

# ***Town of Newbury Stormwater Management, Illicit Discharge and Erosion Control***

## **RULES AND REGULATIONS**

### **PURPOSE AND APPLICABILITY of the REGULATIONS:**

- (1) The purpose of these Stormwater Management, Illicit Discharge and Erosion Control Regulations is to:
  - (a) Protect, maintain and enhance the public health, safety, environment, and general common welfare by establishing minimum requirements and procedures to control the adverse effects of increased post- development stormwater runoff, decreased groundwater recharge, and non-point source pollution associated with new development and redevelopment;
  - (b) Protect, maintain and enhance the public health, safety, environment and general welfare by prohibiting illicit connections and non-stormwater discharges to the Town of Newbury's Municipal Separate Storm Sewer System (MS4) and require all Applicants to comply with all the applicable conditions and activities required of the Town of Newbury as included in its Phase II Stormwater Management Plan (SWMP). This plan is required/approved by the USEPA Region I and the Massachusetts Department of Environmental Protection (DEP). Sections E through G are referenced by both the Subdivision Rules and Regulations (Chapter R117) and Site Plan Review submission requirements and procedures.
  - (c) Protect, maintain and enhance the public safety, environment and general welfare by establishing minimum standards and procedures, including implementation of Best Management Practices (BMPs), to control runoff and prevent soil erosion and sedimentation resulting from site construction/alteration and development, as more specifically addressed in the latest edition of the Stormwater Management and Erosion Control By-Law of the Town of Newbury.
- (2) These Regulations are adopted for implementation of the Stormwater Management and Illicit Discharge and Erosion Control By-Law of the Town of Newbury, which was adopted by the Newbury Town Meeting on May 26, 2009 and approved by the Attorney General on September 16, 2009. They are also incorporated by reference in the Town of Newbury "Subdivision Rules and Regulations";
- (3) Low Impact Development (LID) measures are to be used. Where applicable the Conservation Commission's consideration of waiver requests may be influenced by the amount of Low Impact Development measures included in the project.
- (4) These regulations supplement the Massachusetts DEP "Stormwater Handbook" and apply to all projects except those that are specifically excluded by the provisions of the "Stormwater Handbook". Application of these rules and regulations are not limited to the MS4 areas delineated in the Town of Newbury Stormwater Bylaw, nor to projects under the jurisdiction of the Conservation Commission; and

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- (5) Projects for which these regulations do not apply are as follows (unless one [1] or more acres are altered or disturbed):
- (a) Single family houses;
  - (b) Housing development and redevelopment projects comprised of detached single-family dwellings on four or fewer lots provided there are no stormwater discharges that may potentially affect a critical area;
  - (c) Multifamily housing development and redevelopment projects with four or fewer units including condominiums, cooperatives, apartment buildings and townhouses provided that there are no stormwater discharges that may potentially affect a critical area;
  - (d) Emergency repairs to roads or their drainage systems.

## **DEFINITIONS:**

See Chapter 87, Section 2, of the Code of the Town of Newbury for Definitions related to the Stormwater Management, Illicit Discharge and Erosion Control By-Law and these Rules and Regulations.

## **PART I: APPLICATION**

- (1) Stormwater Management Permit Application

An applicant shall file with the Conservation Commission ten (10) copies of a completed application package for a Stormwater Management Permit (SMP). Permit issuance is required prior to any land disturbance or site altering activity qualifying under Chapter 87 of the Code of the Town of Newbury, Stormwater Management and Illicit Discharge and Erosion Control.

