DIVISION 1. GENERALLY

Sec. 14-46. Short title.
This article shall be known and cited as "The Stormwater Management Ordinance" of the town.
(Ord. No. 04-0516, 2-10-04)

Sec. 14-47. Findings of fact.
The town finds that inadequately or improperly designed, constructed or maintained drainage
facilities and the development of land without due consideration of potential problems associated
with stormwater runoff may have significant adverse impact upon the quality of the waters of the
community and that in the absence of adequately and properly designed, constructed, and
maintained facilities, the following situations have occurred and may occur again which have
potential adverse impact on the public's health, safety and welfare:
(1) Unregulated land use changes may result in increased rates and volumes of stormwater
runoff, contributing to local and area flooding, which is potentially harmful to human health,
welfare, and safety, and creates a risk of harm to property, and unreasonable interference with
the enjoyment of life or property.
(2) Development requiring the alteration of natural topography or removal of vegetation may
increase the rate and volume of stormwater runoff, thereby increasing soil erosion and
sedimentation and degrading water quality.
(3) The siltation of a drainage facility resulting from increased erosion may significantly
decrease the drainage facility's capacity to transport stormwater, thereby increasing the potential
for more frequent and aggravated flooding.
(4) The piecemeal strategies practiced in the absence of stormwater management techniques
most often result in increased off-site flooding, erosion, and property damage.
(5) Uncontrolled surface water runoff carries pollutants, including nutrients, heavy metals,
debris, oils, and greases, into receiving bodies thereby degrading their water quality.
(6) Increased rates and volumes of stormwater discharged onto the beach may further increase
beach erosion, reducing the aesthetic value of the beach and increasing the potential for property
damage to oceanfront structures.
(7) The Stormwater Phase II Final Rule requires small municipal stormwater systems to obtain
National Pollutant Discharge Elimination System (NPDES) permit coverage because their
stormwater discharges are considered "point sources" of pollution.
(8) The NPDES Phase II program requires the town to implement BMP's to meet the
requirements of the Clean Water Act. As it applies to construction site stormwater runoff control
and post construction stormwater management in new development/redevelopment the
recommended BMP's include, but are not limited to, infiltration, detention/retention, limiting
impervious areas, disconnecting impervious areas.
(Ord. No. 04-0516, 2-10-04)

Article III of this chapter pertaining to stormwater management shall apply to the development
or redevelopment of any land in the incorporated areas of the town and any land development
outside the corporate limits for which a request for annexation has been submitted.
(Ord. No. 04-0516, 2-10-04)
Sec. 14-49. Definitions.
The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

**Adverse impact** shall mean any modifications, alterations, or effects on a feature or characteristic of community water or wetlands, including their quality, quantity, hydrodynamics, surface area, living resources, aesthetics or usefulness for human or natural uses which are or may potentially be harmful or injurious to human health, welfare, safety or property, or biological productivity, diversity, or stability or which unreasonably interfere with the enjoyment of life or property, including outdoor recreation. The termincludes secondary and cumulative as well as direct impact.

**Applicant** shall mean the owner or his authorized representative of a lot or tract of land that is the site of development or proposed development activity within the scope of this article.

**Best management practices (BMP)** is a technique or series of techniques that are proven to be effective in controlling runoff, erosion, and sedimentation.

**Clearing** shall mean the removal of trees and brush from the land, but shall not include the ordinary mowing of grass or gardening.

**Culvert** shall mean an enclosed symmetrical channel of comparatively short length installed to convey water from one (1) side of an embankment to the other.

**Detention** shall mean the collection and storage of stormwater runoff in a surface or subsurface facility for subsequent controlled discharge to a watercourse or waterbody.

**Detention/retention basin** shall mean a stormwater management facility for impoundment of runoff in surface storage systems, i.e., regulated systems including excavated depressions, lakes, and ponds.

**Developer** shall mean any person who engages in development either as the owner or as the agent of an owner of property.

**Development** or **development activity** shall mean:

1. The construction, installation, alteration, demolition, or removal of a structure, impervious surface, or drainage facility;

2. Clearing, scraping, grubbing, or otherwise removing or killing the vegetation of a site; or

3. Adding, removing, exposing, excavating, leveling, grading, digging, burrowing, dumping, piling, dredging or otherwise significantly disturbing the soil, mud, sand or rock of a site, but shall not include ordinary gardening.

**Ditch** shall mean a drainage channel in earth created by natural or artificial means to convey surface and subsurface water, flowing continuously or intermittently.

**Drainage facility** shall mean any component of the drainage system.

**Drainage system** shall mean the surface and/or subsurface system which collects and conveys stormwater and surface water, and includes all watercourses, water bodies, and wetlands.

**Elevation** shall mean height in feet above a given known datum, such as mean sea level.

**Erosion** shall mean the wearing or washing away of soil by the action of water or wind.

**Flood** shall mean a temporary rise in the level of any water body, watercourse, or wetland which results in the inundation of areas not ordinarily covered by water.

**Grading** shall mean any displacement of soil by stripping, excavating, stockpiling, or any combination thereof, but does not include ordinary gardening.
*Impervious surface* shall mean a surface which has been compacted or covered with a layer of material so that it is highly resistant to infiltration by water. This term includes, but is not limited to, most conventionally surfaced streets, roofs, sidewalks, driveways, and parking lots.

*Outlet facility* shall mean a stormwater management facility designed to regulate the elevation, rate, and volume of stormwater-discharge from detention/retention facilities.

*Owner* shall mean the person in whom the fee ownership, dominion, or title of real property is vested. This term may also include a tenant, if such tenant is chargeable under his lease for the maintenance of the real property, and any agent of the owner or tenant including a developer.

*Person* shall mean any and all persons, whether natural or artificial, and including any individual, firm, corporation, government agency, business trust, estate, trust, partnership, association, two (2) or more persons having a joint or common interest, or any other legal entity.

*Postdevelopment conditions* shall mean those conditions which are expected to exist or do exist after alteration of the natural topography, vegetation; and rate, volume, or direction of stormwater runoff, resulting from development activity.

*Predevelopment conditions* shall mean those conditions, in terms of the existing topography, vegetation and rate, volume or direction of stormwater runoff, which exists at the time the applicant, submits an application form for a stormwater management plan permit or a stormwater management plan permit waiver.

