

ORDINANCE NO. 858

AN ORDINANCE RELATING TO STORM WATER DRAINAGE AND MANAGEMENT, IMPOSING DEVELOPMENT STANDARDS ON DEVELOPMENT FOR THE CONSTRUCTION OF STORM WATER DRAINAGE FACILITIES, SETTING FORTH EXEMPTIONS, DESCRIBING PERMIT REQUIREMENTS, AND ESTABLISHING AN ENFORCEMENT PROCEDURE; ADOPTING A NEW CHAPTER 14.28 TO THE GIG HARBOR MUNICIPAL CODE ON STORMWATER MANAGEMENT, AND ADOPTING A STORM WATER DESIGN MANUAL; REPEALING RELATED REGULATIONS IN CHAPTER 3 OF THE CITY'S PUBLIC WORKS STANDARDS, ADOPTED BY ORDINANCE NO. 712 § 1, 1996.

WHEREAS, an expanding population and increased development of land, coupled with inadequate drainage controls, can lead to problems related to land clearing, grading, and stormwater runoff impacts; and

WHEREAS, these problems contribute to increased sedimentation in ponds, creeks, and streams, and to water quality and fisheries habitat degradation, through excessive discharge of nutrients, metals, oil, and grease, toxic materials, and other detrimental substances to surface and groundwater; and

WHEREAS, inadequate surface and subsurface drainage planning and practice can lead to erosion and property damage, and risk to life; and

WHEREAS, excess water runoff on streets and highways poses a safety hazard to both lives and property; and

WHEREAS, future problems could be reduced if land developments, both public and private, provide for adequate drainage of property and adequate grading of slopes; and

WHEREAS, a legal mechanism to enforce the provisions of adequate drainage facilities and adequate grading and land clearing practices in the development and use of property is necessary to ensure compliance with adopted standards; and

WHEREAS, RCW 90.54.090 charges the state, local governments, and municipal and public corporations with carrying out the powers vested in them in manners which are consistent with the goals and provisions of the Clean Water Act, the Water Resources Act of 1971, and the Growth Management Act; and

WHEREAS, the Puget Sound Water Quality Plan requires that municipalities in the Puget Sound Basin adopt stormwater management Codes that are substantially equivalent to the

“Stormwater Management Manual for the Puget Sound Basin”, adopted by the Washington State Department of Ecology.

BE IT ORDAINED BY THE CITY OF GIG HARBOR COUNCIL AS FOLLOWS:

Section 1 New Chapter

A new Chapter 14.20, “Stormwater Management”, shall be added to the Gig Harbor Municipal Code, and is hereby adopted as shown in Exhibit “A”, attached hereto.

Section 2 Repeals

Chapter 3, “Storm Drainage”, of the Gig Harbor Public Works Standards as adopted in Ordinance 712 § 1, 1996 is hereby repealed.

Section 3 Adoption by Reference of Storm Water Manual

Attached to this Ordinance as Exhibit ‘B’ is a copy of the “Gig Harbor Stormwater Design Manual” that is adopted by reference and incorporated herein. One copy of the Manual has been filed with the City Clerk for review by the public.


Section 4 Effective Date

This ordinance codified in this title shall become effective January 9, 2001.

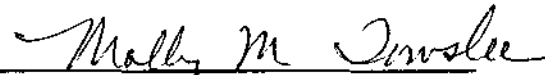
Section 5 Severability

If any phase, sentence or provision of this ordinance or the codes adopted hereunder is held by a court of competent jurisdiction to be invalid or unconstitutional, the remainder of the Code or the application of the provision to other persons or property shall not be affected.

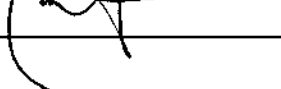
APPROVED


MAYOR

ATTEST/AUTHENTICATED


CITY CLERK

APPROVED AS TO FORM
OFFICE OF THE CITY ATTORNEY:

BY 

**CHAPTER 14.20
CITY OF GIG HARBOR
STORMWATER MANAGEMENT CODE**

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TITLE 14.20 STORMWATER MANAGEMENT

14.20.010 Declaration of Title

This Code shall be known as the “Stormwater Management Code”.

14.20.020 Purpose

The purpose of this Code is to:

Guide development or redevelopment activities within the City of Gig Harbor with regards to stormwater drainage. The provisions of this Code establish the minimum standards and construction procedures that must be met before issuance of a permit for development or redevelopment of property;

Minimize or eliminate the impacts of increased runoff, erosion, and sedimentation caused by land disturbance, development, and redevelopment;

Promote site planning and construction practices that seek to maintain the natural hydrologic conditions;

Require that stormwater facilities be operated, maintained, and repaired in conformance with this Code. The provisions of this Code establish the minimum level of compliance that must be met for maintaining stormwater facilities within the City; and

Provide for inspection and maintenance of stormwater facilities in the City to ensure an effective and functional stormwater drainage system.

Not to create or otherwise establish or designate any particular class or group of persons who will or should be especially protected or benefited by the terms of this code.

14.20.030 Adoption of Technical Manual

The City of Gig Harbor Council recognizes that stormwater control technology is a developing and evolving science. In order to ensure that the latest and best technology is utilized in the City, the *City of Gig Harbor Stormwater Design Manual*, incorporated herein by this reference is hereby adopted as the City’s stormwater technical manual, hereafter called the “Manual”. The Manual shall be used to implement and interpret the terms of this Code.

14.20.040 **Authority**

The Public Works Director, or an assignee, shall have the authority to administer and enforce this Code. The Director shall also have the authority to develop and implement procedures to administer and enforce this Code. The Director may approve, conditionally approve, or deny an application for activities regulated by this Code. The Director is authorized to develop a regular inspection program for all stormwater facilities in the City.

14.20.050 **Applicability**

The provisions of this Code shall apply to all site development activities requiring a Drainage Permit as defined in Section 14.20.120 herein, both public and private, within the City of Gig Harbor.

Any land development which is required by operation of any City of Gig Harbor Code, state law, or federal law to construct, install, or modify any natural or manmade drainage features within, abutting, or serving the development shall do so in accordance with this Code. However, where the provisions of this Code directly conflict with any other Gig Harbor Code, state or federal law, comprehensive drainage plan, or special study, the more stringent provisions shall apply to the extent permissible by law.

Approval of any land development activity by the City of Gig Harbor does not constitute approval of other applicable permits that may be required by other agencies. The fact that any activity is exempt from the permit requirements of this Code shall not constitute an exemption from any other City code, ordinance, or state or federal law.

14.20.060 **Exemptions**

The following are exempt from the requirements of this Code:

- (1) Commercial agriculture and forest practices regulated under Title 222 WAC, except for Class IV General Forest Practices that are conversions from timber land to other uses; and
- (2) Development that is undertaken by the Washington State Department of Transportation in state highway rights-of-way and is regulated by Chapter 173-270 WAC, the Puget Sound Highway Runoff Program.
- (3) Road construction and/or maintenance activities undertaken by the Gig Harbor Public Works Department shall be exempt from the administrative requirements of this Code, but shall comply fully with the technical requirements contained herein.

- (4) An excavation below finished grade for basements and footings of a building, retaining wall, or other structure authorized by a valid Building Permit. This shall not exempt the placement of any fill material removed from such an excavation, and shall not exempt any excavation beyond the limits of the basement or footing excavations nor exempt excavations having an unsupported height greater than 4 feet after the completion of such a structure.
- (5) Agricultural crop management outside of critical drainage areas limited to the preparation of soil by turning, discing, or other means endorsed by the local Conservation District.
- (6) Excavation for cemetery graves.
- (7) The disposal of solid waste, wood waste, problem waste and demolition waste authorized pursuant to R.C.W. 70.95, and regulations presently enacted or as may be amended or as specifically approved by the Pierce County Health District.
- (8) Mining, quarrying, excavating, processing, and/or stockpiling of rock, sand, gravel, aggregate, or clay where established and provided by law, and a permit for said activity has been issued by the State of Washington or the Federal Government, provided such operations do not affect the lateral support or increase the stresses in or pressure upon any adjacent or contiguous land and the activities meet the minimum requirements of this Code.
- (9) Exploratory excavations under the direction of a qualified professional engineer.
- (10) Grading activities already approved by separate permit granted by any governing authority, provided that the activities meet the minimum requirements of this Code.
- (11) Emergency sandbagging, diking, ditching, filling, or similar work during or after periods of extreme weather conditions when done to protect life or property.

14.20.070 **Variances**

The Director of Public Works may grant a variance from the provisions of this Code, provided that all criteria are met as adopted in Section 12.16.010 of the Gig Harbor Municipal Code.

14.20.080 Appeals

Appeals of a variance shall be filed and processed as described in Title 19 GHMC for a Type II application.

14.20.090 Severability

If any provision of this Code or its application to any person or property is held invalid by a court of competent jurisdiction, the remainder of the Code or the application of the provision to other persons or property shall not be affected.

