Introduction

This annotated ordinance is based on the model adopted under RI state enabling legislation, Title 45 Chapter 45-46-5. The proposed revisions offer suggested language to meet minimum requirements of the Storm Water Phase II General Permit for Small Municipal Separate Storm Sewer Systems (MS4). This RIDEM permit requires all regulated MS4s to develop, implement and enforce a program to reduce pollutants in stormwater runoff from construction activities that result in disturbance of one acre or more. This update fills gaps in the current model in key areas such as: control of construction wastes in addition to erosion and sediment; consideration of water quality impacts in site plan review; strengthened site inspection and enforcement procedures; and coordination with state permit review and approval procedures.

It should be noted that some standards of the original model ordinance are more protective than the Storm Water Phase II requirements. For example, areas smaller than 1 acre are regulated based on site specific features such as distance to water bodies, slope and volume of soil graded. Many Rhode Island cities and towns have adopted this original model as is or with minor variations, and have successfully implemented the ordinance over many years. Some have incorporated the model provisions into the zoning ordinance or subdivision and land development regulations. This proposed ordinance retains the original provisions as the current standard, without substituting minimum Phase II requirements, to provide a high level of protection to local water supplies, aquatic habitat, coastal waters and other critical habitat, and to support restoration of impaired waters.

In this annotated ordinance, recommended additions to the ordinance to meet minimum Phase II requirements are shown in bold, underlined, red type. Deletions to the original are in red strike-out. Additional notes, comments and example language adopted by other RI cities and towns are in bold, italics, blue type. As with any municipal ordinance or regulations, review by local legal counsel is recommended. The recommendations are also appropriate for non-traditional MS4s such as agencies and institutions for adoption as enforceable policies.

Key to annotations

- Additions to meet minimum Phase II requirements are in red, bold, underlined text.
- Deletions to the original are in red, strike-out text.
- Other notes, comments and example language are in [blue, bold, italic text within brackets].
§ 45-46-5 **Model ordinance – Soil erosion and sediment control.**

**ARTICLE I**
Section 1. Purpose.

(a) The (city or town) council finds that excessive quantities of soil are eroding from certain areas that are undergoing development for non agricultural uses such as housing developments, industrial areas, recreational facilities, and roads. This erosion makes necessary costly repairs to gullies, washed out fills, roads, and embankments. The resulting sediment clogs the storm sewers and road ditches, muddies streams, leaves deposits of silt in ponds and reservoirs, and is considered a major water pollutant. *[Construction debris, litter and spills also clog the storm water management system and contaminate surface and ground water.]*

(b) The purpose of this ordinance is to *[East Greenwich adds “to control the discharge of construction waste and”]* prevent soil erosion and sedimentation from occurring as a result of non agricultural development within the city or town by requiring proper provisions for water disposal, **construction waste management** and the protection of soil surfaces during and after construction, in order to promote the safety, public health, and general welfare of the city or town.

**ARTICLE II**
Section 1. Applicability.

This ordinance is applicable to any situation involving any disturbance to the terrain, topsoil or vegetative ground cover upon any property within the city or town of [ ] after determination of applicability by the building official or his or her designee based upon criteria outlined in article III. Compliance with the requirements as described in this ordinance shall not be construed to relieve the owner/applicant of any obligations to obtain necessary state or federal permits.

**ARTICLE III**
Section 1. Determination of applicability.

(a) It is unlawful for any person to disturb any existing vegetation, grades, and contours of land in a manner which may increase the potential for soil erosion, *[East Greenwich changes this to “in a manner that may affect the quality of storm water discharges associated with the construction activity”]* without first applying for a determination of applicability from the building official or his or her designee except that the following activities shall be determined to be subject to the requirements of this ordinance:
all activities disturbing a total area equal to or greater than one acre\(^1\), including disturbances less than one acre if part of a larger common plan; and any activity that requires permit approval by either the RIDEM or CRMC.

