, or from a final decision of a court of competent jurisdiction, the costs shall become a special assessment against the property owner and shall constitute a lien on the owner's property for the amount of said costs. Interest shall begin to accrue on any unpaid costs at the statutory rate, as provided in G.L. Ch. 59, § 57, after the thirty-first day following the day on which the costs were due.
8. Criminal Penalty. Any person who violates any provision of this Bylaw, regulation, order or permit issued there under, shall be punished by a fine of not more than \$ 300.00. Each day or part there under that such violation occurs or continues shall constitute a separate offense.
9. Non-Criminal Disposition. As an alternative to criminal prosecution or civil action, the Town of Wakefield may elect to utilize the non-criminal disposition procedure set forth in G.L. Ch. 40, §21D, which has been adopted by the Town in Sec. 19 of the general bylaws, in which case the Wakefield Stormwater Authority or authorized agent shall be the enforcing person. The penalty for each violation shall be \$300.00. Each day or part thereof that such violation occurs or continues shall constitute a separate offense.
10. Tax Liens. The Town of Wakefield shall require the repayment of services provided to the responsible party which the responsible party was obligated to perform as put forth in the Operation and Maintenance Plan. Such services may include but are not limited to the following: removing sediment from stormwater devices, repairing stormwater devices or re-vegetating stormwater devices. The Town will send the responsible party a bill for services provided. If the bill is not paid the Town may impose a tax lien on the responsible party or parties' property.

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