14.20.100 Definitions

Accepted Performance of Construction shall mean the written acknowledgment from the Director of the satisfactory completion of all work accepted by the City, including all work shown on the accepted plans, accepted revisions to the plans, and accepted field changes.

Applicant shall mean the person, party, firm, corporation, or other legal entity that proposes to engage in site development activities in the City of Gig Harbor by submitting an application for any of the activities covered by this Code on a form furnished by the City and paying the required application fees.

Basin Plan shall mean a plan and all implementing regulations and procedures including, but not limited to, land use management adopted by Code for managing surface and stormwater quality and quantity management facilities and drainage features within individual sub-basins.

Beneficial Use shall mean any activity that allows the owner to gain the use intended by the development activity, as so stated by the Applicant at the time of application for a City of Gig Harbor Drainage Permit.

Best Management Practices (BMP) shall mean physical, structural, and/or managerial practices that, when used singly or in combination, prevent or reduce pollution of water, and have been approved by the City as accepted BMPs.

Biofiltration/Biofilter Facilities shall mean vegetative BMPs that treat stormwater by filtration through vegetation. Biofiltration facilities include, but are not limited to, grassed or vegetated swales and filter strips.

Bond shall mean a financial guarantee, in the form of a surety bond, assignment of funds, or irrevocable bank letter of credit, that shall guarantee compliance with applicable provisions of this Code.

City shall mean the City of Gig Harbor.

Clearing or land clearing shall mean the surface removal of vegetation.

Closed Depressions shall mean low-lying areas that have no surface outlet, or such a limited surface outlet that in most storm events the area acts as a retention basin, holding water for infiltration, evaporation or transpiration.

Comprehensive Drainage Plan shall mean a detailed analysis, adopted by the Council, for a drainage basin, which assesses the capabilities and needs for runoff accommodation due to various combinations of development, land use, structural and nonstructural management alternatives. The plan recommends the form, location, and extent of stormwater quantity and quality control measures that would satisfy legal constraints, water quality standards, and community standards, and identifies the institutional and funding requirements for plan implementation.

Contiguous Land shall mean land adjoining and touching other land regardless of whether or not portions of the parcels have separate Assessor's tax numbers or were purchased at different times, lie in different Sections, are in different government lots, or are separated from each other by private road or private rights-of-way.

Council shall mean the City of Gig Harbor City Council.

Design Storm Event shall mean a theoretical storm event, of a given frequency, interval, and duration, used in the analysis and design of a stormwater facility.

Detention Facilities shall mean stormwater facilities designed to store runoff while gradually releasing it at a pre-determined controlled rate. "Detention facilities" shall include all appurtenances associated with their designed function, maintenance, and security.

Developed Site shall mean the condition of the development site following completion of construction of the development including all approved phases of construction.

Director shall refer to the Director of the City of Gig Harbor Public works department or the Director's designee.

Diversion shall mean the routing of stormwater to other than its natural discharge location.

Drainage Feature shall mean any natural or manmade structure, facility, conveyance, or topographic feature which has the potential to concentrate, convey, detain, retain, infiltrate, or affect the flow rate of stormwater runoff.

Drainage Plan shall mean a plan for the collection, transport, treatment and discharge of runoff, and may include both the plan and profile views of the site as well as construction details and notes.

Easement shall mean an acquired privilege or right of use or enjoyment that a person, party, firm, corporation, municipality, or other legal entity has in the land of another.

Erosion Control Design Storm shall mean the 2-year frequency, 24-hour duration storm event used for analysis and design of sedimentation and erosion control facilities.

Existing Stormwater Facilities shall mean those facilities constructed or under permitted construction prior to the effective date of this Code.

Forested Land shall mean "forested land" as defined in RCW 76.09.020 as this section now exists or may hereafter be amended, and shall include all land which is capable of supporting a merchantable stand of timber and that is being actively used in a manner compatible with timber growing.

Geotechnical Engineer shall mean a practicing professional engineer licensed in the State of Washington who has at least four years of professional experience in geotechnical and landslide evaluation.

Geotechnical Report shall mean a study of the effects of drainage and drainage facilities on soil characteristics, geology and groundwater. The geotechnical analysis shall be prepared by a geotechnical engineer.

Grading shall mean any excavating, filling, or embanking of earth materials.

Grubbing shall mean the removal of vegetative matter from underground, such as sod, stumps, roots, buried logs, or other debris, and shall include the incidental removal of topsoil to a depth not exceeding 12 inches.

Hydrograph shall mean a graph of runoff rate, inflow rate or discharge rate, past a specific point over time.

Hydrograph Method shall mean a method of estimating a hydrograph using a mathematical simulation. Commonly accepted hydrograph methods include the Soil Conservation Service TR-55 Method and the Santa Barbara Urban Hydrograph (SBUH) Method.

Illicit Discharge shall mean all non-stormwater discharges to stormwater drainage systems that cause or contribute to a violation of state water quality, sediment quality, or ground water quality standards, including but not limited to, sanitary sewer connections, industrial process water, interior floor drains, and greywater systems.

Impervious Surface shall mean a hard surface area which either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development, and/or a hard surface area which causes water to run off the surface in greater quantities or at an increased rate of flow from the flow present under natural conditions prior to development. Common impervious surfaces include, but are not limited to, roof tops, walkways, patios, driveways, parking lots or storage areas, concrete or asphalt paving, gravel roads with compacted subgrade, packed earthen materials, and oiled, macadam, or other surfaces which similarly impede the natural infiltration of stormwater. Open, uncovered retention/detention facilities shall not be considered as impervious surfaces.

Land Disturbing Activity shall mean any activity that results in a change in the existing soil cover (both vegetative and nonvegetative) and/or the existing soil topography. Land disturbing activities include, but are not limited to, demolition, construction, paving, clearing, grading, and grubbing.

Land Use Permits and Approvals shall mean any use or development of land that requires City action in legislation, administration, or approval, including but not limited to, the following:

- (1) Subdivision
- (2) Short plat subdivision
- (3) Planned Residential Development (P.R.D.),
- (4) Planned Unit Development (P.U.D.), including residential and commercial
- (5) Site plan review
- (6) Conditional Use Permit (C.U.P.)
- (7) Zoning variance
- (8) Short plat subdivision
- (9) Grading and Land Clearing Permit
- (10) Shoreline Substantial Development Permit
- (11) Shoreline Conditional Use Permit
- (12) Environmental Reviews (S.E.P.A., Wetland, Critical Areas)
- (13) Binding Site Plan
- (14) Building Permit

Maintenance shall mean any activity that is necessary to keep a stormwater facility in good working order so as to function as designed. Maintenance shall include complete reconstruction of a stormwater facility if reconstruction is needed in order to return the facility to good working order. Maintenance shall also include the correction of any problem on the site property that may directly impair the functions of the stormwater facilities.

Maintenance Covenant shall mean a binding agreement between the City of Gig Harbor and the person or persons holding title to a property served by a stormwater

facility whereby the property owner promises to maintain certain stormwater facilities; grants the City of Gig Harbor the right to enter the subject property to inspect and to make certain repairs or perform certain maintenance procedures on the stormwater control facilities when such repairs or maintenance have not been performed by the property owner; and promises to reimburse the City of Gig Harbor for the cost should the City perform such repairs or maintenance.

Maintenance Schedule shall mean a document detailing required stormwater facility maintenance activities to be performed at specified intervals.

Major Development shall mean any new development or any redevelopment activity that (1) includes the creation or cumulative addition of 5,000 square feet or greater of new impervious surface area from the pre-development conditions, or (2) includes land disturbing activity of one acre or greater, or (3) includes grading involving the movement of 5,000 cubic yards or more of material.

Manual shall mean the "City of Gig Harbor Stormwater Design Manual".

Minor Development shall mean any new development or redevelopment activity that (1) includes the creation or addition of less than 5,000 square feet of new impervious surface area, and (2) includes land disturbing activity of less than one acre, and (3) includes grading involving the movement of less than 5,000 cubic yards of material.

Non-forestry Use shall mean an active use of land that is incompatible with timber growing.

Off-site Drainage Analysis shall mean a study of those land areas contributing surface runoff to a development site as well as a study of the existing and predicted impacts of surface runoff from the development site on properties and drainage features that have the potential to receive stormwater from the development site.

Oil/Water Separator shall mean a structure or device used to remove suspended, floating, or dispersed oil and greasy solids from water.

Operation and Maintenance Manual shall mean a written manual, prepared by a qualified civil engineer that provides a description of operation and maintenance procedures for specific stormwater control facilities, for use by operation and maintenance personnel.

Owner shall mean any person or persons having a legal or equitable property right or interest, including a fee owner, contract purchaser or seller, mortgagor or mortgagee, optionor or optionee, and beneficiary or grantor of a trust or deed of trust.