*Primary drainage system* shall mean a system that includes major drainage facilities and appurtenances for conveying stormwater and surface water from watershed areas which equal or exceed forty (40) acres in upstream tributary area.

*Project* shall mean improvements and structures proposed by the applicant to be constructed on a defined site as part of a common plan of development.

*Rate* shall mean a volume of water passing a point per unit of time, generally expressed in cubic feet per second (cfs).

*Receiving bodies of water* shall mean any water bodies, watercourses, or wetlands into which surface waters flow either naturally or in manmade ditches or in a closed conduit system.

*Receiving water stage* shall mean the elevation at which stormwater is discharged from a receiving water body, either through regulated facilities or nonregulated facilities.

*Retention* shall mean the collection and storage of stormwater runoff without subsequent discharge to surface waters.

*Return period* shall mean the average length of time between rainfall events having the same amount of precipitation and length of time over which the precipitation occurs.

*Runoff* shall mean that part of rainfall that is not absorbed into the site, but, as surface water, flows from or over the site.

*Secondary drainage system* shall mean a system that includes minor storm sewer systems, ditches, swales; and appurtenant structures and systems for conveying stormwater and surface water from watershed areas which are less than forty (40) acres in upstream tributary area.

*Sediment* shall mean fine, particulate material, whether mineral or organic, that is in suspension and is being transported or has been transported from its site of origin by water or air.

*Sedimentation facility* shall mean any structure or area which is designed to retain suspended sediments from collected stormwater runoff, to include sediment basins.

*Site* shall mean any tract, lot or parcel of land or combination of tracts, lots or parcels of land which are in common ownership, or are contiguous and in diverse ownership where development is to be performed as part of a unit, subdivision, or project.

*Sod* is a square of natural grass to be placed as an erosion control measure.
Storm sewer shall mean an artificial drainage facility or system designed to collect and transport stormwater runoff from storms of frequent occurrence, such as two-year, five-year, or ten-year events.

Stormwater management facility shall mean a drainage facility which is designed, constructed, and maintained to mitigate the detrimental effects of stormwater runoff generated by development activity by encouraging infiltration and percolation, attenuating peak discharge rates and volumes, reducing and controlling erosion and sediment transport, or otherwise approximating the predevelopment hydrologic conditions of a site.

Stormwater management plan shall mean drawings, maps, calculations, and legal documents prepared in accordance with the provisions of this article with the purpose of mitigating detrimental effects of stormwater runoff generated by development activities.

Tail water shall mean the depth of ponding of water at the outlet of a culvert as measured from the culvert invert to the water surface in the outlet channel.

Vegetation shall mean all plant growth, including, but not limited to trees, shrubs, vines, ferns, mosses, and grasses.

Volume of rainfall shall mean the amount of precipitation occurring over the duration of a storm event, generally expressed in inches.

Volume of runoff shall mean the quantity of stormwater runoff generated upstream of a particular point or stored in a stormwater management facility, generally expressed in cubic feet (cf) or acre-feet (acre-ft.).

Water body shall mean any natural or artificial pond, lake, reservoir, or other area which ordinarily or intermittently contains water and which has a discernible shoreline.

Watercourse shall mean any natural or artificial stream, river, creek, channel, ditch, canal, conduit, culvert, drain, waterway, street, roadway, swale or wash in which water flows in a definite direction, either continuously or intermittently and which has a definite channel, bed, or banks.

Watershed shall mean a drainage area or drainage basin contributing to the flow of stormwater into a receiving watercourse or water body.

Wetlands shall mean those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

(Ord. No. 04-0516, 2-10-04)

Sec. 14-50. Applicability.

A stormwater management plan prepared in accordance with this article must be approved by the building department for each of the following:

1. All additions to existing dwellings, including construction of new residences, in the R-1 district that exceed forty (40) percent impervious coverage.

2. All additions to existing dwellings, including construction of new residences, in the R-2, and R-3 districts.

3. All development for multifamily, institutional, commercial, industrial, or other land development projects in the C-1, C-2, and C-3 districts.

4. Any changes to existing drainage systems, wetlands, watercourses, or water bodies that would create adverse impact on the drainage system.
(5) Any change or alteration of grade elevations that will direct or cause stormwater runoff onto adjacent properties. The height of the amount of lot fill is limited to, and shall not exceed, the elevation of all adjacent properties.

(6) No property owner shall cause or allow alteration of grade elevations on their property that will direct or cause stormwater runoff onto adjacent properties. Any property grade elevation alterations or approved stormwater management plans shall divert excess water to the town's stormwater drainage system by natural means. The lowest portion of the structure must be twelve (12) inches above the bottom of the lowest point where drainage enters the nearest stormwater conveyance area. The height of the amount of lot fill is limited to, and shall not exceed, the elevation of all adjacent properties. A permit, inspection, and approval by building department or other entities as may be retained by the town are required for any alteration of property grade elevations. The town reserves the right to review all plans for lot fill and maintains the right to provide for reasonable drainage. Please refer to section 14-57 which provide performance objectives for stormwater management within the town.

(7) General permits are available for development activities less than four hundred (400) square feet in size which meet the conditions herein.

(Ord. No. 04-0516, 2-10-04; Ord. No. 04-0545, 1-25-05)

Sec. 14-51. Exemptions.
For the purpose of sections 14-50 through 14-53, the following activities are exempt from the requirements of this article:

(1) Bona fide agricultural pursuits including gardening except where an artificial drainage system will be used to increase the flow of surface water from the owner's land.

(2) Maintenance work performed on existing stormwater detention/retention structures and drainage channels for the purpose of public health and welfare, provided such work does not alter the function, capacity, or integrity of such structures or channels and is performed by or approved by the town.

(3) Areas zoned R-1 with existing structures are exempt, but will not exceed the forty (40) percent cumulative impervious coverage.

(Ord. No. 04-0516, 2-10-04)

Sec. 14-52. Reserved.

Sec. 14-53. Appeals.
Determinations made by the building department regarding the enforcement or provisions of this article may be appealed, in writing, to the building board of appeals in accordance with the ordinances of the town.

