

ORDINANCE NO. 2009-06-041

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2
3 **AN ORDINANCE OF THE CITY OF BELLINGHAM, WASHINGTON, AMENDING**
4 **BELLINGHAM MUNICIPAL CODE CHAPTER 15.42 (STORMWATER MANAGEMENT)**
5 **RELATING TO IMPLEMENTING BEST PRACTICE STORMWATER MANAGEMENT AND**
6 **MANAGING STORMWATER WITHIN BASIN ONE OF LAKE WHATCOM.**
7

8 **WHEREAS**, the City of Bellingham operates a surface and stormwater utility and
9 management program to further public health, safety, and welfare by promoting a
10 comprehensive approach to these issues, controlling storm and surface runoff, and
11 enhancing environmental protection; and,
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13 **WHEREAS**, the City's stormwater management program is codified in BMC
14 Chapters 15.42; and,
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16 **WHEREAS**, the responsible federal and state regulatory authorities have required
17 local governments to adopt stormwater management regulations, which include minimum
18 requirements; and,
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20 **WHEREAS**, the City of Bellingham must update its codified regulations to implement
21 the requirements of the federal and state regulatory authorities; and,
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23 **WHEREAS**, the intent of this ordinance is to comply with these federal and state
24 regulatory requirements to establish best practices for stormwater management; and,
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26 **WHEREAS**, Lake Whatcom has been listed by the State of Washington as an
27 impaired water body; and,
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29 **WHEREAS**, the Department of Ecology has issued a Total Maximum Daily Loading
30 (TMDL) report for Lake Whatcom water quality; and,
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32 **WHEREAS**, the report from the Department of Ecology states that reductions in
33 phosphorus and fecal coliform bacteria are necessary to restore Lake Whatcom's water
34 quality; and,
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36 **WHEREAS**, the City Council finds this ordinance's requirements to be consistent
37 with meeting the pollutant reductions indicated in the TMDL report;
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40 **NOW, THEREFORE, THE CITY OF BELLINGHAM DOES ORDAIN:**
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42 **Section 1: Bellingham Municipal Code Section 15.42.010 is hereby amended as**
43 **follows:**
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1 **15.42.010 - Findings Of Fact, Need And Purpose**

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3 A. **Findings of Fact:** [UNCHANGED]

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5 B. **Need:** [UNCHANGED]

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7 C. **Purpose:** It is the purpose of this Chapter to:

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9 1. Minimize water quality degradation in streams, ponds, lakes, wetlands and
10 other water bodies;

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12 2. Minimize the degradation of habitat and habitat forming processes in streams,
13 ponds, lakes, wetlands, and other water bodies.

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15 3. Minimize the impact of increased runoff, erosion and sedimentation caused
16 by land development and maintenance practices;

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18 4. Promote site planning and construction practices that are consistent with
19 natural geological, topographical, vegetational and hydrological conditions;

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21 5. Maintain and protect the City's stormwater management infrastructure and
22 those downstream.

23
24 6. Minimize disruption of hydrologic functions, patterns, and processes.

25
26 7. Provide compliance with Federal, State and local requirements for stormwater
27 management and water quality.

28
29 This chapter is not intended to create a special relationship with any individual or individuals,
30 nor to identify and protect any particular class of persons. It is not the intent of this chapter
31 to impose liability upon the city for failure to perform any discretionary act or failure to
32 enforce the provisions of this chapter. It is the intent of this chapter to place the obligation of
33 complying with its requirements upon the owner and/or contractor. Neither the City nor any
34 officer, agent, or employee thereof shall incur or be held as assuming any liability by reason
35 or in consequence of any permission, inspection or approval authorized herein, or issued as
36 provided herein, or by reason or consequence of any thing done or act performed pursuant
37 to the provisions of this chapter.

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39 **Section 2:** Bellingham Municipal Code Section 15.42.020 is hereby modified as
40 follows:

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42 **15.42.020 Definitions**

43 For purposes of this Chapter, the following definitions shall apply:

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1 **A. Arterial** - A road or street primarily for through traffic. A major arterial connects an
2 Interstate Highway to cities and counties. A minor arterial connects major arterials to
3 collectors. A collector connects an arterial to a neighborhood. A collector is not an
4 arterial. A local access road connects individual homes to a collector.