Pollution shall mean contamination or other alteration of the physical, chemical, or biological properties of waters of the state, including change in temperature, taste,

color, turbidity, or odor of the waters, or such discharge of any liquid, gaseous, solid, radioactive, or other substance into any waters of the state as will or is likely to create a nuisance or render such waters harmful.

Pre-development Conditions shall mean:

- (a) For developed sites with stormwater facilities that have been constructed to meet the standards in the Minimum Requirements of the manual, existing site conditions shall mean the existing conditions on the site.
- (b) For developed sites that do not have stormwater facilities that meet the Minimum Requirements, existing site conditions shall mean the conditions that existed prior to the development of the project site. If in question, the existing site conditions shall be documented by aerial photograph records or other appropriate means.
- (c) For undeveloped sites, existing site conditions shall mean the existing conditions of the site prior to any recent land clearing or grading activity or 10 years prior to submittal of a development application.

Professional Engineer shall mean a person who, by reason of his or her special knowledge of the mathematical and physical sciences and the principles and methods of engineering analysis and design, acquired by professional education and practical experience, is qualified to practice engineering as attested by his or her legal registration as a professional engineer in the State of Washington.

Project Engineer shall mean the professional engineer responsible for the design of the project, who will affix his/her seal on the project drainage plans and drainage analysis. The project engineer shall be licensed in the state of Washington and qualified by experience or examination.

Redevelopment shall mean any land disturbing activity occurring on existing developed property.

Retention Facilities shall mean drainage facilities designed to store runoff for gradual release by evaporation, plant transpiration, or infiltration into the soil. Retention facilities shall include all such drainage facilities designed so that none of the runoff entering the facility will be discharged as surface water. Retention facilities shall include all appurtenances associated with their designed function, maintenance, and security.

SEPA shall mean the Washington State Environmental Policy Act.

Shorelines of the State shall mean the total of all "shorelines" and "shorelines of state-wide significance" within the state, as defined in RCW 90.58.030, also known as the Shoreline Management Act.

Site Development Activity shall mean the alteration of topography, clearing, paving, grading, construction, alteration of stormwater systems, site preparation, or other activity commonly associated with site development. Site development includes those activities listed in the definition of Land Use Permits and Approvals.

Soils Investigation Report shall mean a study of soils on a subject property with the primary purpose of characterizing and describing the soils. The soils investigation report shall be prepared by a qualified soils engineer, who shall be directly involved in the soil characterization either by performing the investigation or by directly supervising employees.

Soils Engineer shall mean a practicing engineer licensed as a professional engineer in the State of Washington who has at least four years of professional employment as an engineer dealing with soil descriptions and characterizations.

Source Control BMP shall mean a Best Management Practice (BMP) that is intended to prevent pollutants from entering stormwater. Examples include erosion control practices, maintenance of stormwater facilities, constructing roofs over storage and working areas, and directing wash water and similar discharges to the sanitary sewer or a dead end sump.

Stabilized shall mean the application of BMPs sufficient to protect soil from the erosive forces of raindrop impact and flowing water. Examples include, but are not limited to, vegetative establishment, mulching, plastic covering, the early application of gravel base, and outlet and channel protection.

Stormwater shall mean the surface water runoff that results from all natural forms of precipitation.

Stormwater Facility shall mean a component of a manmade drainage feature, or features, designed or constructed to perform a particular function or multiple functions, including, but not limited to, pipes, swales, ditches, culverts, street gutters, detention basins, retention basins, wetponds, constructed wetlands, infiltration devices, catch basins, oil/water separators, and sediment basins.

Stormwater Quality Control shall mean the control of the introduction of pollutants into stormwater and the process of separating pollutants from stormwater. Stormwater quality control facilities include, but are not limited to, source controls, biofiltration/biofilter facilities, wetponds, wetland forebays, oil/water separators, constructed wetlands, and erosion and sedimentation control facilities.

Stormwater Quantity Control shall mean the control of the rate and/or volume of stormwater released from a development site. Stormwater quantity control facilities include, but are not limited to, detention and retention facilities.

Variance shall mean permission granted by the Director to deviate from the provisions of this Code, pursuant to Section 12.16.010 GHMC.

Water Quality Design Storm Event The water quality design storm, used for the design of water quality treatment facilities, shall be the 6-month, 24-hour storm event. In that the precipitation data from isopluvial maps is not available for the 6-month, 24-hour storm event, the design engineer can use 72% of the 2-year, 24-hour precipitation as equivalent to the 6-month, 24-hour precipitation.

Water Quality Sensitive Area Areas that are sensitive to a change in water quality, including but not limited to, lakes, ground water management areas, ground water special protection areas, sole source aquifers, critical aquifer recharge areas, well head protection areas, closed depressions, fish spawning and rearing habitat, wildlife habitat, and shellfish protection areas.

Wetland shall mean those areas of the City of Gig Harbor that are defined by separate Code, regulation, or statute as wetlands.

14.20.110 Review and Plan Approval

Proposed site development activities shall be reviewed by the City of Gig Harbor to determine the permits required. Consistent with the minimum Requirements contained in this Code, the City of Gig Harbor shall approve or disapprove all new development and redevelopment, unless exempted herein.

14.20.120 Drainage Permit Required

A Drainage Permit, issued by the City of Gig Harbor Public works department, shall be required for any of the following activities:

- 1) Site development or redevelopment activities that meet the definition of a major development.
- 2) Site development or redevelopment activities that require connection to a public storm drainage system.
- 3) Grading activities that result in the movement of 100 cubic yards or more of earth.
- 4) Grading activities that will result in a temporary or permanent slope having a grade exceeding 3 to 1 (3 feet horizontal to 1 foot vertical) and having a total

slope height, measured vertically from toe of slope to top of slope, exceeding 5 feet.

- 5) Grading activities that include the construction of embankment berms that will result in the impoundment of water to a depth exceeding 18 inches and/or with a maximum volume exceeding 2,500 cubic feet of water.
- 6) Grading activities that will result in the diversion of existing drainage courses, both natural and manmade, from their natural point of entry or exit from the grading site.
- 7) Any land clearing or grading on slopes steeper than 30%, or within the mandatory setback of a wetland, stream, lake, or Puget Sound, as established by separate Code or by Gig Harbor Department of Planning and Building Services.

No site development activity, including land clearing, grading or other construction activity as described in this Code, shall occur until a Drainage Permit has been issued, nor shall said site development activity continue without a Drainage Permit in force.

14.20.130 Permit Requirements

The Director shall establish requirements for the issuance of Drainage Permits, subject to the following criteria:

- 1) All site development activities shall comply with the standards, specifications and requirements contained in the Stormwater Design Manual.
- 2) The Director shall establish fees for Drainage Permits. Drainage Permit fees shall include fees for the review of permit applications and documents and for inspections during construction.
- 3) A Drainage Permit shall, at the time of its issuance, specify a maximum expiration period, not to exceed 3 years from the date of issuance. A Drainage Permit shall expire upon approved completion of construction, or upon the specified maximum expiration period, whichever comes first. In the event that a Drainage Permit expires prior to the completion of construction, all construction activity must cease, a new Drainage Permit application must be submitted, and the issuance of a new Drainage Permit shall be, at the discretion of the Director, subject to Gig Harbor development standards in force at the time of the new permit application.

14.20.140 **When a Professional Engineer is Required**

Unless otherwise required by this Code, Drainage Permit applications shall require the submittal of documents prepared by a professional engineer for all developments meeting the definition of a major development, any development located within right-of-way or easement for which the City will ultimately assume responsibility for maintenance, or any site development that the Director deems to be in the public's best interest to require that certain Drainage Permit application submittal documents be prepared by a professional engineer.

14.20.150 **Off-site Analysis**

All Drainage Permit applications that require the submittal of documents prepared by a professional engineer as described in Section 14.20.140, shall include an off-site drainage analysis as described in Section 14.20.460. Said analysis shall also be prepared by a professional engineer and shall be based on a field investigation of the development's off-site contributing and receiving drainage areas.

14.20.160 **Geotechnical Analysis**

All Drainage Permit applications for development activities where grading or the construction of retention, detention, or other stormwater facilities is proposed within 200 feet of slopes steeper than 30%, or where the Director deems that the proposed construction poses a potential hazard due to its proximity to a slope, shall, when required by the Director, include a Geotechnical analysis, prepared by a professional engineer. Said geotechnical analysis shall address the effects of groundwater interception and infiltration, seepage, potential slip planes, and changes in soil bearing strength.

14.20.170 **Soils Analysis**

All Drainage Permit applications which require the submittal of documents prepared by a professional engineer as described in Section 14.20.140, shall include, where the soils underlying the proposed project have not been mapped, or where existing soils maps of the project site are inconsistent, or where the Director deems that existing soils maps of the project site are not of sufficient resolution to allow proper engineering analysis, shall include a soils investigation report. Said report shall also be prepared by a professional engineer.

