**Municipality/Organization:** Town of Weston

**EPA NPDES Permit Number:** MAR041068

**MaDEP Transmittal Number: W-035252**

**Annual Report Number & Reporting Period:** **No. 9: March 2011-March 2012**

# NPDES PII Small MS4 General Permit Annual Report

## Part I. General Information

Contact Person: Stephen R. Fogg, P.E. Title: Town Engineer

Telephone #: 781-786-5115 Email: fogg.s@westonmass.org

Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: Donna S. VanderClock

Printed Name: Donna VanderClock

Title: Town Manager

Date: April 27, 2012

## Part II. Self-Assessment

The Town of Weston has completed the required self-assessment and has determined that our municipality is in compliance with all permit conditions, except for the following provisions:

BMP 1-6, Outreach to Private Ways, has only been partially completed. The Town Engineer has been in communications with the Weston Roads Trust, which owns and manages several miles of private ways and their associated drainage systems.

## Part III. Summary of Minimum Control Measures

## 1. Public Education and Outreach

| BMP ID # | BMP Description | Responsible Dept./Person Name | Measurable Goal(s) | Progress on Goal(s) – Permit Year 9 (11-12) (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 10 (12-13) |
|---|---|---|---|---|---|
| 1-1 | Flyer to residents | SUASCO WCC and SRF | Distribute to 75% of residents | Completed in year 1 | |
| Revised | | | | | |
| 1-2 | Lesson Plan for Fifth Graders | SUASCO WCC and SRF | Lesson plan taught | Lesson plan continuing in schools | Re-assess if lesson plan is effective and being fully used |
| Revised | Plan to be taught in 4th grade | | | | |
| 1-3 | Media Campaign | SUASCO WCC and SRF | Media packet given to press | SUACSO Stormwater Matters slideshow provided to cable access channel for airing leading up to May 2011 town meeting | |
| Revised | | | | | |
| 1-4 | Flyer to Businesses | SUASCO WCC and SRF | Distribute to 50% of businesses | None – completed in year 4 | None |
| Revised | | | Distribute to 100% of businesses | | |
| 1-5 | Video | SUASCO WCC and SRF | Show video at public meeting | | |
| Revised | *"Stormwater Matters Outreach and Participation Campaign"* | SUASCO | Implement stormwater advertising campaign | Ad campaign displayed at informational meetings in spring 2011 | |

## 1a. Additions

| | | | | | |
|---|---|---|---|---|---|
| 1-6 | Outreach to Private Ways | DPW | Develop and send correspondence to road trusts and private way owners about stormwater issues | Communications established and objectives stated with Roads Trust | Follow up as necessary |
| 1-7 | Illicit Discharge Detection and Elimination By-Law | Stormwater Working Group | Hold public meeting to describe proposed bylaw and regulations | Completed | none |
| 1-8 | Public Presentations | Conservation Agent | Make presentation to community groups about stormwater | Presentation made to Weston Garden Club and Weston Land Trust | Continue as opportunities arise; possible library presentation |

| | | | | | |
|---|---|---|---|---|---|
| 1-9 | Proposed by-law | Stormwater Working Group | Hold informational meetings and hearings on proposed stormwater and erosion control by-law | By-law adopted at 2011 Annual Town Meeting, May 2011 | Continued outreach and education around new by-law |

## 2. Public Involvement and Participation

| **BMP ID #** | **BMP Description** | **Responsible Dept./Person Name** | **Measurable Goal(s)** | **Progress on Goal(s) – Permit Year 9 (11-12)** (Reliance on non-municipal partners indicated, if any) | **Planned Activities – Permit Year 10 (12-13)** |
|---|---|---|---|---|---|
| 2-1 | Traveling Display | SUASCO WCC and SRF | 3 months on display | None - Completed in year 1 | Use display as opportunity arises |
| Revised | | | | | |
| 2-2 | Poster contest (5th grade) | SUASCO WCC and SRF | Hold contest | Contest rules provided to School Dept. | None |
| Revised | | | | | |
| 2-3 | Summit Event | SUASCO WCC and SRF | Hold local stormwater summit meeting | none | none |
| Revised | | | | | |
| 2-4 | Photo contest (High School) | SUASCO WCC and SRF | Hold contest | None | None – being considered for next permit cycle |
| Revised | | | | | |
| 2-5 | Super—summit event | SUASCO WCC and SRF | Participate in regional "super-summit" | | |
| Revised | *"Stormwater Matters Outreach and Participation Campaign"* | SUASCO | Implement stormwater advertising campaign | Ad campaign displayed at informational meetings in spring 2011 | |

## 2a. Additions

| | | | | | |
|---|---|---|---|---|---|
| 2-6 | Stream team survey of Seaverns Brook | SRF and stream team | Complete survey | None | Provide GIS mapping and complete survey |
| Revised | *Stream team survey of Hobbs Brook* | Weston Girl Scouts | Complete survey | Survey completed, April 2008 | |
| 2-7 | Catch basin stenciling program | SRF | Volunteer group(s) to install 180 storm drain markers in selected locations | Markers installed in key areas by Weston Girl Scouts | Continue program to other areas of Town |

## 3. Illicit Discharge Detection and Elimination

| BMP ID # | BMP Description | Responsible Dept./Person Name | Measurable Goal(s) | Progress on Goal(s) – Permit Year 9 (11-12) (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 10 (12-13) |
|---|---|---|---|---|---|
| 3-1 | Stormwater System Mapping | DPW | Complete mapping of stormwater system over a 3 year period | None – completed during year 3 | Completion of stormwater system mapping using GPS to construct pipe network |
| 3-2 | Dry weather screening of outfalls | DPW | Visual inspection/report of known outfalls, 33% each year | None – outfalls inspected during year 3 | Re-inspect outfalls and document changes from last inspection |
| 3-3 | Illicit Discharge Elimination | DPW, Board of Health | Trace non-stormwater flows and eliminate within 1 year | none | Sample flowing outfalls using IDDE protocol |
| 3-4 | Water Quality Monitoring | Cambridge Water Supply | Obtain and review results of regular monitoring | Water quality data summary from CWS - See Attachment A | Same as prior years |
| 3-5 | Amend Stormwater regulations | DPW | Amended regulations adopted at 2003 Annual town Meeting | Goal met | |
| Revised | | | Amended regulations adopted at 2010 Annual Town Meeting | Goal met | |
| 3-6 | Septic System Monitoring Program | Board of Health | Develop, implement and enforce septic pumping | BOH not planning to institute mandatory pumping | |
| Revised | | | System in place to identify frequent pumping | Database created and in use; frequent pumping locations are investigated | |
| 3-7 | Dechlorination of New Water Mains | DPW - Water Div. | Use dechlorination tablets when flushing new mains | No water mains installed | As needed |
| 3-8 | Trench Dewatering Policy | DPW | Require siltation control on all trench dewatering projects | Siltation control specified on all capital projects; controls used on DPW projects | As needed |

## 4. Construction Site Stormwater Runoff Control

| BMP ID # | BMP Description | Responsible Dept./Person Name | Measurable Goal(s) | Progress on Goal(s) – Permit Year 9 (11-12) (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 10 (12-13) |
|---|---|---|---|---|---|
| 4-1 | Erosion and Sediment Control Bylaw | Stormwater Working Group | Develop, implement and enforce bylaw | By-law adopted at Town Meeting, May 2011<br>Refer to Attachment B for Stormwater and Erosion Control By-Law | Full implementation of by-law and regulations |

| | | | | | |
|---|---|---|---|---|---|
| Revised | *Implementation of by-law and regulations* | *Stormwater Permitting Authority* | *All projects meeting established thresholds of land disturbance required to obtain Stormwater Permit* | *Regulations and permit procedures in place November 2011; Stormwater Engineer hired Dec. 2011 Refer to Attachment B for Stormwater and Erosion Control Regulations* | *Same as prior years* |
| 4-2 | Planning Board review of projects | Planning Board | All projects reviewed for compliance with runoff control measures | All applicants are required to demonstrate that they are addressing stormwater runoff control during construction | Same as prior years |
| 4-3 | Conservation Commission review of projects | Conservation Commission | All projects reviewed for compliance with runoff control measures | All applicants are required to demonstrate that they are addressing stormwater runoff control during construction | Same as prior years |
| 4-4 | Street Opening permit process | DPW | Inspections conducted for compliance with Stormwater Regulations | DPW inspector assigned to this task | Inspections documented and reported in annual report |
| 4-5 | Building Permit process | See 4-1 | See 4-1 | | |
| | | | | | |

## 5. Post-Construction Stormwater Management in New Development and Redevelopment

| **BMP ID #** | **BMP Description** | **Responsible Dept./Person Name** | **Measurable Goal(s)** | **Progress on Goal(s) – Permit Year 9 (11-12)** (Reliance on non-municipal partners indicated, if any) | **Planned Activities – Permit Year 10 (12-13)** |
|---|---|---|---|---|---|
| 5-1 | Erosion and Sediment Control ByLaw | DPW | Same as control measure 4-1 | Bylaw and regulations drafted – see Attachment | Seek approval at town meeting in spring of 2011 |
| Revised | *Implementation of by-law and regulations* | *Stormwater Permitting Authority* | *All projects meeting established thresholds of land disturbance required to obtain Stormwater Permit* | *Regulations and permit procedures in place November 2011; Stormwater Engineer hired Dec. 2011 Refer to Attachment B for Stormwater and Erosion Control Regulations* | *Same as prior years* |
| 5-2 | DPW Runoff Control Policy | See 5-1 | | | |

| | | | | | |
|---|---|---|---|---|---|
| 5-3 | Compliance with stormwater O&M plans under Con Com review | Conservation Commission | Ensure compliance with post-construction stormwater O&M Plans | Any project approved under the Con Com's jurisdiction which increases impervious surfaces by 2,000 s.f. or more must demonstrate that there will be no increase in the rate or volume (offsite) of the 100 year storm. Applicants are required to submit a stormwater O&M plan and annual inspection checklist for the first year after construction | Con Com will not issue a Cert. of Compliance until the Applicant has completed a post-construction stormwater structure(s) inspection and submitted a completed maintenance checklist |
| | | | | | |

## 6. Pollution Prevention and Good Housekeeping in Municipal Operations

| **BMP ID #** | **BMP Description** | **Responsible Dept./Person Name** | **Measurable Goal(s)** | **Progress on Goal(s) – Permit Year 9 (11-12)** (Reliance on non-municipal partners indicated, if any) | **Planned Activities – Permit Year 10 (12-13)** |
|---|---|---|---|---|---|
| 6-1 | Street Sweeping | DPW | Sweep all public streets annually | All public streets swept at least once per year | Same as prior years |
| 6-2 | Catch Basin Cleaning | DPW | Clean all public catch basins annually | All public catch basins cleaned at least annually | Same as prior years |
| 6-3 | Drainage Improvement Projects | DPW | Incorporate structural BMPs into each project | Concord Road project completed, including approx. 2,400 lin. ft. of drainage and road improvements, incorporating stormwater BMPs | South side drainage project design (flood mitigation)<br><br>5 year capital plan to be developed |
| 6-4 | DPW Housekeeping | DPW | Conduct environmental audit, implement recc. | Completed | none |
| *Revised* | *Environmental Management System* | *DPW* | *Develop and Implement Environmental Management System* | *Implementation of Stormwater Best Management Practices at new DPW facility opened February 2011* | *Continuing program* |
| 6-5 | Roadway De-icing Program | DPW | Install computerized spreader controls; alt. dispensing equipment | Computerized controls installed; continue to track usage to achieve optimal application rate | Continue to seek optimal levels to achieve balance between public safety and environmental impact |
| 6-6 | Waterway Maintenance | DPW | Clear waterways of debris, 3 year rotating basis | Notice of Intent filed with Conservation Commission for permit to do maintenance | Continuing project |
| Revised | *Ditch maintenance* | East Middlesex Mosquito Control Project | Clear sediment from ditches | minimal ditch clearing accomplished in one area | Identify and clean as time and budget allows |

**6a. Additions**

| | | | | | |
|---|---|---|---|---|---|
| 6-7 | Employee Training Program | DPW | Provide all departments with training | Done for DPW staff as part of EMS program | |
| 6-8 | New DPW Facility | DPW | Incorporate Green Building Design into project | Construction completed and building opened Feb. 2011 | *Implementation of Stormwater Best Management Practices at new DPW facility opened February 2011* |

## Part IV. Summary of Information Collected and Analyzed

A summary of water quality monitoring results from Cambridge Water Supply (CWS) is included as Attachment A. In general the most recent data shows low levels of E-Coli bacteria compared to the range of concentrations measured at stream locations in prior sampling rounds. Weston has received no notification of specific water quality concerns from staff in the Watershed Protection Division of CWS. This agency has staff dedicated to monitoring water quality within the watershed on a daily basis.