5 **B. Best Management Practice ("BMP")** - Those physical, structural, and/or managerial
6 practices that, when used singly or in combination, prevent or reduce pollution of water,
7 and have been approved by Ecology or the City. BMPs are listed and described in the
8 DOE Manual, current edition.

9 1. *Source Control BMP.* A BMP that is intended to prevent pollution from
10 entering stormwater.

11 2. *Treatment BMP.* A BMP that is intended to remove pollution from stormwater.

12 3. *Flow Control BMP.* A BMP that is intended to mitigate the impacts of
13 increased surface and stormwater runoff rates generated by development.

14 4. *Low Impact Development BMP.* A set of BMPs containing treatment and flow
15 control solutions that are contained in the LID Guidance Manual.

16 5. *Experimental BMP.* Any treatment or methodology proposed for treatment or
17 management of stormwater that is not in the DOE Manual (current edition) and is
18 being studied by the City, Whatcom County and/or the Washington State
19 Department of Ecology for adoption as a BMP.

20 **C. Bioretention** - An integrated stormwater management practice that uses the
21 chemical, biological, and physical property of plants, microbes, and soils to remove or
22 retain pollutants from stormwater runoff. Bioretention facilities are depressions that can
23 be isolated detention cells, swales for conveyance as well as treatment, or a connected-
24 cell hybrid of the two. Bioretention facilities include compost amended soils, landscape
25 plantings selected for tolerance to a range of conditions and a mulch layer.

26 **D. Clearing** - The destruction and removal of vegetation by manual, mechanical,
27 chemical or other such method.

28 **E. Critical Areas** – Means those areas, to include those areas defined in Bellingham
29 Municipal Code Chapter 16.55, with a critical recharging effect on aquifers used for
30 potable water, fish and wildlife habitat conservation areas, frequently flooded areas,
31 geologically hazardous areas, including unstable slopes, and associated areas and
32 ecosystems.

33 **F. Critical Basins** – Means those geographic basin areas that are of exceptional
34 significance and that have been determined by the City to require special protection. The
35 Lake Whatcom Watershed has been determined to be a Critical Basin.

1 **G. Detention** - The release of stormwater runoff from the site at a slower rate than it is
2 collected by the stormwater facility system, the difference being held in temporary
3 storage.

4 **H. Detention facility** - An above or below ground facility, such as a pond or tank, that
5 temporarily stores stormwater runoff and subsequently releases it at a slower rate than it
6 is collected by the drainage facility system. There is little or no infiltration of stored
7 stormwater.

8 **I. Development** - Means new development, redevelopment, or both, including a
9 combination thereof. See definitions for each.

10 **J. Director** – Means the Director of the Public Works Department or his/her assignee.

11 **K. Drainage basin** - A geographic and hydrologic subunit of a watershed.

12 **L. Ecology or DOE** – Means the Washington State Department of Ecology.

13 **M. DOE Manual or Ecology Manual** – Means the Washington State Department of
14 Ecology "Stormwater Management Manual for Western Washington" as currently
15 adopted or hereafter modified. The LID Guidance Manual shall be considered a portion
16 of this Manual.

17 **N. Effective Impervious surface** - Those impervious surfaces that are connected via
18 sheet flow or discrete conveyance to a drainage system. Impervious surfaces on single
19 family residences are considered ineffective if the runoff is dispersed through at least
20 one hundred feet of native vegetation in accordance with BMP T5.30 – "Full Dispersion,"
21 as described in Chapter 5 of Volume V of the Ecology Manual.

22 **O. Erosion** - The wearing away of the land surface by running water, wind, ice, or other
23 geological agents, including such processes as gravitational creep. Also, detachment
24 and movement of soil or rock fragments by water, wind, ice, or gravity.

25 **P. Excavation** - The mechanical removal of earth material.