Upon determination of applicability, the owner/applicant shall submit a soil erosion and sediment control plan for approval by the building official or his or her designee, as provided in article IV. The application for determination of applicability shall describe the location, nature, character, and time schedule of the proposed land disturbing activity in sufficient detail to allow the building official or his or her designee to determine the potential for soil erosion and sedimentation resulting from the proposed project. In determining the applicability of the soil erosion and sediment control ordinance to a particular land disturbing activity, the building official or his or her designee shall consider site topography, drainage patterns, soils, proximity to watercourses, and other information deemed appropriate by the building official or his or her designee. Where less than a total of one acre is disturbed, a particular land disturbing activity shall not be subject to the requirements of this ordinance if the building official or his or her designee finds that erosion resulting from the land disturbing activity is insignificant and represents no threat to adjacent properties or to the quality of any coastal feature or watercourse, as defined in Article IX. The current "Rhode Island Soil Erosion and Sediment Control Handbook," prepared by the U.S. department of agriculture soil conservation service, R.I. department of environmental management, and R.I. state conservation committee shall be consulted in making this determination.

In making this determination, the building official will also take into consideration the sensitivity of the waterbody to which the site drains. A waterbody and its watershed will be considered sensitive if a Total Maximum Daily Load or Special Area Management Plan is written or under development for it, or it is included on RIDEM’s 303(d) list, or is included on RIDEM’s list of Special Resource Protection Waters (Appendix D of the Water Quality Regulations), or has been noted by the municipality to be of special concern.

(2) This ordinance shall not apply to existing quarrying operations actively engaged in excavating rock but shall apply to sand and gravel extraction operations.

(b) No determination of applicability is required for the following:

(1) Construction, alteration, or use of any additions to existing single family or duplex homes or related structures; provided, that the grounds coverage of addition is less than one thousand (1,000) square feet, and construction, alteration and use does not occur within one hundred (100') feet of any watercourse or coastal feature [Middletown & Bristol use 200'], and the slopes at the site of land disturbance do not exceed ten percent (10%) [Johnston uses 8%].

(2) Use of a home garden in association with onsite residential use.

(3) Accepted agricultural management practices such as seasonal tilling and harvest activities associated with property utilized for private and/or commercial agricultural or silvicultural purposes.

(4) Excavations for improvements other than those described in subsection (b)(1) of this section which exhibit all of the following characteristics:

(i) Does not result in a total displacement of more than fifty (50) cubic yards of material;

(ii) Has no slopes steeper than ten feet (10') vertical in one hundred feet (100') horizontal or approximately ten percent (10%); and

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\(^1\) Throughout this document, this term shall include disturbances less than one acre if part of a larger common plan
(iii) Has all disturbed surface areas promptly and effectively protected to prevent soil erosion and sedimentation.

(5) Grading, as a maintenance measure, or for landscaping purposes on existing developed land parcels or lots; provided, that all bare surface is immediately seeded, sodded or otherwise protected from erosive actions, and all of the following conditions are met:

(i) The aggregate area of activity does not exceed two thousand (2,000) square feet; and

(ii) The change of elevation does not exceed two feet (2') at any point; and

(iii) The grading does not involve a quantity of fill greater than eighteen (18) cubic yards; except where fill is excavated from another portion of the same parcel and the quantity does not exceed fifty (50) cubic yards.

(6) Grading, filling, removal, or excavation activities and operations undertaken by the city or town under the direction and supervision of the director of public works for work on streets, roads, or rights-of-ways dedicated to public use; provided, that adequate and acceptable erosion and sediment controls [East Greenwich adds “and controls for other construction wastes”] are incorporated, in engineering plans and specifications, and employed. Appropriate controls apply during construction as well as after the completion of these activities. All work shall be undertaken in accordance with the performance principles provided for in Article V, Section 1(c) and the standards and definitions that may be adopted to implement the performance principles.

ARTICLE IV

Section 1. Provisions of plan – Procedures.

(1) To obtain approval for a land disturbing activity as found applicable by the building official or his or her designee under article III, an applicant shall first file an erosion and sediment control plan if the site is less than one (1) acre in size, or if the site is a total of one (1) acre or greater in size they shall submit a Stormwater Pollution Prevention Plan (SWPPP) signed by the owner of the property, or authorized agent, on which the work subject to approval is to be performed. The plan or drawings, as described in article V, shall include proposed erosion and sediment control and waste management measures to be employed by the applicant or the applicant's agent.