14.20.180 **Permit Modifications**

Proposed modifications to an approved Drainage Permit must be submitted to the Public works department and be reviewed for compliance with this Code. Substantial proposed modifications, as determined by the Director, shall require additional review fees and shall require re-issuance of the required permit. Minor proposed

modifications may be accepted by the Director without requiring the re-issuance of the accepted permit or the payment of additional review fees.

14.20.190 Erosion and Sedimentation Control

All final drainage, grading, clearing, or other site development plans requiring acceptance from the Gig Harbor Public Works Department shall include a plan for the control of erosion and sedimentation as required in Sections 14.20.260 and 14.20.270, for the period beginning with the commencement of site development activity and continuing without interruption until permanent site stabilization is achieved.

No clearing, grading, or other construction activity shall take place on a project site until an erosion and sedimentation control plan has been approved by the Public works department.

14.20.200 Site Stabilization

Prior to the issuance of a Drainage Permit and prior to beginning any construction activity on a project site, the owner of the project will be required to record a performance covenant or post a performance surety for site stabilization and erosion and sedimentation control. In addition, the owner may be required to provide a Certificate of Commercial Liability Insurance.

This performance requirement for stabilization and erosion control should not be confused with the performance bond accepted at the time of final plat recording as a surety for construction items not yet completed. When a performance bond is accepted for a final plat in lieu of construction completion, the surety or covenant for stabilization and erosion control will be released, and the new performance bond shall cover site stabilization and erosion control along with the other incomplete construction items.

14.20.210 Performance Covenant for Site Stabilization

For project sites with less than 5 acres of land disturbing activity, a Performance Covenant may be recorded in lieu of performance surety for site stabilization prior to issuance of the Drainage Permit to guarantee the City that temporary erosion and sedimentation control and permanent site stabilization measures will perform in accordance with the Stormwater Management Code. This Covenant shall be recorded with the Pierce County Auditor and shall run with the land until such a time as the City issues final acceptance of the permitted activities, or until a separate performance bond is posted prior to final plat approval. Upon issuance of final project approval, the Public works department will record a document that extinguishes the Performance Covenant.

If the site work is determined by the Director to be in violation of the Stormwater Management Code, the City may enforce the Performance Covenant to provide temporary and permanent site stabilization. In this case, the applicant or owner will be charged for all associated costs and, if required, the Director may as ask the City Attorney to initiate legal proceedings to collect such costs, such as a lien on the property

14.20.220 Performance Surety for Site Stabilization

The term "Bond" as defined in the Code shall mean a surety bond, assignment of funds, or irrevocable bank letter of credit. For project sites with 5 or more acres of land disturbing activity, a Performance Bond shall be posted prior to issuance of a Drainage Permit to guarantee the City that temporary erosion and sedimentation control and permanent site stabilization measures will perform in accordance with the Code. The amount of the Performance Bond shall be as follows:

- o One hundred percent (100%) of the estimated cost of performing minor grading and installing temporary erosion and sedimentation control, and permanent site stabilization measures to bring the construction site into compliance with the Code. A cost estimate shall be submitted by the project engineer subject to the approval of the Director. The minimum amount of the "Bond" shall be five thousand dollars (\$5,000.00).

(OR)

- o One thousand dollars (\$1,000.00) per acre of land disturbing activity. No engineer's estimate is required.

If the site work is determined by the Director to be in violation of the Stormwater Management Code, the City may use the Performance Bond to provide temporary and permanent site stabilization.

All Performance Bonds shall be approved by the City and run continuously until released in writing by the City, and shall not be subject to an expiration or cancellation date.

14.20.230 Performance Bond for Uncompleted Site Improvements

For single family residential developments, a Performance Bond shall be provided prior to the final recording of the plat/PUD, guaranteeing completion of all site improvements not yet completed. The amount of the Performance Bond shall be one-hundred percent (100%) of the estimated cost of said improvements. The estimated cost of the construction shall be determined by a professional engineer subject to the approval of the Director.

14.20.240 Commercial Liability Insurance

The owner of any property subject to a permit application must provide a Certificate of Liability Insurance to the Public works department prior to issuance of a Drainage Permit. The liability insurance shall remain in force until final project approval is issued by the City. The commercial liability insurance shall be in the amount of not less than one million dollars (\$1,000,000.00) combined single limit bodily injury and property damage, with a two million dollar (\$2,000,000.00) aggregate. Such insurance shall include the City of Gig Harbor, its officers, and employees as additional insureds, with respect to the terms and conditions of the policy.

14.20.250 Maintenance Bonds

A maintenance bond is required for residential plats/PUD's and other projects for which maintenance of the stormwater facilities and/or roads is to ultimately be taken over by the City.

Prior to the final approval of construction and release of any performance sureties, a Maintenance Bond must be posted and maintained by the project owner for a period of two (2) years. The Maintenance Bond shall guarantee the stormwater facilities and roads constructed under permit against design defects and/or failures in workmanship, and shall guarantee that the facilities constructed under the permit will be regularly and adequately maintained throughout the maintenance period.

The amount of the Maintenance Bond shall be fifteen percent (15%) of the estimated construction cost of the stormwater facilities and roads requiring maintenance, or five thousand dollars (\$5,000.00), whichever is greater. The construction cost of the facilities requiring maintenance shall be estimated by the Project Engineer, subject to the approval of the Director.

14.20.260 Erosion and Sedimentation Control for Minor Developments

All minor Developments, as defined in this Code, shall be required to control erosion and sedimentation during construction, to permanently stabilize soil exposed during construction, and to comply with the following Minor Development Requirements:

- (1) Construction access route. Construction vehicle access shall be limited to one route. Access points shall be stabilized with quarry spalls or crushed rock to minimize the tracking of soils and debris onto public roads, or where they might otherwise be washed into the storm drainage system during rainfall events or street cleaning operations.

- (2) Stabilization of denuded areas. All exposed soils shall be stabilized by suitable application of BMPs, including but not limited to, sod or other vegetation, mat covering, mulching, or application of compacted ground base

material on areas to be paved. All BMPs shall be selected, designed and maintained in accordance with the Manual. From October 1 to April 30, no soils shall remain unstabilized for more than 48 hours. From May 1 to September 30, no soils shall remain unstabilized for more than 7 days unless approved in writing by the Director.

At all times of the year, the contractor shall have sufficient materials, equipment and labor on-site to stabilize and prevent erosion from all denuded areas within 12 hours as site and weather conditions dictate.

(3) Protection of adjacent properties. Adjacent properties shall be protected from sediment deposition by appropriate use of vegetative buffer strips, sediment barriers or filters, dikes or mulching, or by a combination of these measures and other appropriate BMPs.

(4) Maintenance. All erosion and sediment control BMPs shall be regularly inspected and maintained to ensure continued performance of their intended function.

(5) Other BMPs. Any adverse effects of increased runoff resulting from land disturbing and/or land development activities shall be controlled by appropriate BMPs.

14.20.270 Erosion and Sedimentation control for Major Developments

Any new development meeting the definition of a major development shall comply with the following provisions of this section. For any redevelopment project meeting the definition of a major development, those portions of the site that are being redeveloped shall comply with the following provisions of this section. Compliance with the erosion and sedimentation control requirements of this section shall be demonstrated through the implementation of an approved Erosion and Sedimentation Control Plan. Said plan shall be prepared by a professional engineer licensed in the State of Washington.

(1) Stabilization and sediment trapping. All exposed and unworked soils, including soil stockpiles, shall be stabilized by suitable application of BMPs which protect soil from erosive forces of raindrop impact and flowing water. Applicable practices include, but are not limited to vegetative establishment, mulching, plastic covering, and the early application of gravel base on areas to be paved. From October 1 to April 30, no soils shall remain unstabilized for more than 48 hours. From May 1 to September 30, no soils shall remain unstabilized for more than 7 days unless approved in writing by the Director.

At all times of the year, the contractor shall have sufficient materials, equipment and labor on-site to stabilize and prevent erosion from all denuded areas within 12 hours as site and weather conditions dictate.

(2) Delineation of clearing and easement limits. Clearing limits, setbacks, buffers, and sensitive or critical areas such as steep slopes, wetlands and riparian corridors shall be clearly marked in the field and inspected by the City of Gig Harbor Department of Planning and Building Services prior to commencement of land clearing activities.

(3) Protection of adjacent properties. Adjacent properties shall be protected from sediment deposition by appropriate use of vegetative buffer strips, sediment barriers or filters, dikes or mulching, or by a combination of these measures and other appropriate BMPs.

(4) Timing and stabilization of sediment trapping measures. Sediment ponds and traps, perimeter dikes, sediment barriers and other BMPs intended to trap sediment on-site shall be constructed as a first step in grading. These BMPs shall be functional before additional land disturbing activities take place. Earthen structures such as dams, dikes, and diversions shall be stabilized according to the timing indicated in item (1) above.