26 **P1. Exempt Gardening** - Those gardening and landscape practices that are contained
27 within one or more areas of a property. The total square footage of all areas together
28 shall not exceed 5% of the property or 500 sf whichever is the greater. Exempt gardens
29 shall be maintained and located to prevent runoff resultant from direct precipitation,
30 water run-on and irrigation. Exempt Garden areas are not exempt from the prohibition
31 on the use of phosphorus containing products including fertilizers, pesticides or other
32 deleterious materials. Landscape or gardening areas beyond the limit provided herein
33 are considered to be partially pervious surfaces and subject to the limitations and
34 requirements of BMC 16.80 and BMC 15.42 regarding those areas. Exempt Gardens
35 that are not in active use for gardening or landscaping purposes for more than 30 days

1 shall provide for the stabilization of the Exempt Garden by the use of a Type 1 mulch or
2 other approved method.

3 **Q. Fill** - A deposit of earth material placed by artificial means.

4 **R. Forest practice** - Any activity conducted on or directly pertaining to forest land and
5 relating to growing, harvesting, or processing timber, including but not limited to:

- 6 1. Road and trail construction;
- 7 2. Harvesting, final and intermediate;
- 8 3. Precommercial thinning;
- 9 4. Reforestation;
- 10 4. Fertilization;
- 11 5. Prevention and suppression of diseases and insects;
- 12 6. Salvage of trees; or
- 13 7. Brush control.

14 **S. Highway** – A main public road connecting towns and cities

15 **T. Hydroperiod** - A seasonal occurrence of flooding and/or soil saturation; it
16 encompasses depth, frequency, duration, and seasonal pattern of inundation.

17 **U. Illicit discharge** - All non-stormwater discharges to natural or manmade stormwater
18 drainage systems that cause or contribute to a violation of state water quality, sediment
19 quality or ground water quality standards, including but not limited to sanitary sewer
20 connections, industrial process water, interior floor drains, car washing, and greywater
21 systems. All non-stormwater discharges not listed below are considered to be an illicit
22 discharge.

23 The following are allowed discharges:

- 24 • Diverted stream flows.
- 25 • Rising ground waters.
- 26 • Uncontaminated ground water infiltration (as defined at 40 CFR
27 35.2005(20)).
- 28 • Uncontaminated pumped ground water.
- 29 • Foundation drains.
- 30 • Air conditioning condensate.

- Irrigation water from agricultural sources that is commingled with urban stormwater.
- Springs.
- Water from crawl space pumps.
- Footing drains.
- Flows from riparian habitats and wetlands.
- Non-stormwater discharges covered by another NPDES permit.
- Discharges from emergency fire fighting activities in accordance with permit condition S2 of the Western Washington Phase II Municipal Stormwater Permit *Authorized Discharges*.

The following are conditionally allowed discharges:

- Discharges from potable water sources, including water line flushing, hyperchlorinated water line flushing, fire hydrant system flushing, and pipeline hydrostatic test water. Planned discharges will be to sanitary sewer. If sanitary sewer is not an option, the water shall be dechlorinated 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.
- Discharges from lawn watering and other irrigation runoff. Excess runoff from these activities are discouraged and are subject to nuisance abatement.
- Dechlorinated swimming pool discharges. Any swimming pool discharge that may be allowed must be dechlorinated to a concentration of 0.1 ppm or less, pH-adjusted and reoxygenized. Discharge volume and velocity will be controlled to prevent scour or re-suspension of sediments in City stormwater conveyances. Swimming pool cleaning wastewater and filter backwash is not an allowed discharge.
- Street and sidewalk wash water, water used to control dust, and routine external building wash down are allowed if the water does not contain detergents and particulates will not cause an exceedance of State water quality standards. For City operations, to the extent practicable, the amount of street wash and dust control water used shall be minimized. At active construction sites, BMC15.42.060.F.2.e.ii(d) requires that street sweeping must be performed prior to the washing of any street.
- Stormwater discharges associated with construction, including de-watering practices, are regulated and enforced per BMC15.42.