Attachment B includes the new Stormwater and Erosion Control By-Law and Regulations, adopted during 2011.

A tracking system was put in place in 2004 for private development stormwater BMPs that are reviewed and approved by the Town Engineer. This system was updated to incorporate the new Stormwater Permit provisions under the Stormwater and Erosion Control By-Law and Regulation. To date, approximately 290 projects have been reviewed; at the present time there are over 50 projects ongoing.

Attachment A

Cambridge Water Supply – water quality monitoring summary

| | A | B | C | E | F | G | H | I | J | K | L | M | N | O | P | R | S | T | U |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2011 Surface Water Quality Data, Cambridge Watershed, Weston | | | | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | | | | |
| 3 | Baseflow (no storm samples in Weston, 2011) | | | | | | | | | | | | | | | | | | |
| 4 | **SiteID** | **USGS ID** | **Date** | **Water temp. (°C)** | **SpC (µS/cm)** | **DO (%Saturation)** | **DO (mg/L)** | **pH** | **Orp mV** | **Turbidity (NTU)** | **Salinity PSS** | **Air temp. (°F)** | **BP (mmHg)** | **Staff Height** | **Discharge (inst. cfs)** | **NH3 (mg/L)** | **TKN (mg/L)** | **Total Phos. (mg/L)** | **Ortho Phos. (mg/L)** |
| 5 | SB@VILES | 01104370 | 6/21/11 | 17.47 | 346 | 93.6 | 8.95 | 7.38 | 210 | 1.5 | 0.1 | 75 | 760 | 0.60 | 5.20 | 0.06 | <0.5 | 0.026 | NS |
| 6 | SB@VILES | 01104370 | 10/11/11 | 13.78 | 287 | 81.5 | 8.51 | 7.34 | | | 0.14 | 58 | 767 | 0.80 | 8.60 | <0.02 | <0.5 | 0.023 | NS |
| 7 | RT 20 | 01104460 | 6/21/11 | 18.48 | 678 | 89.4 | 8.36 | 7.27 | 132 | 3.3 | 0.30 | 74 | 760 | 5.20 | 22.00 | 0.120 | <0.5 | 0.022 | NS |
| 8 | RT 20 | 01104460 | 10/11/11 | 16.22 | 666 | 81.9 | 8.11 | 7.16 | | | 0.32 | 61 | 767 | 5.74 | 55.00 | 0.032 | <0.5 | 0.023 | NS |
| 9 | SUMMER ST | 01104475 | 9/13/11 | 17.56 | 292 | 91.7 | 8.74 | 7.33 | | 2.50 | 0.14 | 74.3 | 759.0 | 0.68 | 1.90 | 0.11 | 1.300 | 0.011 | 0.017 |
| 10 | MBS | 01104453 | 6/21/11 | 22.10 | 671 | 49.33 | ***4.29*** | 6.72 | 128 | 2.30 | 0.30 | 75.6 | 760.00 | 96.33 | 1.30 | 0.110 | 0.720 | 0.021 | NS |
| 11 | MBS | 01104453 | 10/11/11 | 15.19 | 503 | 28.40 | ***2.87*** | 6.78 | | | 0.24 | 59.3 | 767.00 | 96.42 | 1.90 | 0.076 | <0.5 | 0.023 | NS |
| 12 | HB@KG | 01104440 | 6/8/11 | 20.39 | 800 | 88.8 | 7.95 | 7.25 | | 4.6 | 0.4 | 81.5 | 756 | | | 0.068 | 0.52 | 0.026 | NS |
| 13 | HB@KG | 01104440 | 10/18/11 | 12.27 | 487 | 92.0 | 9.79 | 7.60 | 71 | 2.3 | 0.2 | 56.7 | 756 | 1.04 | | 0.120 | <0.5 | 0.057 | NS |
| 14 | INDUST BROOK | 01104433 | 9/13/11 | 18.67 | 1940 | 68.00 | 6.30 | 6.87 | | 4.7 | 0.98 | 70.50 | 759 | 0.82 | 0.27 | 0.48 | 0.61 | 0.029 | NS |
| 15 | | | | | | | | | | | | | | | | | | | |
| 16 | WB@RT20 | NA | 5/26/11 | 13.06 | 946 | 78.5 | 8.24 | 6.66 | | 3.1 | 0.5 | 74.10 | 761.60 | N/A | 1.60 | 0.110 | 0.630 | 0.021 | NS |
| 17 | WB@RT20 | NA | 11/8/11 | 9.34 | 644 | 71.9 | 8.30 | 6.96 | 116 | 0.1 | 0.3 | 61.20 | 767.00 | N/A | 2.44 | 0.110 | <0.5 | <0.01 | NS |
| 18 | QB@CHURCH | NA | 5/26/11 | 15.27 | 386 | 62.90 | 6.31 | 6.4 | | 1.20 | 0.18 | 73.40 | 761.60 | N/A | | 0.14 | 0.950 | 0.036 | NS |
| 19 | QB@CHURCH | NA | 11/8/11 | 6.96 | 310 | 75.84 | 9.29 | 7.1 | 130.0 | 0.50 | 0.10 | 60.30 | 767.00 | N/A | 0.92 | 0.082 | 0.790 | 0.03 | NS |
| 20 | CHERRY@CONANT | NA | 5/26/11 | 16.59 | 375 | 81.1 | 7.9 | 7.09 | | 0.9 | 0.2 | 70.2 | 761.6 | N/A | 3 | 0.25 | 0.62 | 0.035 | NS |
| 21 | CHERRY@CONANT | NA | 11/8/11 | 5.59 | 332 | 82.4 | 10.4 | 7.61 | 162 | 0.2 | 0.1 | 58.6 | 767.0 | N/A | 7.99 | 0.06 | <0.5 | 0.014 | NS |
| 22 | STONY@CONANT | NA | 5/26/11 | 17.5 | 241 | 84.10 | 8.05 | 7.2 | | 1.0 | 0.1 | 69.0 | 761.60 | N/A | | 0.078 | 0.800 | 0.017 | NS |
| 23 | STONY@CONANT | NA | 11/8/11 | 6.2 | 213 | 92.75 | 11.58 | 7.6 | 121.0 | | 0.1 | 57.2 | 767.00 | N/A | | 0.05 | <0.5 | 0.013 | NS |

| | W | X | Y | Z | AA | AB | AC | AD | AE | AF | AG | AH | AI | AJ | AK | AL | AM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | |
| 4 | **Ca (mg/L)** | **Cl (mg/L)** | **Color (CU)** | **Conductivity (umhos/cm)** | **E-Coli (MPN)** | **Mn (mg/L)** | **NO3 (mg/L)** | **NO2 (mg/L)** | **Lab pH** | **Na (mg/L)** | **TOC (mg/L)** | **Total Alkalinity (mg/L CaCO3)** | **Total Al (mg/L)** | **Total Coliform (MPN)** | **Total Fe (mg/L)** | **Lab Turbidity (NTU)** | **UV254 (abs)** |
| 5 | 23.7 | 66.2 | 46 | 324 | ***570*** | 0.078 | 0.943 | <0.004 | 7.15 | 45.5 | 6.120 | 30.0 | 0.070 | 7900 | 0.83 | 1.66 | 0.298 |
| 6 | 18.1 | 50.6 | 70 | 274 | 56 | 0.044 | 0.280 | <0.004 | 7.05 | 30.8 | 9.790 | 34.0 | 0.033 | 2000 | 0.60 | 1.07 | 0.444 |
| 7 | 29.2 | 168.0 | 30 | 619 | 62 | 0.289 | 0.371 | <0.004 | 7.12 | 111.0 | 4.340 | 29.0 | 0.142 | 5700 | 0.99 | 0.192 | 0.178 |
| 8 | 22.8 | 168.0 | 28 | 643 | 38 | 0.113 | 0.079 | <0.004 | 7.10 | 94.2 | 6.240 | 28.5 | 0.017 | 10000 | 0.36 | 0.858 | 0.196 |
| 9 | 15 | 34.3 | 13 | 256 | 74 | 0.029 | 1.040 | <0.004 | 7.60 | 29.00 | | 39.5 | 0.040 | 72000 | 0.106 | 0.56 | 0.104 |
| 10 | 25.8 | 164 | 63 | 618 | 69 | 0.075 | <0.005 | <0.004 | 6.75 | 111.0 | 8.81 | 34 | 0.047 | 3500 | 0.81 | 1.35 | 0.390 |
| 11 | 19.5 | 114 | 98 | 482 | 31 | 0.067 | 0.057 | <0.004 | 6.75 | 74.6 | 12.50 | 33 | 0.073 | 2000 | 0.69 | 0.93 | 0.604 |
| 12 | 27.80 | 216 | 90 | 771 | 54 | 0.31 | 0.153 | 0.005 | 7.35 | 131 | 3.96 | 23.0 | 0.16 | 5200 | 0.710 | 1.65 | 0.122 |
| 13 | 23.20 | 109 | 36 | 473 | 18 | 0.17 | 0.638 | <0.004 | 7.17 | 67 | 5.90 | 29.0 | 0.04 | 2400 | 0.617 | 1.10 | 0.229 |
| 14 | 84.60 | 535 | 39 | 1710 | 0 | 0.410 | 0.982 | 0.019 | 6.96 | 326 | 4.74 | 79.5 | 0.10 | 15000 | 1.48 | 5.16 | 0.185 |
| 15 | | | | | | | | | | | | | | | | | |
| 16 | 39 | 242 | 49 | 882 | 30 | 0.063 | 2.220 | <0.004 | 6.80 | 157 | 5.900 | 34.0 | 0.07 | 3900 | 0.800 | 1.16 | 0.271 |
| 17 | 24 | 150 | 70 | 591 | 13 | 0.031 | 1.620 | 0.012 | 6.60 | 95 | 8.930 | 31.0 | 0.06 | >2419.6 | 0.510 | 0.90 | 0.415 |
| 18 | 16.3 | 90.90 | 120 | 375 | 21 | 0.118 | 0.237 | 0.010 | 6.50 | 65.9 | 13.7 | 18.50 | 0.18 | 1800 | 0.967 | 1.28 | 0.707 |
| 19 | 11.6 | 64.00 | 90 | 290 | 25 | 0.061 | 0.725 | 0.010 | 6.43 | 44.2 | 11.1 | 16.00 | 0.24 | >2419.6 | 0.952 | 0.87 | 0.523 |
| 20 | 23.8 | 75.8 | 56 | 362 | 100 | 0.072 | 0.793 | 0.028 | 7.19 | 50.4 | 7.68 | 33.5 | 0.058 | 2100 | 0.665 | 1.130 | 0.342 |
| 21 | 16.8 | 64 | 59 | 305 | 16 | 0.018 | 0.779 | 0.015 | 6.8 | 39.1 | 7.76 | 21 | 0.034 | >2419.6 | 0.311 | 1.010 | 0.322 |
| 22 | 20 | 41.900 | 66 | 235 | 48 | 0.07 | 0.34 | <0.004 | 7.09 | 31.50 | 8.82 | 27.5 | 0.075 | 2900 | 0.74 | 1.420 | 0.41 |
| 23 | 16 | 34.300 | 50 | 195 | 31 | 0.03 | 0.53 | <0.004 | 6.87 | 24.30 | 8.83 | 23.0 | 0.039 | >2419.6 | 0.41 | 0.821 | 0.392 |

| | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2011 Surface Water Quality Data, Cambridge Watershed, Weston | | | | | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | | | | | |
| 3 | Stormwater Monitoring | | | | | | | | | | | | | | | | | | | |
| 4 | **SiteID** | **USGS ID** | **Date** | **Time** | **Water temp. (°C)** | **SpC (µS/cm)** | **DO (%Saturation)** | **DO (mg/L)** | **pH** | **Orp mV** | **Turbidity (NTU)** | **Salinity PSS** | **Air temp. (°F)** | **BP (mmHg)** | **Staff Height** | **Discharge (inst. cfs)** | **Comments** | **NH3 (mg/L)** | **TKN (mg/L)** | **Total Phos. (mg/L)** |
| 5 | INDUST BROOK | 01104433 | 3/16/2011 | 11:40 | 5.54 | 2260 | 74.5 | 9.37 | 6.64 | | 49.40 | 1.14 | 37.9 | 766.50 | 1.06 | 1.07 | estimated f | 0.36 | 0.76 | 0.04 |
| 6 | SUMMER ST | 01104475 | 3/16/2011 | 12:00:00 | 4.92 | 266 | 90.90 | 11.71 | 7.13 | | 16.80 | 0.12 | 38.3 | 766.50 | 0.97 | 4.70 | Quanta use | <0.02 | <0.5 | 0.016 |
| 7 | SUMMER ST | 01104475 | 8/15/2011 | 10:40:00 | 19.27 | 240 | 88.80 | 8.13 | 7.41 | | 7.50 | 0.11 | 68.7 | 754.00 | 0.52 | 0.92 | no orthoP | 0.077 | <0.5 | 0.038 |
| 8 | MBS | 01104453 | 2/8/2011 | 10:54:57 | 0.92 | 808 | 69.18 | 9.67 | 7.88 | 170 | 0.2 | 0.3 | 35.8 | 748 | 96.43 | 3 | Rating curv | 0.15 | <0.5 | <0.01 |
| 9 | RT 20 | 01104460 | 2/8/2011 | 11:21:10 | 1.38 | 1163 | 95.52 | 13.16 | 7.89 | 116 | 7.2 | 0.5 | 35.8 | 748 | 5.28 | 26 | Runoff eve | 0.095 | 0.64 | <0.01 |

| | U | V | W | X | Y | Z | AA | AB | AC | AD | AE | AF | AG | AH | AI | AJ | AK | AL | AM | AN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | |
| 4 | **Ortho Phos. (mg/L)** | **TSS (mg/L)** | **lab number** | **Ca (mg/L)** | **Cl (mg/L)** | **Color (CU)** | **Conductivity (umhos/cm)** | **E-Coli (MPN)** | **Mn (mg/L)** | **NO3 (mg/L)** | **NO2 (mg/L)** | **Lab pH** | **Na (mg/L)** | **TOC (mg/L)** | **Total Alkalinity (mg/L CaCO3)** | **Total Al (mg/L)** | **Total Coliform (MPN)** | **Total Fe (mg/L)** | **Lab Turbidity (NTU)** | **UV254 (abs)** |
| 5 | <0.01 | 33.00 | 2011-1297 | 88.00 | 706 | 52 | 1910 | 10.00 | 0.48 | 1.23 | <0.004 | 6.74 | 341.00 | 3.39 | 42.0 | 1.01 | 2200.00 | 3.66 | 11.60 | 0.134 |
| 6 | <0.01 | 8.0 | 2011-1299 | 17.00 | 40.60 | 26.00 | 265.00 | 75.0 | 0.05 | 1.63 | <0.004 | 7.11 | 31.50 | 3.04 | 20.00 | 0.32 | 1800.0 | 0.57 | 4.38 | 0.12 |
| 7 | | 6.0 | 2011-3996 | 19.10 | 34.50 | 33.00 | 234.00 | ***2900*** | 0.06 | 1.00 | 0.03 | 7.46 | 29.90 | 5.94 | 34.00 | 0.02 | >24196 | 0.53 | 3.54 | 0.19 |
| 8 | <0.01 | 3 | 2011-0659 | 24.3 | 206 | 40 | 744 | 30 | 0.147 | 1.13 | <0.004 | 6.79 | 127 | 6.37 | 24 | 0.038 | 770 | 0.29 | 1.22 | 0.259 |
| 9 | <0.01 | 7 | 2011-0661 | 27.6 | 332 | 39 | 1060 | 0 | 0.193 | 0.716 | 0.005 | 6.97 | 197 | 5.16 | 30.5 | 0.16 | 410 | 0.437 | 4.89 | 0.214 |

Attachment B

Weston Stormwater and Erosion Control By-Law and Regulations

## ARTICLE XXVII. Stormwater and Erosion Control By-Law

### Section I. Purpose

**A.** The purpose of this By-Law is to protect, maintain and enhance the public health, safety, environment and general welfare of the Town by establishing minimum requirements and procedures to control the adverse effects of soil erosion and sedimentation, construction site runoff, increased post-development stormwater runoff and nonpoint source pollution associated with new development and redevelopment. It has been determined that proper management of stormwater runoff will minimize damage to public and private property and infrastructure, safeguard the public health, safety, environment and general welfare of the public, protect water and aquatic resources, protect and enhance wildlife habitat, and promote groundwater recharge to protect surface and groundwater drinking supplies. This Bylaw seeks to meet that purpose through the following objectives:

1. Establish a mechanism by which the municipality can monitor and ensure compliance with requirements of its National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4) and other applicable State and Federal mandates.

2. Establish decision-making processes surrounding land development activities that protect the integrity of the watershed and preserve the health of water resources.

3. Require that new development, redevelopment and other land alteration activities maintain the after-development runoff characteristics as equal to or less than the pre-development runoff characteristics where appropriate in order to reduce flooding, stream bank erosion, siltation, nonpoint source pollution, property damage, and to maintain the integrity of stream channels and aquatic habitats.

4. Establish minimum post-development stormwater management standards and design criteria for the regulation and control of stormwater runoff quantity and quality; Establish minimum design criteria for the protection of properties and aquatic resources downstream from land development and land conversion activities from damages due to alterations in volume, velocity, frequency, duration, and peak flow rate of storm water runoff; Establish minimum design criteria for measures to eliminate or minimize to the extent feasible nonpoint source pollution from stormwater runoff which would otherwise degrade water quality.

5. Establish design and application criteria for the construction and use of structural stormwater control facilities that can be used to meet or exceed the minimum post-development stormwater management standards.

6. Encourage the use of nonstructural stormwater management, better site design practices or “low-impact development practices”, such as reducing impervious cover, increasing site-wide infiltration, and preserving open space and other natural areas, to the maximum extent practicable.

7. Promote water conservation through the re-use of stormwater for irrigation.

8. Establish provisions that require practices that eliminate soil erosion and sedimentation and control the volume and rate of stormwater runoff resulting from land disturbance activities.

9. Establish provisions to ensure that soil erosion and sedimentation control measures and stormwater runoff control practices are incorporated into the site planning and design process and are implemented and maintained.

10. Establish provisions for the long-term responsibility for and maintenance of structural stormwater control facilities and nonstructural stormwater management practices to ensure that they continue to function as designed, are maintained, and pose no threat to public safety or the environment.

11. Establish provisions to ensure there is an adequate funding mechanism for the proper review, inspection and long-term maintenance of stormwater facilities implemented as part of this By-Law.

12. Establish administrative procedures for the submission, review, approval or disapproval of stormwater management plans, erosion and sediment controls, and for the inspection of approved active projects, and long-term follow up; Establish certain administrative procedures and fees for the submission, review, approval, or disapproval of stormwater plans, inspection of construction sites, and the inspection of approved projects.

13. Ensure that construction and waste materials, toxic materials, hazardous materials, and other pollutants are prevented from mixing with stormwater runoff, which would degrade water quality.

14. Establish the Town of Weston's legal authority and capacity to ensure compliance with the provisions of this By-Law through funding, permitting, inspection, monitoring, and enforcement.

**B.** Nothing in this Bylaw is intended to replace the requirements of the Town of Weston Zoning By-Law, the Mass Wetlands Protection Act, the Town of Weston General By-Law, any other By-Law that may be adopted by the Town of Weston, or any Rules and Regulations adopted there under.

**Section II Definitions**

The following definitions shall apply in the interpretation and implementation of this By-Law. Additional definitions may be adopted by separate regulation:

ALTER: Any activity that will measurably change the ability of a ground surface area to absorb water, will change existing surface drainage patterns, or will increase or decrease the rate or volume of flow from a site.

BEST MANAGEMENT PRACTICE (BMP): Structural, non-structural and managerial techniques that are recognized to be the most effective and practical means to prevent and/or reduce increases in stormwater volumes and flows, reduce point source and nonpoint source pollution, and promote stormwater quality and protection of the environment. "Structural" BMPs are devices that are engineered and constructed to provide temporary storage and treatment of stormwater runoff. "Nonstructural" BMPs use natural measures to reduce pollution levels, do not require extensive construction efforts, and/or promote pollutant reduction by eliminating the pollutant source.

BETTER SITE DESIGN: Site design approaches and techniques, including low-impact development (LID) that can reduce a site's impact on the watershed through the use of nonstructural stormwater management practices. Better site design includes conserving and protecting natural areas and green space, reducing impervious cover, using natural features for stormwater management, and providing site-wide infiltration.

DEVELOPMENT: Any construction that disturbs or alters a parcel of land.

DISTURBANCE OF LAND: Any action causing removal of vegetation or a change in the position, location, elevation, or arrangement of soil, sand, rock, gravel or similar earth material.

IMPERVIOUS: Any material or structure on, above or below the ground that prevents water from infiltrating through the underlying soil. Impervious surface is defined to include, without limitation: paved surfaces (parking lots, sidewalks, and driveways), concrete, brick, stone, and roof tops.

INFILTRATION: The act of conveying surface water into the ground to permit groundwater recharge and the reduction of stormwater runoff from a project site.

LOW IMPACT DEVELOPMENT (LID): An ecosystem-based approach to land development and stormwater management that ensures that each development site is designed to protect, or restore, the natural hydrology of the site.

MASSACHUSETTS STORMWATER MANAGEMENT STANDARDS: The latest version as may be amended from time to time of the Stormwater Management Standards and accompanying Stormwater Handbook issued by the Department of Environmental Protection pursuant to authority under the Wetlands Protection Act, M.G.L. c. 131, § 40, and the Massachusetts Clean Waters Act, M.G.L .c. 21, §§ 26-53. The Stormwater Management Standards are incorporated in the Wetlands Protection Act Regulations, 310 CMR 10.05(6)(k) and the Water Quality Certification Regulations, 314 CMR 9.06(6)(a).

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) or MUNICIPAL STORM DRAIN SYSTEM: The system of conveyances designed or used for collecting or conveying stormwater, including any road with a drainage system, street, gutter, curb, inlet, piped storm drain, pumping facility, retention or detention basin, natural or man-made or altered drainage channel, reservoir, and other drainage structure that together comprise the storm drainage system owned or operated by the Town of Weston.

NONPOINT SOURCE POLLUTION: Pollution from many diffuse sources caused by rainfall, snowmelt, or other method of pollutant transport moving over and through the ground. As the runoff moves, it picks up and carries away natural and human-made pollutants, finally depositing them into water resource areas.

NORMAL MAINTENANCE: Activities that are regularly scheduled to maintain the health and condition of a landscaped area. Examples include removal of weeds or invasive species, pruning, mowing, raking, and other activities that are done at regular intervals within the course of a year.

PRE-DEVELOPMENT: The conditions that exist prior to the proposed disturbance activity. Where phased development or plan approval occurs (preliminary grading, roads and utilities, etc.), the existing conditions at the time prior to the first plan submission shall establish pre-development conditions.

POST-DEVELOPMENT: The conditions that reasonably may be expected or anticipated to exist after completion of the land development activity in accordance with approved plans on a specific site or tract of land. Post-development refers to the phase of a new development or redevelopment project after completion, and does not refer to the construction phase of a project.

RECHARGE: The replenishment of underground water reserves.

RECONSTRUCTION: Any action causing complete removal and replacement of paved surfaces, such as driveways, parking areas and roads.

