EXHIBIT B

Chapter 14.30
STORMWATER MANAGEMENT

Sections:

14.30.011 Findings of fact.

The city council adopts the findings of the model stormwater management ordinance provided by the Department of Ecology that:

(1) Stormwater pollution is a problem associated with land utilization and development and the common occurrence of potential pollutants such as pesticides, fertilizers, petroleum products, pet wastes and numerous others. Land utilization and development is also known to increase both the volume and duration of peak flows. The resulting erosion, scouring and deposition of sediment affect the ecological balance in the stream. Sedimentation and stormwater pollution cause diversity of species to decrease and allow more tolerant (and usually less desirable) species to remain. Stormwater pollution can cause or contribute to restrictions on public use of the waters within Buckley.

(2)An expanding population and increased development of land have led to:
Water quality degradation through discharge of nutrients, metals, oil and grease, toxic materials, and other detrimental substances including, without limitation, insect and weed

control compounds; drainage and storm and surface water runoff problems within the city; and safety hazards to both lives and property posed by uncontrolled water runoff on streets and highways.

(3)Continuation of present stormwater management practices, to the extent that they exist, will lead to water quality degradation, erosion, and property damage, and endanger the health and safety of the inhabitants of the city.

(4)In the future such problems and dangers will be reduced or avoided if existing properties and future developers, both private and public, provide for stormwater quality and quantity controls.

(5)Stormwater quality and quantity controls can be achieved when land is developed or redeveloped by implementing appropriate best management practices (BMPs).

(6)Best management practices can be expected to perform as intended only when properly designed, constructed and maintained.

14.30.012 Need.

The city council adopts the needs set forth in the model stormwater management ordinance provided by the Department of Ecology that this chapter is necessary in order to:

(1)Minimize or eliminate water quality degradation;

(2)Prevent erosion and sedimentation in creeks, streams, ponds, lakes and other water bodies;

(3)Protect property owners adjacent to existing and developing lands from increased runoff rates which could cause erosion of abutting property;

(4)Preserve and enhance the suitability of waters for contact recreation, fishing, and other beneficial uses;

(5)Preserve and enhance the aesthetic quality of the water;

(6)Promote sound development policies which respect and preserve city surface water, ground water and sediment;

(7)Ensure the safety of city roads and rights-of-way;

(8)Decrease stormwater-related damage to public and private property from existing and future runoff;

(9)Protect the health, safety and welfare of the inhabitants of the city.

14.30.013 Purpose.
The city council adopts the purpose set forth in the model stormwater management ordinance provided by the Department of Ecology that the provisions of this chapter are intended to guide and advise all who conduct new development or redevelopment within city. The provisions of this chapter establish the minimum level of compliance which must be met to permit a property to be developed or redeveloped within the city. It is the purpose of this chapter to:

(1)Minimize water quality degradation and sedimentation in streams, ponds, lakes, wetlands and other water bodies;

(2)Minimize the impact of increased runoff, erosion and sedimentation caused by land development and maintenance practices;

(3)Maintain and protect ground water resources;

(4)Minimize adverse impacts of alterations on ground and surface water quantities, locations and flow patterns;

(5)Decrease potential landslide, flood and erosion damage to public and private property;

(6)Promote site planning and construction practices that are consistent with natural topographical, vegetational and hydrological conditions;

(7)Maintain and protect the city stormwater management infrastructure and those downstream;

(8)Provide a means of regulating clearing and grading of private and public land while minimizing water quality impacts in order to protect public health and safety; and

(9)Provide minimum development regulations and construction procedures which will preserve, replace or enhance, to the extent practical, existing vegetation to preserve and enhance Buckley.

(10) The provisions of this chapter are also intended to guide and advise all residential and commercial property owners within the City on regulations pertaining to the introduction of pollutants into the stormwater system to protect water quality within the City.

14.30.020 Definitions.
For the purposes of this chapter, the following definitions shall apply:

"AKART" means all known, available, and reasonable methods of prevention, control and treatment. See also the State Water Pollution Control Act, sections 90.48.010 RCW and 90.48.520 RCW.

"American Public Works Association" or "APWA" means the adopted edition of the Washington State Chapter of the American Public Works Association.

"Approval" means the proposed work or completed work conforms to this chapter in the opinion of the administrator.

"As-graded" means the extent of surface conditions on completion of grading.

"Basin plan" means a plan adopting and implementing all regulations and procedures including, but not limited to, land use management practices adopted by ordinance for managing surface and stormwater management facilities and features within individual sub-basins or drainage areas, including any basin or area identified in the city storm water management plan. A plan should include but not be limited to recommendations for:

(A) Stormwater requirements for new development and redevelopment;
(B) Capital improvement projects
(C) Source control activities including public education and involvement, and business programs
(D) Other targeted stormwater programs and activities, such as maintenance, inspections, and enforcement
(E) Monitoring
(F) An implementation schedule and funding strategy

"Bedrock" means the more or less solid rock in place either on or beneath the surface of the earth. It may be soft, medium or hard and have a smooth or irregular surface.

"Bench" means a relatively level step excavated into earth material on which fill is to be placed.

"Best management practice" or "BMP" the schedule of activities, prohibitions of practices, maintenance procedures, and structural and/or managerial practices that, when used singly or in combination, prevent or reduce the release of pollutants and other adverse impacts of stormwater. BMPs are listed and described in the storm water management manual.

"Certified Erosion and Spill Control Lead (CESCL) means an individual who has current certification through an approved erosion and sediment control training program that meets the minimum training standards established by the Department of Ecology. A CESCL is knowledgeable in the principles and practices of erosion and sediment control. The CESCL must have the skills to assess site conditions and construction activities that could impact the quality of stormwater and, the effectiveness of erosion and sediment control measures used to control the quality of stormwater discharges. Certification is obtained through an Ecology approved erosion and sediment control course.

"Civil engineer" means a professional engineer licensed in the state of Washington in civil engineering who is experienced and knowledgeable in the practice of soils engineering.

"Civil engineering" means the application of the knowledge of the forces of nature, principles of mechanics and the properties of materials to the evaluation, design and construction of civil works for the beneficial uses of mankind.

"Clean Water Act" means the federal Water Pollution Control Act (33 USC Section 1251 et seq.), and any subsequent amendments thereto.

"Clearing" means the destruction and removal of vegetation by manual, mechanical or chemical methods.

"Commercial agriculture" means those activities conducted on lands defined in RCW 84.34.020(2), and activities involved in the production of crops or livestock for wholesale trade. An activity ceases to be considered commercial agriculture when the area on which it is conducted is proposed for conversion to a nonagricultural use or has lain idle for more than five years, unless the idle land is registered in a federal or state soils conservation program, or unless the activity is maintenance of irrigation ditches, laterals, canals or drainage ditches related to an existing and ongoing agricultural activity.

"Compaction" means densification of a fill by mechanical means.

"Construction stormwater pollution prevention plan" or "Construction SWPPP" means a plan that includes a narrative, drawings, and details for describing construction practices, stabilization techniques, and structural BMPs that are to be implemented to prevent erosion and sedimentation, and control other pollutants at a construction site.

"Conveyance System" means the drainage facilities, both natural and man-made, which collect, contain, and provide for the flow of surface and stormwater from the highest points on the land down to receiving water. The natural elements of the conveyance system include swales and small drainage courses, streams, rivers, lakes, and wetlands. The human-made elements of the conveyance system include gutters, ditches, pipes, channels, and most retention/detention facilities.

"Critical areas" mean, at a minimum, areas which include wetlands, areas with a critical recharging effect on aquifers used for potable water, fish and wildlife habitat conservation areas, frequently flooded areas, geologically hazardous areas, including unstable slopes, and associated areas and ecosystems.

"Design storm" means a prescribed hyetograph and total precipitation amount (for a specific duration recurrence frequency) used to estimate runoff for a hypothetical storm of interest or concern for the purposes of analyzing existing drainage, designing new drainage facilities or assessing other impacts of a proposed project on the flow of surface water. (A hyetograph is a graph of percentages of total precipitation for a series of time steps representing the total time during which the precipitation occurs.)