- (a) The application package for a SMP shall consist of:
- 01) Ten (10) copies of a completed Application Form with signatures of all property owners and the signature of the Applicant if different;
  - 02) Ten (10) copies each of a list of abutters who are property owners as delineated in Part II of this document;
  - 03) Ten (10) copies each of the Erosion and Sediment Control Plan (ESCP), Stormwater Management Plan (SWMP), and Operation and Maintenance Plan (OMP) as specified in PARTS II, III and IV of these regulations adopted under the By-Law, and a descriptive project narrative. The Project Drawings as specified in Part II of these Regulations shall be a part of each of these plans;

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- 04) Payment of the application fee and professional review fee, which may include the creation of an escrow account in accordance with Section (7) (a) of the By-Law; See Part VI of these regulations;
- 05) Wetlands and Subdivision Approvals:
  - a) A project that has been reviewed and approved by the Conservation Commission under the authority of the Wetlands Protection Act and the Wetlands Protection By-Law, may be deemed as acceptable under the Stormwater Management and Erosion Control By-Law only if the entire project and construction activities, including all land disturbance, adhere fully and meet the requirements as specified in PARTS II, III and IV of these regulations adopted under the By-Law. The Applicant must submit to the Conservation Commission two (2) completed copies each of the SWMP, ESCP, OMP and application form along with two (2) copies of the Conservation Commission's issued Order of Conditions and Final Approved Plans. The Conservation Commission may issue a Stormwater and Erosion Control Permit at its next regularly scheduled meeting after receipt and review of said materials. The filing fee shall be waived;
  - b) A project that includes a street or roadway that has been reviewed and approved by the Planning Board under its Subdivision Rules and Regulations, including applicable Zoning By-Laws, may be deemed as acceptable under the Stormwater Management and Erosion Control By-Law only if the entire project and construction activities, including all land disturbance, adhere fully to and meet the requirements of PARTS II, III and IV of these Stormwater Regulations adopted under the By-Law. The Applicant must submit to the Conservation Commission two (2) completed copies of the SWMP, ESCP, OMP and application form along with two (2) copies of the Planning Board's issued Definitive Subdivision Permit, Final Approved Plans, and/or applicable Special Permit. The Conservation Commission may issue a Stormwater and Erosion Control Permit at its next regularly scheduled meeting after receipt and review of said materials. The filing fee shall be waived; it should be noted that these regulations are incorporated into the Subdivision Rules and Regulations by reference;
  - c) The Stormwater Fees noted in Part VI will still apply;
- 06) The Conservation Commission reserves the right to require surety for such projects for which other surety requirements do not apply.
- 07) The Conservation Commission reserves the right to request additional copies of the required documents as necessary.

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### **PART II: PROJECT DRAWINGS**

- (1) The Project Drawings must include the following information:
  - (a) Location of the Project, name(s) and address of the applicant, name and address of the engineer/land surveyor preparing the drawing, and the appropriate Massachusetts registration stamp. Applicant, if different from the Owner, shall show evidence of authority to speak for owner;
  - (b) Locus map at a scale of 1" = 2000';
  - (c) North arrow;
  - (d) List of property owners, certified by the Assessor's Office, who have the necessary proximity to the proposed subdivision in conformance with the Massachusetts General Laws;
  - (e) Existing and proposed topography plotted at a scale of 1"=40' for subdivisions and 1"=20' for site plan review plans. Elevations shall be shown relative to North American Vertical Datum 1988. Contour intervals shall be two feet;
  - (f) Wetlands boundaries and location of buffer zones;
  - (g) Plan locations and extent of any existing and proposed paved areas, or any other impervious areas and any structure such as buildings or bridges. Proposed streets shall be laid out in 100 ft. stations;
  - (h) Proposed well locations, and proposed locations and approximate extent of sanitary sewage leaching facilities;
  - (i) Existing and proposed property boundaries including easements and lines of abutting streets with sufficient information so that they may be reinstated. Areas of proposed lots shall be shown;
  - (j) Location of changes in vegetative cover, areas of critical environmental concern and habitats mapped by Massachusetts Natural Heritage;
  - (k) Location of the 100-year flood zone, per the current FEMA Flood Insurance Rate Maps;
  - (l) Location of water lines, if any, indicating size, material, location of valves, services, along with appropriate details as required for construction;
  - (m) Location, size and materials of sanitary sewer lines, if any, including manholes and service connections, a profile of the sanitary sewer line at a scale of 1"= 40' horizontal and 1" = 4' vertical, rim and invert elevations, along with appropriate details as required for construction;