REDEVELOPMENT: Any construction, alteration, improvement, repaving, or resurfacing on a previously-developed site.

RUNOFF: Rainfall or snowmelt water flowing over the ground surface or other source which may result in transport of pollutants.

SITE: The entire parcel of land being developed.

STOCKPILING: The storage of unsecured material for future use, excluding the storage of materials 10 cubic yards or less when secured utilizing erosion controls to prevent erosion of material.

STORMWATER MANAGEMENT: The use of structural or non-structural practices that are designed to control or treat stormwater runoff pollutant loads, discharge volumes, and/or peak flow discharge rates. Stormwater Management includes the use of Low-Impact Development (LID) management practices.

STORMWATER MANAGEMENT PERMIT (SMP): A permit issued by the Stormwater Permitting Authority (SWPA), after review of an application, plans, calculations, and other supporting documents, which is designed to protect the environment of the Town from the deleterious effects of uncontrolled and untreated stormwater runoff.

**Section III. Authority**

This By-Law is adopted under authority granted by the Home Rule Amendment of the Massachusetts Constitution and the Home Rule statutes, and pursuant to the regulations of the federal Clean Water Act found at 40 CFR 122.34., and as authorized by the residents of the Town of Weston at Town Meeting dated May 10, 2011

**Section IV. Applicability**

Where a project is subject to Site Plan Approval, Definitive Subdivision or Special Permit Approval from the Planning Board, the Stormwater Regulations adopted by the Planning Board shall apply and the stormwater review shall be completed as part of the Planning Board process provided that the Planning Board also finds that the activity is in compliance with any additional performance standards contained in the Regulations promulgated to implement this By-Law.

**A.** For projects not subject to Site Plan Approval, Definitive Subdivision or Special Permit Approval from the Planning Board, this By-Law shall be applicable to all new development and redevelopment, land disturbance and any other activity that may result in an increased amount of stormwater runoff or pollutants, or changes to drainage characteristics causing an increases in runoff, flowing from a parcel of land, unless exempt pursuant to Section V of this By-Law. This By-Law shall apply to land or parcels of land that are held in common ownership (including ownership by related or jointly-controlled persons or entities) as of the effective date of this By-Law, if the total land-disturbing activities on said land or parcels, considered as a whole, would presently or ultimately exceed the minimum thresholds in Section IV.B and are not exempted by Section V. A development shall not be segmented or phased in a manner to avoid compliance with this By-Law.

**B.** No Permit Required – For activities including, but not necessarily limited to, those listed below, no permit shall be required by the SWPA provided that erosion control measures are used and the activity will not result in an increased amount of stormwater runoff or pollutants flowing from a parcel of land and entering a traveled way or adjacent properties.

1. Land Disturbance not to exceed 5,000 square feet in area other than work described in Section IV.B.4 and Section IV.C.1.
2. The creation of new impervious area, or expansion of existing impervious area, not to exceed 750 square feet.
3. Repair, replacement or reconstruction of an existing driveway.
4. Restoration of existing lawn areas provided that any imported material is spread at a thickness no greater than four inches and the total imported material does not exceed 250 cubic yards.
5. The addition or on-site redistribution of up to 250 cubic yards of material.
6. Demolition of a structure provided that any land disturbance, including the area of the structure, does not exceed 5,000 square feet.

**C.** Storm Water Management Permit Thresholds - A Storm Water Management Permit shall be required for any of the following, except for an activity exempt per Section V:

1. Minor Permit

   a) The creation of new impervious area, or expansion of existing impervious area, greater than 750 square feet and not exceeding 2,500 square feet.
   b) Repair, replacement, expansion of septic systems provided the work does not exceed the thresholds in Section IV.C.2.d.
   c) The addition or on-site redistribution of more than 250 cubic yards, but not exceeding 500 cubic yards, of earth materials including, but not limited to, sand, gravel, stone, soil, loam, clay, sod, fill and mineral products.

2. Major Permit

   a) Construction of any new dwelling or new dwelling replacing an existing dwelling in conformance with Article VIII, Section V.B.1.a and Section V.C.1.a of the Weston Zoning By-Laws;
   b) Any land disturbance exceeding an area of 5,000 square feet, or more than 20% of a parcel or lot, whichever is less, other than activities described in section IV.B.4.
   c) Creation of new impervious surface area greater than 2,500 square feet.
   d) The addition or on-site redistribution of more than 500 cubic yards of earth materials including, but not limited to, sand, gravel, stone, soil, loam, clay, sod, fill and mineral products.
   e) Reconstruction of public or private way.
   f) Reconstruction or replacement of existing non-residential parking lots, including associated driveways, greater than 2,500 square feet.

**Section V. Exemptions**

Exemptions from this By-Law apply to the following activities, provided that a project is solely comprised of any one of these activities:

A. Normal maintenance and improvement of land in agricultural use as defined by the Wetlands Protection Act Regulations at 310 CMR 10.04 (“Agricultural”) and the conversion of additional land to agricultural use, when undertaken in such a manner as to prevent erosion and siltation through the use of Best Management Practices recommended by the U.S. Department of Agriculture Natural Resources Conservation Service or the Massachusetts Department of Agricultural

Resources.

B. Any work or projects for which all necessary approvals and permits were issued before the effective date of this By-Law.

C. Normal maintenance of existing landscaping, gardens or lawn areas

D. Construction of any fence that will not alter existing terrain or drainage patterns.

E. Construction of utilities (gas, water, sanitary sewer, electric, telephone, cable television, etc.) other than drainage which will not alter terrain, ground cover, or drainage patterns, so long as BMPs are used to prevent erosion, sedimentation and release of pollutants.

F. Emergency repairs to any existing utilities (gas, water, sanitary sewer, electric, telephone, cable television, etc.) and emergency repairs to any stormwater management facility that poses a threat to public health or safety, designated by the SWPA. Where such activity is subject to the jurisdiction of the Conservation Commission, the work shall not proceed without the issuance of an Emergency Certification by the Commission.

G. The maintenance or resurfacing (not including reconstruction) of any public or private way.

**Section VI. Administration**

**A.** The Board of Selectmen shall be the appointing authority for the Stormwater Permitting Authority. The Stormwater Permitting Authority is responsible for the administration, implementation, and enforcement of this By-Law. Meetings of the Stormwater Permitting Authority shall be subject to the Massachusetts Open Meeting Law, MGL Ch. 30A, §§ 18-25.

**B.** Stormwater Permitting Authority (SWPA). The SWPA shall consist of (5) five members, four of whom shall permanently be the Town Engineer, the Town Planner, the Conservation Administrator, and the Public Health Director. One (1) member shall be a resident of the Town of Weston and possess a degree in landscape architecture, environmental or civil engineering or environmental science appointed by the Board of Selectmen serving a (3) year term. The SWPA shall administer, implement and enforce this By-Law. Any powers granted to or duties imposed upon the SWPA may be delegated in writing by the SWPA to any Town employee, board or agent.

**C.** Stormwater & Erosion Control Regulations ("Regulations"). The SWPA may adopt, and periodically amend, rules and regulations relating to the terms, conditions, definitions, enforcement, fees (including application, inspection, and/or consultant fees), delegation of authority, procedures and administration of this By-Law after conducting a public hearing to receive comments on the proposed rules and regulations or any proposed revisions. Such hearing dates shall be advertised in a newspaper of general local circulation at least seven (7) days prior to the hearing date. Failure of the SWPA to promulgate such rules and regulations or a legal declaration of their invalidity by a court shall not act to suspend or invalidate the effect of this By-Law.

**D.** Massachusetts Stormwater Handbook

The SWPA will utilize the policy, criteria and information including specifications and standards of the most recent edition of the Massachusetts Stormwater Handbook for execution of the provisions of this By-Law. Unless otherwise specified in the Regulations, stormwater management practices that are designed, constructed, and maintained in accordance with these design and sizing criteria will be presumed to be protective of Massachusetts water quality standards.

**E.** Stormwater Management Permit

The SWPA shall have the authority to issue a Stormwater Management Permit (SMP) for projects exceeding the thresholds defined in Section IV.B. of this By-Law and not otherwise exempted by Section V. Requirements of the SMP may be defined and included within the Regulations promulgated pursuant to Section VI.C of this By-Law.

**F.** SWPA Approval Process.

1. Action by SWPA

a. Determination of Completeness: The SWPA shall review the application submission and issue a determination stating whether the application is complete and whether it complies with the Design Standards established in the Stormwater Rules and Regulations, as may be waived in accordance with Section 3.E. of this By-Law.

b. Incomplete Applications: If the SWPA determines the application is incomplete, including insufficient information to describe the site, the work, or the effect of the work on water quality and runoff volume, the SWPA may require the submission of additional information and/or disapprove the application and deny the Permit.

c. Applications deemed to be complete and in compliance with Design Standards. Each application for a Stormwater Management Permit that complies with the Regulations, and is determined to be a complete application by the SWPA shall be acted upon within thirty (30) days of the date of filing with the SWPA, unless such application has been withdrawn from consideration. The SWPA may:
   i. Approve the Permit Application upon finding that the proposed plan will protect water resources and meets the objectives and requirements of this By-Law;
   ii. Approve the Permit Application with conditions, modifications or restrictions that are required to ensure that the project will protect water resources and meets the objectives and requirements of this By-Law; or
   iii Disapprove the Permit Application if the proposed plan will not protect water resources or fails to meet the objectives and requirements of this By-Law.

d. Applications not in compliance with Design Standards.
   i. For applications where the SWPA has determined that the Design Standards are not met, the Applicant may appeal the determination and request a public hearing with the SWPA to consider the application or resubmit the application demonstrating compliance.
   ii. For applications where the Design Standards cannot be met due to site conditions or the applicant wishes to propose an alternative design not consistent with the Design Standards, the applicant may immediately request a public hearing with the SWPA.

2. Public Hearing Process

a. A public hearing is required for all Minor and Major Stormwater Management Permits (SMP) where design standards cannot be met. Minor Permits and Major Permits that meet design standards shall not require a public hearing. Public hearings shall be published in a newspaper of general circulation for two (2) consecutive weeks. The first publication date shall be published not less than fourteen (14) days before the day of the hearing. A copy of the hearing notice shall be posted in the Office of the Town Clerk for a period of not less than fourteen (14) days before the date of the hearing. Copies of the notice shall be mailed, postage prepaid, to the applicant, property owner (if different) and to direct abutters and owners of land directly opposite on a public or private way as they appear on the most recent Assessor's list.

b. The SWPA may take any of the following actions following the close of the public hearing for an application for a Stormwater Management Permit

i. Approve the Permit Application upon finding that the proposed plan will protect water resources and meets the objectives and requirements of this By-Law;
ii. Approve the Permit Application with conditions, modifications or restrictions that are required to ensure that the project will protect water resources and meets the objectives and requirements of this By-Law; or
iii. Disapprove the Permit Application if the proposed plan will not protect water resources or fails to meet the objectives and requirements of this By-Law.

**G.** Appeals of Action by the SWPA. A decision of the SWPA shall be final. Further relief of a decision by the *SWPA* made under this By-Law shall be to a court of competent jurisdiction.

**H.** Waivers. The SWPA may waive strict compliance with any of the requirement*s* of this By-Law or the rules and regulations promulgated hereunder, if it determines that some of the application requirements are unnecessary because of the size or character of the development project or because of the natural conditions at the site and where such action is:

1. Allowed by federal, state and local statutes and/or regulations,
2. In the public interest, and
3. Not inconsistent with the purpose and intent of this By-Law.

Any request from an Applicant for a waiver of these rules shall be submitted, in writing, to the SWPA at the time of submission of the application. Such requests shall clearly identify the provision/s of the rule from which relief is sought and be accompanied by a statement setting forth the reasons why, in the applicant's opinion, the granting of such a waiver would be in the public interest or the specific information required to show strict compliance is irrelevant to the project, and why a waiver would be consistent with the intent and purpose of this By-Law and the rules and regulations promulgated hereunder.

**Section VII. Performance Standards**

Criteria for Stormwater Management Standards shall be defined and included as part of any Rules and Regulations promulgated under Section VI.C of this By-Law.