"Detention" means the release of stormwater runoff from the site at a slower rate than it is collected by the stormwater facility system, the difference being held in temporary storage.

"Detention facility" means an above or below ground facility, such as a pond or tank, that temporarily stores stormwater runoff and subsequently releases it at a slower rate than it is collected by the drainage facility system. There is little or no infiltration of stored stormwater.

"Director" means the City Administrator or designated appointee.
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"Drainage basin" means a geographic and hydrologic subunit of a watershed.

"Drainage system" means the system of collecting, conveying, and storing surface and stormwater runoff. Drainage facilities shall include but not be limited to all surface and stormwater runoff conveyance and containment facilities including: streams, pipelines, channels, ditches, swamps, lakes, wetlands, closed depressions, infiltration facilities, retention /detention facilities, erosion/sedimentation control facilities, and other drainage structures and appurtenances, both natural and man-made.

"Earth material" means any rock, natural soil or fill and/or any combination thereof.

"Ecology" means the Washington State Department of Ecology.

"Effective Impervious area" means those impervious surfaces that are connected via sheet flow or discrete conveyance to a drainage system. Impervious surfaces on residential development sites are considered ineffective if the runoff is dispersed through at least one hundred feet of native vegetation in accordance with BMP T5.30 – "Full Dispersion" as described in Chapter 5 of Volume V of the Stormwater Management Manual for Western Washington (2005).

"Engineering geologist" means a geologist experienced and knowledgeable in engineering geology.

"Engineering geology" means the application of geologic knowledge and principles in the investigation and evaluation of naturally occurring rock and soil for use in the design of civil works.

"Erosion" means the wearing away of the land surface by running water, wind, ice, or other geological agents, including such processes as gravitational creep and detachment and movement of soil or rock fragments by water, wind, ice or gravity.

"Excavation" means the mechanical removal of earth material.

"Experimental BMP" means a BMP that has not been tested and evaluated by the Department of Ecology in collaboration with local governments and technical experts.

"Fill" means a deposit of manmade and natural material placed by artificial means.

“Forest practice” means any activity conducted on or directly pertaining to forest land and relating to growing, harvesting or processing timber, including, but not limited to:

(a)Road and trail construction;

(b)Harvesting, final and intermediate;

(c)Precommercial thinning;

(d)Reforestation;

(e)Fertilization;

(f)Prevention and suppression of diseases and insects;

(g)Salvage of trees;

(h)Brush control.

“Frequently flooded areas” mean the 100-year floodplain designations of the Federal Emergency Management Agency and the National Flood Insurance Program.

“Geologically hazardous areas” mean areas that, because of their susceptibility to erosion, sliding, earthquake or other geological events, are not suited to the siting of commercial, residential or industrial development consistent with public health or safety concerns.

“Grade” means the slope of a road, channel or natural ground; the finished surface of a canal bed, roadbed, top of embankment, or bottom of excavation; or any surface prepared for the support of construction such as paving or the laying of a conduit.

(a)Existing Grade. The grade prior to grading.

(b)Rough Grade. The stage at which the grade approximately conforms to the approved plan.

(c)Finish Grade. The final grade of the site which conforms to the approved plan.

(To) “grade” means to finish the surface of a canal bed, roadbed, and top of embankment or bottom of excavation.

“Gradient terrace” means an earth embankment or a ridge-and-channel constructed with suitable spacing and an acceptable grade to reduce erosion damage by intercepting surface runoff and conducting it to a stable outlet at a stable nonerosive velocity.

“Ground water” means water in a saturated zone or stratum beneath the surface of land or a surface water body.

"Hydroperiod" means the seasonal occurrence of flooding and/or soil saturation; it encompasses depth, frequency, duration, and seasonal pattern of inundation.

"Hazardous materials" means any material, including any substance, waste, or combination thereof, which because of its quantity, concentration, or physical, chemical or infectious characteristics may cause, or significantly contribute to a substantial present or potential hazard to human health, safety, property or the environment when improperly treated, stored, transported, disposed of or otherwise managed.

"Hyperchlorinated" means water that contain more than 10 mg/Liter chlorine.

"Illicit connection" means any man-made conveyance that is connected to a municipal separate storm sewer without a permit, excluding roof drains and other similar type connections. Examples include sanitary sewer connections, floor drains, channels, pipelines, conduits, inlets, or outlets that area connected directly to the municipal separate storm sewer system.

"Illicit discharge" means a discharges to stormwater drainage systems that is not composed entirely of storm water, except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal storm sewer) and discharges resulting from fire fighting activities.

"Impervious surface" means 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 pavement, gravel roads, 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 for purposes of determining whether the thresholds for application of Minimum Requirements are exceeded. Open, uncovered retention/detention facilities shall be considered impervious surfaces for purposes of runoff modeling.

"Interflow" means that portion of rainfall that infiltrates into the soil and moves laterally through the upper soil horizons until intercepted by a stream channel or until it returns to the surface, for example, in a wetland, spring or seep.

"Land clearing" or "Clearing" means the destruction or removal of vegetation from a site by physical, mechanical, chemical or other means. This does not mean mowing, landscape maintenance or pruning consistent with accepted horticultural and arboricultural practices, which does not impair the health or survival of the trees and associated vegetation.

"Land disturbing activity" means any activity that results in a movement of earth or 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, clearing, grading, filling and excavation. Compaction that is associated with stabilization of structures and road construction shall also be considered a land disturbing activity. Vegetation maintenance practices are not considered land disturbing activity.

"Low impact development" means use of innovative or creative approaches to site design, using methods such as retention of natural vegetation, significant reduction of effective impervious surface, enhanced infiltration, and changes in traditional site features such as roads and structures, to achieve dramatically reduced or zero drainage discharge from the site after development.

"Manual" or "storm water management manual" means the latest edition of the "Storm Water Management Manual for Western Washington" (April 2005) prepared by Ecology, which manual is adopted by reference as though set forth herein in full with modifications provided herein.

"Mitigation" means, in the following order of preference:

(a)Avoiding the impact altogether by not taking a certain action or part of an action;

(b)Minimizing impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts;

(c)Rectifying the impact by repairing, rehabilitating or restoring the affected environment;

(d)Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and

(e)Compensation for the impact by replacing, enhancing or providing substitute resources or environments.

"Municipal Separate Storm Sewer System" or "MS4" means a conveyance, or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains):

(A) Owned or operated by a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State Law) having jurisdiction over disposal of wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and

approved management agency under section 208 of the CWA that discharges to water of the United States.

(B) Designed or used for collected and conveying stormwater.

(C) Which is not a combined sewer; and

(D) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

"National Pollutant Discharge Elimination System Stormwater Discharge Permit" or "NPDES Permit" means a permit issued by EPA (or by a State under authority delegated pursuant to 33 USC section 1342(b)) that authorizes the discharge of pollutants to the waters of the State, whether the permit is applicable on an individual, group, or general area-wide basis.

"Native vegetation" means vegetation comprised of plant species, other than noxious weeds, that are indigenous to the coastal region of the Pacific Northwest and which reasonably could have been expected to naturally occur on the site. Examples include trees such as Douglas fir, western hemlock, western red cedar, alder, big-leaf maple, and vine maple; shrubs such as willow, elderberry, salmonberry, and salal; and herbaceous plants such as sword fern, foam flower, and fireweed.

"Natural location" means the location of those channels, swales, and other non-manmade conveyance systems as defined by the first documented topographic contours existing for the subject property, either from maps or photographs, or such other means as appropriate.

"New development" means the following activities: land disturbing activities; structural development, including construction, installation of a building or other structure; creation of impervious surfaces; Class IV – General forest practices that are conversions from timber land to other uses; and subdivision and short subdivision of land as defined in RCW 58.17.020. All other forest practices and commercial agriculture are not considered new development. Projects meeting the definition of redevelopment shall not be considered new development.

"Non-stormwater discharge" means any discharge to the storm drain system that is not composed entirely of stormwater.

"On-site stormwater management BMPs" means site development techniques that serve to infiltrate, disperse, and retain stormwater runoff on-site.