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2 **V. Impervious surface** - A hard surface area that either prevents or retards the entry of
3 water into the soil mantle as under natural conditions prior to development. A hard
4 surface area which causes water to run off the surface in greater quantities or at an
5 increased rate of flow from the flow present under natural conditions prior to
6 development. Common impervious surfaces include, but are not limited to, roof tops,
7 walkways, patios, driveways, parking lots or storage areas, concrete or asphalt paving,
8 packed gravel surfaces, packed earthen materials, and oiled, macadam or other
9 surfaces which similarly impede the natural infiltration of stormwater. Open, uncovered
10 retention/detention facilities shall not be considered as impervious surfaces for purposes
11 of determining whether the thresholds for application of minimum requirements are
12 exceeded. Open, uncovered retention/detention facilities shall be considered impervious
13 surfaces for purposes of runoff modeling. Impervious surfaces that meet the criteria for
14 full dispersion or that are fully infiltrated in compliance with the Ecology Manual shall be
15 excluded in the determination of thresholds for compliance with this Chapter.

16 **W. Land disturbing activity** - Any activity that results in movement of earth, or a
17 change in the existing soil cover (both vegetative and non-vegetative) and/or the existing
18 soil topography. Land disturbing activities include, but are not limited to clearing,
19 grading, filling, and excavation. Compaction that is associated with stabilization of
20 structures and road construction shall also be considered a land disturbing activity.
21 Vegetation maintenance practices or gardening are not generally considered a land-
22 disturbing activity. The exception is that within Basin One of the Lake Whatcom
23 Watershed such activities are limited to the provisions for Exempt Gardens within this
24 code.

25 **X. Lake Whatcom Watershed** - All those lands that drain into Lake Whatcom. The
26 terminus of the Lake Whatcom Watershed is the City of Bellingham control dam located
27 at the juncture of Lake Whatcom and Whatcom Creek. The boundaries are shown on
28 the map in Attachment A. Where in conflict, the definition of the watershed boundaries
29 provided herein shall supersede the map.

30 **Y. Lake Whatcom Watershed Basin One** – Those lands within the Lake Whatcom
31 Watershed that drain into Basin One of Lake Whatcom via natural topography or through
32 manmade conveyance systems. The boundaries of Basin One are shown on the map
33 in Attachment A. Where in conflict, the definition of the watershed boundaries provided
34 herein shall supersede the map.

35 **Z. Low Impact Development (LID)** - A group of BMPs and land use practices that are
36 aimed at lessening the hydrologic and water quality impacts to the environment from
37 development. LID practices include but are not limited to, reduction in impervious
38 surfaces, infiltration of flow, dispersion of flow, soil remediation and cluster development.

39 **AA. LID Guidance Manual** - The January 2005 Low Impact Development Technical
40 Guidance Manual for Puget Sound, prepared by the Puget Sound Action Team and the
41 Washington State University Pierce County Extension as now or hereafter amended.

1 BB. **Maintenance** - Repair and maintenance includes activities conducted on currently
2 serviceable structures, facilities, and equipment that involves no expansion or use
3 beyond that previously existing use and results in no significant adverse hydrologic
4 impact. It includes those usual activities taken to prevent a decline, lapse, or cessation
5 in the use of structures and systems. Those usual activities may include removal and
6 replacement of disfunctioning facilities, including cases where environmental permits
7 require replacing an existing structure with a different type structure, as long as the
8 functioning characteristics of the original structure are not changed. By way of example
9 is the replacement of a collapsed, fish blocking, round culvert with a new box culvert
10 under the same span, or width, of roadway.

11 CC. **Master Plan** – The City of Bellingham’s Watershed Master Plan or Stormwater
12 Comprehensive Plan.

13 DD. **Mitigation** – Mitigation means, in the following order of preference:

- 14 1. Avoiding the impact altogether by not taking a certain action or part of an
15 action;
- 16 2. Minimizing impacts by limiting the degree or magnitude of the action and its
17 implementation, by using appropriate technology, or by taking affirmative steps to
18 avoid or reduce impacts;
- 19 3. Rectifying the impact by repairing, rehabilitating or restoring the affected
20 environment;
- 21 4. Reducing or eliminating the impact over time by preservation and
22 maintenance operations during the life of the action; and
- 23 5. Compensating for the impact by replacing, enhancing, or providing substitute
24 resources or environments.