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- (n) Location and details of all components of the stormwater drainage system, including details of all BMPs. Details shall provide adequate information for proper construction, including dimensions, elevations, plant species, material types, etc.;
- (o) Cross-section of any proposed road or parking areas, showing utilities, base and pavement;
- (p) Location and details of all siltation control BMPs to be in place during construction, including for stockpiles of earth;
- (q) Soil types and hydrologic groups, as determined by a Competent Soils Professional, as defined in the Massachusetts Stormwater Handbook, Vol. 3, Chap. 1;
- (r) Location and results of percolation tests and deep test pits, as performed and logged by an approved Soil Evaluator as defined under 310 CMR 15.017;
- (s) Watershed and sub-watershed boundaries both pre- and post-construction, including Town stormwater conveyancing systems;
- (t) A landscaping plan showing post-construction planting locations, sizes and species, areas to be seeded, landscape features, etc. prepared by a licensed landscape architect.
- (u) Location, species and diameter of all trees 12" in diameter or greater at 4'0" above grade;
- (v) Centerline profiles of all roads at a scale of 1" = 40' horizontal and 1" = 4' vertical;
- (w) Clear indication of areas of proposed stockpiling of earth materials; and
- (x) Existing zoning district boundaries.

### **PART III: CONSTRUCTION SITE EROSION & SEDIMENTATION CONTROL PLAN**

- (1) Standards: The Erosion and Sedimentation Control Plan (ESCP) 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 Plan must be prepared in accordance with the following:
  - (a) Massachusetts DEP Erosion & Sediment Control Guidelines for Urban and Suburban Areas, available on-line at [www.mass.gov/ded/water/essec1.pdf](http://www.mass.gov/ded/water/essec1.pdf);

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- (b) US EPA document “Developing your Stormwater Pollution Prevention Plan,” available on-line at [www.epa.gov/npdes/swpppguide](http://www.epa.gov/npdes/swpppguide) ;
  - (c) Construction activities shall be sequenced to minimize simultaneous areas of disturbance;
  - (d) No areas shall be disturbed before it is necessary to accomplish the work causing the disturbance;
  - (e) All erosion and sedimentation control measures shall be installed prior to any disturbance and installed and maintained in conformance with the documents referenced above.
  - (f) On and off-site stockpile areas shall be managed to provide protection from erosion and sediment transport (overburden and stockpiles of dirt, borrow areas, or other areas used solely by the permitted project are considered a part of the project);
  - (g) Applicable Federal, State and local laws and regulations shall be complied with fully, including, but not limited to, those regarding waste disposal, sanitary sewer or septic system regulations, and air quality requirements (including dust control);
  - (h) For any proposed activities within habitats mapped by the Massachusetts Natural Heritage & Endangered Species Program such as:
    - 01) Endangered, Threatened or Of Special Concern,
    - 02) Estimated Habitats of Rare Wildlife and Certified Vernal Pools, and
    - 03) Priority Habitats of Rare Species,the provisions of 310 CMR 10.59 and 10.60 shall apply;
  - (i) Interim and permanent stabilization measures shall be instituted on a disturbed area as soon as practicable, but no more than fourteen (14) days after construction activity has temporarily or permanently ceased on that portion of the site;
  - (j) On-site construction and waste materials shall be handled properly, by procedures including but not limited to, appropriate containment, prevention of harborage and vermin control, protection from the elements, and timely off-disposal at a permitted and approved waste disposal facility; and
- (2) Contents: The ESCP shall contain the following information:
- (a) The Project Drawings as described in Part II above;