**Section VIII. Enforcement**

**A.** The SWPA, or an authorized agent of the SWPA, shall enforce this By-Law, and any Regulations, permits orders, violation notices, and enforcement orders, and may pursue all civil and criminal remedies for violations.
**B.** If a person violates the provisions of this By-Law or its Regulations, or a permit, notice or order issued there under, the SWPA may seek injunctive relief in a court of competent jurisdiction to restrain the person from activities which would create further violations or to compel the person to perform abatement or remediation of the violation.
**C.** The SWPA, or an authorized agent of the SWPA, may issue a written order to enforce the provisions or this By-Law or the Regulations, which may include requirements to:

1. Cease and desist from land-disturbing activity until there is compliance with the By-Law or provisions of an approved Stormwater Management Permit;
2. Maintain, install or perform additional erosion and sediment control measures;
3. Perform monitoring, analyses, and reporting;
4. Remediate erosion and sedimentation resulting directly or indirectly from land-disturbing activity;

5. Comply with requirements in the Stormwater Management Permit for operation and maintenance of stormwater management systems; and,
6. Remediate adverse impacts resulting directly or indirectly from malfunction of the stormwater management systems.

If the SWPA or its authorized agent determines that abatement or remediation is required, the order shall set forth a deadline by which such abatement or remediation must be completed.

**D.** Criminal Penalties. Any person who violates any provisions of this By-Law, regulation, order or permit issued hereunder, shall be punished by a fine of not more than $300. Each day a violation exists shall constitute a separate violation.

**E.** Non-Criminal Disposition. As an alternative to criminal prosecution or civil action, the Town may utilize the non-criminal disposition procedure set forth in M.G.L. Ch. 40, §21D and Article V of the Town By-Laws, in which case any police officer of the Town of Weston, the Town Engineer, and such other persons as are authorized by the SWPA shall be the enforcing person. If non-criminal disposition is used, any person who violates any provision of this By-Law, regulation, order or permit issued thereunder, shall be punished as follows:

1. First Violation: Warning
2. Second violation: $100
3. Third violation: $200
4. Fourth and subsequent violations: $300
5. Each day a violation exists shall constitute a separate violation

**F.** Remedies Not Exclusive. The remedies listed in this By-Law are not exclusive of any other remedies available to the SWPA or the Town under any applicable federal, state or local law.

**Section IX. Severability**

The invalidity of any section, provision, paragraph, sentence, or clause of this By-Law shall not invalidate any section, provision, paragraph, sentence, or clause thereof, nor shall it invalidate any permit or determination that previously has been issued.

**Section X. Effective Date**

This By-Law shall take effect on October 1, 2011, provided that all other requirements of G.L. c.40, §32 have been met.

# Town of Weston

# Stormwater & Erosion Control Regulations*

**Approved November 28, 2011**
**Revised March 14, 2012**

*** Approved by the Stormwater Permitting Authority (SWPA) in accordance with Article XXVII – Stormwater and Erosion Control By-Law, Section VI.C.**

## 1.0 PURPOSE

The purpose of these Stormwater and Erosion Control (Regulations) is to protect, maintain and enhance the public health, safety, environment, and general welfare by establishing minimum requirements and procedures to control the adverse effects of soil erosion and sedimentation, construction site runoff, increased post-development stormwater runoff, decreased groundwater recharge, and nonpoint source pollution associated with new development, redevelopment and other land alterations, as more specifically addressed in the Stormwater and Erosion Control By-Law (By-Law) of the Town of Weston.

## 2.0 DEFINITIONS

The definitions contained herein apply to issuance of a Stormwater Management Permit (SMP) established by the Town of Weston Stormwater and Erosion Control By-Law and implemented through these Regulations. Terms not defined in this section shall be construed according to their customary and usual meaning unless the context indicates a special or technical meaning.

All definitions are provided in the Appendix A of the Regulations.

## 3.0 AUTHORITY

A. The Rules and Regulations contained herein have been adopted by the Stormwater Permitting Authority (SWPA) in accordance with the Stormwater and Erosion Control By-Law.

B. Nothing in the Stormwater and Erosion Control By-Law or these Regulations is intended to replace the requirements of the Town of Weston Zoning By-Law, the Town of Weston General By-Law, any other By-Law that may be adopted by the Town of Weston, or any Rules and Regulations adopted there under. Any activity subject to the provisions of the above-cited By-Laws or Rules and Regulations must comply with the specifications of each.

C. These Stormwater and Erosion Control Regulations may be periodically amended by the SWPA in accordance with the procedures outlined in Section VI.C of the Town of Weston Stormwater and Erosion Control By-Law.

D. The SWPA may review and recommend revisions to the fee schedule periodically as it sees fit.

E. Waivers. The SWPA may waive strict compliance with any of the requirements of this By-Law or the rules and regulations promulgated hereunder, if it determines that some of the application requirements are unnecessary because of the size or character of the development project or because of the natural conditions at the site and where such action is:

1. Allowed by federal, state and local statutes and/or,
2. In the public interest, and
3. Not inconsistent with the purpose and intent of the Town of Weston Stormwater Management By-Law.

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 these Regulations does not further the purposes or objectives of the By-Law and these Regulations.

## 4.0 APPLICABILITY

These Regulations apply to all activities subject to the Applicability Section of the Stormwater and Erosion Control By-Law. Projects and/or activities not specifically under the currently regulated jurisdiction of any of the Town of Weston boards, commissions or departments but still within the jurisdiction of the Town of Weston Stormwater and Erosion Control By-Law must obtain a Stormwater Management Permit from the SWPA in accordance with the permit procedures and requirements defined in Sections 5.0 through 7.0 of these Regulations.

No work may commence without written approval of the SWPA or its designee, confirming that the project or activity is in compliance with the Design Standards of these Regulations.

## 5.0 APPLICATION PROCEDURES FOR STORMWATER MANAGEMENT PERMITS

### A. Permit Required

1. Projects that exceed the thresholds for a SMP shall require a Stormwater Management Permit in accordance with Section IV. of the By-Law.

2. Permit issuance is required prior to any site altering activity.

### B. Fees

1. The SWPA shall obtain with each submission an application fee to be collected at the time of application according to the Fee Schedule as approved by the Board of Selectmen.

### C. Filing Application

1. Applications for a Stormwater Management Permit (SMP) shall include the materials as specified in this section and must meet the Design Standards as specified in these Regulations. The applicant shall file with the SWPA one (1) original completed application package for a Stormwater Management Permit (SMP); two (2) paper copies of the the plans and one (1) electronic copy of the application package in PDF format.

   Additional copies may be requested by the SWPA. The applicant may be a representative of the Owner; the Owner must sign the application. The SMP Application submission requirements for Minor Permits and Major Permits shall be as follows:

2. Minor Permit Submission Requirements
   a. A completed Stormwater Management Permit Application Form with original signatures of all owners.
   b. Project Narrative that includes a description of the proposed project and description of how and where stormwater will be controlled and erosion and sediment controls to be implemented.
   c. Payment of the application and review fees.
   d. Stormwater Management Site Plan may be prepared by drafting or hand sketching and show at a minimum the entirety of the parcel and location of physical features.
      i. General Information
         1. The original drawing of the Plan; one set of drawings at a legible scale and a drawing size of not more than 24”x36”, and one electronic copy.
         2. Name and address of record owner and if applicable the name and address of the engineer or surveyor.
         3. Address of property, Assessor Map and Parcel ID.
      ii. Existing Conditions Plan.
         1. The site’s existing topography with contours at 2 foot intervals for work area.
         2. Locations of bodies of water, including wetlands.
         3. Location of existing septic systems and private wells if infiltration systems are proposed.
         4. Locations of existing buildings, driveways, walls, etc.
      iii. Proposed Conditions Plan.
         1. Proposed grading plan for work area.
         2. Proposed improvements including location of buildings or other structures, impervious surfaces, utilities, and easements, if applicable.
         3. Proposed drainage facilities, if applicable (plan view and details).
         4. Areas of soil disturbance and areas that will not be disturbed.
         5. Locations of soil testing including test pits, groundwater determinations, and percolation tests with the soil logs and percolation testing results, and/or other soil testing procedures.
      iv. Erosion and Sediment Control Plan.
         1. Locations of all structural and nonstructural erosion and sediment control measures and BMPs.
         2. Locations where stabilization practices are expected to occur.
         3. Locations for storage of materials, waste, vehicles, equipment, soil, snow and other potential pollutants.
         4. Areas where final stabilization has been accomplished and no further construction-phase permit requirements apply.

e. Any other information requested by the SWPA.

3. Major Permit Submission Requirements
   a. A completed Stormwater Management Permit Application Form with original signatures of all owners, including indication whether a public hearing is requested.
   b. Project Narrative that includes a description of the proposed project and description of how and where stormwater will be controlled and erosion and sediment controls to be implemented.
   c. Payment of applicable application and review fees.
   d. Stormwater Management Site Plan prepared as follows:
      i. General Information
         1. The original drawing of the Plan; dark lines on white background; one set of drawings at a scale of not less than 1"=30' and a drawing size of not more than 24"x36", and one electronic copy. Coordinate system shall be 1983 North American Datum, Massachusetts State Plane, feet, and North American Vertical Datum (NAVD) of 1988.
         2. Name and address of record owner and engineer or surveyor.
         3. Address of property, Assessor Map and Parcel ID.
         4. A locus map.
      ii. Existing Conditions Plan
         1. The existing zoning, and land use at the site and abutting properties.
         2. The location(s) of existing easements.
         3. The location of existing utilities.
         4. The site's existing topography with contours at 2 foot intervals.
         5. Locations of bodies of water, including wetlands.
         6. Location of existing septic systems and private wells if infiltration systems are proposed.
      iii. Proposed Conditions Plan
         1. Proposed grading.
         2. Proposed improvements including location of buildings or other structures, utilities, easements if applicable, and impervious surfaces.
         3. Proposed drainage facilities, if applicable (plan view and details).
         4. Areas of soil disturbance and areas that will not be disturbed.
         5. Locations of soil testing including test pits, groundwater determinations, and percolation tests with the soil logs and percolation testing results, and/or other soil testing procedures.
         6. Notes indicating the required inspection for the site and the stormwater drainage facilities.
      iv. Erosion and Sediment Control Plan

1. Locations of all structural and nonstructural erosion and sediment control measures and BMPs.
2. Locations where stabilization practices are expected to occur.
3. Locations for storage of materials, waste, vehicles, equipment, soil, snow and other potential pollutants.
4. Locations where stormwater discharges to surface water (include all roads, drains and other structures that could carry stormwater to a wetland or other water body, on or offsite).
5. Areas where final stabilization has been accomplished and no further construction-phase permit requirements apply.
6. Erosion control notes applicable to the project.

v. A description & delineation of existing stormwater conveyances, impoundments, wetlands, drinking water resource areas, swimming beaches or other critical environmental resource areas on or adjacent to the site or into which stormwater flows.

vi. A delineation of FEMA Special Flood Hazard areas, if applicable.

vii. Estimated seasonal high groundwater elevation in areas to be used for stormwater retention, detention, or infiltration.

viii. The existing and proposed vegetation and ground surfaces with runoff coefficients for each.

ix. Drawings of all components of the proposed stormwater management 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 stormwater management facilities.
5. Notes on drawings specifying materials to be used, and construction specifications.

x. Soils Information from test pits performed at the location of proposed stormwater management facilities, including but not limited to soil descriptions, depth to seasonal high groundwater, depth to bedrock, and percolation rates. Soils information will be based on site test pits logged by a Massachusetts Registered Soil Evaluator.

xi. Landscaping plan describing the woody and herbaceous vegetative stabilization and management techniques to be used within and adjacent to the stormwater practice.

xii. Stamp and signature of a Professional Engineer (PE) licensed in the Commonwealth of Massachusetts to certify that the Stormwater Management Plan is in accordance with the criteria established in the Stormwater

Regulations; a stamp and signature of a Professional Land Surveyor (PLS) is acceptable if no drainage facilities are proposed and they have the experience and capability to prepare the required Site Plan and to provide the required existing and proposed grading, and erosion control provisions.