"Permanent erosion and sediment control" means the continuous on-site and off-site control measures that are needed to prevent accelerated erosion, sedimentation or related pollution from occurring after completion of the grading activity or the construction project.

"Permanent stormwater quality control (PSQC) plan" means a plan which includes permanent BMPs for the control of pollution from stormwater runoff after construction and/or land disturbing activity has been completed.

"Person" means any individual, partnership, corporation, association, organization, cooperative, public or municipal corporation, agency of the state, or local government unit, however designated.

"Pollutant" means any substance which, when added to water, would contaminate or alter the chemical, physical, or biological properties of any waters of the City's drainage system or of the State. This includes a 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 City's drainage system or of the State and will or is likely to create a nuisance. It also includes any substance, which renders such waters harmful, detrimental, or injurious to the public health, safety, or welfare, or to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial use, or to livestock, wild animals, birds, fish, or other aquatic life.

"Pollution" means 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, detrimental or injurious to the public health, safety or welfare, or to domestic, commercial, industrial, agricultural, recreational or other legitimate beneficial uses, or to livestock, wild animals, birds, fish or other aquatic life.

"Pollution-generating impervious surface (PGIS)" means those impervious surfaces considered to be a significant source of pollutants in stormwater runoff. Such surfaces include those which are subject to: vehicular use; industrial activities; or storage of erodible or leachable materials, wastes, or chemicals, and which receive direct rainfall or the run-on or blow-in of rainfall. Erodible or leachable materials, wastes, or chemicals are those substances which, when exposed to rainfall, measurably alter the physical or chemical characteristics of the rainfall runoff. Examples include erodible soils that are stockpiled, uncovered process wastes, manure, fertilizers, oily substances, ashes, kiln dust, and garbage dumpster leakage. Metals roofs are also considered to be PGIS unless they are coated with an inert, non-leachable material (e.g., baked-on enamel coating).

A surface, whether paved or not, shall be considered subject to vehicular use if it is regularly used by motor vehicles. The following are considered regularly-used surfaces: roads, unvegetated road shoulders, bike lanes within the traveled lane of a roadway, driveways, parking lots, unfenced fire lanes, vehicular equipment storage yards, and airport runways.

The following are not considered regularly-used surfaces: paved bicycle pathways separated from and not subject to drainage from roads for motor vehicles, fenced fire lanes, and infrequently used maintenance access roads.

“Pollution-generating pervious surface (PGPS)” means any non-impervious surface subject to use of pesticides, fertilizers, or loss of soil.

“Pre-developed condition” means the native vegetation and soils that existed at a site prior to the influence of Euro-American settlement. The pre-developed condition shall be assumed to be a forested land cover unless reasonable, historic information is provided that indicates the site was prairie prior to settlement.

“Premises” means any building, lot, parcel of land, or portion of land whether improved or unimproved including adjacent sidewalks and parking strips.

“Project Site” means that portion of a property, properties, or right of way subject to land disturbing activities, new impervious surfaces, or replaced impervious surfaces.

“Redevelopment” on an already substantially developed site (i.e. has 35 percent or more of existing impervious surface coverage), means the creation or addition of impervious surfaces, structural development including construction, installation or expansion of a building footprint or addition or replacement of a structure, and/or replacement of impervious surface that is not part of a routine maintenance activity, and land disturbing activities associated with structural or impervious redevelopment.

“Regional retention/detention system” means a stormwater quantity control structure designed to correct existing excess surface water runoff problems of a basin or sub-basin. This term is also used when a detention facility is used to detain stormwater runoff from a number of different businesses, developments or areas within a catchment.

“Replaced impervious surface” means the removal and replacement of any exterior impervious surfaces or foundation of a structure. Other impervious surfaces are considered replaced if first removed down to bare soil or base course.

“Retention/detention facility (R/D)” means a type of drainage facility designed either to hold water for a considerable length of time and then release it by evaporation, plant transpiration, and/or infiltration into the ground; or to hold surface and stormwater runoff for a short period of time and then release it to the surface and stormwater management system.

“Sediment” means solid particulate matter, both mineral and organic, that has been or is being transported by water, air, gravity, or ice from its original site of origin.

“Sedimentation” means the process by which sediment has been transported off the site of the grading activity and settled onto land or the bed of a creek, stream, river, wetland, pond, or other water body.

"Site" means the area within the legal boundaries of a parcel or parcels of land subject to new development or redevelopment. For road projects, the length of the project site and the right-of-way boundaries define the site.

"Slope" means the degree of deviation of a surface from the horizontal, measured as a numerical ratio, percent, or in degrees. Expressed as a ratio, the first number is the horizontal distance (run) and the second is the vertical distance (rise), as 2:1. A 2:1 slope is a 50 percent slope. Expressed in degrees, the slope is the angle from the horizontal plane, with a 90-degree slope being vertical (maximum) and 45-degree being a 1:1 or 100 percent slope.

"Soil" means the unconsolidated mineral and organic material on the immediate surface of the earth that serves as a natural medium for the growth of land plants.

"Source control BMP" means a structure or operation that is intended to prevent pollutants from coming into contact with stormwater through physical separation of areas or careful management of activities that are sources of pollutants. A few examples of source control BMPs are 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.

"Stormwater" means that portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, channels or pipes or other features of a stormwater system into a defined surface water channel, or a constructed infiltration facility.

"Stormwater facility" means a constructed component of a stormwater drainage system, designed or constructed to perform a particular function, or multiple functions. Stormwater facilities include, but are not limited to, pipes, swales, ditches, culverts, street gutters, detention basins, retention basins, constructed wetlands, infiltration devices, catch basins, oil/water separators, sediment basins and modular pavement.

"Stormwater site plan" means the comprehensive report containing all of the technical information and analysis necessary to evaluate a proposed new development or redevelopment project for compliance with stormwater requirements. Contents of the Stormwater Site Plan will vary with the type and size of the project, and individual site characteristics. It includes a Construction Stormwater Pollution Prevention Plan (Construction SWPPP) and a Permanent Stormwater Control Plan (PSC Plan).

"Surface water" means the naturally occurring water that flows over or is stored on the earth's surface.

"Temporary erosion control" means the on-site and off-site control measures that are needed during construction activities to prevent accelerated erosion, sedimentation or related pollution from occurring, but may not be needed when the project is completed or when ground conditions have been stabilized by permanent erosion control measures.

“Threshold discharge area” means an on-site area draining to a single natural discharge location or multiple natural discharge locations that combine within one-quarter mile downstream (as determined by the shortest flow path).

“Toe of slope” means a point or line of slope in an excavation or cut where the lower surface changes to horizontal or meets the exiting ground slope.

“Top of slope” means a point or line on the upper surface of a slope where it changes to horizontal or meets the original surface.

“Treatment BMP” means a BMP that is intended to remove pollutants from stormwater. A few examples of treatment BMPs are detention ponds, oil/water separators, biofiltration swales and constructed wetlands.

“Unstable slopes” mean those sloping areas of land which have in the past exhibited, are currently exhibiting, or will likely in the future exhibit mass movement of earth.

“Vegetation” means all organic plant life growing on the surface of the earth.

“Water body” means surface waters including rivers, streams, lakes, marine waters, estuaries and wetlands.

“Water quality design flow rate” means:

(A) Preceding detention facilities or when detention facilities are not required: that rate at or below which 91 percent of the runoff volume, as estimated by an approved continuous runoff model, will be treated.

(B) Downstream of detention facilities: the full 2-year release rate from the detention facility

“Water quality design storm” means the 24-hour rainfall amount with a 6-month return frequency. It is commonly referred to as the 6-month, 24-hour design storm.

“Water quality design storm volume” means the volume of runoff predicted from a 24-hour storm with a 6-month return frequency.

“Watershed” means a geographic region within which water drains into a particular river, stream, or body of water as identified and numbered by the State of Washington Water Resource Inventory Areas (WRIAs) as defined in Chapter 173-500 WAC.

“Wetlands” means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas. This includes wetlands created, restored or enhanced as part of a mitigation procedure. This does not

include constructed wetlands or the following surface waters of the state intentionally constructed from sites that are not wetlands: irrigation and drainage ditches, grass-lined swales, canals, agricultural detention facilities, farm ponds and landscape amenities.