(Ord. No. 04-0516, 2-10-04)

Sec. 14-54. Preapplication conference.
(a) Purpose. The purpose of the preapplication conference is to discuss acceptable sources of information concerning stormwater management, applicable requirements and information known about the subject property in order to identify issues that should be addressed by the applicant. Preapplication conferences are encouraged, but are not required.
(b) **Required information.** If a preapplication conference is requested by the applicant, the application form shall be submitted to the building department and shall be accompanied by the following information:

1. A location map of the property with appropriate lot and block number;
2. A statement and sketch of the property at a reasonable scale expressing the intent and scope of the proposed project and the anticipated extent of disturbance to the natural and existing drainage system on and around the site.

(c) **Review process.** The application form, request for preapplication conference, and the required information shall be reviewed by the building department after submission of the completed application form for utilization at the preapplication conference. The conference will be held between the applicant or his designated representative and a designated representative of the building department.

(d) **Fees.** A fifty dollar ($50.00) fee shall be charged for the preapplication review and conference.

(Ord. No. 04-0516, 2-10-04)

Sec. 14-55. Stormwater management plan permit application.

(a) **Purpose.** The purpose of the stormwater management plan review process is to provide an organized framework for evaluating and acting upon proposals for development as they relate to stormwater management issues.

(b) **Required information.** The applicant shall furnish the building department with five (5) copies of the application form together with all plans and data required by the South Carolina Stormwater Management and Sediment and Control Handbook for Land Disturbance Activities, which plans and data shall bear the seal of a professional engineer registered in the state.

(c) **Review process.**

1. The building department will ascertain whether the application form is complete and contains the information required by the provisions of the South Carolina Stormwater Management and Sediment and Control Handbook for Land Disturbance Activities. If the building department determines that the application form and supporting plans and data are complete, the building department shall notify the applicant that the application form is complete.

2. If the building department determines that the application form is not complete, the building department shall notify the applicant, in writing, that the application form is not complete and specify the deficiencies of the application form. No further action shall be taken by the town with respect to the application form. If the applicant fails to submit the information necessary to complete the application form together with supporting plans and data after the building department has notified the applicant that the application form together with supporting plans and data is not complete, the application form shall be determined abandoned by the applicant. If the application form is determined to be abandoned by the applicant, the applicant must resubmit on a new application form all information together with supporting plans and data along with a new application fee to the building department in order to have the project reviewed.

3. After the building department has notified the applicant that the application form is complete, the building department shall approve the application form or shall reject the application form and recommend that specified conditions conforming to the requirements of this article be met as a condition precedent to approval of the application form, and shall notify the applicant.
The stormwater management plan application form, together with all plans and data required by the South Carolina Stormwater Management and Sediment and Control Handbook for Land Disturbance Activities can be reviewed by the building department which may include the building official, director of public works, town engineer, town attorney and such other expertise as may be retained by the town.

If a decision on the application form is not rendered by the building department within twenty (20) calendar days after written notification to the applicant that the application form is complete, the application form will be deemed approved without conditions. If the applicant feels aggrieved as a result of denial of the application form, he may appeal the decision of the building department to the building board of appeals consistent with the requirements of section 14-53.

(d) **Review criteria.** The building department or other entities as may be retained by the town, in approving or rejecting an application form shall consider the requirements of this article including the following criteria with respect to each application form:

1. The characteristics and limitations of the soil at the proposed site, specifically with respect to percolation, infiltration, and water table depth;
2. The existing topography of the proposed site and the extent of proposed topographical changes after development;
3. The existing vegetation of the proposed site and the extent of proposed vegetational changes after development;
4. The plans and specifications of structures or devices; to be employed for detention, retention, erosion control, and flow attenuation;
5. The effect the proposed water detention or retention facilities will have upon mosquito breeding habitats;
6. The continuity of projects to be developed in phases will require the submission of a comprehensive drainage plan for the project’s total boundary.
7. The ability of the plan to meet the intent of the town’s NPDES Phase II program.
8. A geotechnical investigation report containing at a minimum, boring log and reporting, an adequate description of the soils on site with conclusions and recommendations regarding:
   a. The infiltration rate.
   b. Depth to groundwater.

(e) **Fees.**

1. A fee shall be collected at the time the application form is submitted by the applicant to the building department and will reflect the cost of the administration and management of the review process.

2. When work for which an approved application is required by this article is commenced prior to obtaining approval, the building department shall establish a fee equivalent to twice the amount of the application form fee to reflect the additional administrative, inspection, and enforcement efforts required to deal with the violation. The payment of such fee shall not relieve any persons from fully complying with the requirements of this article in the execution of the work nor from any applicable penalties prescribed in this article.

Sec. 14-56. Design requirements and contents of stormwater management plans.
(a) **Responsibility of applicant.** It is the responsibility of an applicant to include sufficient information for review by the building official in the application form to enable evaluation of the project. Application shall be made on the standard forms approved by the building department.

(b) **Required information from the applicant.** The information supplied by the applicant shall be in conformance with the provisions of South Carolina Stormwater Management and Sediment and Control Handbook for Land Disturbance Activities. The manual outlines the following requirements:

1. Required information from applicant.
2. Plan contents.
3. Hydraulic design considerations.
4. Computational methodologies.
5. System design requirements.
7. A soils report completed after testing infiltration rates and depth to groundwater by a third party licensed professional.

(Ord. No. 04-0516, 2-10-04)

Sec. 14-57. Performance objectives for stormwater management plans.

(a) **Purpose.** The purpose of this section is to establish engineering objectives for the design, construction, and maintenance activities of stormwater management plans. It is the intent of this article that the performance objectives be satisfied by all stormwater management plans.

(b) **Performance objectives.** Stormwater management plans will be approved, consistent with procedures in this article, when the applicant has demonstrated that the proposed development activity has been designed to be constructed and maintained to meet each of the following performance objectives:

1. To encourage the maximum use of on-site storage facilities to reduce runoff rates and volumes, and minimize erosion and sedimentation;
2. To design, construct, and maintain stormwater management facilities in a manner which regulates and controls postdevelopment runoff to levels equivalent to or less than predevelopment conditions;
3. To design, construct, and maintain stormwater management facilities in such a manner that erosion or sedimentation does not exceed natural or predevelopment conditions;
4. To ensure that no adverse impact on the existing system results from improper location, design and construction of stormwater management facilities;
5. To design, construct and maintain stormwater management facilities to minimize stagnant water conditions;
6. To conserve the aquatic areas associated with the town and reduce pollutant loadings to the aquatic areas. To address the requirements of NPDES Phase II in an integrated, watershed approach. Each effort to meet the requirements will be completed in a measurable manner.