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

31 FF. **Natural Forested Condition**—A vegetated condition mimicking well-
32 established forests and supporting soils found in the lowlands of Whatcom
33 County prior to European settlement. The pre-European-settlement condition is
34 characterized by an extensive canopy cover dominated by native coniferous
35 trees, a significant duff layer, and all distinct plant layers present (tree, shrub,
36 ground cover). The natural forested condition shall function and perform as the
37 “forested condition” in the Dept. of Ecology Stormwater Manual, current edition.

1 GG. **Natural location** - Means the location of those channels, swales, and other non-
2 manmade conveyance systems as defined by the first documented topographic contours
3 existing for the subject property, either from maps or photographs, or such other means
4 as appropriate. In the case of outwash soils with relatively flat terrain, no natural location
5 of surface discharge may exist.

6 HH. **New development** - Land disturbing activities, including Class IV -general forest
7 practices that are conversions from timber land to other uses; structural development,
8 including construction or installation of a building or other structure; creation of
9 impervious surfaces; and subdivision, short subdivision and binding site plans, as
10 defined and applied in Chapter 58.17 RCW. Projects meeting the definition of
11 redevelopment shall not be considered new development.

12 II. **New Impervious Surface** - Impervious surfaces that replace or supplant existing
13 pervious surfaces. For road construction projects, extending the pavement edge without
14 increasing the size of the road prism, or paving graveled shoulders, resurfacing by
15 upgrading from dirt to gravel, asphalt, or concrete; upgrading from gravel to asphalt, or
16 concrete; or upgrading from a bituminous surface treatment ("chip seal") to asphalt or
17 concrete: These are considered new impervious surfaces and are subject to the
18 minimum requirements that are triggered when the thresholds identified for development
19 or redevelopment projects are met. For other development, the replacement of
20 compacted dirt, gravel or bituminous surface treatment, regardless of use, with structural
21 development, asphalt or concrete shall constitute a new impervious surface.

22 JJ. **Partially Pervious Surface**- Surfaces that cause an increase in stormwater runoff
23 from a natural forested condition but that are not clearly a defined impervious surface.
24 Common surfaces in this category are lawns, landscaping areas, gardens, areas that
25 have been cleared of native vegetation, and non-engineered pervious driveways that
26 have not been proven through engineering analysis as being capable of fully infiltrating
27 the water from a 100 year developed condition storm. (Applies to Basin One of Lake
28 Whatcom Watershed only)

29 KK. **Person** - Any individual, partnership, corporation, association, organization,
30 cooperative, public or Municipal Corporation, agency of the state, or local government
31 unit, however designated.

32 LL. **Pollution** - Contamination or other alteration of the physical, chemical, or biological
33 properties, of waters of the state, including change in temperature, taste, color, turbidity,
34 or odor of the waters, or such discharge of any liquid, gaseous, solid, radioactive or other
35 substance into any waters of the state as will or is likely to create a nuisance or render
36 such waters harmful, detrimental or injurious to the public health, safety or welfare, or to
37 domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial
38 uses, or to livestock, wild animals, birds, fish or other aquatic life.

39 MM. **Pollution-generating impervious surface (PGIS)** - Those impervious surfaces
40 considered to be a significant source of pollutants in stormwater runoff. Such surfaces

1 include those which are subject to: vehicular use; industrial activities (as defined in the
2 Ecology Manual); or storage of erodible or leachable materials, wastes, or chemicals,
3 and which receive direct rainfall or the run-on or blow-in of rainfall. Erodible or leachable
4 materials, wastes, or chemicals are those substances which, when exposed to rainfall,
5 measurably alter the physical or chemical characteristics of the rainfall runoff. Examples
6 include erodible soils that are stockpiled, uncovered process wastes, manure, fertilizers,
7 oily substances, ashes, kiln dust, and garbage dumpster leakage. Metal roofs are also
8 considered to be PGIS unless they are coated with an inert, non-leachable material (e.g.,
9 baked-on enamel coating). A surface, whether paved or not, shall be considered subject
10 to vehicular use if it is regularly used by motor vehicles. The following are considered
11 regularly-used surfaces: roads, unvegetated road shoulders, bike lanes within the
12 traveled lane of a roadway, driveways, parking lots, unfenced fire lanes, vehicular
13 equipment storage yards, and airport runways. The following are not considered
14 regularly-used surfaces: paved bicycle pathways separated from and not subject to
15 drainage from roads for motor vehicles, fenced fire lanes, and infrequently used
16 maintenance access roads.