[Note: some municipalities, such as Lincoln, refer to all plans for construction site control as a SWPPP and no longer refer to soil erosion and sediment control plans.]

(2) R.I. Freshwater Wetlands Permit: Where any portion of a proposed development requires approval under any provision of the general laws approved by the general assembly or where the approval contains provisions for soil erosion and sediment controls, that approved plan shall be a component of the overall soil erosion and sediment control plan or SWPPP required under this ordinance for the development.

(3) Construction General Permit: In those cases where a SWPPP is submitted, the applicant will also submit a copy of the Notice of Intent.

[Note: when less than 1 acre, basic E/S plan may be required by municipality; when 1-5 acres, NOI must be submitted to RIDEM, and SWPPP prepared but not submitted; when > 5 acres must also submit SWPPP to RIDEM. For projects > 1 acre, local E/S Plan and SWPPP requirements should be the same so one plan can be submitted to municipality and state.]
The city or town adopting this ordinance may collect fair and reasonable fees from each applicant requesting approval of a soil erosion and sediment control plan for the purposes of administering this ordinance.

(1) Within five (5) working days [Woonsocket & Pawtucket made this 10 days] of the receipt of a completed plan, the building official or his or her designee shall send a copy of the plan to the review authorities which may include the public works department, the planning board or planning department, and conservation commission for the purpose of review and comment. The building official or his or her designee may also, within five (5) working days, submit copies of the plan to other local departments or agencies, including the conservation district that services their county, in order to better achieve the purposes of this chapter. Failure of these review authorities to respond within twenty-one (21) days [Pawtucket & Bristol made this 15 days] of their receipt of the plan shall be deemed as no objection to the plan as submitted.

(2) The time allowed for plan review shall be commensurate with the proposed development project, and shall be done simultaneously with other reviews. [Bristol adds “The submittal of plans for review shall amount to acknowledgement and authorization from the applicant for municipal officials to enter upon and inspect private property where work is proposed for the purpose of reviewing site conditions as they relate to soil erosion, surface water runoff, and sediment control.”]

(1) The building official or his or her designee shall take action in writing, either approving or disapproving the plan, with reasons stated within ten (10) days after the building official has received the written opinion of the review authorities. [Newport states no building permit issued until this written approval is presented.]

(2) In approving a plan, the building official or his or her designee may attach conditions deemed reasonably necessary by the review authorities to further the purposes of this ordinance. The conditions pertaining to erosion and sediment control measures and/or devices, may include, but are not limited to, the erection of walls, drains, dams, and structures, planting vegetation, trees and shrubs, furnishings, necessary easements, and specifying a method of performing various kinds of work, and the sequence or timing of the work. The applicant/owner shall notify the building inspector, or his or her designee, in advance [Woonsocket requires 72 hours advance notice, Bristol requires 48 hours] of his or her intent to begin clearing and construction work described in the erosion and sediment control plan or SWPPP. The applicant shall have the erosion and sediment control plan or SWPPP on the site during grading and construction [East Greenwich simply says “for the duration of the project”].

(1) Administrative procedures: (A) If the ruling made by the building official or his or her designee is unsatisfactory to the applicant/owner, the applicant/owner may file a written appeal. The appeal of plans for soil erosion and sediment control shall be to the zoning board of review or other appropriate board of review, as determined by the city or town council.

(B) Appeal procedures shall follow current requirements for appeal to the above-mentioned boards.

(C) During the period in which the request for appeal is filed, and until the time that a final decision is rendered on the appeal, the decision of the building official or his or her designee remains in effect.

(2) Expert opinion: The official, or his or her designee, the zoning board of review, or other board of review, may seek technical assistance on any soil erosion and sediment control plan. The expert opinion must be made available in the office of the building official, or his or her designee, as a public record prior to the appeals hearing.
ARTICLE V.

The erosion and sediment control plan and/or Stormwater Pollution Prevention Plan shall be prepared by a registered engineer, or landscape architect or a soil and water conservation society CPESC, Inc., certified erosion and sediment control specialist, and copies of the plan shall be submitted to the building official or his or her designee.