(Ord. No. 04-0516, 2-10-04)

Sec. 14-58. Maintenance responsibilities for stormwater management facilities.

(a) **Granting of easement.** The stormwater management facility required by this article shall be constructed by-and maintained by the owner" The owner shall be required to grant an easement to the town which will permit the building department officials or other town employees or agents:
Adequate ingress and egress to inspect the premises; and
(2) If necessary, to take corrective maintenance action should the owner fail to properly maintain the system.

(b) **Documentation of maintenance responsibility.** The owner shall be required to provide documentation to the town attorney which clearly shows the continuity of maintenance responsibility for the stormwater management facility. If the project involves sale of units or parcels to third parties, the owner must provide legal documents to ensure that successors are legally bound to continue proper maintenance of the system. The documentation requirements will vary as to the type of project, whether townhouse, a subdivision, or a condominium project. The town attorney will review and approve all permit applications regarding maintenance responsibility.

(c) **Failure to maintain.** Should the owner fail to properly maintain the system to be maintained by him, the building department shall give written notice to the owner of record as appears on the latest property tax rolls, by certified, return receipted mail, of the nature of the violation, and shall order the corrective action necessary. Should the owner fail, within thirty (30) calendar days from the date of the written notice, to take corrective action to the satisfaction of the building department or shall fail to appeal the notice and order within thirty (30) calendar days of the date of the written notice, the town may enter upon the lands, take such corrective action as the building department may deem necessary and place a lien on the property of the owner for the costs thereof.

(d) **Town maintenance.** Certain off-site systems as may be identified by the building department which are to provide general public benefits may be accepted by the town for maintenance. All areas and/or structures to be maintained by the town must be dedicated to the town by plat or separate instrument and accepted by resolution of the town council.

(Ord. No. 04-0516, 2-10-04)

**Sec. 14-59. Compliance with plan; amendments to plan.**
(a) The applicant shall be required to adhere strictly to the stormwater management plan submitted by the applicant and approved by the building department. Any changes or amendments to the plan must be approved by the building department in accordance with the procedures set forth in this article for obtaining stormwater management plan approval. Enforcement officials shall, and are granted by this section, inspection rights, and right of entry privileges in order to ensure compliance with the requirements of this article.

(b) After completion of the project and prior to issuance of a certificate of occupancy, the building department shall require from the applicant that the professional engineer in charge certify compliance with terms of the approved stormwater management plan and permit.

(c) Town staff or other entities as may be retained by the town will conduct periodic site inspections on all land disturbing activities. The person responsible for the land disturbing activity shall notify the town before initiation of construction and upon project completion when a final inspection will be conducted to ensure compliance with the approved stormwater management plan.

(Ord. No. 04-0516, 2-10-04)

**Sec. 14-60. Enforcement.**
If the building department determines that the project is not being carried out in accordance with the approved plan or that any project subject to this article is being carried out without approval, the building department is authorized to take the following actions:

1. **Written notice.** Issue written notice to the owner by certified, receipted delivery mail specifying the nature and location of the alleged noncompliance, with a description of the remedial actions necessary to bring the project into compliance within a reasonable specified time.

2. **Stop-work order.** Issue a stop-work order by certified, receipted delivery mail or receipted hand delivery directing the applicant or owner to cease and desist all or any portion of the work which violates the provisions of this article, if the remedial work identified in the written notice is not complete within the specified time.

3. **Revocation of approval.** Should the applicant or owner fail to bring the project into compliance with the written notice and stop-work order he shall then be subject to immediate revocation of the stormwater management plan permit and all building permits issued by the building department with respect to the project and to the penalties described in this article. Notice of such revocation shall be made by certified receipted delivery. In the event of such revocation, no stormwater management plan permit fees or building permit fees shall be refunded.

4. **Appeal.** Any notice, order, or revocation shall become final unless the person named therein requests a hearing before the building board of appeals pursuant to section 14-53. Such request shall be made in writing no later than ten (10) calendar days after the date such notice, order or revocation is served.

(Ord. No. 04-0516, 2-10-04)

**Sec. 14-61. Penalties for violation.** Any person who violates or causes to be violated any provision of this article or permits any such violation or fails to comply with any of the requirements in this article shall be guilty of a misdemeanor. Each day upon which such violation occurs shall constitute a separate offense. In addition to any other remedies, whether civil or criminal, the violation of this article may be restrained by injunction, including mandatory injunction and otherwise abated in any manner provided by law.

(Ord. No. 04-0516, 2-10-04)

**Sec. 14-62. Emergencies.**

(a) This article shall not be construed to prevent the doing of any act necessary to prevent material harm to or destruction of real or personal property as a result of a present emergency including; but not limited to fire, infestation by pest, or hazards resulting from violent storms or hurricanes. or when the property is in imminent peril and the necessity of obtaining a permit is impractical and would cause undue hardship in the protection of the property.

(b) A report of any such emergency action shall be made to the building department by the owner or person in control of the property upon which emergency action was taken as soon as practical, but not more than ten (10) calendar days following such action. Further, the property on which the emergency action is taken shall be brought back to acceptable standards as determined by the building department within thirty (30) calendar days after initiation of such action.

(Ord. No. 04-0516, 2-10-04)
Sec. 14-63. Fee schedule.
The following is the schedule of fees applicable to development within the jurisdiction of and pursuant to this article:
(1) General permit: $350.00.
(2) Stormwater management plan review base fee:

<table>
<thead>
<tr>
<th>Site Size</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0 acre or less</td>
<td>$350.00</td>
</tr>
<tr>
<td>1.01 to 5.00 acres</td>
<td>350.00 plus $40.00/acre</td>
</tr>
<tr>
<td>5.01 or more acres</td>
<td>510.00 plus $20.00/acre</td>
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</tbody>
</table>

The base fee of three hundred fifty dollars ($350.00), plus an acreage fee, includes an initial plan review by the building department staff, public works, town engineer, and/or the town attorney. The initial review includes reviewing the plans, conducting a committee meeting to assimilate comments from the reviewers, forwarding comments to the developer and a second plan review to ensure comments are incorporated in the plans. It will also entail the preapplication conference conducted by the building department if requested by the applicant.