"Wetpool" means a pond or constructed wetland that stores runoff temporarily and whose normal discharge location is elevated so as to maintain a permanent pool of water between storm evens.

14.30.030 Abrogation and greater restrictions.
It is not intended that this chapter repeal, abrogate or impair any existing regulations, easements, covenants or deed restrictions. However, where this chapter imposes greater restrictions, the provisions of this chapter shall prevail.

14.30.032 Interpretation.
The provisions of this chapter shall be held to be minimum requirements in their interpretation and application and shall be liberally construed to serve the purposes of this chapter.

14.30.040 Applicability.
When any provision of any other chapter of the Buckley Municipal Code conflicts with this chapter, that which provides more environmental protection shall apply unless specifically provided otherwise in this chapter.

The city is authorized to adopt written procedures for the purpose of carrying out the provisions of this chapter.

1. Actions. All persons taking any of the following actions or applying for any of the following permits and/or approvals may be required to submit for approval a Stormwater Site Plan with their application and/or request:

    (A) Creation or alteration of new or additional impervious surfaces;
    (B) New development;
    (C) Redevelopment;
    (D) Building permit;
    (E) Subdivision approval;
    (F) Short subdivision approval;
    (G) Binding site plan approval;
    (H) Commercial, industrial, or multifamily site plan approval;
    (I) Planned unit development;
    (J) Development within or adjacent to critical areas;
    (K) Franchise utility right of way use or other right of way use;
    (L) Conditional and special use permits;
    (M) Substantial development permit; and
    (N) Logging, clearing, grading and other land disturbing activities.

2. Exemptions. The following are exempt from the provisions of the Minimum Requirements described in 14.30.051:

(A) Forest practices regulated under Title 222 WAC, except for Class IV General forest practices that are conversions from timber land to other uses;
(B) Commercial agricultural practices involving working the land for production are generally exempt. However, the conversion from timberland to agriculture, and the construction of impervious surfaces are not exempt; and
(C) The following road maintenance practices are exempt: pothole and square cut patching, overlaying existing asphalt or concrete pavement with asphalt or concrete without expanding the area of coverage, shoulder grading, reshaping/regrading drainage systems, crack sealing, resurfacing with in-kind material without expanding the road prism, and vegetation maintenance. See the Manual for road activities not exempt.

3. Beginning Construction. Commencement of construction work under any of the actions, permits, or applications set forth in this Section shall not begin until the Stormwater Site Plan is approved.
4. Preparation of Plan. Guidance on preparing a Stormwater Site Plan is contained in Section 14.30.52.
5. Conflicting Requirements. When any provision of any other Chapter of the City Code and state or federal requirements conflicts with this Chapter, that which provides more environmental protection shall apply unless specifically provided otherwise in this Chapter.
6. Minimum Requirements. The provisions of this Chapter shall be held to be minimum requirements in their interpretation and application and shall be liberally construed to serve the purposes of this Chapter.

14.30.050 Minimum Requirement Thresholds (New Section)

1. New Development. The Minimum Requirements discussed in this Section are described in Section 14.30.051. All new development shall be required to comply with Minimum Requirement No. 2. In addition, new development that exceeds certain thresholds shall be required to comply with additional Minimum Requirements described in Section 14.30.051 as follows:

   A. The following new development shall comply with Minimum Requirement Nos. 1 through 5 for the new and replaced impervious surfaces and the land disturbed.
      i.) Development that includes the creation or addition of 2,000 square feet or greater, of new, replaced, or new plus replaced impervious surface area; or
      ii.) Development that includes land disturbing activity of 7,000 square feet or greater.

   B. The following new development shall comply with Minimum Requirements No. 1 through No. 10.
      i.) Creates or adds 5,000 square feet or greater, of new impervious surface area; or
      ii.) Converts ¾ acres or more of native vegetation to lawn or landscaped areas; or
      iii.) Converts 2.5 acres or more of native vegetation to pasture.

2. Redevelopment. All redevelopment shall be required to comply with Minimum Requirement No. 2. In addition, redevelopment that exceeds certain thresholds shall

be required to comply with additional Minimum Requirements described in Section 14.30.051 as follows:

A. The following redevelopment shall comply with Minimum Requirement Nos. 1 through 5 for the new and replaced impervious surfaces and the land disturbed:
   i.) The new, replaced, or total of new plus replaced impervious surfaces is 2,000 square feet or more; or
   ii.) Redevelopment that includes land disturbing activity of 7,000 square feet or more.
B. The following redevelopment shall comply with Minimum Requirement Nos. 1 through 10 for the new impervious surfaces and converted pervious surfaces:
   i.) Redevelopment that adds 5,000 square feet or more of new impervious surfaces; or
   ii.) Redevelopment that converts ¾ acres or more of native vegetation to lawn or landscaped areas; or
   iii.) Redevelopment that converts 2.5 acres or more of native vegetation to pasture.
C. Commingled Stormwater. If the runoff from the new impervious surfaces and converted pervious surfaces is not separated from runoff from other surfaces on the project site, the stormwater treatment facilities must be sized for the entire flow that is directed to them.
D. Equivalent Area. The Director may allow the Minimum Requirements to be met for an equivalent (flow and pollution characteristics) area within the same site. For public road projects, the equivalent area does not have to be within the project limits, but must drain to the same receiving water.
E. Road Related Projects. Runoff from the replaced and new impervious surfaces (including pavement, shoulders, curbs, and sidewalks) shall meet all the Minimum Requirements if the new impervious surfaces total 5,000 square feet or more and total 50 percent or more of the existing impervious surfaces within the project limits. The project limits shall be defined by the length of the project and the width of the right-of-way.
F. Regional Facilities. The Director may exempt or institute a stop-loss provision for redevelopment projects from compliance with Minimum Requirements for treatment, flow control, and wetlands protection as applied to the replaced impervious surfaces if the City has adopted a plan and schedule that fulfills those requirements in regional facilities.

14.30.051 Minimum Requirements.

This Section identifies the eleven Minimum Requirements for stormwater management applicable to new development and redevelopment sites. See the Manual for additional details related to each of the Minimum Requirements.

1. Minimum Requirement #1: Preparation of Stormwater Site Plans. All projects meeting the thresholds in Section 14.30.050 shall prepare a Stormwater Site Plan in accordance with Chapter 3 of Volume 1 of the Stormwater Management Manual for Western Washington (2005).

2. Minimum Requirement #2: Construction Stormwater Pollution Prevention (SWPP). All new development and redevelopment shall comply with Construction SWPP Elements #1 through #12 below.

   Projects in which the new, replaced, or new plus replaced impervious surfaces total 2,000 square feet or more or disturb 7,000 square feet or more of land must prepare a Construction SWPP Plan (SWPPP) as part of the Stormwater Site Plan. Each of the twelve elements must be considered and included in the Construction SWPPP unless the Director decides that site conditions render the element unnecessary and the exemption from that element is clearly justified in the narrative of the SWPPP.

   Projects that add or replace less than 2,000 square feet of impervious surface or disturb less than 7,000 square feet of land are not required to prepare a Construction SWPPP, but must consider all of the twelve Elements of Construction Stormwater Pollution Prevention and develop controls for all elements that pertain to the project site.

A. Element 1: Preserve Vegetation/Mark Clearing Limits.
   i.) Prior to beginning land disturbing activities, including clearing and grading, all clearing limits, sensitive areas and their buffers, and trees that are to be preserved within the construction area should be clearly marked, both in the field and on the plans, to prevent damage and offsite impacts.
   ii.) The duff layer, native top soil, and natural vegetation shall be retained in an undisturbed state to the maximum degree practicable.
   iii.) Plastic, metal, or stake wire fence may be used to mark the clearing limits.