(5) Slope Stabilization. Cut and fill slopes shall be constructed in a manner that will minimize erosion. Roughened soil surfaces are preferred to smooth surfaces. Interceptor ditches should be constructed at the top of steep slopes that have significant areas that contribute runoff. Concentrated runoff should not be allowed to flow down the face of a cut or fill slope unless contained within an adequate channel or pipe slope drain. Wherever a slope face crosses a water seepage plane, adequate drainage or other protection should be provided. In addition, slopes should be stabilized in accordance with item (1) above.

(6) Controlling off-site erosion. Properties and waterways downstream from development sites shall be protected from erosion due to increases in the volume, velocity, and peak flow rate of stormwater runoff from the development site by the implementation of appropriate BMPs to minimize adverse downstream impacts.

(7) Stabilization of temporary conveyance channels and outlets. All temporary on-site conveyance channels shall be designed, constructed and stabilized to prevent erosion from the expected flow velocity from a 10-year, 24-hour design storm event for the post-development condition. Stabilization adequate to prevent erosion of outlets, adjacent stream banks, slopes and downstream reaches shall be provided at the outlets of all conveyance systems.

(8) Storm drain inlet protection. All storm drain inlets made operable during construction shall be protected so that stormwater runoff shall not enter the conveyance system without first being filtered or otherwise treated to remove sediment.

(9) Underground utility construction. The construction of underground utility lines shall be limited, where feasible, to no more than 500 feet of open trench at any one time. Where consistent with safety and space considerations, excavated material shall be placed on the uphill side of the trench. Dewatering devices shall discharge to an appropriate sediment trap or pond, preceded by adequate energy dissipation, prior to runoff leaving the site.

(10) Constructed access routes. Wherever construction vehicle access routes intersect paved roads, provisions must be made to minimize the transport of sediment onto the paved road by use of appropriate BMPs such as a stabilized construction entrance. If sediment is transported onto a road surface, the roads shall be cleaned thoroughly, as a minimum, at the end of each day. Sediment shall be removed from roads by shoveling or sweeping and be transported to a controlled sediment disposal area. Street washing shall be allowed only after sediment is removed in this manner, as approved by the Director.

(11) Removal of temporary BMPs. All temporary erosion and sediment control BMPs shall be removed within 30 days after final site stabilization is achieved or after the temporary BMPs are no longer needed, as determined by the Director. Trapped sediment shall be removed or stabilized on-site. Disturbed soil areas resulting from removal of temporary BMPs shall be permanently stabilized. The removal of temporary erosion and sediment control BMPs may not be required for those projects, such as single family plats, that will be followed by additional construction under a different permit(s). In these circumstances, the need for removing or retaining the measures will be evaluated on a site-specific basis.

(12) Dewatering construction sites. Dewatering devices shall discharge into an appropriate sediment trap or pond designed to accept such a discharge, preceded by adequate energy dissipation, prior to runoff leaving the site.

(13) Control of pollutants other than sediment on construction sites. All pollutants other than sediment that occur on-site during construction shall be handled and legally disposed of in a manner that does not cause contamination of surface waters. Pollutants of concern include, but are not limited to, fuels, lubricants, solvents, concrete by-products and construction materials.

(14) Maintenance. All temporary and permanent erosion and sediment control BMPs shall be maintained and repaired as needed to assure continued performance of their intended function. All maintenance and repair shall be

conducted in accordance with the Manual. The applicant shall be responsible for assuring that any such facilities damaged during floods, storms or other adverse weather conditions are immediately returned to normal operating condition.

(15) Financial Liability. A performance surety shall be required for all projects to ensure compliance with the approved erosion and sediment control plan, as described in Section 14.20.220.

14.20.280 Erosion Control Design Storm Event

Facilities designed for the control of erosion and sedimentation shall be designed for the erosion and sedimentation control design storm event, defined as the 10-year, 24-hour duration storm.

14.20.290 Authority of the Director

The Director is the designated agent for the issuance of Drainage Permits for grading, and shall have the authority to prepare regulations and set administrative procedures to carry out the purposes and intent of this Section.

14.20.300 Grading Plan Required

Grading projects meeting the criteria of Section 14.20.120 shall be required to have an approved engineered grading plan.

14.20.310 Abbreviated Grading Plan

Grading projects meeting the definition of a Minor Development will require an approved abbreviated grading plan in lieu of an engineered grading plan. An abbreviated grading plan is a grading plan that does not require the seal of a professional civil engineer.

14.20.330 Drainage Associated With Grading Activities

(1) All grading activities shall conform to the requirements of this Code concerning stormwater management.

(2) Where required by the Director, all discharge of runoff from the project site shall be of like quality, flow rate, and velocity as that which flowed from the project site prior to the work for which the Drainage Permit has been issued.

(3) Stormwater flows shall be accepted onto, and shall be discharged from, a project site at the natural or otherwise legally existing locations.

14.20.340 Minimum Grading Standards

This Code sets forth minimum standards that shall apply to grading activities as described in Section 14.20.120. For circumstances not specifically addressed in this Code or the Stormwater Design Manual, the provisions of the latest version of the Uniform Building Code adopted by the City shall apply.

14.20.350 Changes in Site Topography

(1) The maximum surface gradient on any artificially created slope shall be two (2) feet of horizontal run to one (1) foot of vertical fall (2:1). This gradient may be increased to that gradient which can be demonstrated through engineering calculations to be stable, if, in the opinion of the Director, it has been demonstrated by the Applicant through engineering calculations performed by a qualified professional engineer that surface erosion can be controlled to that erosion rate equal to a properly stabilized 2:1 slope under the same conditions.

(2) The Applicant shall at all times protect adjacent private properties and public rights-of-way or easements from damage occurring during grading operations. The Applicant shall restore public improvements damaged by his/her operations.

(3) The Applicant shall be responsible for obtaining and coordinating all required State or Federal permits associated with the filling of wetlands or other regulated activities.

14.20.360 Rockeries and Retaining Structures

Any rockery or other retaining structure greater than 4 feet in height shall be permitted under a separate Building Permit issued by the City's Department of Planning and Building Services.

14.20.370 Maintenance of Erosion and Sedimentation Control

It shall be the responsibility of the Applicant to maintain all erosion control and drainage facilities in good operating condition at all times, as required in Sections 14.20.260 and 14.20.270.

14.20.380 Progress of Work

All work permitted under this Code shall proceed continuously to completion in an expeditious manner unless otherwise authorized by the Director, with the intent that work may be halted due to weather conditions or the need to coordinate other

construction on the project site. Drainage Permits, issued for grading only, shall expire six (6) months after issuance.

14.20.390 Redevelopment Activities

Where redevelopment activities meet the definition of a major development, the requirements of this Code shall apply to that portion of the site that is being redeveloped. In addition, where one or more of the following conditions exist, the requirements of this Code shall apply, to the maximum extent practicable, for the entire site, including adjoining parcels, if they are part of the project:

- (1) Existing sites greater than one (1) acre in size with 50% or more impervious surface.
- (2) Sites that discharge to a receiving water that has a documented water quality problem. Subject to local priorities, a documented water quality problem includes, but is not limited to, water bodies:
 - (i) Listed in reports required under section 305(b) of the Clean Water Act, and designated as not supporting beneficial uses;
 - (ii) Listed under section 304 (1) (1) (A) (i), 304 (1) (1) (A) (ii), or 304 (1) (1) (B) of the Clean Water Act as not expected to meet water quality standards or water quality goals;
 - (iii) Listed in Washington State's Nonpoint Source Assessment required under section 316 (a) of the Clean Water Act that, without additional action to control nonpoint sources of pollution, cannot reasonably be expected to attain or maintain water quality standards.
- (3) Sites where the need for additional stormwater control measures have been identified through a basin plan, watershed ranking process, or through Growth Management Act planning.

14.20.400 Approved Hydrological Methods for Design

Estimation of peak stormwater runoff rates used in the design of stormwater quantity control facilities shall utilize hydrograph methods of analysis approved by the Director. The design of storage facilities that are a part of stormwater quantity control facilities shall be designed using methods approved by the Director.