<table>
<thead>
<tr>
<th>Review Type</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Third review</td>
<td>$100.00</td>
</tr>
<tr>
<td>Fourth review</td>
<td>150.00</td>
</tr>
<tr>
<td>Fifth review</td>
<td>200.00</td>
</tr>
<tr>
<td>Sixth or more (per review)</td>
<td>250.00</td>
</tr>
</tbody>
</table>

Reviews above the number indicated in the base fee initial plan review process (in excess of two (2) by any member of the review team or the committee as a whole) will result in an excess review fee being assessed to the applicant in accordance with the schedule above. Such fee shall be collected prior to initiation of the review, and the timetable indicated for review by the building department shall not commence until the appropriate fee is paid.

(Ord. No. 04-0516, 2-10-04)

Sec. 14-64 Reserved.

Sec. 14-65. General permits for residential construction.
A notice of intent shall be provided to the town for review and compliance with the general permit conditions. The notice of intent for general permitting will include the following:
(1) The mailing address, and location of the construction site for which the notification is submitted. Where a mailing address for the site is not available, the location can be described in terms of the legal description (Lot, Block, Section), latitude and longitude are encouraged.
(2) The owner's name, address, and telephone number.
(3) The name, address, and telephone number of the person or entity with day-to-day operational control that have been identified at the time of NOI.
The name of the watershed and drainage features and the ultimate receiving water.

An estimate of project start and completion dates, estimates of the number of acres of the site, and a certification that a stormwater plan has been performed for the facility in accordance with the guidance provided in this section.

The proposed compliance method:

a. Option A: Infiltration.

b. Option B: Biofiltration.

c. Option C: Parking lot storage.

A geotechnical investigation report containing at a minimum, boring log and reporting, an adequate description of the soils on site with conclusions and recommendations regarding:

a. The infiltration rate.

b. Depth to groundwater.

Each plan must include a description of appropriate stormwater controls and measures that will be implemented at the construction site. If the following guidance is sufficient to meet specific site constraints, the drawings in the section can suffice.

1. **Option A--Infiltration; purpose.** Infiltration systems are used primarily as water quality management practices. Stored runoff gradually infiltrates into the surrounding soil. The surface of the system can be covered with grating and/or consist of stone, gabion, sand or a grassed area with a surface inlet. Utilizing underground pipes within the trench can increase the temporary storage capacity of the system and can sometimes provide storage for flooding control.

   a. Infiltration systems are suitable for use where the subsoil is sufficiently permeable to provide a reasonable rate of infiltration. They are also practical where the water table is sufficiently lower than the design depth of the facility to prevent pollution of the groundwater.

   b. Infiltration systems are not practical for large drainage areas. Generally, infiltration systems should be limited to five (5) acres. Multiple systems can be considered.

   c. Infiltration practices are generally suited for low to medium density development (thirty-eight (38) percent to sixty-six (66) percent impervious cover).

   d. Determine if the development conditions and drainage area are appropriate for an infiltration system application.

   e. Infiltration systems are assumed to have rectangular cross-sections.

   f. All systems should be designed to capture sediment prior to entering the reservoir.

   g. Backfill material for the system should be clean aggregate with a maximum diameter of three and one-half (3.5) inches and a minimum of one and one-half (1.5) inches. Void space should be forty (40) percent.

   h. An eight (8) inch deep bottom sand layer is required for all systems to promote better drainage and reduce the risk of soil compaction when backfilled with stone.

   i. The aggregate fill material should be surrounded with an engineered filter fabric.

   j. A nonerosive overflow channel leading to a stabilized watercourse should be provided, as necessary, to insure that uncontrolled, erosive, concentrated flow does not develop.

   k. Provide for maintenance and inspection. A catch basin should be installed for every fifty (50) inches of infiltration system. The catch basin should be placed in the middle of the system.

   l. No fencing, landscaping, or any other permanent establishment of any kind can be set within or upon the infiltration system.

2. **Option B--Biofiltration swale; purpose.** The purpose of a biofiltration swale is to convey stormwater runoff at a nonerosive velocity in order to enhance its water quality through
infiltration, sedimentation, and filtration. Check dams are used within the swale to slow the rate and create small, temporary retention areas.

a. A biofiltration swale is a broad and shallow earthen channel vegetated with erosion resistant and flood-tolerant grasses. Check dams are strategically placed in the swale to encourage retention behind them. The swale must be underlain by an appropriate or engineered soil to provide for infiltration.

b. Grassed swales engineered for enhancing water quality control cannot convey large flows. The contributing drainage areas must be kept small. Grassed swales are generally suited to densities of development (sixteen (16) percent to thirty-seven (37) percent impervious).

c. Soils should have moderate to high infiltration rates of twenty-seven hundredths (0.27) inches per hour or greater.

d. Depth to water table should be at least three (3) feet.

e. Determine if the development conditions and drainage area are appropriate for an infiltration system application.

f. A swale should have a trapezoidal cross-section to spread flows across its flat bottom. Minimum bottom width should be two (2) feet and maximum six (6) feet in order to maintain sheet flow across the bottom and to avoid concentration of low flows.

g. Flow depth is determined by vegetation height and hydraulics.

h. Velocity should be no greater than one and one-half (1.5) feet per second. Maximum design velocity is seven (7) feet per second.

i. The minimum slope is between three-fourths (0.75) and one (1) percent. The maximum slope depends upon what is needed to maintain the desired flow velocities to provide adequate storage. Generally, longitudinal slope should be between one (1) to three (3) percent. The slope should never exceed five (5) percent.

j. A swale should have the capacity to convey the peak flows from a ten-year event without exceeding the maximum permissible velocities.

k. Vegetation must be maintained to design standards with a dense cover of water-tolerant, erosion resistant species. Appropriate vegetative species for use in the swale are, but not limited to, tall fescue, reed canary grass, redtop, bulls tongue, and others.

l. Check dam maximum height is eighteen (18) inches and should not exceed one-half (1/2) the height of the swale bank. Filter fabric is required under riprap check dams. Dams should be placed at the discharge point of the swale.