B. Element 2: Establish Construction Access.
   i.) Access Limited. Construction vehicle access and exit shall be limited to one route if possible.
   ii.) Tracking Sediment. Access points shall be stabilized with quarry spall or crushed rock to minimize the tracking of sediment onto public roads.
   iii.) Wheel Wash. Wheel wash or tire baths should be located on-site, if applicable.
   iv.) Clean Public Roads. Public roads shall be cleaned thoroughly at the end of each day. Sediment shall be removed from roads by shoveling or pickup sweeping and shall be transported to a controlled sediment disposal area. Street washing will be allowed only after sediment is removed in this manner.
   v.) Street Wash Water. Street wash wastewater shall be controlled by pumping back on-site, or otherwise be prevented from discharging into systems tributary to state surface waters.

C. Element 3: Control Flow Rates.
   i.) General. 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 project site.

ii.) Downstream Analysis. Downstream analysis is necessary if changes in flows could impair or alter conveyance systems, stream banks, bed sediment or aquatic habitat.

iii.) BMPs Functional. Stormwater retention/detention facilities shall be constructed as one of the first steps in grading. Detention facilities shall be functional prior to construction of site improvements (e.g. impervious surfaces).

iv.) Additional Flow Standards. The Director may require pond designs that provide additional or different stormwater flow control if necessary to address local conditions or to protect properties and waterways downstream from erosion due to increases in the volume, velocity, and peak flow rate of stormwater runoff from the project site.

v.) Permanent Infiltration Ponds. If permanent infiltration ponds are used for flow control during construction, these facilities should be protected from siltation during the construction phase.

D. Element 4: Install Sediment Controls.

i.) Natural Vegetation. The duff layer, native top soil, and natural vegetation shall be retained in an undisturbed state to the maximum extent practicable.

ii.) Sediment Removal BMP. Prior to leaving a construction site, or prior to discharge to an infiltration facility, stormwater runoff from disturbed areas shall pass through a sediment pond or other appropriate sediment removal BMP. Runoff from fully stabilized areas may be discharged without a sediment removal BMP, but must meet the flow control performance standard of Element #3. Full stabilization means concrete or asphalt paving; quarry spalls used as ditch lining; or the use of rolled erosion products, a bonded fiber matrix product, or vegetative cover in a manner that will fully prevent soil erosion. The Director shall inspect and approve areas stabilized by means other than pavement or quarry spalls.

iii.) BMPs Functional. Sediment ponds, vegetated buffer strips, sediment barriers or filters, dikes, and other BMPs intended to trap sediment on-site shall be constructed as one of the first steps in grading. These BMPs shall be functional before other land disturbing activities take place.

iv.) Seeding. Earthen structures such as dams, dikes, and diversions shall be seeded and mulched according to the timing indicated in Element #5.

E. Element 5: Stabilize Soils.

i.) General. All exposed and unworked soils shall be stabilized by application of effective BMPs that protect the soil from the erosive forces of raindrop impact and flowing water, and wind erosion.

ii.) Seasonal Work Limitations. From October 1 through April 30, no soils shall remain exposed and unworked for more than 2 days. From May 1 to September 30, no soils shall remain exposed and unworked for more than 7 days.[1] This condition applies to all soils on-site, whether at final grade or not

[1] These time limits are based upon the average time between storm events for the two periods based upon SeaTac rainfall. These time limits may be adjusted by a local government if it can document different average times between storm events. Adjustments are subject to review and approval by Ecology.

iii.) Soil Stabilization. Soil stabilization measures selected should be appropriate for the time of year, site conditions, estimated duration of use, and potential water quality impacts that stabilization agents may have on downstream waters or ground water.
iv.) Soil Stockpiles. Soil stockpiles must be stabilized and protected with sediment trapping measures.
v.) Linear Facilities. Work on linear construction sites and activities, including right-of-way and easement clearing, roadway development, pipelines, and trenching for utilities, shall not exceed the capability of the individual contractor for his portion of the project to install the bedding materials, roadbeds, structures, pipelines, and/or utilities, and to re-stabilize the disturbed soils, meeting the timing conditions listed above in Section 14.30.051.2.G.2.).

F. Element 6: Protect Slopes.
i.) Cut and Fill Slopes. Cut and fill slopes shall be designed and constructed in a manner that will minimize erosion.
ii.) Soil Types. Consider soil type and its potential for erosion.
iii.) Runoff Velocities. Reduce slope runoff velocities by reducing the continuous length of slope with terracing and diversions, reduce slope steepness, and roughen slope surface.
iv.) Diverted Flows. Divert upslope drainage and run-on waters from off-site with interceptors at top of slope. Off-site stormwater should be handled separately from stormwater generated on the site. Diversion of off-site stormwater around the site may be a viable option. Diverted flows shall be redirected to the natural drainage location at or before the property boundary.
v.) Collected Flows. Contain downslope collected flows in pipes, slope drains, or protected channels.
vi.) Ground Water. Provide drainage to remove ground water intersecting the slope surface of exposed soil areas.
vii.) Excavation. Excavated material shall be placed on the uphill side of trenches, consistent with safety and space considerations.
viii.) Check Dams. Check dams shall be placed at regular intervals within trenches that are cut down a slope.
ix.) Stabilize Soils. Stabilize soils on slopes, as specified in Element #5.

G. Element 7: Protect Drain Inlets.
i.) General. 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 treated to remove sediment.
ii.) Roads. All approach roads shall be kept clean, and all sediment and street wash water shall not be allowed to enter storm drains without prior and adequate treatment unless treatment is provided before the storm drain discharges to waters of the State.

H. Element 8: Stabilize Channels and Outlets.

i.) General. All temporary on-site conveyance channels shall be designed, constructed and stabilized to prevent erosion from the following expected peak flows. Channels shall handle the expected peak 10-minute flow velocity from a Type 1A, 10-year, 24-hour frequency storm for the developed condition. Alternatively, the 10-year, 1-hour flow rate predicted by an approved continuous runoff model, increased by a factor of 1.6 may be used. The hydrologic analysis shall use the existing land cover condition for predicting flow rates from tributary areas outside the project limits. For tributary areas on the project site, the analysis shall use the temporary or permanent project land cover condition, whichever will produce the highest flow rates. If using the Western Washington Hydrology Model to predict flows, bare soil areas should b modeled as "landscaped area".

ii.) Stabilization. Stabilization, including armoring material, adequate to prevent erosion of outlets, adjacent stream banks, slopes and downstream reaches shall be provided at the outlets of all conveyance systems.

I. Element 9: Control Pollutants.

i.) General. All pollutants, including waste materials and demolition debris, that occur on-site during construction shall be handled and disposed of in a manner that does not cause contamination of stormwater.

ii.) Vandalism. Cover, containment, and protection from vandalism shall be provided for all chemicals, liquid products, petroleum products, and non-inert wastes present on the site.

iii.) Equipment Maintenance. Maintenance and repair of heavy equipment and vehicles involving oil changes, hydraulic system drain down, solvent and de-greasing cleaning operations, fuel tank drain down and removal, and other activities which may result in discharge or spillage of pollutants to the ground or into stormwater runoff must be conducted using spill prevention measures, such as drip pans. Contaminated surfaces shall be cleaned immediately following any discharge or spill incident. Emergency repairs may be performed on-site using temporary plastic placed beneath and, if raining, over the vehicle.

iv.) Wheel Wash. Wheel wash, or tire bath wastewater, shall be discharged to a separate on-site treatment system. It may be discharged to the sanitary sewer system only if expressly allowed by the local sewer district authority.

v.) Agricultural Chemicals. Application of agricultural chemicals, including fertilizers and pesticides, shall be conducted in a manner and at application rates that will not result in loss of chemical to stormwater runoff. Manufacturers' recommendations shall be followed for application rates and procedures.

vi.) pH Management. Management of pH-modifying sources shall prevent contamination of runoff and stormwater collected on the site. These sources include, but are not limited to, bulk cement, cement kiln dust, fly ash, new concrete washing and curing waters, waste streams generated from concrete grinding and sawing, exposed aggregate processes, and concrete pumping and mixer washout waters.