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- (b) A description of construction and waste materials expected to be stored on-site. The ESCP 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;
  - (c) Such other information as is required by the Conservation Commission.
  - (d) All plans, reports, and calculations must be stamped by a Massachusetts Registered Professional Engineer.
- (3) Minimum Erosion and Sedimentation Control Requirements: Minimum Erosion and Sedimentation Control Requirements for applicable projects as required under Section (4) Applicability of the Stormwater Management and Illicit Discharge and Erosion Control By-Law are as follows:
- (a) Filter fabric shall be installed as recommended by the DEP document noted in (1)(a) above except as otherwise directed by the Conservation Commission or its Agent. The bottom six (6) inches of the material shall be buried by excavating a six (6) inch deep trench along the toe of the fabric line and placing the bottom six (6) inches of filter fabric into the trench. The trench shall then be backfilled with the spoil material and compacted. In no instance shall the bottom of the filter fabric be laid on the ground surface and simply covered with backfill or stone;
  - (b) The adequacy of various erosion control methodologies shall be evaluated on a site specific basis and shall be subject to review and approval by the Conservation Commission or its Agent and adherence to construction site BMPs;
  - (c) Such erosion and sedimentation control devices shall remain in place until the site has become stabilized with an adequate vegetative cover, as determined by the Conservation Commission or its Agent.

## **PART IV: STORMWATER MANAGEMENT PLAN**

- (1) Standards: All aspects of the SWMP shall be prepared in accordance with the Massachusetts Department of Environmental Protection Stormwater Handbook
- (2) Stormwater Management Plan Requirements: The SWMP shall contain the following information:
  - (a) Project Drawings as described in Part II above;
  - (b) Calculations of stormwater runoff flows for pre-construction and post-construction conditions, showing routings to BMPs;
  - (c) Calculations showing that all ten (10) stormwater management standards from the Massachusetts DEP Stormwater Handbook are met, or, for redevelopment projects, such standards as are required by the Stormwater Handbook;

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- (d) Massachusetts DEP Checklist for Stormwater Report;
  - (e) Complete calculations as required for each BMP proposed for the project;
  - (f) Catalogue cuts of all proprietary BMP devices proposed. Proprietary, mechanical BMPs are to be used only when the applicant can demonstrate the infeasibility of vegetative BMPs such as bioretention ponds, filter strips, etc.;
  - (g) Runoff and detention calculations shall be performed by USNRCS TR-20 or a commercial program based thereon (such as "HydroCad") as approved by the Conservation Commission. Two (2) copies of the input and output sheets will be provided to the Conservation Commission. Other run-off calculation methods may be used if approved by the Conservation Commission;
  - (h) Runoff calculations shall be performed for the 2-year, 10-year and 100-year 24-hour storms. Detention must be provided for the 2 and 10- year storms. Calculations shall be provided that show that the 100 year storm will not contribute to flooding; and
  - (i) Any other pertinent information required by the Conservation Commission.
  - (j) Treatment of the first inch of runoff shall be provided for projects in every section of town where treatment of the first one-half inch only is allowed by the DEP Stormwater Handbook.
- (3) Post-Development Stormwater Management Criteria: At a minimum all projects shall comply with the performance standards of the most recent version of Massachusetts Department of Environmental Protection (DEP) Stormwater Management Handbook, as well as the following:
- (a) General Criteria: The following general performance criteria shall be applicable to all stormwater management plans, unless otherwise provided for in these Regulations:
    - 01) No Illicit Discharges or Connections: Regulation of illicit connections or discharges to the Town of Newbury stormwater system or any receiving waters is necessary for the protection of the Town of Newbury's water bodies and groundwater, and to safeguard the public health, safety, welfare and the environment. No stormwater runoff generated from land development and land use conversion activities shall be discharged untreated directly to a wetland, local water body, municipal drainage system, or abutting property, without provisions being made to:
      - a) Prevent pollutants from entering the soil and groundwater;
      - b) Prohibit illicit connections and unauthorized discharges;