m. Provide for maintenance and inspection.

n. No fencing, landscaping or any other permanent establishment of any kind can be set within or upon the infiltration system

(3) Option C--Driveway drain storage. The purpose of driveway drain storage is to store and treat stormwater runoff through infiltration, sedimentation, and filtration the grades, subsoils, drainage characteristics, and groundwater conditions are suitable.

a. Slopes must be less than five (5) percent.

b. Soils must be verified.

c. The contributing drainage areas must be kept small. Soils should have moderate to high infiltration rates of twenty-seven hundredths (0.27) inches per hour or greater.

d. Depth to water table should be at least three (3) feet.

e. Any other stormwater entering area must be pretreated.
f. Driveway drains must be placed over a highly permeable layer of open-graded gravel or crushed stone. The void spaces in the aggregate layers act as the storage reservoir for stormwater.

g. Filter fabric is placed beneath the gravel and stone layers to screen out fine soil particles.

h. Perforated pipe may be added to discharge excess stormwater after the reservoir is filled.

i. Provide for maintenance and inspection.

(Ord. No. 04-0516, 2-10-04)
Secs. 14-66--14-75. Reserved.

DIVISION 2. DESIGN REQUIREMENTS FOR PLANS

Sec. 14-76. Responsibility of applicant.
It is the responsibility of an applicant to include sufficient information in the stormwater management plan to enable evaluation of the potential and predicted impact of the proposed activity on all affected lands and water, and the, effectiveness and acceptability of the measures proposed by the applicant of preventing or reducing adverse impact.

(Ord. No. 04-0516, 2-10-04)

Sec. 14-77. Required information from applicant.
The following information is required from the applicant:
(1) Stormwater management plan application form.
a. The name, address, and telephone number of the applicant, and the owner if different from the applicant;
b. Name, address, and phone number of the professional engineer;
c. The legal description of the property or plat with location map.
(2) Predevelopment site information.
a. Location sketch showing the parcel, major adjacent roads, water bodies and existing drainage patterns through and around the site at a scale of one (1) inch equals one hundred (100) feet or greater;
b. Topographic map of the site at a scale of at least one (1) inch equals one hundred (100) feet or greater with one-foot contour intervals and spot elevations, as needed, tied into an approved U.S.G.S. datum;
c. Identification of SCS soils characteristics of the site indicating seasonal water table elevations and general soils suitability;
d. Infiltration tests and soil borings performed by a third-party licensed geotechnical professional, if infiltration or subsurface systems are proposed, representative of design conditions; A minimum of one (1) soil boring log is required for every fifty (50) feet of trench length. A minimum of two (2) soil boring logs will be required for each trench location.
e. Location of 100-year floodplain with known floodways identified on a map at a scale of one (1) inch equals one hundred (100) feet or greater using flood insurance data published by the Federal Emergency Management Agency or its successors. This information may be recorded upon the topographic map of the site required pursuant to subsection (2)b.
(3) Stormwater management plan. Provide a separate map (twenty-four (24) inches by thirty-six (36) inches) on a scale of one (1) inch equals one hundred (100) feet or less for subsections a. and b. below, showing the following:
a. Identify and describe all water bodies and watercourses adjacent to the site with details of size, capacity, side slopes, and depths;
b. Location and details of all water control structures with control elevations of the control structures and any seasonal water level regulation schedules;
c. Make provisions for the unimpeded conveyance of stormwater from off-site areas which drain onto or through the site;
d. Paving, grading and drainage plans along with locations of roads and buildings and their proposed elevations;
e. Right-of-way and easement locations for the drainage system including all areas to be dedicated for stormwater management purposes;
f. Location and size of internal stormwater management facilities.
g. Soil erosion and sediment control plan identifying all structures, and strategies proposed to control erosion and contain sediment.
h. Suggested best management practices sufficient to meet the NPDES Phase II requirements.
1. Filtration practices such as filter strips, grassed swales, and sand filters treat sheet flow by using vegetation or sand to filter and settle pollutants. Infiltration systems should drain within seventy-two (72) hours to maintain aerobic conditions, which favor pollutant removal processes, and to ensure that the basin is ready to receive the next storm.
2. Detention practices temporarily impound runoff to control runoff rates, and settle and retain suspended solids and associated pollutants. Constructed urban runoff wetlands and multiple-pond systems also remove pollutants by detaining flows.
i. On-site infiltration rates and depth to water table. The infiltration rate, or permeability, measured in inches per hour, is the rate at which water passes through the soil profile during saturated conditions. Soil textures acceptable for use with infiltration systems include those with infiltration rates between fifty-two hundredths (0.52) inches per hour and eight and twenty-seven hundredths (8.27) inches per hour, and include loam, sandy loam, and loamy sand.
(4) Calculations.
a. Average slope and hydraulic length for both the present condition and for the future developed condition;
b. The predevelopment conditions of the site;
c. The amount of pervious and impervious surface for both the predevelopment conditions of the site and the postdevelopment conditions of the site;
d. Calculations of the peak rate of discharge for the required design storm, and retention volume for the first one (1) inch of runoff, all in accordance with the methods outlined in section 14-81;
e. Runoff routing calculations for detention basins showing discharges, elevations, and volumes retained and/or detained during applicable storm events and for storm events of more frequent return period to ensure the effectiveness of the system in controlling lesser events;
f. For surface storage facilities, stage-storage computations and stage-discharge computations for the major discharge structure, based on the appropriate hydraulics;
g. Depth to water table and infiltration rates performed by a third-party licensed geotechnical professional; and
h. Calculations supporting the design of any subsurface percolation system proposed.
(5) Legal and institutional information including:
a. Every stormwater management plan shall identify the person or entity responsible for construction, operation and maintenance of the stormwater management facility from the date of commencement of the project through the later of the date of completion of the project or the
date of acceptance of responsibility for maintenance of the project's stormwater management facility by another person or legal entity.