J. Element 10: Control De-Watering.

i.) General. All foundation, vault, and trench de-watering water, which have similar characteristics to stormwater runoff at the site, shall be discharged into a controlled conveyance system, prior to discharge to a sediment trap or sediment pond. Channels must be stabilized, as specified in Element #8.

ii.) Clean Water. Clean, non-turbid de-watering water, such as well-point ground water, can be discharged to systems tributary to state surface waters, as specified in Element #8, provided the de-watering flow does not cause erosion or flooding of the receiving waters. These clean waters should not be routed through sediment ponds with stormwater.

iii.) Contaminated Water. Highly turbid or otherwise contaminated dewatering water, such as from construction equipment operation, clamshell digging, concrete tremie pour, or work inside a cofferdam, shall be handled separately from stormwater at the site.

iv.) Other Disposal Options. Depending on site constraints, dewatering may include: infiltration; transport off-site in vehicle, such as a vacuum flush truck, for legal disposal in a manner that does not pollute state waters; on-site treatment using chemical treatment or other suitable treatment technologies; or sanitary sewer discharge with [local sewer district approval] approval if there is no other option.

K. Element 11: Maintain BMPs.

i.) General. 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 BMPs.

ii.) Inspection. Sediment control BMPs shall be inspected weekly or after a runoff-producing storm event during the dry season and daily during the wet season.

iii.) Remove 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. Trapped sediment shall be removed or stabilized on-site. Disturbed soil areas resulting from removal of BMPs or vegetation shall be permanently stabilized.

L. Element 12: Manage The Project.

i.) Phasing of Construction. Development projects shall be phased where feasible in order to prevent, to the maximum extent practicable, the transport of sediment from the project site during construction. Revegetation of exposed areas and maintenance of that vegetation shall be an integral part of the activities for any phase. Clearing and grading activities for developments shall be permitted only if conducted pursuant to an approved site development plan (e.g., subdivision approval) that establishes permitted areas of clearing, grading, cutting, and filling. When establishing these permitted clearing and grading areas, consideration should be given to minimizing removal of existing trees and minimizing disturbance/compaction of native soils except as needed for building purposes. These permitted clearing and grading areas and any other areas required to preserve critical or sensitive areas, buffers, native growth protection easements, or

tree retention areas as may be required by the Director, shall be delineated on the site plans and the development site.

ii.) Seasonal Work Limitations. From October 1 through April 30, clearing, grading, and other soil disturbing activities shall only be permitted if shown to the satisfaction of the Director that silt-laden runoff will be prevented from leaving the construction site through a combination of the following:

iii.) Site conditions including existing vegetative coverage, slope, soil type and proximity to receiving waters; and

iv.) Limitations on activities and the extent of disturbed areas; and

v.) Proposed erosion and sediment control measures.

vi.) Modify Seasonal Limits. Based on the information provided, and/or local weather conditions, the Director may expand or restrict the seasonal limitation on site disturbance. If, during the course of any construction activity or soil disturbance during the seasonal limitation period, silt-laden runoff leaving the construction site causes a violation of the surface water quality standard or if clearing and grading limits or erosion and sediment control measures shown in the approved plan are not maintained, the Director shall take enforcement action according to Section 14.30.803.

vii.) Exemptions. The following activities are exempt from the seasonal clearing and grading limitations:

- Routine maintenance and necessary repair of erosion and sediment control BMPs;
- Routine maintenance of public facilities or existing utility structures that do not expose the soil or result in the removal of the vegetative cover to soil; and
- Activities where there is one hundred percent infiltration of surface water runoff within the site in approved and installed erosion and sediment control facilities.

viii.) Coordination with Other Contractors. The primary project applicant shall evaluate, with input from utilities and other contractors, the stormwater management requirements for the entire project, including the utilities, when preparing the Construction SWPPP.

ix.) Inspection. All BMPs shall be inspected, maintained, and repaired as needed to assure continued performance of their intended function.

x.) Certified Professional. A Certified Erosion and Sediment Control Specialist shall be identified in the Construction SWPPP and shall be on-site or on-call at all times.

xi.) Sampling. Sampling and analysis of the stormwater discharges from a construction site may be necessary on a case-by-case basis to ensure compliance with standards. Monitoring and reporting requirements may be established by the Director when necessary.

xii.) Modify SWPPP. Whenever inspection and/or monitoring reveals that the BMPs identified in the Construction SWPPP are inadequate, due to the actual discharge of or potential to discharge a significant amount of any pollutant, the SWPPP shall be modified, as appropriate, in a timely manner.

xiii.) Construction SWPPP. The Construction SWPPP shall be retained on-site or within reasonable access to the site. The Construction SWPPP shall be modified

whenever there is a significant change in the design, construction, operation, or maintenance of any BMP.

3. Minimum Requirement #3: Source Control of Pollution. All known, available and reasonable source control BMPs shall be applied to all projects. Source control BMPs shall be selected, designed, and maintained according to the Manual.

4. Minimum Requirement #4: Preservation of Natural Drainage Systems and Outfalls. Natural drainage patterns shall be maintained, and discharges from the project site shall occur at the natural location, to the maximum extent practicable. All outfalls require energy dissipation

   The manner by which runoff is discharged from the project site must not cause a significant adverse impact to downstream receiving waters and downgradient properties. Downstream properties shall not be unreasonably burdened with increased flow rates, negative impacts or unreasonable changes in manner of flow from upstream properties. Drainage problems shall not be transferred from one location to another. However, downstream properties cannot block natural or existing runoff through their site and shall accept runoff from upstream properties.

   Planning and design of drainage systems shall not be based on the premise that stormwater can be transferred from one basin to another unless part of an adopted City regional drainage system plan.

   The flow of storm runoff shall be maintained within its natural drainage course unless reasonable use is demonstrated otherwise. When stormwater is discharged into an existing drainage course, the peak discharge into the water course shall not adversely affect or cause damage to property along the drainage course now or in the future based on existing zoning. Erosional impacts due to concentration of flows and increased flow durations shall be evaluated and mitigated.

5. Minimum Requirement #5: On-site Stormwater Management. Projects shall employ on-site Stormwater Management BMPs to infiltrate, disperse, and retain stormwater runoff on-site to the maximum extent feasible without causing flooding or erosion impacts. On-site Stormwater Management BMPs as identified in the Manual shall be used for roof downspout control, flow dispersion, and soil quality.

6. Minimum Requirement #6: Runoff Treatment.
   A. Thresholds. The following require construction of stormwater treatment facilities (see Table 14.30.051.6.A):
      i.) Projects in which the total of effective, pollution-generating impervious surface (PGIS) is 5,000 square feet or more in a threshold discharge area of the project; or
      ii.) Projects in which the total of pollution-generating pervious surfaces (PGPS) is three-quarters (3/4) of an acre or more in a threshold discharge area, and from

which there is a surface discharge in a natural or man-made conveyance system from the site.

Table 14.30.051.6.A:

Treatment Requirements by Threshold Discharge Area				
	< ¾ acres of PGPS	> ¾ acres PGPS	< 5,000 sf PGIS	> 5,000 sf PGIS
Treatment Facilities		✔		✔
Onsite Stormwater BMPs	✔	✔	✔	✔

PGPS = pollution-generating pervious surfaces
PGIS = pollution-generating impervious surfaces
sf = square feet

B. Treatment Facility Sizing. Treatment facilities shall be sized to provide effective treatment of the volume of runoff predicted from a 24-hour storm with a 6-month return frequency (the 6-month, 24-hour storm). Alternatively, the 91 percent of the 24-hour runoff volume indicated by an approved continuous runoff model may be used.
   i.) The Water Quality Design Volume shall be used to size volume-based treatment facilities preceding detention facilities or when detention facilities are not required. The volume of runoff shall be estimated using methods approved in the Manual.
   ii.) The Water Quality Design Flow Rate for the full 2-year release rate shall be used to size flow rate-based treatment facilities located downstream of detention facilities.
   iii.) The Director may allow alternative methods if they identify volumes and flow rates that are at least equivalent.

C. Treatment Facility Selection, Design, and Maintenance. Stormwater treatment facilities shall be:
   i.) Selected in accordance with the process identified in Chapter 4 of Volume I the Manual;

   ii.) Designed in accordance with the design criteria in Volume V of the Manual; and

   iii.) Maintained in accordance with the maintenance schedule in Volume V of the Manual.