The erosion and sediment control plan or Stormwater Pollution Prevention Plan shall include sufficient information about the proposed activities and land parcels to form a clear basis for discussion and review and to assure compliance with all applicable requirements of this chapter. The erosion and sediment control plan for proposed activities disturbing a total of one (1) acre or greater shall be prepared in conformance with the requirements for a Storm Water Pollution Prevention Plan (SWPPP), as provided in the RI Department of Environmental Management’s General Permit for Storm Water Discharge Associated with Construction Activity. For sites disturbing less than one acre, the plan shall be consistent with the data collection, data analysis, and plan preparation guidelines in the current "Rhode Island Soil Erosion and Sediment Control Handbook," prepared by the U.S. department of agriculture, soil natural resources conservation service, R.I. department of environmental management, R.I. state conservation committee, and at a minimum, shall contain:

1. A brief narrative describing the proposed land disturbing activity and the soil erosion and sediment control measures, waste management measures and stormwater management measures to be installed to control erosion that could result from the proposed activity. [Middletown adds, “and a description of any potential sources of pollution that may be expected to affect the quality of storm water discharges from the site”]

Supporting documentation, such as a drainage area, existing site, and soil maps shall be provided as required by the building official or his or her designee.

2. Construction drawings in detail commensurate with the size of the project, sensitivity of the potentially impacted waterbody and distance to water and/or storm sewer system. These drawings will illustrating in detail existing and proposed contours, drainage features, and vegetation; limits of clearing and grading, the location of soil erosion and sediment control and stormwater management measures, detail drawings of measures; stock piles and borrow areas; waste collection and burial areas; concrete truck wash out sites; sequence and staging of land disturbing activities; and other information needed for construction.

3. A schedule showing the sequence of construction and inspection and maintenance of erosion and sediment control and waste control measures. [Newport adds descriptions of erosion and sediment controls, and description of maintenance procedures to its list of plan requirements.]

4. All applicants shall provide other information or construction plans and details as deemed necessary by the building official or his or her designee for a thorough review of the plan prior to action being taken as prescribed in this chapter. Withholding or delay of information may be reasons for the building official or his or her designee to judge the application as incomplete and providing grounds for disapproval of the application.

The contents of the erosion and sediment control plan shall clearly demonstrate how the principles, outlined in this subsection, have been met in the design and are to be accomplished by the proposed development project.
(1) The site selected shall show due regard for natural drainage characteristics and topography.

(2) To the extent possible, steep slopes shall be avoided.

(3) The grade of created slopes shall be minimized.

(4) Post development runoff rates should not exceed pre development rates, consistent with other stormwater requirements which may be in effect. Any increase in storm runoff shall be retained and recharged as close as feasible to its place of origin by means of detention ponds or basins, seepage areas, subsurface drains, porous paving, or similar technique.  
[Bristol adds provisions for a watershed of special concern]

(5) Original boundaries, alignment, and slope of watercourses within the project locus shall be preserved to the greatest extent feasible.

(6) In general, drainage shall be directed away from structures intended for human occupancy, municipal or utility use, or similar structures.

(7) All drainage provisions shall be of a design and capacity so as to adequately handle stormwater runoff, including runoff from tributary upstream areas which may be outside the locus of the project.

(8) Drainage facilities shall be installed as early as feasible during construction, prior to site clearance, if possible.  
[Bristol adds that they must be operational prior to increase in impervious area]

(9) Fill located adjacent to watercourses shall be suitably protected from erosion by means of riprap, gabions, retaining walls, vegetative stabilization, or similar measures.  
[Woonsocket simply states that no fill shall be located adjacent to a watercourse]

(10) Temporary vegetation and/or mulching shall be used to protect bare areas and stockpiles from erosion during construction; the smallest areas feasible shall be exposed at any one time; disturbed areas shall be protected during the non growing months, November through March.

(11) Permanent vegetation shall be placed immediately following fine grading.

(12) Trees and other existing vegetation shall be retained whenever feasible; the area within the dripline shall be fenced or roped off to protect trees from construction equipment.

(13) Construction wastes will be managed to reduce the potential for stormwater runoff to mobilize them and contaminate surface or ground water. The storage, disposal, or use as fill of material containing asphalt, concrete, construction debris or stumps, even if determined to be non-hazardous, is prohibited.