b. If the project involves the subdivision of a site, the developer must submit a proposed declaration of restrictions for the site which shall contain an affirmative perpetual covenant running with the land imposing upon each of the owners of the site, and their respective successors and assigns, the obligation to appropriately maintain the stormwater management facility. The declaration of restrictions may provide for the establishment of an owner's association and delegate to the owners' association the responsibility for appropriate maintenance of the stormwater management facility located upon the site; provided, however, that the establishment of an owners' association and the delegation to the owners' association of the responsibility for appropriate maintenance of the stormwater management facility shall not relieve the owners of the site from their obligation to appropriately maintain the stormwater management facility if the owners' association fails to adequately maintain the stormwater management facility. The declaration of restrictions shall be reviewed by the town attorney to ensure compliance with the letter and intent of this article. No stormwater management plan shall be approved unless and until the town has notified the applicant and the town building department that the proposed declaration of restrictions complies with the letter and intent of this article. Any amendments to the proposed declarations of restrictions shall also be submitted to the town attorney for review to ensure compliance of the declaration of restrictions with the letter and intent of this article. Upon recording the declaration of restrictions and any amendments thereto in the office of the clerk of the court for the county, the developer shall deliver to the town building department a certified copy of the declaration of restrictions and any amendments thereto attested as true and correct by the clerk of the court for the county, which certified copies shall be maintained by the town building department as part of its permanent records pertaining to the project.

c. If the proposed project involves the establishment of a horizontal property regime, sometimes termed "condominium," upon a site pursuant to the Horizontal Property Act, Code of Laws of South Carolina, 1976, S.C. Code 1976, § 27-31-10 et seq., as amended, the developer must submit for review by the town attorney, a proposed master deed for the horizontal property regime as well as a proposed declaration and petition for incorporation and proposed bylaws for an owners' association to be formed for the purpose of administering the horizontal property regime. The master deed shall contain affirmative covenants which shall clearly set forth the obligation and responsibility incidental to ownership of each unit in the horizontal property regime and its appurtenant interest in the common elements of the horizontal property regime to appropriately maintain the stormwater management facility. The master deed shall delegate to the owners' association the responsibility for appropriate maintenance of the stormwater management facility located upon the site; provided, however, that the delegation to the owners' association of the responsibility for appropriate maintenance of the stormwater management facility shall not relieve the unit owners of their obligation to appropriately maintain the stormwater management facility if the owners' association fails to adequately maintain the stormwater management facility. The master deed declaration and petition for incorporation and bylaws of the owners' association shall be reviewed by the town attorney to ensure compliance with the letter and the intent of this article and no stormwater management plan shall be approved unless and until the
town attorney has notified the applicant and the town building department, in writing, that the proposed master deed, charter for incorporation and bylaws of the owners’ association complies with the letter and intent of this article. Any amendments to the proposed master deed, charter for incorporation and bylaws of the owners’ association shall also be submitted to the town attorney for review to ensure compliance of the master deed, charter for incorporation and bylaws of the owners' association with the letter and intent of this article. Upon recording the master deed, charter for incorporation and bylaws of the owners’ association and any amendments thereto in the office of the clerk of the court for the county, the developer shall deliver to the town building department a certified copy of the master deed, charter of incorporation and bylaws of the owners' association and any amendments thereto, attested as true and correct by the clerk of the court for the county, which certified copies shall be maintained by the town building department as part of its permanent records pertaining to the project.

(Ord. No. 04-0516, 2-10-04; Ord. No. 05-0573, 9-27-05)

Sec. 14-78. Performance objectives.
The purpose of this section is to establish engineering objectives for the design, construction, and maintenance activities of stormwater management plans. It is the intent of this article that the performance objectives by satisfied by all stormwater management plans. Stormwater management plans will be approved, consistent with procedures in this article when the applicant has demonstrated that the proposed development activity has been designed to be constructed and maintained to meet each of the following performance objectives:

1. To encourage the maximum use of on-site storage facilities to reduce runoff rates and volumes, and minimize erosion and sedimentation;
2. To design, construct, and maintain stormwater management facilities in a manner which regulates and controls postdevelopment runoff to levels equivalent to or less than predevelopment conditions;
3. To design, construct, and maintain stormwater management facilities in such a manner that erosion or sedimentation does not exceed natural or predevelopment conditions;
4. To ensure that no adverse impact on the existing system results from improper location, design and construction of stormwater management facilities;
5. To design, construct and maintain stormwater management facilities to minimize stagnant water conditions;
6. To further reduce adverse impacts to water quality and aquatic habitat by instituting the use of controls on the sources of stormwater discharges that have a likelihood of causing aquatic environment degradation.

(Ord. No. 04-0516, 2-10-04)

Sec. 14-79. General requirements.
(a) Plans, calculations, and supporting documentation as required by this article for the design, construction, and maintenance of stormwater management facilities shall be prepared and sealed by a professional engineer currently registered in the state.
(b) Innovative approaches to stormwater management shall be encouraged and the concurrent control of flooding, erosion, and sedimentation and water pollution shall be mandatory.
(c) The developer of a project that is to be developed in phases shall submit a master plan of the developer's contiguous landholdings.
Development should maximize the amount of on-site rainfall infiltration and minimize direct overland runoff onto adjoining property, public drainage facilities, adjoining streets, water bodies, watercourses, and wetlands. Channeling runoff directly into watercourses shall be prohibited; instead, runoff shall be routed to decrease velocity, increase infiltration, allow suspended solids to settle, and remove pollutants.

A drainage facility for discharging runoff in excess of that retained shall be provided to a watercourse.

The soil types of a site and the contiguous watershed area shall be of prime consideration in the design and maintenance of all stormwater management facilities.

A soil erosion and sediment control plan shall be prepared and submitted as part of the stormwater management plan.

Sec. 14-80. Hydraulic design.

(a) Design storms. Stormwater systems will be designed with sufficient hydraulic capacity for the following frequencies and durations:

<table>
<thead>
<tr>
<th>Facility</th>
<th>Frequency (in years)</th>
<th>Duration (in hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retention and detention basins</td>
<td>25</td>
<td>24</td>
</tr>
<tr>
<td>Primary drainage systems</td>
<td>25</td>
<td>24</td>
</tr>
<tr>
<td>Secondary drainage systems, i.e., cross drains and ditches for internal subdivision drainage</td>
<td>10</td>
<td>24</td>
</tr>
</tbody>
</table>

(b) Sources of information. All rainfall data is to be obtained using sources generally accepted as good engineering practice. Reference sources include:

2. U.S. Weather Bureau Technical Paper No. 40, "Rainfall Frequency Atlas of the United States for Duration from 30 Minutes to 24 Hours and Return Periods from 1 to 100 Years," latest revision;

Sec. 14-81. System design requirements.