D. Untreated Stormwater. Discharge of untreated stormwater from pollution-generating impervious surfaces to ground water is prohibited, except for the discharge achieved by infiltration or dispersion of runoff from residential sites through use of On-site Stormwater Management BMPs.

7. Minimum Requirement #7 – Flow Control.

A. Applicability

i.) Flow Control. Projects must provide flow control to reduce the impacts of stormwater runoff from impervious surfaces and land cover conversions. The requirement below applies to projects that discharge stormwater directly, or indirectly through a conveyance system, into a fresh water, except for discharges into a stream that leads to a wetland or to a wetland that has an outflow to a stream in which both this requirement and Minimum Requirement #8 must be met.

ii.) Exempt Areas. The Director may petition the Department of Ecology to exempt projects in certain areas provided those areas also meet the following criteria:

a.) The area must be drained by a conveyance system that is comprised entirely of manmade conveyance elements (e.g., pipes, ditches, outfall protection, etc.) and extends to the ordinary high water line of the receiving water; and

b.) Any erodible elements of the manmade conveyance system for the area must be adequately stabilized to prevent erosion; and

c.) Surface water from the area must not be diverted from or increased to an existing wetland, stream, or near-shore habitat sufficient to cause a significant adverse impact.

B. Thresholds. The following require construction of flow control facilities and/or land use management BMPs:

Table 14.30.051.7.A

Flow Control Requirements by Threshold Discharge Area		
	Flow Control Facilities	On-site Stormwater Management BMPs
< ¾ acres conversion to lawn/landscape, or < 2.5 acres to pasture		✔
≥ ¾ acres conversion to lawn/landscape, or ≥ 2.5 acres to pasture	✔	✔
< 10,000 square feet of effective impervious area		✔
≥ 10,000 square feet of effective impervious area	✔	✔
≥ 0.1 cubic feet per second increase in the 100-year flood frequency	✔	✔

i.) Projects in which the total of effective impervious surfaces is 10,000 square feet or more in a threshold discharge area, or

ii.) Projects that convert ¾ acres or more of native vegetation to lawn or landscape, or convert 2.5 acres or more of native vegetation to pasture in a

threshold discharge area, and from which there is a surface discharge in a natural or man-made conveyance system from the site, or

iii.) Projects that through a combination of effective impervious surfaces and converted pervious surfaces, cause a 0.1 cubic feet per second increase in the 100-year flow frequency from a threshold discharge area as estimated using the Western Washington Hydrology Model or other model authorized by the Director.

iv.) That portion of any development project in which the above thresholds are not exceeded in a threshold discharge area shall apply Onsite Stormwater Management BMPs in accordance with Minimum Requirement 5.

v.) The Director may require flow control for individual lots due to sensitive areas, historical flooding, or other relevant reasons as deemed necessary by the Director.

C. Standard Requirement

i.) Peak Flows. Stormwater discharges shall match developed discharge durations to pre-developed durations for the range of pre-developed discharge rates from 50 percent of the 2-year peak flow up to the full 50-year peak flow.

ii.) Pre-developed Condition. The pre-developed condition to be matched shall be a forested land cover unless

a.) reasonable, historic information is provided that indicates the site was prairie prior to settlement (modeled as "pasture" in the Western Washington Hydrology Model); or

b.) the drainage area of the immediate stream and all subsequent downstream basins have had at least 40% total impervious area for the last 20 years. In this case, the pre-developed condition to be matched shall be the existing land cover condition. Whenever basin-specific studies determine a stream channel to be unstable, even though the above criterion is met, the pre-developed condition assumption shall be the "historic" land cover condition, or a land cover condition commensurate with achieving a target flow regime identified by an approved basin study.

iii.) This standard requirement is waived for sites that will reliably infiltrate all the runoff from impervious surfaces and converted pervious surfaces.

iv.) Flow Control Facility Selection, Design, and Maintenance. Flow Control facilities shall be selected, designed, and maintained in accordance with Volume III of the Manual.

8. Minimum Requirement #8: Wetlands Protection.

A. Applicability. The requirements below apply only to projects whose stormwater discharges into a wetland, either directly or indirectly through a conveyance system. These requirements must be met in addition to meeting Minimum Requirement #6, Runoff Treatment.

B. Thresholds. The thresholds identified in Minimum Requirement #6 – Runoff Treatment, and Minimum Requirement #7 – Flow Control shall also be applied for discharges to wetlands.
C. Standard Requirement. Discharges to wetlands shall maintain the hydrologic conditions, hydrophytic vegetation, and substrate characteristics necessary to support existing and designated uses. A wetland can be considered for hydrologic modification and/or stormwater treatment in accordance with guidance within the Manual.
D. Additional Requirements. The standard requirement does not excuse any discharge from the obligation to apply whatever technology is necessary to comply with state water quality standards, Chapter 173-201A WAC, or state ground water standards, Chapter 173-200 WAC or successor regulations. Stormwater treatment and flow control facilities shall not be built within a natural vegetated buffer, except for: necessary conveyance systems as approved by the Director; or as allowed in wetlands approved for hydrologic modification and/or treatment in accordance with the Manual. An adopted and implemented basin plan (Minimum Requirement #9), or a Total Maximum Daily Load (TMDL) may be used to develop requirements for wetlands that are tailored to a specific basin.

9. Minimum Requirement #9: Operation and Maintenance. An operation and maintenance manual that is consistent with the Manual shall be provided for all proposed stormwater facilities and BMPs, and the person responsible for maintenance and operation shall be identified. At private facilities, a copy of the manual shall be retained on-site or within reasonable access to the site, and shall be transferred with the property to the new owner. For public facilities, a copy of the manual shall be retained by the Director or other appropriate location. A log of maintenance activity that indicates what actions were taken shall be kept and be available for inspection by the Director.

10. Minimum Requirement #10 – Financial Liability. Projects that may require bonding include, but are not limited to, those occurring in environmentally sensitive areas and where problems are anticipated.
    A. Financial Instrument Required. The Director shall require all persons proposing activities regulated by this Chapter to provide an acceptable financial instrument to protect the city. Where such person has previously provided, or are required to provide, another financial instrument on the facility itself or on other construction related to the facility, such person may, with the permission of the Director, and to the extent allowable by law, combine all such financial instrument into a single instrument; provided, that at no time shall the amount guaranteed be less than the total amount which would have been required by the separate instruments; and provided further, that such an instrument shall on its face clearly delineate those separate instruments which it is intended to replace.
    B. Construction. Prior to commencing construction, the person constructing the facility shall post a construction bond in an amount not less than 150 percent of the cost of drainage improvements and shall be sufficient to cover the cost of performing said construction per the approved drainage plans. Alternatively, an

equivalent cash deposit to an escrow account administered by a local bank may be allowed by the Director. An assignment of funds shall be administered for pre-construction activities such as for erosion control.

C. Maintenance. After satisfactory completion of the facilities and release of the construction financial instrument by the City, the person constructing the facility shall satisfactorily maintain the facility for a two-year period. A financial instrument to be used at the discretion of the City, to correct deficiencies in maintenance must be provided and continued throughout the two-year maintenance period. The amount of the financial instrument shall be 150 percent of the cost of drainage improvements. In addition, at the discretion of the Director, a financial instrument to cover the cost of design defects or failures in workmanship shall also be posted and maintained through the two-year maintenance period. Alternatively, the Director may allow an equivalent cash deposit to an escrow account administered by a local bank.

D. Liability Policy. The person constructing the facility shall maintain a liability policy in an amount to be determined by the Director which shall name the City as an additional insured and which shall protect the City from any liability for any accident, negligence, failure of the facility, or any other liability whatsoever, relating to the construction or maintenance of the facility. The owner of the facility shall maintain the liability policy for the duration of the facility.