e. Stormwater Management Plan Report

A Stormwater Management Plan Report shall be prepared in conformance with the Design Standards contained in Section 7.A and contain the following elements:

i. The existing site hydrology.

ii. A drainage area map showing pre and post construction watershed boundaries, drainage area and stormwater time of concentration (Tc) flow paths, including municipal drainage system flows.

iii. Hydrologic and hydraulic design calculations for the pre-development and post-development conditions for the design storms specified in this Regulation. Such calculations shall include:

1. Description of the design storm frequency, intensity and duration.
2. Time of concentration;
3. Soil Runoff Curve Number (CN) based on land use and soil hydrologic group.
4. Peak runoff rates and total runoff volumes for each watershed area.
5. Information on construction measures used to maintain the infiltration capacity of the soil where any kind of infiltration is proposed.
6. Infiltration rates, where applicable.
7. Culvert capacities.
8. Flow velocities.
9. Data on the increase in rate and volume of runoff for the specified design storms.
10. Documentation of sources for all computation methods and field test results.

iv. Post-Development downstream analysis if deemed necessary by the SWPA.

f. Erosion and Sediment Control Report

An Erosion and Sediment Control Report shall be prepared in conformance with the Design Standards contained in Section 7.B and contain the following:

i. Estimates of the total area expected to be disturbed by excavation, grading, or other construction activities, including dedicated off-site borrow and fill areas.

ii. All pollution control measures (structural and non-structural BMPs) that will be implemented as part of the construction activity to control pollutants in storm water discharges. Appropriate control measures must be identified for

each major construction activity and the operator responsible for the implementation of each control measure must also be identified.

iii. The intended sequence and timing of activities that disturb soils at the site and the general sequence during the construction process in which the erosion and sediment control measures will be implemented.

iv. Structural practices to divert flows from exposed soils, retain/detain flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Placement of structural practices in floodplains must be avoided to the degree practicable.

v. Interim and permanent stabilization practices for the site, including a schedule of when the practices will be implemented. Site plans should ensure that existing vegetation is preserved where possible and that disturbed portions of the site are stabilized. Use of impervious surfaces for stabilization should be avoided.

vi. Construction and waste materials expected to be stored on-site with updates as appropriate, including descriptions of controls, and storage practices to minimize exposure of the materials to stormwater, and spill prevention and response practices.

vii. Measures to minimize, to the extent practicable, off-site vehicle tracking of sediments onto paved surfaces and the generation of dust.

viii. Measures to prevent the discharge of solid materials, including building materials, to waters of the United States, except as authorized by a permit issued under Section 404 of the CWA.

ix. Pollutant sources from areas other than construction and a description of controls and measures that will be implemented at those sites to minimize pollutant discharges.

x. Proposed dewatering operations including proposed locations of discharge.

xi. An Operation and Maintenance Schedule for structural and non-structural measures, interim grading, and material stockpiling areas.

g. Operation and Maintenance Plan

i. The O&M Plan shall be designed to ensure compliance with the Permit, the By-Law and these Regulations and that the Massachusetts Surface Water Quality Standards, 314, CMR 4.00 are met in all seasons and throughout the life of the system. The O&M Plan shall be a stand-alone document, and shall remain on file with the SWPA and shall be an ongoing requirement. To ensure that all BMPs continue to function as designed a final O&M Plan shall be submitted prior to issuance of a Certificate of Completion and reflect any modifications made during the permitting process and the site specific conditions.

ii. The Operation and Maintenance Plan shall include, at a minimum:

1. The name(s) of the owner(s) for all components of the system.
2. The signature(s) of the owner(s).

3. The names and addresses of the person(s) responsible for operation and maintenance; if responsibility is contracted to a third party, a copy of the maintenance agreement(s) must be provided.
4. A plan or map showing the location of the systems and facilities including easements, catch basins, manholes/access lids, main, and stormwater devices.
5. An Inspection and Maintenance Schedule for all stormwater management facilities including routine and non-routine maintenance tasks to be performed.
6. A list of easements with the purpose and location of each. Easements shall be recorded with the Middlesex South District Registry of Deeds prior to issuance of a Certificate of Completion by the SWPA.
7. Provisions for the SWPA or its designee to enter the property at reasonable times and in a reasonable manner for the purpose of inspection.
8. Any other information required by the SWPA.

iii. O&M Plan shall apply to the entire project site, not just the disturbance area.

iv. At a minimum, inspections shall occur during the first year of operation and in accordance with the operation and maintenance plan in the approved stormwater management permit.

v. The owner of the property shall maintain a log of all operation and maintenance activities, including without limitation, inspections, repairs, replacement and disposal (for disposal, the log shall indicate the type of material and the disposal location). This log shall be made available to the MassDEP and the SWPA upon request.

vi. Inspection reports shall be submitted to and maintained by the SWPA for all stormwater management systems. Inspection reports for stormwater management systems shall include:

1. The date of inspection.
2. Name of inspector.
3. The condition of each BMP, including components such as:
    a. Pretreatment devices.
    b. Vegetation or filter media.
    c. Fences or other safety devices.
    d. Spillways, valves, or other control structures.
    e. Embankments, slopes, and safety benches.
    f. Reservoir or treatment areas.
    g. Inlet and outlet channels and structures.
    h. Underground drainage.

i. Sediment and debris accumulation in storage and forebay areas (including catch basins).

j. Any nonstructural practices.

k. Any other item that could affect the proper function of the stormwater management system.

4. Description of the need for maintenance.

vii. Changes to Operation and Maintenance Plans: The owner(s) of the stormwater management system must notify the SWPA of changes in ownership or assignment of financial responsibility.

viii. The SWPA may require recordation of the O&M Plan depending on the complexity of the systems installed.

h. Any other information required by the SWPA.

## 6.0 ADMINISTRATION

### A. Administration of Rules and Regulations

The SWPA shall administer, implement and enforce these Regulations. The SWPA may designate in writing any authorized Town employee, board or agent for the purposes of reviewing stormwater submittals and issuing stormwater permits. Any Town employee, board or agent so designated by the SWPA shall be defined as the "Reviewing Agent."

When a Reviewing Agent is designated by the SWPA, as outlined above, the Applicant shall submit all Stormwater Management Permit application submittals in compliance with these Regulations to the Reviewing Agent.

The Reviewing Agent will review the submittal for compliance with the requirements and standards of Section 5 through 7.0 of these Regulations. If the proposed project complies with these Regulations, the Reviewing Agent shall grant a Stormwater Management Permit, in addition to any other approval or permit it may grant.

The Reviewing Agent shall notify the SWPA of all Stormwater Management Permits it approves. Both the SWPA and the Reviewing Agent shall have authority to enforce the Stormwater and Erosion Control By-Law and these Regulations.

### B. Entry

Filing an application for a permit grants the SWPA, its Reviewing Agent, or designee as specified in these Regulations, permission to enter the site throughout the term of the permit to verify the information in the application and to inspect for compliance with the resulting permit.

### C. SWPA Approval Process

1. Action by SWPA

a. Determination of Completeness: The SWPA shall review the application submission and issue a determination stating whether the application is complete within 5 business days.

b. Incomplete Applications: If the SWPA determines the application is incomplete, including insufficient information to describe the site, the work, or the effect of the work on water quality and runoff volume, the SWPA may require the submission of additional information and/or disapprove the application and deny the Permit.

c. Complete Applications. Each application for a Stormwater Management Permit that is determined to be a complete application shall be reviewed by the SWPA for compliance with the Stormwater By-Law. The application shall be acted upon within thirty (30) days of the date of filing of a complete application with the SWPA, unless such application has been withdrawn from consideration. The SWPA may:

   i. Approve the Permit Application upon finding that the proposed plan will protect water resources and meets the objectives and requirements of this By-Law;

   ii. Approve the Permit Application with conditions, modifications or restrictions that are required to ensure that the project will protect water resources and meets the objectives and requirements of this By-Law; or

   iii. Deny the Perm it Application due to non-compliance with Design Standards.

d. Applications not in compliance with Design Standards.

   i. For applications where the SWPA has determined that the Design Standards are not met, the Applicant may appeal the determination and request a public hearing with the SWPA to consider the application or resubmit the application demonstrating compliance.

   ii. For applications where the Design Standards cannot be met due to site conditions or the applicant wishes to propose an alternative design not consistent with the Design Standards, the applicant may immediately request a public hearing with the SWPA.

2. Public Hearing Process

a. A public hearing is required for all Minor and Major Stormwater Management Permits (SMP) where design standards cannot be met. Minor Permits and Major Permits that meet design standards shall not require a public hearing.

b. Applicants requesting a Public Hearing shall submit an Application for Stormwater Management Permit (SMP) Public Hearing with the SWPA. Applications for a public hearing shall include the materials as specified in Section 5.0 and include a statement on how compliance with the Design Standards as specified in Section 7.0 cannot be met or alternatively a statement of determination of noncompliance prepared by the SWPA. The applicant shall file with the SWPA, one (1) original completed application package for a Stormwater Management Permit (SMP); two (2) paper copies of the plans and one (1) electronic copy of the application package in PDF format.

c. Public hearings shall be published in a newspaper of general circulation for two (2) consecutive weeks. The first publication date shall be published not less than fourteen (14) days before the day of the hearing. A copy of the hearing notice shall

be posted in the Office of the Town Clerk for a period of not less than fourteen (14) days before the date of the hearing. Copies of the notice shall be mailed, postage prepaid, to the applicant, property owner (if different) and to direct abutters and owners of land directly opposite on a public or private way as they appear on the most recent Assessor's list.

d. The SWPA may take any of the following actions following the close of the public hearing for an application for a Stormwater Management Permit

   i. Approve the Permit Application upon finding that the proposed plan will protect water resources and meets the objectives and requirements of this By-Law;

   ii. Approve the Permit Application with conditions, modifications or restrictions that are required to ensure that the project will protect water resources and meets the objectives and requirements of this By-Law; or

   iii. Disapprove the Permit Application if the proposed plan will not protect water resources or fails to meet the objectives and requirements of this By-Law.

## D. Deadline for Action

Failure of the SWPA to take final action upon an application within 30 calendar days of receipt of a complete application shall be deemed to be approval of said application, unless extension of said deadline date is mutually agreed upon in writing by the SWPA and the applicant. Upon certification by the Town Clerk that the allowed time has passed without SWPA action, the SWPA must issue a Stormwater Management Permit. For applications requiring a public hearing, the public hearing shall be held within 45 days of the Date of Submission of the Application for SMP Public Hearing. The SWPA shall file a decision within 60 days of the receipt of the Application for Public Hearing.

## E. Plan Changes

The Applicant must notify the SWPA in writing of any drainage change or alteration in the system authorized in a Stormwater Management Permit before any change or alteration is made. If the SWPA determines that the change or alteration is significant, based on the Stormwater Management Standards in Section 7.0 of these Regulations and accepted construction practices, the SWPA may require that an amended application be filed.

## F. Appeals of Actions of the SWPA

A decision of the SWPA shall be final. Further relief of a decision by the SWPA made under these Regulations shall be reviewable in a court of competent jurisdiction of an action filed within sixty (60 days) thereof, in accordance with M.G.L. Ch 249. § 4. An appeal of an action by a board, commission or department that has current regulatory authority for a project and/or activity shall be conducted under the applicable appeal provisions of said board, commission and/or department of the Town of Weston. Such an appeal shall result in revocation of the written approval as described in these Regulations, until such time as the appeal process of the applicable board, commission and/or department has been resolved.

### G. Project Delay

Should a land-disturbing activity associated with an approved plan in accordance with this Section not begin within12 months following permit issuance, the SWPA may evaluate the existing stormwater management plan to determine whether the plan still satisfies local program requirements and to verify that all design factors are still valid. If the SWPA finds the previously filed plan to be inadequate, a modified plan shall be submitted and approved prior to the commencement of land-disturbing activities. If the project associated with an approved Stormwater Management Permit granted under the By-Law has not been substantially completed within three (3) years of permit issuance, a new permit or a permit extension will be required by the SWPA.