(14) All areas damaged during construction shall be resodded, reseeded, or otherwise restored. Where soil compaction has occurred through storage of materials or use of equipment, soil infiltration shall be restored through use of soil amendments or other means. Monitoring and maintenance schedules, where required, shall be predetermined.

(1) The building official and/or his or her designee shall accept plans for existing uses and facilities which by their nature may cause erosion and sedimentation, such as excavation and quarrying operations;
provided, that this section shall not apply to article III, section 1(a)(1). Plans or satisfactory evidence to demonstrate that the existing operations accomplish the objectives of the section shall be submitted to the building official and/or his/her designee within one hundred twenty (120) days from the date of the determination of applicability. Implementation of the plan shall be initiated upon approval of the plan.

(2) When the preexisting use is a gravel extraction operation, the property owner shall conduct the operation in a manner so as not to devalue abutting properties; to protect abutting property from wind erosion and soil erosion due to increased runoff, sedimentation of reservoirs, and drainage systems; and to limit the depth of extraction so as not to interfere with the existing nearby water table.

ARTICLE VI. Enforcement.

Section 1. Performance bond.

(1) Before approving an erosion sediment control plan or SWPPP, the building official or his or her designee may require the applicant/owner to file a surety company performance bond, deposit of money, negotiable securities, or other method of surety, as specified by the building official or his or her designee. When any land disturbing activity is to take place within one hundred feet (100') of any watercourse or coastal feature or within an identified flood hazard district, or on slopes in excess of ten percent (10%), the filing of a performance bond shall be required. The amount of the bond, as determined by the public works department, or in its absence, the building official or his or her designee, shall be sufficient to cover the cost of implementing all erosion and sediment control measures as shown on the plan.

(2) The bond or negotiable security filed by the applicant shall be subject to approval of the form, content, amount, and manner of execution by the public works director and the city or town solicitor.

(3) A performance bond for an erosion sediment control plan for a subdivision may be included in the performance bond of the subdivision. The posting of the bond as part of the subdivision performance bond does not, however, relieve the owner of any requirements of this ordinance.

[Connecticut’s model ordinance also requires the following:

yy) Site development shall not begin unless the soil erosion and sediment control plan is approved and those control measures and facilities in the plan scheduled for installation prior to site development are installed and functional.

zz) Planned soil erosion and sediment control measures and facilities shall be installed as scheduled according to the approved plan.]

(1) Whenever the building official or his or her designee finds that a default has occurred in the performance of any terms or conditions of the bond or in the implementation of measures secured by the bond, written notice shall be made to the applicant and to the surety of the bond by the municipal solicitor. The notice shall state the nature of default, work to be done, the estimated cost, and the period of time deemed by the building official or his or her designee to be reasonably necessary for the completion of the work.

(2) Failure of the applicant to acknowledge and comply with the provisions and deadlines outlined in the notice of default means the institution, by the city or town solicitor, without further notice of proceedings whatsoever, of appropriate measures to utilize the performance bond, to cause the required work to be completed by the city or town, by contract or by other appropriate means as determined by the city or town solicitor.

If a cash or negotiable securities deposit has been posted by the applicant, notice and procedure are the same as provided for in subsection (b) of this section.
The performance bonding requirement shall remain in full force and effect for twelve (12) months following completion of the project, or longer if deemed necessary by the building official or his or her designee.


(a) Every approval granted in this ordinance shall expire at the end of the time period established in the conditions. The developer shall fully perform and complete all of the work required within the specified time period.

(b) If the developer is unable to complete the work within the designated time period, he or she shall, at least thirty (30) days prior to the expiration date, submit a written request for an extension of time to the building official or his or her designee, stating the underlying reasons for the requested time extension. If the extension is warranted, the building official or his or her designee may grant an extension of time up to a maximum of one year from the date of the original deadline. Subsequent extensions under the same conditions may be granted at the discretion of the building official.

Section 3. Maintenance of measures.

Maintenance of all erosion sediment control devices under this ordinance shall be the responsibility of the owner. The erosion sediment control devices shall be maintained in good condition and working order on a continuing basis. Watercourses originating and located completely on private property shall be the responsibility of the owner to their point of open discharge at the property line or at a communal watercourse within the property.