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- c) Remove all such illicit connections and discharges;
  - d) Comply with state and federal statutes and regulations relating to pollutant content of stormwater discharges;
  - e) Ensure compliance with the provisions of this regulation through proper inspection, monitoring, and enforcement; in conformance with Chapter 87 of the code of the Town of Newbury; and
  - f) Prevent contamination of drinking water supplies.
- (b) Channel and Overbank Flooding Protection: Protection of channels from bank and bed erosion and degradation as well as overbank protection shall be provided by controlling the peak discharge rate from the 2-yr and 10-year storm events to the predevelopment rate as required by the MA DEP Stormwater Handbook.
- (c) Extreme Flooding Protection: Extreme flooding and public safety protection shall be provided by evaluating the 100-year, 24-hour return frequency storm event to demonstrate that no increased flooding impacts will occur off-site, as required by the MA DEP Stormwater Handbook. Attenuation must be provided for the 100-year storm if flooding will otherwise result.
- (d) Structural Practices for Water Quality:
- 01) Presumed Compliance with Massachusetts Water Quality Standards;
- a) All structural storm water management facilities shall be selected and designed using the appropriate criteria from the most recent version of the Massachusetts Stormwater Handbook unless modified by these rules and regulations;
  - b) Applicants are encouraged to meet water quality standards through the use of low impact techniques such as bio-retention cells and vegetated filter strips, rather than proprietary mechanical BMP's; and
  - c) Structural BMPs must be designed to remove 80% of the average annual post development total suspended solids (TSS). It is presumed that a BMP complies with this performance goal if it is:
    - i. Sized to capture the prescribed water quality volume;
    - ii. Designed according to the specific performance criteria outlined in the Massachusetts DEP Stormwater Handbook;
    - iii. Constructed properly; and
    - iv. Maintained regularly so that it continues to operate as originally intended.

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- 02) Water Quality Volume: The prescribed water quality volume required in the sizing of a structural stormwater practice shall be 0.50 inches x the total impervious area of the drainage area and 1.0 inches x the total impervious area of the drainage area in critical areas, as specified in the Massachusetts DEP Stormwater Handbook.
- 03) Hydrologic Basis for Design of Structural Practices: For facility sizing criteria, the basis for hydrologic and hydraulic evaluation of development sites are as follows:
  - a) Impervious cover shall be measured from the site plan and includes any material or structure on or above the ground that prevents water from infiltrating through the underlying soil. Impervious surface may include, without limitation: roof tops and paved areas.
  - b) Off-site areas shall be assessed based on their "pre-developed condition" for computing the water quality volume (i.e., treatment of only on-site areas is required). However, if an off-site area drains to a proposed BMP, flow from that area must be accounted for in the sizing of a specific practice.
  - c) Off-site areas draining to a proposed facility shall be modeled as "present condition" for peak-flow attenuation requirements.
  - d) The length of "sheet flow" used in time of concentration calculations is limited to no more than 50 feet, after which "shallow concentrated flow" shall then be used, until channel flow becomes appropriate.
  - e) The standard for characterizing pre-development land use for on-site areas shall be to assume that the land was forested.
  - f) For purposes of computing runoff, all pervious lands on the site shall be assumed prior to development to be in "good" condition regardless of conditions existing at the time of computation, in selecting pre-development curve numbers.
  - g) If an off-site area drains to a facility upstream, off-site areas should be modeled, assuming an "ultimate build out condition" .
  - h) Determination of flooding and channel erosion impacts to receiving streams due to land development projects shall be measured at each point of discharge from the development project and such determination shall include any runoff from the balance of the watershed which also contributes to that point of discharge.
  - i) The specified design storms shall be defined as the 24-hour storm using the rainfall intensity recommended by the Cornell University

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Northeast Regional Climate Center Extreme Precipitation Tables  
accessible at <http://precip.eas.cornell.edu>