### H. Project Completion

For all Permits, as determined by Section IV.C.1 and 2. of the By-Law, at the completion of the project the Applicant shall request a Certificate of Completion from the SWPA pursuant to the requirements of Section 9 of these Regulations. The SWPA will issue a letter certifying completion upon review and approval of the final inspection reports and/or upon otherwise determining that all work of the permit has been satisfactorily completed in conformance with the By-Law.

## 7.0 DESIGN STANDARDS

### A. Stormwater Management Design and Performance Criteria

1. At a minimum all projects subject to a Stormwater Management Permit (SMP) shall comply with the performance standards of the most recent version of Massachusetts Stormwater Standards and accompanying Stormwater Management Handbook, as well as the criteria contained herein. The following criteria shall be used in the submittal of an application for a Stormwater Management Permit under the Town of Weston By-Laws:

    a. The design of the project shall, to the maximum extent feasible, employ environmentally sensitive site design as outlined in the DEP handbook and shall attempt to reproduce natural hydrologic conditions with respect to ground and surface waters.

    b. Consideration of Low Impact Development practices is required and implementation of such practices is encouraged and preferred, to the maximum extent practicable and where it provides a substantially equivalent alternative. Guidance on these practices is provided in Appendix B of these Regulations and the MA Stormwater Management Handbook.

    c. The water quality volume for sizing of BMPs shall be based on 1-inch of runoff from the tributary area.

    d. Stormwater Management systems designed to accept runoff from impervious areas, e.g., infiltration devices for roof and driveway runoff, shall be sited in acceptable areas on the property and shall be evaluated on the basis of the following criteria.

e. Projects are to be designed such that the peak rates of stormwater runoff and volumes in the post development conditions are less than in the pre-development conditions (See #2 below).

2. Design for mitigation of peak stormwater runoff rates:

a. A hydrologic analysis using TR-55/TR-20 methodology or other acceptable analysis method shall be performed on the entire project site and include any off site areas that drain to or through the project site.

i. The analyses shall be conducted for the 1 inch, and the 2, 10, 25 and 100-year design storms under pre-development and post-development conditions. The 24-hour rainfall amounts for the 2, 10, 25 and 100 year storms are to be based on the Northeast Regional Climate Center "Atlas of Precipitation Extremes for the Northeastern United States and Southeastern Canada." For Weston, the 24 hr. rainfall amounts are as follows (rounded to the nearest one-tenth of an inch):

1. 2 yr. - 24 hr. event = 3.2 inches
2. 10 yr. - 24 hr. event = 4.7 inches
3. 25 yr. - 24 hr. event = 6.0 inches
4. 100 yr.- 24 hr. event = 8.5 inches
5. 1-inch - 24 hr. event = 1.0 inches

ii. The analysis is to be performed on a pre-development and post development sub-watershed basis with designated control points at each location where runoff leaves the site.

iii. The same land area shall be used in the analysis to facilitate comparison of pre- development and post development conditions.

iv. The total volume of discharge as well as peak rate of runoff shall be evaluated at each control point. The analysis must demonstrate that the design achieves a net reduction of volume and peak flow rate in all design storms when comparing existing with proposed conditions.

b. Stormwater infiltration systems may be needed to provide stormwater storage to mitigate peak stormwater runoff and volume in the proposed conditions to be less than the peak runoff in the existing conditions.

i. Infiltration systems must be located 2 feet above high ground water and be constructed in an area surrounded by existing pervious material to ensure drainage from the proposed drainage structures.

ii. High ground water and depth of pervious material must be established on the site by a Licensed Soil Evaluator prior to the construction of any drainage structures which discharges through infiltration.

iii. Systems must be designed so that inspection and maintenance can be readily performed.

3. Roadway Reconstruction Standards

All public/private roadway projects must provide a net improvement to stormwater conditions, either in the area of disturbance or to other areas on the site. The SWPA may require improvements to areas outside of disturbance activity where known problems exist and reasonable solutions are available. Such opportunities might include:

a. Reduce impervious surfaces
b. Implement source controls of potential stormwater pollutants on the entire site
c. Reroute drainage to maximize treatment efficiencies
d. Update/Prepare Operation and Maintenance plans and procedures for the roadway.

### B. Erosion and Sediment Control Design and Performance Criteria

Approval of an Erosion and Sediment Control Plan by the SWPA is required prior to any site altering activity. The plan shall be designed to ensure compliance with the Permit, these Regulations, and if applicable, the NPDES General Permit for Storm Water Discharges from Construction Activities. In addition, the plan shall ensure that the Massachusetts Surface Water Quality Standards (314 CMR 4.00) are met in all seasons. The applicant shall submit such material as is necessary to show that the proposed development will comply with the design requirements.

1. If a project requires a Stormwater Pollution Prevention Plan (SWPPP) per the NPDES General Permit for Storm Water Discharges from Construction Activities (applicable to construction sites that disturb one or more acres of land), then the Applicant is required to submit a complete copy of the SWPPP (including the signed Notice of Intent and approval letter) as part of its application for a SMP. If the SWPPP meets the requirements of the NPDES General Permit, it will be considered equivalent to the Erosion and Sediment Control Plan described in this Section.
2. The Erosion and Sediment Control Plan shall be designed to meet the following criteria and guidelines.

a. Minimize total area of disturbance and minimize unnecessary clearing and grading from all construction sites. Clearing and grading shall only be performed within areas needed to build the project, including structures, utilities, roads, recreational amenities, post-construction stormwater management facilities, and related infrastructure.

b. Erosion and Sediment Control measures used shall be chosen based on the goal of minimizing site disturbance from installation of such measures, such as the use of filter mitts where appropriate.

## 8.0 INSPECTIONS

### A. Construction Commencement

1. Pre-Construction Meeting

The SWPA may require a pre-construction meeting prior to starting clearing, excavation, construction or land disturbing activity by the Applicant. The Applicant's technical representative, the general contractor or any other person with authority to make changes to the project, shall meet with the SWPA or its representative to review construction sequencing and the permitted plans and their implementation.

2. Notice of Construction Commencement

   The applicant must notify the SWPA two (3) days prior to the commencement of construction. In addition, the applicant must notify the SWPA two (3) days prior to construction of critical components of any stormwater management facility.

3. A copy of the approved and signed plans and permits for a SMP shall be kept on the construction site at all times.

4. The SWPA or its designee shall be granted the right to enter the property at reasonable times and in a reasonable manner for the purpose of inspection. The SWPA, its agents, officers, and employees shall have authority to enter upon privately owned land for the purpose of performing their duties under this Regulation and may make or cause to be made such examinations, surveys, or sampling as the SWPA deems necessary, subject to the constitutions and laws of the United States and the Commonwealth.

## B. Construction Inspections

The SWPA may require the submission of periodic inspections and reporting by the Applicant as dictated by site conditions.

1. The SWPA may inspect the project site at the following stages, at a minimum:

   a. Initial Site Inspection of erosion and sedimentation controls prior to any land disturbance to assess overall effectiveness and functioning to protect resources

   b. Stormwater Management System Excavation Inspection: An inspection will be made of the excavation of the stormwater management system to insure depth to ground water and presence of approved soil type.

   c. Stormwater Management System Inspection: An inspection will be made of the completed stormwater management system, prior to backfilling of any underground drainage or stormwater conveyance structures.

   d. Final Inspection

      i. After the stormwater management system has been constructed, all applicants are required to submit actual "as built" plans for any stormwater management facilities or practices after final construction is completed. As-built plans must be submitted both in hard copy and electronically as either AutoCAD drawings or PDF documents.

      ii. The SWPA shall inspect the system to confirm its "as-built" features. . If the inspector finds the system to be adequate he/she shall so report to the SWPA which will issue a Certificate of Completion.

e. Notes indicating the required inspections are to be added to the Site Plan(s).

## 9.0 CERTIFICATE OF COMPLETION

**A.** Prior to the issuance of a Certificate of Completion, the SWPA may require the applicant to submit the following material to the SWPA demonstrating that the completed project is in accordance with the approved plans and specifications:

1. As-built plan. For projects designed by a registered professional engineer, the SWPA may require the as-built plan to be prepared and stamped by the design engineer.
2. Documentation on compliance with all permit conditions
3. All Inspection reports as required during construction have been submitted, if applicable
4. Final Operation & Maintenance Plan, if applicable
5. Maintenance contracts in place, if applicable
6. Stormwater Management Permit has been recorded at Registry of Deeds, if applicable

**B.** Upon receipt and approval of the final inspection and reports and/or upon otherwise determining that all work of the permit has been satisfactorily completed in conformance with this Regulation, the SWPA shall issue a letter certifying completion in conformance with this Regulation.

## 10.0 ENFORCEMENT

Enforcement powers of the SWPA are granted in the Stormwater and Erosion Control By-Law, Section VIII.

**A.** The SWPA shall enforce the By-Law, Regulations, orders, violation notices, and enforcement orders, and may pursue all civil, criminal and non-criminal remedies for such violations.

**B. Notices and Orders**

1. The SWPA may issue a written notice of violation or enforcement order to enforce the provisions of the By-Law or the Regulations thereunder, which may include requirements to:

   a. Cease and desist from construction or land disturbing activity until there is compliance with the By-Law and the Stormwater Management Permit.

   b. Repair, maintain; or replace the stormwater management system or portions thereof in accordance with the operation and maintenance plan.

   c. Perform monitoring, analyses, and reporting.

d. Fix adverse impact resulting directly or indirectly from malfunction of the stormwater management system.

2. If the SWPA determines that abatement or remediation of adverse impacts is required, the order may set forth a deadline by which such abatement or remediation must be completed. Said order may further advise that, should the violator or property owner fail to abate or perform remediation within the specified deadline, the Town of Weston may, at its option, undertake such work, and the property owner shall reimburse the Town of Weston for expenses incurred.

3. Within thirty (30) days after completing all measures necessary to abate the violation or to perform remediation, the violator and the property owner shall be notified of the costs incurred by the Town of Weston including administrative costs. The violator or property owner may file a written protest objecting to the amount or basis of costs with the SWPA 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 SWPA 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 provided in G.L. Ch. 59, § 57, after the thirty-first day at which the costs first become due.

**C.** Any person who violates any provision of the Town of Weston Stormwater Management By-Law, or Regulations, order or permit issued there under, may be ordered to correct the violation and/or shall be punished by a fine of not more than $300. Each day or part thereof that such violation occurs or continues shall constitute a separate offense.

**D. Non-Criminal Disposition**

As an alternative to criminal prosecution or civil action, the Town of Weston may elect to utilize the non-criminal disposition procedure set forth in G.L. Ch. 40, §21D. The following shall be the fines applicable to the listed offenses:

| | |
|---|---|
| First violation: | Warning |
| Second violation: | $100 |
| Third violation: | $200 |
| Fourth and subsequent violation: | $300 |

Each day or part thereof that such violation occurs or continues shall constitute a separate offense.

**F. Remedies Not Exclusive**

The remedies listed in the By-Law and these Regulations are not exclusive of any other remedies available under any applicable federal, state or local law.

## 11.0 SEVERABILITY

The invalidity of any section, provision, paragraph, sentence, or clause of these Regulations shall not invalidate any other section, provision, paragraph, sentence, or clause thereof, nor shall it invalidate any permit or determination that previously has been issued.

**Town of Weston**
***Stormwater Regulations***
**APPENDICES**

## APPENDIX A: DEFINITIONS

ALTER: Any activity that will measurably change the ability of a ground surface area to absorb water, will change existing surface drainage patterns, or will increase or decrease the rate or volume of flow from a site.

APPLICANT: A property owner or agent of a property owner who has filed an application for a Stormwater Management Permit.

BEST MANAGEMENT PRACTICE (BMP): Structural, non-structural and managerial techniques that are recognized to be the most effective and practical means to prevent and/or reduce increases in stormwater volumes and flows, reduce point source and nonpoint source pollution, and promote stormwater quality and protection of the environment. "Structural" BMPs are devices that are engineered and constructed to provide temporary storage and treatment of stormwater runoff. "Nonstructural" BMPs use natural measures to reduce pollution levels, do not require extensive construction efforts, and/or promote pollutant reduction by eliminating the pollutant source.

CERTIFICATE OF COMPLETION (COC): A document issued by the Stormwater Permitting Authority after all construction activities have been completed which states that all conditions of an issued Stormwater Management Permit (SMP) have been met and that a project has been completed in compliance with the conditions set forth in a SMP.