Section 4. Liability of applicant.

Neither approval of an erosion and sediment control plan nor compliance with any condition of this chapter shall relieve the owner/applicant from any responsibility for damage to persons or property, nor impose any liability upon the city or town for damages to persons or property.

ARTICLE VII.

Section 1. Inspections.

The provisions of this ordinance shall be administered and enforced by the building official or his or her designee. All work shall be subject to periodic inspections by the building official, or his or her designee. All work shall be performed in accordance with an inspection and construction control schedule approved by the building official or his or her designee, who shall maintain a permanent file on all of his or her inspections.

The owner or his/her agent shall make regular inspections of all control measures in accordance with the inspection schedule outlined on the approved Erosion and Sediment Control Plan. The purpose of such inspections will be to determine the overall effectiveness of the control plan and the need for additional control measures. All inspections shall be conducted by a properly trained professional recognized as a Certified Erosion, Sediment and Storm Water Inspector (CESSWI) by the Certified Professional in Erosion and Sediment Control (CPESC, Inc). All inspections shall be documented in written form and submitted to the building official as requested.

The building official or his or her designee will perform a minimum of two (2) inspections; one during construction and one after final stabilization of the site. The developer or owner shall notify the building official of the installation of erosion and sediment control measures, in order for an
Upon completion of the all work, the developer or owner shall notify the building official or his or her designee that all grading, drainage, erosion and sediment control measures and devices, and vegetation and ground cover planting has been completed in conformance with the approval, all attached plans, specifications, conditions, and other applicable provisions of this ordinance.

(1) Upon notification of the completion by the owner, the building official or his or her designee shall make a final inspection of the site in question, and shall prepare a final summary inspection report of its findings which shall be retained in the department of inspections, and in the department of public works’ permanent inspections file.  

[Johnston specifies that for public works projects, a copy of the final summary inspection report be placed in their permanent inspections file.  Woonsocket sends a copy of the inspection report to the developer/owner.]

(2) The applicant/owner may request the release of his or her performance bond from the building official or his or her designee twelve (12) months after the final site inspection has been completed and approved. In the instance where the performance bond has been posted with the recording of a final subdivision, the bond shall be released after the building official or his or her designee has been notified by the city or town planning director of successful completion of all plat improvements by the applicant/owner.

ARTICLE VIII. Notification.

Section 1. Noncompliance.

If, at any stage, the work in progress and/or completed under the terms of an approved erosion and sediment control plan does not conform to the plan, a written notice from the building official or his or her designee to comply shall be transmitted by certified mail to the owner.

The notice shall state the nature of the temporary and permanent corrections required, and the time limit within which corrections shall be completed as established in section 2(b) of this article. Failure to comply with the required corrections within the specified time limit is considered a violation of this ordinance, in which case the performance bond or cash or negotiable securities deposit is subject to notice of default, in accordance with sections 1(b) and 1(c) of article VI.

Section 2. Penalties.

The approval of an erosion and sediment control plan under this chapter may be revoked or suspended by the building official and all work on the project halted for an indefinite time period by the building official after written notification is transmitted by the building official to the developer for one or more of the following reasons:

(1) Violation of any condition of the approved plan, or specifications pertaining to it;
(2) Violation of any provision of this ordinance or any other applicable law, ordinance, rule, or regulation related to the work or site of work; and
(3) The existence of any condition or the performance of any act constituting or creating a nuisance, hazard, or endangerment to human life or the property of others, or contrary to the spirit or intent of this ordinance.

In addition, whenever there is a failure to comply with the provisions of this ordinance, the city or town has the right to notify the applicant/owner that he or she has five (5) days from the receipt of notice to temporarily correct the violations and thirty (30) days from receipt of notice to permanently correct the violations. Should the applicant owner fail to take the temporary corrective measures within the five (5) day period and the permanent corrective measures within the thirty (30) day period, the city or town then has the right to take whatever actions it deems necessary to correct the violations and to assert a lien on the subject property in an amount equal to the costs of remedial actions. The lien shall be enforced in the manner provided or authorized by law for the enforcement of common law liens on personal property. The lien shall be recorded with the records of land evidence of the municipality, and the lien does incur legal interest from the date of recording. The imposition of any penalty shall not exempt the offender from compliance with the provisions of this ordinance, including revocation of the performance bond or assessment of a lien on the property by the city or town.