- j) Proposed residential, commercial, and industrial subdivisions shall apply these stormwater management criteria to the land development as a whole. Individual lots in new subdivisions shall not be considered separate land development projects, but rather the entire subdivision shall be considered a single project. Hydrologic parameters shall reflect the ultimate land development and these shall be used in all engineering calculations.
- 04) Sensitive Areas: Stormwater discharges to critical areas with sensitive resources (i.e., swimming areas, aquifer recharge areas, water supply reservoirs) may be subject to additional criteria, or may need to utilize or restrict certain stormwater management practices at the discretion of the Conservation Commission. The Conservation Commission may designate sensitive areas and specific criteria for these areas after conducting a public hearing in accordance with the provisions of Paragraph (5)(c) Public Hearing of the Town of Newbury Stormwater Management and Illicit Discharge and Erosion Control By-Law.
- 05) Hotspots: Stormwater discharges from land uses or activities with higher potential pollutant loadings, known as "hotspots," as defined in the most recent version of the DEP Stormwater Management Manual, require the use of specific stormwater management BMPs as specified in the most recent version of the Massachusetts DEP Stormwater Management Handbook. The use of infiltration practices without pretreatment is prohibited.
- 06) Gravel Base: Gravel base for roads and parking areas shall not consist of crushed, recycled Portland cement concrete, but shall be naturally occurring material.

## **PART V: OPERATION AND MAINTENANCE PLAN & AGREEMENT**

- (1) Operation and Maintenance Plan Requirements: An Operation and Maintenance Plan (OMP) is required at the time of application for all projects. The maintenance plan shall be designed to ensure that the work complies with the Permit and the Stormwater and Erosion Control By-Law and that the Massachusetts Surface Water Quality Standards, 314, CMR 4.00 (as amended) are met in all seasons and throughout the life of the system. Once approved by the Conservation Commission, the Operation and Maintenance Plan shall be recorded at the Registry of Deeds. The OMP shall remain on file with the Conservation Commission and adherence to the O&M Plan shall be an ongoing requirement.
- (2) The OMP shall include:

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- (a) The name(s) of the owner( s) for all components of the system;
- (b) Maintenance agreements that specify:
  - 01) The names and addresses of the person(s) responsible for operation and maintenance;
  - 02) The person(s) responsible for financing inspections, maintenance, and emergency repairs;
  - 03) An Inspection and Maintenance Schedule for all stormwater management and other facilities, including swales and ponds, and including routine and non-routine maintenance tasks to be performed;
  - 04) A list of easements with the purpose and location of each;
  - 05) The signature(s) of the owner(s) and
  - 06) Executed legal documents that clearly describe the responsibilities and source of funding for all operation and maintenance requirements. This includes evidence that the operation and maintenance plan is funded in perpetuity or that no expense will accrue to the Town of Newbury.
- (3) Stormwater Management Easement(s):
  - (a) Stormwater management easements shall be provided by the property owner(s) as such easements are necessary for:
    - 01) Access for facility inspections and maintenance;
    - 02) Preservation of storm water runoff conveyance, infiltration, detention areas and facilities, including flood routes for the 100-year storm event; and
    - 03) Direct maintenance access for heavy equipment to structures requiring regular cleanout maintenance.
  - (b) The purpose of each easement shall be specified in the maintenance agreement signed by the property owner;
  - (c) Stormwater management easements are required for all areas used for off-site stormwater control, unless a waiver is granted by the Conservation Commission; and
  - (d) Easements shall be recorded with the Registry of Deeds prior to issuance of a Certificate of Completion by the Conservation Commission.

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**PART VI: REVIEW FEE SCHEDULE**

The following fee schedule is in place for the Conservation Commission to accomplish appropriate review and administration of applications and issued permits. Fees for professional review will be established in accordance with Section (7)(a.) of the By-Law. Application fees are payable at the time of application and are non-refundable.

The Conservation Commission may waive the application fee, completion review fee, and professional review fee for a permit or other application filed by a government agency.

Disturbed Area	Application Fee	Completion Review Fee**
One (1) acre up to two (2) acres	\$500	varies
Two (2) acres or greater in area	\$1000	varies

\*\* Review fee will be based upon the complexity of the specific project.