14.20.410 Stormwater Quantity Control

The following minimum requirements for stormwater quantity control shall apply to all land developments that meet the definition of a major development:

1. All surface water and stormwater entering the development site in its pre-development state shall be received at the naturally occurring or otherwise legally existing locations. All surface water and stormwater leaving the development site shall be discharged at all times during and after development at the naturally occurring or otherwise legally existing locations so as not to be diverted onto or away from adjacent downstream properties, EXCEPT, diversion which will correct an existing man-made downstream problem may be permitted by the Director. For the purposes of this Code, "naturally occurring location" shall mean the location of those channels, swales, and pre-existing and established systems as defined by the first documented topographic contours existing for the subject property, either from maps or photographs, site inspections, decisions of a court of law, or other means determined appropriate by the Director.
2. The post-development peak stormwater discharge rate from the developed site for the 2-year, 24-hour duration storm event shall at no time exceed fifty percent (50%) of the pre-development peak stormwater runoff rate from the 2-year, 24-hour pre-development design storm event. The post-development peak stormwater discharge rate from the developed site for the 10-year, 24-hour duration storm event shall at no time exceed the pre-development peak stormwater runoff rate from the 2-year, 24-hour pre-development design storm. The post-development peak stormwater discharge rate from the developed site for the 100-year, 24-hour duration storm event shall at no time exceed the pre-development peak stormwater runoff rate from the 10-year, 24-hour pre-development design storm. The Director may require that runoff from a development site be controlled for additional design storm events.
3. Closed depressions shall be analyzed using hydrograph routing methods. Infiltration shall be addressed where appropriate. If a proposed project will discharge runoff to an existing closed depression that has greater than 5,000 square feet of water surface area at overflow elevation, the following requirements must be met:
 - (a) CASE 1: The pre-development 100-year, 7-day and 24-hour duration design storms from the drainage basin tributary to the closed depression are routed into the closed depression using only infiltration as outflow. If the design storms do not overflow the closed depression, no runoff may leave the site for the same storm events following development of a proposed project. This may be accomplished by excavating additional volume in the closed depression subject to all applicable requirements. If a portion of the depression is located off of the project site, impacts to adjacent properties shall be evaluated.

- (b) CASE 2: The pre-development 100-year, 7-day and 24-hour duration design storm events from the drainage basin tributary to the closed depression are routed to the closed depression using only infiltration as outflow, and overflow occurs. The closed depression shall then be analyzed as a detention/infiltration pond. The required performance, therefore, shall not exceed the pre-development runoff rates for 50% of the 2-year and 100% of the 10-year and 100-year, 24-hour duration and 100-year, 7-day duration design storms. This will require that a control structure, emergency overflow spillway, access road, and other applicable design criteria be met. If the facility will be maintained by the City, the closed depression shall be placed in a dedicated tract. If the facility will be privately maintained, the tract shall be located within a drainage easement. If a portion of the depression is located off of the project site, impacts to adjacent properties shall be evaluated.
 - (c) CASE 3: When a proposed project is contributory to a closed depression located off-site, the volume of runoff discharged may not be increased for the 2, 10 and 100-year, 24-hour duration, and the 100-year, 7-day duration storm events. The exception to this requirement is in the case where discharge would not result in an increase in water surface elevation of greater than 0.01-foot for the 100-year storm events.
- 4. Land developments shall provide stormwater quantity control facilities designed to meet as a minimum performance standard, the requirements of this Section, except in the following circumstances:
 - (a) The development site discharges directly into Puget Sound or directly into the tidally influenced areas of rivers and streams discharging into Puget Sound, where runoff quantity control is not required by other governmental agencies and streambank or shoreline erosion will not occur.
 - (b) The development site discharges to a regional stormwater facility approved by the Director to receive the developed site runoff.
 - (c) The development site discharges to a receiving body of water (lake, etc.) where it can be demonstrated by the Applicant, to the satisfaction of the Director, that stormwater quantity control is not warranted.
- 5. In the event that conditions downstream from a proposed development site are determined by the Director to be exceptionally sensitive to potential stormwater discharges from the subject site, the Director may require a factor of safety be applied to the total retention/detention storage volume and/or a reduction of allowable stormwater release rates.

6. Submittals for all proposed development projects shall include an analysis of downstream water quantity impacts resulting from the project and shall provide for mitigation of these impacts. The analysis shall extend a minimum of one-quarter of a mile downstream from the project. The existing or potential impacts to be evaluated and mitigated shall include, but not be limited to, excessive streambank erosion, flooding, surcharging of existing closed drainage conveyance facilities, discharge to closed depressions, and discharge to existing off-site runoff control facilities.
7. Retention facilities and open stormwater quantity control facilities shall not be located in dedicated public road rights-of-way.
8. Reasonable access for maintenance, as determined by the Director, shall be provided to all stormwater facilities.
9. As the first priority, streambank erosion control BMPs shall utilize infiltration to the fullest extent practicable, only if site conditions are appropriate and ground water quality is protected. Streambank erosion control BMPs shall be selected, designed, and maintained according to the Manual. Streambank erosion control BMPs shall not be built within a natural vegetated buffer, except for necessary conveyance systems as approved by the City of Gig Harbor Department of Planning and Building Services.
10. Where stormwater detention is proposed to meet stormwater quantity controls, volume correction factors as outlined in the manual shall be applied to increase pond size.

14.20.420 Stormwater Quality Control

Water quality best management practices (BMPs) shall be used to the maximum extent practicable to control pollution in stormwater. Water quality BMPs shall be used to comply with the standards of this Code, including those contained in the Manual. Construction and post-development water quality BMPs shall be utilized for all major development activities. Said water quality BMPs shall provide runoff water quality treatment for all storm events with intensities less than or equal to the water quality design storm event, as defined in Section 14.20.100.

14.20.440 Experimental Best Management Practices

In those instances where appropriate best management practices are not contained in the Manual, experimental BMPs may be considered. In an effort to improve stormwater quality technology, experimental BMPs are encouraged as a means of solving problems in a manner not addressed in the Manual. All Experimental BMPs must be approved by the Director. The Director may require that the performance of

experimental BMPs be monitored to document their effectiveness for future use. The Director may also require that a detailed operations and maintenance program be developed for the facility in question and that a cost analysis be provided for those facilities in which the City will assume ownership and maintenance responsibilities.

14.20.450 Incorporation Into Stormwater Quantity Control Facilities

Water quality BMPs may be incorporated into the design of stormwater quantity control facilities where appropriate.

14.20.460 Minimum Requirements for Quality Control of a Major Development

The following minimum requirements for stormwater quality control shall apply to all land developments that meet the definition of a major development:

1. Source control of pollution. Source control BMPs shall be applied to all projects to the maximum extent practicable.
2. Stormwater treatment BMPs. Treatment BMPs shall be sized to capture and treat developed runoff from the water quality design storm, defined as the 6-month, 24-hour duration storm event. For the purpose of this Code, the precipitation from a 6-month, 24 hour storm event shall be considered equivalent to 72% of the precipitation from a 2-year, 24 hour storm event. All treatment BMPs shall be selected, designed, and maintained according to the Manual.

Stormwater treatment BMPs shall not be built within a natural vegetated buffer, except for necessary conveyance systems as approved by the City of Gig Harbor Department of Planning and Building Services.

All major developments shall provide treatment of stormwater discharge utilizing wetponds and/or biofiltration BMPs. Other water quality BMPs may only be substituted subject to the granting by the Director of a technical deviation from the provisions of the Stormwater Design Manual.

3. Wetponds shall be required for development sites with greater than five (5) acres of new impervious surface subject to motor vehicle use, which: (a) discharges directly to a regional facility, receiving body of water, or closed depression without providing on-site stormwater quantity control; or (b) discharges directly or indirectly to a Class 1, 2, or 3 stream, or a Class 1 or 2 wetland within 1 mile downstream of the site.

"Wetpond" shall mean a stormwater basin which is intended to maintain a permanent pool of water equal to the post-development runoff volume of the 6-month frequency, 24-hour duration design storm.

4. Presettling basin. All stormwater, prior to discharge to a facility designed to utilize infiltration, shall pass through an appropriate stormwater treatment BMP designed to remove suspended solids.
5. Water quality-sensitive areas. Where the Director determines that these Major Development minimum requirements do not provide adequate protection of water-quality sensitive areas, either on-site or within the drainage basin in which the development is located, more stringent controls shall be required to protect water quality.

An adopted and implemented basin plan may be used to develop requirements for specific water quality sensitive areas.

6. Downstream analysis and mitigation. All major developments shall conduct an analysis of downstream water quality impacts resulting from the project and shall provide for mitigation of these impacts. The analysis shall extend a minimum of one-quarter of a mile downstream from the project. The existing or potential impacts to be evaluated and mitigated shall include excessive sedimentation, streambank erosion, discharges to ground water contributing or recharge zones, violations of water quality standards, and spills and discharges of priority pollutants.

14.20.470 Stormwater Conveyance Facilities

1. All proposed developments must provide on-site stormwater conveyance facilities having sufficient capacity to convey, without flooding or otherwise damaging existing or proposed structures, the post-development peak stormwater runoff rate resulting from a 100-year, 24-hour duration storm event, plus any existing upstream runoff that will be conveyed through the development site.
2. Estimation of peak stormwater runoff rates used in the design of water conveyance facilities shall use either the Rational Method or a hydrograph method of analysis accepted by the Director.
3. Existing drainage ways and/or other conveyance facilities downstream from proposed developments that are identified within the scope of the downstream portion of the off-site drainage analysis, shall have sufficient capacity to convey, without flooding or otherwise damaging existing or proposed structures, the post-development peak stormwater discharge for the 25-year storm event. All newly constructed downstream drainageways and/or conveyance facilities shall have sufficient capacity to convey the post-development peak stormwater discharge for the 100-year storm event. Downstream improvements or additional on-site stormwater quantity

control measures shall be provided to eliminate any potential downstream flooding or other damage that may occur following completion of the proposed development. The Director has the authority to waive the requirement for downstream improvements.