(c) In addition to any other penalties provided in this section, a city or town is authorized and empowered to provide by local ordinance for penalties and/or fines of not more than two hundred fifty dollars ($250) for failure to submit plans on or before the date on which the plan must be submitted, as stated in the determination of applicability. Each day that the plan is not submitted constitutes a separate offense.

ARTICLE IX.

Section 1. Definition of selected terms.

(a) Applicant: Any persons, corporation, or public or private organization proposing a development which would involve disturbance to the natural terrain as defined in this ordinance.

[Newport defines best management practices (BMPs):
Best Management Practices (BMPs) means schedules of activities, prohibitions of practices, general good house keeping practices, pollution prevention and educational practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants directly or indirectly to stormwater, receiving waters, or stormwater conveyance systems. BMPs also include treatment practices, operating procedures, and practices to control site runoff, spillage or leaks, sludge or water disposal, or drainage from raw materials storage.]

[The annotators suggest including solid waste disposal in the last sentence]

(b) Coastal feature: Coastal beaches and dunes, barrier beaches, coastal wetlands, coastal cliffs, bluffs, and banks, rocky shores, and manmade shorelines as defined in “The State of Rhode Island Coastal Resources Management Program” as amended June 28, 1983.

[Pawtucket defines construction wastes:
Construction wastes: Solid and/or liquid wastes generated from the construction/site development process. This includes, but not limited to discarded building materials, concrete truck washout, chemicals, litter, and sanitary wastes.]

[The annotators suggest including fill material containing asphalt, concrete, discarded building materials, concrete truck washout, chemicals, litter, and sanitary wastes]
(c) Cut: An excavation. The difference between a point on the original ground and a designated point of lower elevation on the final grade. Also, the material removed in excavation.

(d) Development project: Any construction, reconstruction, demolition, or removal of structures, roadways, parking, or other paved areas, utilities, or other similar facilities, including any action requiring a building permit by the city or town.

**(xx) Disturbed area:** An area in which the natural vegetative soil cover has been removed or altered and, therefore, susceptible to erosion. *Definition from 2009 Draft Stormwater Manual*

(e) Erosion: The removal of mineral and/or organic matter by the action of wind, water, and/or gravity.

(f) Excavate: Any act by which earth, sand, gravel, or any other similar material is dug into, cut, removed, displaced, relocated, or bulldozed, and includes the resulting conditions.

(g) Fill: Any act by which earth, sand, or other material is placed or moved to a new location above ground. The fill is also the difference in elevation between a point of existing undisturbed ground and a designated point of higher elevation of the final grade.

(h) Land disturbing activity: Any physical land development activity which includes such actions as clearance of vegetation, moving or filling of land, removal or excavation of soil or mineral resources, or similar activities.

**(xx) Limit of disturbance:** Line delineating the boundary of the area to be disturbed during a development or redevelopment project. Area outside this boundary shall not be touched. *Definition from 2009 Draft Stormwater Manual*

(i) Runoff: The surface water discharge or rate of discharge of a given watershed after a fall of rain or snow, and including seepage flows that do not enter the soil but run off the surface of the land. Also, that portion of water that is not absorbed by the soil, but runs off the land surface.

(j) Sediment: Solid material, both mineral and/or organic, that is in suspension, is being transported, or has been moved from its site or origin by wind, water, and/or gravity as a product of erosion.

**xx ) Soil amendment:** Any material, such as compost, lime, animal manures, crop residues, etc., that is worked into the soil. Generally pertains to materials other than fertilizers.

(k) Soil erosion and sediment control plan: The approved document required before any person may cause a disturbance to the natural terrain within the city or town as regulated by this ordinance. Also, referred to as erosion and sediment control plan, approved plan.

(l) Watercourse: The term watercourse means any tidewater or coastal wetland at its mean high water level, and any freshwater wetland at its seasonal high water level, including, but not limited to, any river, stream, brook, pond, lake, swamp, marsh bog, fen, wet meadow, or any other standing or flowing body of water. The edge of the watercourse shall be used for delineation purposes.