CONVEYANCE: Any structure or device, including pipes, drains, culverts, curb breaks, paved swales or man-made swales of all types designed or utilized to move or direct stormwater runoff or existing water flow.

DEVELOPER: A person who undertakes or proposes to undertake land disturbance activities.

DEVELOPMENT: Any construction that disturbs or alters a parcel of land.

DISTURBANCE OF LAND: Any action causing removal of vegetation or a change in the position, location, or arrangement of soil, sand, rock, gravel or similar earth material.

DRAINAGE EASEMENT: A legal right granted by a landowner to a grantee allowing the use of private land for stormwater management purposes.

EROSION CONTROL: The prevention or reduction of the movement of soil particles or rock fragments due to stormwater runoff.

EROSION CONTROL PLAN: A plan that shows the location and construction detail(s) of the erosion and sediment reduction controls to be utilized for a construction site.

EXEMPT USE: Any use subject to the provisions of M.G.L. chapter 40A, section 3.

FLOOD CONTROL: The prevention or reduction of flooding and flood damage.

FLOODING: A local and temporary inundation or a rise in the surface of a body of water, such that it covers land not usually under water.

GRADING: Changing the level or shape of the ground surface.

GROUNDWATER: All water beneath any land surface including water in the soil and bedrock beneath water bodies.

HOTSPOT: Land uses or activities with higher potential pollutant loadings, such as auto salvage yards, auto fueling facilities, fleet storage yards, commercial parking lots with high intensity use, road salt storage areas, commercial nurseries and landscaping, outdoor storage and loading areas of hazardous substances, or marinas.

IMPERVIOUS SURFACE: Any material or structure on, above or below the ground that prevents water from infiltrating through the underlying soil. Impervious surface is defined to include, without limitation: paved surfaces (parking lots, sidewalks, driveways), roof tops, swimming pools, patios, and paved, gravel and compacted dirt surfaced roads.

INFILTRATION: The act of conveying surface water into the ground to permit groundwater recharge and the reduction of stormwater runoff from a project site.

LOW IMPACT DEVELOPMENT (LID): An ecosystem-based approach to land development and stormwater management that ensures that each development site is designed to protect, or restore, the natural hydrology of the site.

MASSACHUSETTS STORMWATER MANAGEMENT STANDARDS: The latest version as may be amended from time to time of the Stormwater Management Standards and accompanying Stormwater Handbook issued by the Department of Environmental Protection pursuant to authority under the Wetlands Protection Act, M.G.L. c. 131, § 40, and the Massachusetts Clean Waters Act, M.G.L .c. 21, §§ 26-53. The Stormwater Management Standards are incorporated in the Wetlands Protection Act Regulations, 310 CMR 10.05(6)(k) and the Water Quality Certification Regulations, 314 CMR 9.06(6)(a).

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) or MUNICIPAL STORM DRAIN SYSTEM: The system of conveyances designed or used for collecting or conveying stormwater, including any road with a drainage system, street, gutter, curb, inlet, piped storm drain, pumping facility, retention or detention basin, natural or man-made or altered drainage channel, reservoir, and other drainage structure that together comprise the storm drainage system owned or operated by the Town of Weston.

NEW DEVELOPMENT: Any construction or land disturbance of a parcel of land that is currently in a natural vegetated state and does not contain alteration by man-made activities.

NONPOINT SOURCE POLLUTION: Pollution from many diffuse sources caused by rainfall, snowmelt, or other method of pollutant transport moving over and through the ground. As the runoff moves, it picks up and carries away natural and human-made pollutants, finally depositing them into water resource areas.

OPERATION AND MAINTENANCE PLAN: A plan that defines the functional, financial and organizational mechanisms for the ongoing operation and maintenance of a stormwater management system to insure that it continues to function as designed.

OWNER: A person with a legal or equitable interest in a property.

PERSON: Any individual, group of individuals, association, partnership, corporation, company, business organization, trust, estate, the Commonwealth or political subdivision thereof to the extent subject to Town By-Laws, administrative agency, public or quasi-public corporation or body, the Town of Weston, and any other legal entity, its legal representatives, agents, or assigns.

PERVIOUS MATERIAL: Soil Types that are listed as Class I, II and III soils as defined in 310 CMR 15.243 and 15.244 based upon the general soil classification used by the U.S. Department of Agriculture and depicted in the Soil Textural Triangle

PRE-DEVELOPMENT: The conditions that exist prior to the proposed disturbance activity. When phased development or plan approval is part of the site plan development i.e. (preliminary grading, roads and utilities, etc.), the first plan submission is considered to establish pre-development existing site conditions.

POINT SOURCE: Any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, or container from which pollutants are or may be discharged.

POST-DEVELOPMENT: The conditions that reasonably may be expected or anticipated to exist after completion of the land development activity in accordance with approved plans on a specific site or tract of land. Post-development refers to the phase of a new development or redevelopment project after completion, and does not refer to the construction phase of a project.

RECHARGE: The replenishment of underground water reserves.

REDEVELOPMENT: Any construction, alteration, improvement, repaving, or resurfacing on a previously-developed site.

RESOURCE AREA: Any area protected under including without limitation: the Massachusetts Wetlands Protection Act, Massachusetts Rivers Act, or Town of Weston Wetlands Protection By-Law.

REVIEWING AGENT: Any Town employee, board or agent delegated in writing by the Stormwater Permitting Authority to administer, implement and enforce the Stormwater By-Law.

RUNOFF: Rainfall or snowmelt water flowing over the ground surface or other source resulting in transport of other pollutants.

SEDIMENTATION: A process of depositing material that has been suspended and transported in water.

SLOPE: The incline of a ground surface expressed as a ratio of horizontal distance to vertical distance (e.g. a 4:1 slope). It can also be expressed as a percentage of the vertical rise divided by the horizontal distance (e.g. a twenty-five (25) percent slope).

SITE: The parcel of land being developed.

STORMWATER MANAGEMENT: The use of structural or non-structural practices that are designed to reduce stormwater runoff pollutant loads, discharge volumes, and/or peak flow discharge rates. Stormwater Management includes the use of Low-Impact Development (LID) management practices.

STORMWATER MANAGEMENT PERMIT (SMP): A permit issued by the Stormwater Permitting Authority, after review of an application, plans, calculations, and other supporting documents, which is designed to protect the environment of the Town from the deleterious effects of uncontrolled and untreated stormwater runoff.

STOP WORK ORDER: An order issued which requires that all construction activity on a site be stopped.

TSS: Total Suspended Solids.

WATER QUALITY VOLUME (WQv): The storage needed to capture a specified average annual stormwater runoff volume. Numerically (WQv) will vary as a function of drainage area or impervious area.

## APPENDIX B: LOW IMPACT DEVELOPMENT PRACTICES

Low Impact Development (LID) strategies use careful site design and decentralized stormwater management to reduce the environmental footprint of new growth and redevelopment. This approach improves water quality, minimizes the need for expensive pipe and pond stormwater systems, and creates more attractive developments. The following are LID strategies and various benefits of implementation.

1. Bioretention cells, commonly known as rain gardens, are relatively small-scale, landscaped depressions containing plants and a soil mixture that absorbs and filters runoff.

   Management Objectives:
   - Provide quality treatment.
   - Remove suspended solids, metals, nutrients.
   - Increase groundwater recharge through infiltration.
   - Reduce peak discharge rates and total runoff volume.

2. Permeable and porous pavements allow water to soak through the paved surface into the ground beneath. Permeable pavement encompasses a variety of mediums including: porous concrete and asphalt, plastic grid systems and interlocking paving bricks.

   Management Objectives:

   - Reduce stormwater runoff volume from paved surfaces.
   - Reduce peak discharge through infiltration.
   - Reduce pollutant transport through direct infiltration.
   - Improve site landscaping benefits (grass pavers).

3. Grass swales are broad, open channels sown with erosion resistant and flood tolerant grasses. This has been used alongside roadways for years.

   Management Objectives:

   - Provide water quality treatment; remove suspended solids; heavy metals, trash.
   - Reduce peak discharge rate and total runoff volume.
   - Infiltrate water into the ground.
   - Provide a location for snow storage.

4. Infiltration Trenches and Dry Wells Dry wells are standard stormwater management structures that store water in the void space between crushed stone or gravel; the water slowly percolates downward into the subsoil.

   Management Objectives:

   - Remove suspended solids, heavy metals trash, oil, and grease.
   - Reduce peak discharge rate and total runoff volume.
   - Provide modest infiltration and recharge.

- Provide snow storage areas.

5. Grass Filter Strips are low-angle vegetated slopes designed to treat sheet flow runoff from adjacent impervious areas.

   Management Objectives:

   - Remove suspended solids, heavy metals, trash, oil and grease.
   - Reduce peak discharge rate and total runoff volume.
   - Provide modest infiltration and recharge.
   - Provide snow storage areas.

6. Roadway and Parking Lot Design:

   Management Objectives:

   - Reduce total impervious surface.
   - Reduce road/parking construction costs.
   - Provide save access and adequate parking.
   - Minimize disturbance to natural site hydrology.
   - Create opportunities for stormwater treatment and infiltration.
   - Improve site appearance.

7. Cisterns and rain barrels harvest and store rainwater collected from roofs.

   Management Objectives:

   - Storing and diverting runoff.
   - Reduce flooding and erosion caused by stormwater runoff.
   - They contain no salts or sediment which provides "soft" chemical-free water for garden or lawn irrigation, reducing water bills and conserving municipal water supplies.

8. Other LID Implementations

   - Shared Driveways.
   - Green Roofs.
   - Eliminating curbs and gutters, or minimizing in new construction.
   - Roughening surfaces.
   - Creating long flow paths over landscaped areas.
   - Installing smaller culverts, pipes, and inlets.
   - Creating terraces and check dams.
   - Infiltration, Filtration
     - Rain gardens.
     - Disconnected downspouts (not on hills).
     - Filter Mitts.

9. Maintenance of Paved Surfaces

- No coal-tar pavement sealants.
- No sodium de-icers.

10. Low Impact Landscaping
    - Native, drought tolerant species.
    - Turf area conversion (shrubs, etc.).
    - Encouraging longer grass length
    - Planting wildflower meadows rather than turf along medians.

**Conservation Development**

Like LID, Conservation Development tries to mitigate the effects of urbanization, but it places additional emphasis on protecting aquatic habitat and other natural resources. Conservation Development subdivisions are characterized by compact clustered lots surrounding a common open space. Conservation Development's goal is to disturb as little land area as possible while simultaneously allowing for the maximum number of residences permitted under zoning laws.

Prior to new construction, conservation developers evaluate natural topography, natural drainage patterns, soils and vegetation. They deploy stormwater best management practices to help prevent flooding and protect natural hydrology. By maintaining natural hydrological processes, Conservation Development creates conditions that slow, absorb, and filter stormwater runoff onsite.

Because future development threatens valuable natural features, Conservation Development provides specific provisions for long-term and permanent resource protection. Conservation easements, transfer of development rights, and other "in perpetuity" mechanisms ensure that protective measures are more than just temporary.

**Better Site Design**

The goals of Better Site Design are to reduce impervious cover, preserve natural lands, and capture stormwater onsite. To meet these goals, designers employ a variety of methods. To reduce impervious cover, they narrow streets and sidewalks, minimize cul-de-sacs, tighten parking spaces, and reduce the size of driveways and housing lots.

To reduce stormwater runoff, designers preserve natural lands, using them as buffer zones along streams, wetlands and steep slopes. They employ landscaping techniques that flatten slopes and preserve native vegetation and clusters of trees. They create bio-retention areas - open channels, filter strips and vegetated swales - to increase stormwater infiltration, helping to protect streams, lakes, and wetlands.

**Water Reuse/Water Conservation**

In order to conserve potable water supplies and maximize recharge, it may be appropriate on some sites to store and reuse clean runoff (e.g. from roofs) for reuse on the site for irrigation or other greywater purposes. This can be accomplished through the use of cisterns and rain barrels. Where appropriate, a water budget may be required to be prepared to determine applicability.