4. Drainage through closed conveyance structures such as pipes shall not discharge directly onto the surface of a public road.

14.20.480 Easements, Tracts, and Covenants

1. Drainage easements shall be provided in a proposed development for all stormwater conveyance systems that are not located in public rights-of-way or tracts. Said drainage easements shall be granted to the parties responsible for providing on-going maintenance of the systems.

Drainage easements through structures are not permitted.

2. Stormwater facilities that are to be maintained by the City of Gig Harbor, together with maintenance access roads to said facilities, shall be located in public right-of-way, separate tracts dedicated to the City of Gig Harbor, or drainage easements located in designated Open Space. The exception is for stormwater conveyance pipes that may be located within easements on private property, provided that all catch basins can be accessed without entering private property.
3. All runoff from impervious surfaces, roof drains, and yard drains shall be directed so as not to adversely affect adjacent properties. Wording to this effect shall appear on the face of all final plats/P.U.D.'s, and shall be contained in any covenants required for a development.

14.20.490 Wetlands

The following requirements apply only to situations where stormwater discharges directly or indirectly into a wetland, and must be met in addition to meeting the requirements in Major Development Minimum Requirements of Section 14.20.460, Stormwater Treatment BMPs:

1. Stormwater discharges to wetlands must be controlled and treated to the same extent as all other discharges, with the goal of meeting State Water Quality and Groundwater Quality Standards.
2. Discharges to wetlands shall maintain the hydroperiod and flows of pre-development site conditions to the extent necessary to protect the characteristic functions of the wetland. Prior to discharging to a wetland, alternative discharge locations shall be evaluated, and natural water storage and infiltration opportunities outside the wetland shall be maximized.

3. Created wetlands that are intended to mitigate for loss of wetland acreage, function and value shall not be designed to also treat stormwater.
4. In order for constructed wetlands to be considered treatment systems, they must be constructed in areas which are not designated as wetland or wetland buffer or in other areas which are not in conflict with designated critical areas and associated buffers, and they must be managed for stormwater treatment. If these systems are not managed and maintained in accordance with the Manual for a period exceeding three years, these systems may no longer be considered constructed wetlands.
5. Wetland BMPs shall not be built within a natural vegetated buffer, except for necessary conveyance systems as approved by the City of Gig Harbor Department of Planning and Building Services.

14.20.500 Regional Facilities

When the Director has determined that the public would benefit by the establishment of a regional stormwater facility which would serve as an alternative to the construction of separate on-site drainage facilities, the Director may recommend to the Council that a regional stormwater facility be constructed which would serve more than one development in providing stormwater quantity and/or quality control. In the event that a regional stormwater facility is required by the Council, such a regional stormwater facility shall be located outside of fish-bearing streams, unless otherwise accepted by the Washington State Department of Fish and Wildlife. All future developments constructed on lands designated by the Council to be served by the regional facility shall, at the time of issuance of a Drainage Permit for a development, be required to contribute a fair share to the cost of land purchase, design and construction of said regional facility. In the event that a proposed regional stormwater facility is not yet in operation at the time of completion of construction of a development that is to be served by said regional facility, the Applicant for said development shall be required to provide temporary stormwater quantity and quality controls. Temporary quantity and quality controls may be constructed in temporary easements, rather than in separate tracts.

14.20.510 Basin Planning

An adopted and implemented basin plan tailored to a specific basin may be used to develop requirements for source control, stormwater treatment, streambank erosion control, wetlands, and water quality sensitive areas. Adopted and implemented watershed-based basin plans may be used to modify any or all of the minimum requirements for stormwater quantity or quality control addressed in this Code, provided that the level of protection for surface or ground water achieved by the basin plan will equal or exceed that which would otherwise be achieved by implementation

of the provisions of this Code in the absence of a basin plan. Basin plans shall evaluate and include, as necessary, retrofitting of BMPs for existing development and/or redevelopment in order to achieve watershed-wide pollutant reduction goals. Standards developed from basin plans shall not modify any of the above requirements until the basin plan is formally adopted and fully implemented by the City.

14.20.520 Maintenance of Stormwater Facilities by Owners

For privately maintained stormwater facilities and BMPs, the maintenance requirements specified in this Code, including the Manual, shall be enforced against the owner(s) of the subject property served by the stormwater facility.

14.20.530 Maintenance Covenant Required for Privately Maintained Drainage Facilities

(1) Prior to the beneficial use of a development, the owner shall record a Maintenance Covenant against the property that guarantees the City of Gig Harbor that the stormwater facilities shall be properly operated, maintained, and inspected. The restrictions set forth in such covenant shall be included in any instrument of conveyance of the subject property and shall be recorded with the Pierce County Auditor.

(2) The Director may require the owners of existing stormwater facilities for which the City of Gig Harbor has not previously accepted operation and maintenance responsibility, to record a Maintenance Covenant, or to request that the City of Gig Harbor accept operation and maintenance responsibility for the stormwater facilities subject to the requirements of this Code.

(3) Maintenance Covenants shall remain in force for the life of the development, or until the responsibility for the operation and maintenance of the subject stormwater facilities is accepted by the City of Gig Harbor.

14.20.540 City Acceptance of New Stormwater Facilities

The City of Gig Harbor may accept for maintenance those new residential stormwater facilities constructed under an accepted Drainage Permit that meet the following conditions:

1. Improvements in residential plats/PUDs have been completed on at least 80% of the lots, unless waived by the Director, AND;
2. All drainage facilities have been inspected and accepted by the Director and said drainage facilities have been in satisfactory operation for at least two (2) years, AND;

3. All drainage facilities reconstructed during the maintenance period have been accepted by the Director, AND;
4. The stormwater facility, as designed and constructed, conforms to the provisions of this Code, AND;
5. All easements and tracts required under this Code, entitling the City to properly operate and maintain the subject drainage facility, have been conveyed to the City of Gig Harbor and have been recorded with the Pierce County Auditor, AND;
6. For non-standard drainage facilities, an operation and maintenance manual, including a maintenance schedule, has been submitted to and accepted by the City of Gig Harbor.
7. A complete and accurate set of reproducible mylar as-built drawings have been provided to the City of Gig Harbor.

14.20.550 City Acceptance of Existing Stormwater Facilities

The City of Gig Harbor may accept for maintenance those stormwater facilities for residential developments existing prior to the effective date of this Code that meet the following conditions:

1. Improvements in residential plats/PUDs have been completed on at least 80% of the lots, AND;
2. An inspection by the Director has determined that the stormwater facilities are functioning as designed, AND;
3. The stormwater facilities have had at least two (2) years of satisfactory operation and maintenance, unless otherwise waived by the Director, AND;
4. The person or persons holding title to the properties served by the stormwater facilities submit a petition containing the signatures of the title holders of more than 50% of the lots served by the stormwater facilities requesting that the City of Gig Harbor maintain the stormwater facilities, AND;
5. All easements required under this Code, entitling the City to properly operate and maintain the subject stormwater facilities, have been conveyed to the City of Gig Harbor and have been recorded with the Pierce County Auditor, AND;

6. The person or persons holding title to the properties served by the stormwater facilities show proof of the correction of any defects in the drainage facilities, as required by the Director, AND;
7. The stormwater facilities meet current design standards as defined in the Stormwater Management Design Manual or a variance has been approved.

14.20.560 City Inspections of Privately Maintained Stormwater Facilities

1. The Director is authorized to develop an inspection program for privately owned and maintained stormwater facilities in the City of Gig Harbor. The purpose of this inspection program shall be to determine if said stormwater facilities, conveyance structures, and water quality facilities are in good working order and are properly maintained, and to ensure that stormwater quality BMPs are in place and that non-point source pollution control is being implemented.
2. Whenever the provisions of the inspection program are being implemented, or whenever there is cause to believe that a violation of this Code has been or is being committed, the inspector is authorized to inspect during regular working hours and at other reasonable times any and all stormwater drainage facilities within the City of Gig Harbor to determine compliance with the provisions of this Code.
3. Prior to making any inspections, the Director or his assignee shall follow the procedures delineated in Section 14.20.650.

14.20.570 Inspection Schedule

The Director is authorized to establish a master inspection and maintenance schedule to inspect appropriate stormwater facilities that are not owned and operated by the City of Gig Harbor. The party (or parties) responsible for maintenance and operation shall be identified. Critical stormwater facilities, as so deemed by the Director, may require a more frequent inspection schedule.

14.20.580 Illicit Discharges

Illicit discharges to stormwater drainage systems are prohibited.