14.30.052 Contents of a Stormwater Site Plan

1. Site Plan Required. All projects for new development or redevelopment, which exceed the thresholds of 2,000 square feet for impervious surfaces or 7,000 square feet for land disturbance, must prepare a Stormwater Site Plan.
2. Contents of Plan. Contents of a Stormwater Site Plan will vary with the type and size of the project and individual site characteristics. Two major elements included in a Stormwater Site Plan are a Construction Stormwater Pollution Prevention Plan and a Permanent Stormwater Control Plan. The following documents are to be included in a Stormwater Site Plan:

   (A) Project overview;
   (B) Existing conditions summary;
   (C) Off-site Analysis Report;
   (D) Construction Stormwater Pollution Prevention Plan;
   (E) Permanent Stormwater Control Plan;
   (F) Special Reports and Studies;
   (G) Other Permits;
   (H) Operation and Maintenance Manual; and
   (I) Bond Quantities Worksheet

3. Detailed Information in Manual. Additional details on the content and the procedures for preparation of a Stormwater Site Plan, a Construction Stormwater Pollution Prevention Plan, and a Permanent Stormwater Quality Control Plan are included in the Manual.

14.30.055 Exemptions.
Commercial agriculture, except for the conversion of timberland to agriculture or the construction of impervious surfaces, and forest practices regulated under WAC Title 222, except for Class IV – General forest practices that are conversions from timberland to other uses, are exempt from the provisions of this chapter.

14.30.061 Stormwater management manual adopted.
The 2005 Ecology Stormwater Management Manual for Western Washington is hereby adopted by reference and is hereinafter referred to as the manual.

14.30.062 Stormwater best management practices – BMPs.
1. General. BMPs shall be used to control pollution from stormwater. BMPs shall be used to comply with the standards in this chapter. BMPs are in the manual.

2. Experimental BMPs. In those instances where appropriate BMPs are not in the manual, experimental BMPs should be considered. Experimental BMPs are encouraged as a means of solving problems in a manner not addressed by the manual in an effort to improve stormwater quality technology. Experimental BMPs must be approved in accordance with the approval process outlined in the manual.

14.30.063 Illicit discharges.
Illicit discharges to stormwater drainage systems are prohibited. No person shall throw, drain, or otherwise discharge into the MS4 any pollutants or water containing pollutants, other than stormwater.

1. The following categories of non-stormwater discharges are prohibited unless the stated conditions are met:

    A. Discharges from potable water sources, including water line flushing, hyperchlorinated water line flushing, fire hydrant system flushing, and pipeline hydrostatic test water. Planned discharges shall be de-chlorinated to a concentration of 0.1 ppm or less, pH-adjusted, if necessary, and volumetrically and velocity controlled to prevent re-suspension of sediments in the MS4.
    B. Discharges from lawn watering and other irrigation runoff. These shall be minimized through, at a minimum, public education activities and water conservation efforts.
    C. Dechlorinated swimming pool discharges. The discharges shall be dechlorinated to a concentration of 0.1 ppm or less, pH-adjusted and reoxygenized if necessary, volumetrically and velocity controlled to prevent re-suspension of sediments in the MS4. Swimming pool cleaning wastewater and filter backwash shall not be discharged to the MS4.
    D. Street and sidewalk wash water, water used to control dust, and routine external building wash down that does not use detergents. Discharges from these sources shall be minimized through, public education activities in accordance with the

Permit. At active construction sites, street sweeping must be performed prior to washing the street.

E. Other non-stormwater discharges. The discharges shall be in compliance with the requirements of the stormwater pollution prevention plan reviewed by the City, which addresses control of construction site de-watering discharges.

F. Solid or liquid wastes thrown, drained or otherwise discharged directly or indirectly into the municipal storm drain system and/or surface and ground waters. Examples of prohibited contaminants include, but are not limited to, the following:

i.) Trash or debris.
ii.) Construction materials.
iii.) Petroleum products including but not limited to oil, gasoline, grease, fuel oil and heating oil.
iv.) Antifreeze and other automotive products.
v.) Metals in either particulate or dissolved form.
vi.) Flammable or explosive materials.
vii.) Radioactive material.
viii.) Batteries.
ix.) Acids, alkalis, or bases.
x.) Paints, stains, resins, lacquers, or varnishes.
xi.) Degreasers and/or solvents.
xii.) Pesticides, herbicides, or fertilizers.
xiii.) Steam cleaning wastes.
xiv.) Soaps, detergents, or ammonia.
xv.) Domestic animal wastes.
xvi.) Recreational vehicle waste.
xvii.) Animal carcasses.
xviii.) Food wastes.
xix.) Bark and other fibrous materials.
xx.) Lawn clippings, leaves, or branches.
xxi.) Silt, sediment, concrete, cement or gravel.
xxii.) Dyes (discharged without prior notification and approval of the City).
xxiii.) Chemicals not normally found in uncontaminated water.
xxiv.) Any other process-associated discharge except as otherwise allowed in this section.
xxv.) Any hazardous material or waste not listed above.

2. The following categories of non-stormwater discharges are exempt from the discharge prohibitions established by this section:

(A) Diverted stream flows.
(B) Rising ground waters.
(C) Uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)).
(D) Uncontaminated pumped ground water.
(E) Foundation drains.

(F) Air conditioning condensation.
(G) Irrigation water from agricultural sources that is commingled with urban stormwater.
(H) Springs.
(I) Water from crawl space pumps.
(J) Footing drains.
(K) Flows from riparian habitats and wetlands.
(L) Non-stormwater discharges covered by another NPDES permit.
(M) Discharges from emergency fire fighting activities.

3. Prohibition of Illicit Connections

(A) The construction, use, maintenance, or continued existence of illicit connnections to the storm drain system is prohibited.
(B) This prohibition expressly includes, without limitation, illicit connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection.
(C) A person is considered to be in violation of this section if the person connects a line conveying sewage to the MS4, or allows such a connection to continue.

14.30.734 Exceptions.
Exceptions to minimum requirements Nos. 1 through 10 may be granted by the City Council prior to permit approval and construction. An exception may be granted following a public hearing conducted by the City Council; provided, that a written finding of fact is prepared that addresses the following:

1. That there are special physical circumstances or conditions affecting the property such that the strict application of these provisions would deprive the applicant of all reasonable use of the site in question, and every effort to find creative ways to meet the intent of the minimum standards has been made;

2. That the granting of the exceptions will not be detrimental to the public health and welfare, nor injurious to other properties in the vicinity and/or downstream, and to the quality of waters of the state; and

3. The exception is the least possible exception that could be granted to comply with the intent of the minimum requirements.

14.30.801 Administration and director.
The City Administrator shall administer this chapter and shall be referred to as the director. The director shall have the authority to develop and implement administrative procedures to administer and enforce this chapter.

14.30.802 Review and approval.
The director may approve, conditionally approve or deny an application for activities regulated by this chapter.

14.30.803 Enforcement authority.
The director shall enforce this chapter.

14.30.804 Inspection.
All activities regulated by this chapter, except those exempt in BMC 14.30.040(2), shall be inspected by the director. The director shall inspect projects at various stages of the work requiring approval to determine that adequate control is being exercised. Stages of work requiring inspection include, but are not limited to, preconstruction; installation of BMPs; land disturbing activities; installation of utilities, landscaping, retaining walls and completion of project. When required by the director, a special inspection and/or testing shall be performed.

14.30.901 General.
Enforcement action shall be in accordance with this chapter whenever a person has violated any provision of this chapter. The choice of enforcement action 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, and/or the degree of bad faith of the person subject to the enforcement action.

14.30.905 Orders.

The Director shall have the authority to issue to an owner or person(s) representing an owner an order to maintain or repair a component of a stormwater facility or BMP to bring it in compliance with this chapter, the Stormwater Management Manual and/or other City regulations. 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 action to be taken.
3. A reasonable time to comply, depending on the circumstances.
4. Penalties that may be incurred by any owner of a stormwater system not in compliance with this chapter.
5. An order to the owner to provide to the Director a detailed plan showing drawings and steps that will be taken to achieve compliance within a specified time. This plan is subject to approval by the Director.

14.30.910 Enforcement, violations and penalties.

Any person violating or failing to comply with any of the provisions of this title shall be subject to the notice requirements, enforcement, violations and/or penalty provisions of Chapter 1.12 BMC.

14.30.920 Appeals

Administrative interpretations and administrative Type A-1 and Type A-2 decisions may be appealed, by applicants or parties of record, to the board of adjustment subject to the provisions of BMC 20.01.260.