(a) Methods of runoff computations. Accepted methods of computation are as follows:

1. Rational method hydrograph procedure, limited in use to developments with watershed areas of ten (10) acres or less;
(3) Unit hydrograph method;
(4) Other methods will be accepted only with prior approval by the building department.
(b) Receiving water stage.
(1) Regulated systems. Existing design and maintained stage elevations will be available from the building department.
(2) Nonregulated systems. The applicant should compute receiving water stages for such systems from the best available data and submit the results to the building department for review and concurrence before utilizing such results in further computations.
(3) Any system. Tail water stages should be considered if they have a significant influence on the design.
(c) Detention/retention.
(1) As a minimum, adequate storage volume shall be provided to retain on-site the first inch of runoff generated by any storm event over the developed or redeveloped portion of the site. For soil conditions or groundwater table conditions which do not permit the percolation of this volume within the five (5) days following a storm event, the building department may approve detention with filtration systems in lieu of retention.
(2) Outlet facilities shall be designed in accordance with accepted engineering principles, with particular attention given to appropriate hydraulics, including orifice, weir, and culvert hydraulics.
(3) Outlet facilities shall be so designed to attenuate the postdevelopment peak discharge rates of two-year, ten-year, and twenty-five-year, twenty-four-hour storms to be less than or equal to the peak rates of the predeveloped state of the site.
(4) Where the detention/retention basin discharges into a stream, ditch, swale, or water body, an energy dissipater may be required by the building department to reduce discharge velocities in order to minimize soil erosion and sediment transport.
(5) For detention and retention basins, an emergency spillway may be required by the building department to discharge flows in excess of the twenty-five-year, twenty-four-hour storm event. The spillway shall be designed to accommodate the peak discharge rate occurring from a fifty-year, twelve-hour storm event. The spillway shall be so located that the discharge does not erode the basin or receiving channel.
(6) The design of detention/detention areas shall incorporate considerations for regular maintenance and vegetation management procedures.
(d) Subsurface infiltration systems.
(1) Subsurface infiltration shall be designed on the basis of actual test data completed by a licensed geotechnical professional. Tests shall be consistent as to soils, elevations, locations, and water table depths with the system design to which the test data will be applied.
(2) Subsurface percolation systems shall be designed for prevention of clogging by fine material and for ease of cleaning with conventional sewer cleaning equipment. This may include but not necessarily be limited to wrapping of the perforated pipe and the seepage trench with an appropriate fabric and providing sufficient cleanouts to the system.
(3) Systems shall have an overflow with a control device to a watercourse between the subsurface percolation system and the discharge pipe. The overflow or control device shall be sized for the allowable discharge.
(e) Impervious areas. Runoff shall be discharged from impervious surfaces through retention areas, detention devices, filtering and cleansing devices prior to discharge from the project site.
(f) **Stagnant water conditions.** Configurations which create stagnant water conditions, such as hydraulically dead-end canals, are to be avoided regardless of the type of development.

(g) **Stormwater management areas.** Areas to be utilized for the conveyance or storage of stormwater shall be legally reserved for that purpose by plat, easement, etc., so that subsequent owners or others may not remove such areas from their intended use.

(h) **Runoff from adjacent lands.** Runoff from adjacent or upstream lands shall be considered and provision for unimpeded conveyance of such runoff shall be included in drainage plans, (Ord. No. 04-0516, 2-10-04)

Sec. 14-82. Soil erosion and sediment control plan.

(a) **Purpose.** The purpose of the soil erosion and sediment control plan is to provide effective measures to control erosion and sedimentation generated by removal of ground surface cover.

(b) **General principles.**

1. Erosion and sedimentation control requires consideration of stormwater control and soil to be encountered in order to be effective.

2. Proper design shall include measures for erosion control and provide for the early establishment of vegetation that will help to avoid erosion problems during and after development activities.

3. Alignment, grades, area of disturbed soil and bank slopes shall be based on soil erodibility, climatic exposure, geology, proposed vegetative restoration and expected maintenance.

(c) **Guidelines for design.**

1. Slopes should be protected from erosion by quick establishment of vegetative cover, benches or terraces, slope protection structures, mulches, or a combination of these practices as required. Sod is the preferred method of stabilization.

2. Drainage channels should be designed to avoid erosion problems. Wide channels with flat side slopes lined with grass or other vegetation shall be utilized where feasible. Where channel gradients are steep, concrete linings or grade control structures, such as stone check dams, may be required. Every effort should be made to preserve natural channels.

3. Sediment basins shall be constructed to discharge stormwater runoff while trapping sediment loads. Sediment basins may either be temporary or permanent, as required by the building department.

4. Detention basins may also be used to trap sediment during and after development. Where used for this purpose, the basin shall continue to detain stormwater in accordance with the hydraulic design criteria, but allow for the settlement and containment of sediment in the basin. Sediment shall be removed periodically to ensure the intended performance of the detention basin.

5. Existing vegetation, adequate to control erosion, shall be preserved. Regeneration of wood plants shall be encouraged.

6. Hay bales or silt fences may be placed around storm sewer inlets and at the boundaries of disturbed areas to trap sediment on site.

(d) **Contents.** Each soil erosion and sediment control plan shall contain the following:

1. Location, scope, and manner of performing erosion control measures;

2. Proposed construction sequence and time schedule for all earth disturbing activities and installation of provisions for erosion and sediment control and stormwater management; and
(3) Design computations and applicable assumptions for all structural measures for erosion and sediment control. Volume and velocity must be given for all surface water conveyance measures and pipe discharges.

(4) NPDES Phase II:
   a. Storage or detention BMP's control stormwater by gathering runoff in wet ponds, dry basins, or multichamber catch basins and slowly releasing it to receiving waters or drainage systems.
   b. Infiltration practices will be designed to facilitate the percolation of runoff through the soil to ground water, and, thereby, result in reduced stormwater quantity and reduced opportunity for pollutants to enter the aquatic area. Examples include infiltration basins/trenches, dry wells, and porous pavement.

(Ord. No. 04-0516, 2-10-04)