14.20.590 Illicit Connections and Uses

The stormwater system of the City, natural and artificial, may only be used to convey stormwater runoff. Stormwater System shall mean all natural and man-made systems that function together or independently to collect, store, purify, discharge, and convey stormwater. Included are all stormwater facilities as well as natural systems such as

streams and creeks and all natural systems that convey, store, infiltrate, or divert stormwater. Violation of this section can result in enforcement action being taken as prescribed in Section 14.20.670.

No person shall use this system, directly or indirectly, to dispose of any solid or liquid matter other than stormwater. No person shall make or allow any connection to the stormwater system that could result in the discharge of polluting matter. Connections to the stormwater system from the interiors of structures are prohibited. Connections to the stormwater system for any purpose other than to convey stormwater or groundwater are prohibited and shall be eliminated.

14.20.600 Pollution Control Device Maintenance

Owners and operators of oil/water separators, wet ponds, bio-filtration facilities, sediment and erosion control systems, infiltration systems, and any other pollution control devices shall operate and maintain such control devices to assure that performance meets the intended level of pollutant removal. Recommended maintenance schedules for these devices are included in this manual.

14.20.610 Test Procedures

In the event that water quality testing is utilized in determining whether a violation of this Section has occurred, said water quality test procedures shall be followed as described in the most recent edition of the "Code of Federal Regulations, Part 136".

14.20.620 Exemptions

The following discharges are exempt from the provisions of this Section:

- (1) The regulated effluent from any commercial or municipal facility holding a valid state or federal wastewater discharge permit.
- (2) Acts of nature not compounded by human negligence.
- (3) Properly operating on-site domestic sewage systems.
- (4) Properly applied agricultural chemicals or materials.

14.20.630 Violations of This Code

The placement, construction, or installation of any structure, or the connection to a public storm drainage facility, or the discharge to a public storm drainage facility, or grading, which violates the provisions of this Code shall be and the same hereby is declared to be unlawful and a public nuisance and may be abated as such through the use of civil penalties and Stop Work Orders, as well as any other remedies which are

set forth in this Code, including any applicable ordinance or statute, including, but not limited to, revocation of any permits. The choice of enforcement action taken and the severity of any penalty shall be based on the nature of the violation, the damage or risk to the public or to public resources.

14.20.640 Inspection

1. Routine Inspections. The Director or his designee shall have access to any site for which a Drainage Permit has been issued pursuant to Section 14.20.120 hereof during regular business hours for the purpose of on-site review and to insure compliance with the terms of such Permit. Applicant for any such Permit shall agree in writing, as a condition of issuance thereof, that such access shall be permitted for such purposes.
2. Inspection For Cause. Whenever there is cause to believe that a violation of this Code has been or is being committed, the Director or his designee is authorized to inspect the project, and any part thereof reasonably related to the violation, during regular business hours, and at any other time reasonable in the circumstances. Applicant for Drainage Permit under Section 14.20.120 hereof shall, as a condition of issuance of such permit, agree in writing that such access to the project site, which inhibits the collection of information relevant to enforcement of the provisions of this Code, shall be grounds for issuance of a Stop Work Order by the Director or his designee.

14.20.650 Inspection Procedures

Prior to making any inspections, the Director or his assignee shall present identification credentials, state the reason for the inspection, and request entry.

1. If the property or any building or structure on the property is unoccupied, the Director or his assignee shall first make a reasonable effort to locate the owner or other person(s) having charge or control of the property or portions of the property and request entry.
2. If after reasonable effort, the Director or his assignee is unable to locate the owner or other person(s) having charge or control of the property, and has reason to believe the condition of the site or of the stormwater drainage system creates an imminent hazard to persons or property, the inspector may enter.

14.20.660 Stop Work Orders

"Stop Work Order" shall mean a written notice, signed by the Director or his assignee, that is posted on the site of a construction activity, which identifies the specific

violation of a City of Gig Harbor Code that has occurred, and that all construction-related activity, except for erosion and sedimentation control activities authorized by the Director, is to cease until further notice. The Director may cause a Stop Work Order to be issued whenever the Director has reason to believe that there is a violation of the terms of this Code. The effect of such a Stop Work Order shall be to require the immediate cessation of such work or activity until authorization is given by the Director to proceed.

14.20.670 Cumulative Civil Penalty

Every person who violates this Code, or the conditions of an approved Drainage Permit, may incur a civil penalty. The penalty shall be \$1,000.00 for each violation. This penalty shall be in addition to any other penalty provided by law. Each and every such violation shall be a separate and distinct offense, and each day of continued or repeated violation shall constitute a separate violation.

14.20.680 Aiding or Abetting

Any person who, through an act of commission or omission, aids or abets in the violation shall be considered to have committed a violation for the purposes of the civil penalty.

14.20.690 Order to Maintain or Repair

The Director shall have the authority to issue to an owner or person an order to maintain or repair a component of a stormwater facility or BMP to bring it in compliance with this Code. The order shall include:

1. A description of the specific nature, extent, and time of the violation and the damage or potential damage that reasonably might occur;
2. A notice that the violation or the potential violation cease and desist and, in appropriate cases, the specific corrective actions to be taken; and
3. A reasonable time to comply, depending on the circumstances.

14.20.700 Notice of Violation - Assessment of Penalty

Whenever the Director has found that a violation of this Code has occurred or is occurring, the Director is authorized to issue a Notice of Violation directed to the person or persons identified by the Director as the violator.

1. The Notice of Violation shall contain:
 - (a) The name and address of the property owner;

- (b) The street address, when available, or a legal description sufficient to identify the building, structure, premises, or land upon or within which the violation is occurring;
 - (c) A statement of the nature of such violation(s) including identification of the Code provision violated;
 - (d) A statement of the action that is required to be taken within thirty (30) days from the date of service of the notice of violation, unless the Director has determined the violation to be hazardous and to be requiring immediate corrective action, OR unless the corrective action constitutes a temporary erosion control measure;
 - (e) A statement that a cumulative civil penalty in the amount of one thousand dollars (\$1,000.00) per day shall be assessed against the person to whom the Notice of Violation is directed for each and every day following the date set for correction on which the violation continues; and
 - (f) A statement that the Director's notice of violation may be appealed to the City of Gig Harbor City Council by filing written notice of appeal, in duplicate, with the Council within thirty (30) days of service of the Notice of Violation. The per diem civil penalty shall not accrue during the pendency of such administrative appeal unless the violation was determined by the Director to be hazardous and to require immediate corrective action or was determined by the Director to constitute a temporary erosion control measure.
2. The Notice of Violation shall be served upon the person(s) to whom it is directed either personally or by complaint in Superior Court proceedings or by mailing a copy of the Notice of Violation by certified mail.

14.20.710 Appeal and Disposition

A Notice of Violation issued pursuant to this Section shall have the following appeal options:

- 1) Within thirty (30) days from the date of receipt of the Notice of Violation, the aggrieved person may make application for relief from penalty to the Director. Such application shall contain any information relevant to the situation that the aggrieved party believes the Director should consider. The Director may cancel, lower, or affirm the penalty.
- 2) Within fifteen (15) days from the date of receipt of the Director's response to said application for relief from penalty, the aggrieved party may appeal

to the City of Gig Harbor City Council. The aggrieved person shall be entitled to have the appeal considered by the Council at its next available regularly scheduled meeting date following the filing of the appeal. The Council shall issue their decision within 15 days of the completion of the hearing. The aggrieved party shall be notified by certified mail of the determination of the Council.

14.20.720 Liability for Costs of Investigation

Any person found to be in violation of this Code shall be responsible for the costs of investigation by the City of Gig Harbor. Such cost may include the analytical services of a certified laboratory.

14.20.730 Collection of Civil Penalty

The civil penalty constitutes a personal obligation of the person(s) to whom the Notice of Violation is directed. Penalties imposed under this Section shall become due and payable 30 days after receiving notice of penalty unless an appeal is filed. The City Attorney, on behalf of the City of Gig Harbor, is authorized to collect the civil penalty by use of appropriate legal remedies, the seeking or granting of which shall neither stay nor terminate the accrual of additional per diem penalties so long as the violation continues.

14.20.740 Hazards

- 1) Whenever the Director determines that any existing construction site, erosion/sedimentation problem or drainage facility poses a hazard to public safety or substantially endangers property, or adversely affects the condition or capacity of the drainage facilities, or adversely affects the safety and operation of the City of Gig Harbor right of way, or violates State water pollution laws, the person or persons to whom the permit was issued shall upon receipt of notice in writing from the Director, repair or otherwise address the cause of the hazardous situation in conformance with the requirements of this Section.
- 2) Should the Director have reasonable cause to believe that the situation is so adverse as to preclude written notice, he may take the measures necessary to eliminate the hazardous situation, provided that he or she shall first make a reasonable effort to locate the owner before acting, in accordance with Section 14.20.650. In such instances, the person or persons to whom the permit was issued shall be obligated for the payment to the City of Gig Harbor of all costs incurred by the City. If costs are incurred and a bond pursuant to this Section or other City requirement has been posted, the Director shall have the authority to collect against the bond to cover costs incurred.