17 **NN. *Pollution-generating pervious surfaces (PGPS)*** - Any non-impervious surface
18 subject to the use of pesticides and fertilizers or loss of soil. Typical PGPS include, by
19 way of example, lawns, landscaped areas, golf courses, parks, cemeteries, and sports
20 fields.

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22 **OO. *Pre-developed condition*** – For areas that drain directly or indirectly to a river or
23 stream pre-developed conditions shall mean the native vegetation and soils that existed
24 at a site prior to the influence of Euro-American settlement. The pre-developed condition
25 shall be assumed to be a forested land cover unless reasonable, historic information is
26 provided that indicates the site was prairie prior to settlement. For areas that only drain
27 directly or indirectly to marine or estuarine waters the pre-developed conditions shall be
28 the site conditions as of September 1, 1995.

29
30 **PP. *Project site*** - That portion of a property, properties, or right of way subject to land
31 disturbing activities, new impervious surfaces, or replaced impervious surfaces. The total
32 projected area of new, replaced or new plus replaced impervious surfaces for
33 subdivisions shall constitute a project site. Project site shall also include any and all
34 areas of the project property or properties that have been previously developed on or
35 after September 1, 1995 if said development did not provide permanent stormwater
36 facilities for water quality and quantity mitigation.

37
38 **QQ. *Receiving waters*** - Bodies of water or surface water systems to which surface
39 runoff is discharged via a point source of stormwater or via sheet flow.

40
41 **RR. *Redevelopment*** - On a site that is already substantially developed (which means
42 35% or more of existing impervious surface coverage, 10% or more for Basin One of
43 Lake Whatcom Watershed), the creation or addition of impervious surfaces; the
44 expansion of a building footprint or addition or replacement of a structure; structural

1 development including construction, installation or expansion of a building or other
2 structure; replacement of impervious surface that is not part of a routine maintenance
3 activity; and land disturbing activities. For Basin One of the Lake Whatcom Watershed
4 redevelopment also means the creation of or expansion of Partially Pervious Surfaces.
5

6 **SS. Regional retention/detention system** - A stormwater quantity control structure
7 designed to correct existing surface water runoff problems of a basin or subbasin. The
8 area downstream has been previously identified as having existing or predicted
9 significant and regional flooding and/or erosion problems. This term is also used when a
10 detention facility is sited to detain stormwater runoff from a number of new developments
11 or areas within a catchment.
12

13 **TT Replaced impervious surface** - For structures, the removal and replacement of any
14 exterior impervious surfaces or foundation. Roof replacement not including substantial
15 replacement of structural members is considered to be maintenance. For other
16 impervious surfaces, the removal down to bare soil or base course and replacement.
17 The pulverization and replacement of like pavement is considered a replaced impervious
18 surface. The partial grinding of surfaces for overlay are considered to be a maintenance
19 activity.
20

21 **UU. Site** – The area defined by the legal boundaries of a parcel or parcels of land that is
22 (are) subject to new development or redevelopment. For road projects, the length of the
23 project site and the right-of-way boundaries define the site.
24

25 **VV. Soil** - The unconsolidated mineral and organic material on the immediate surface of
26 the earth that serves as a natural medium for the growth of land plants.
27

28 **WW. Source control BMP** - A structure or operation that is intended to prevent
29 pollutants from coming into contact with stormwater through physical separation of areas
30 or careful management of activities that are sources of pollutants. This manual
31 separates source control BMPs into two types. Structural Source Control BMPs are
32 physical, structural, or mechanical devices, or facilities that are intended to prevent
33 pollutants from entering stormwater. Operational BMPs are non-structural practices that
34 prevent or reduce pollutants from entering stormwater. See DOE Manual, Volume IV for
35 details.
36

37 **XX. Stormwater** - That portion of precipitation that does not naturally percolate into the
38 ground or evaporate, but flows via overland flow, interflow, pipes and other features of a
39 stormwater drainage system into a defined surface waterbody, or a constructed
40 infiltration facility.
41

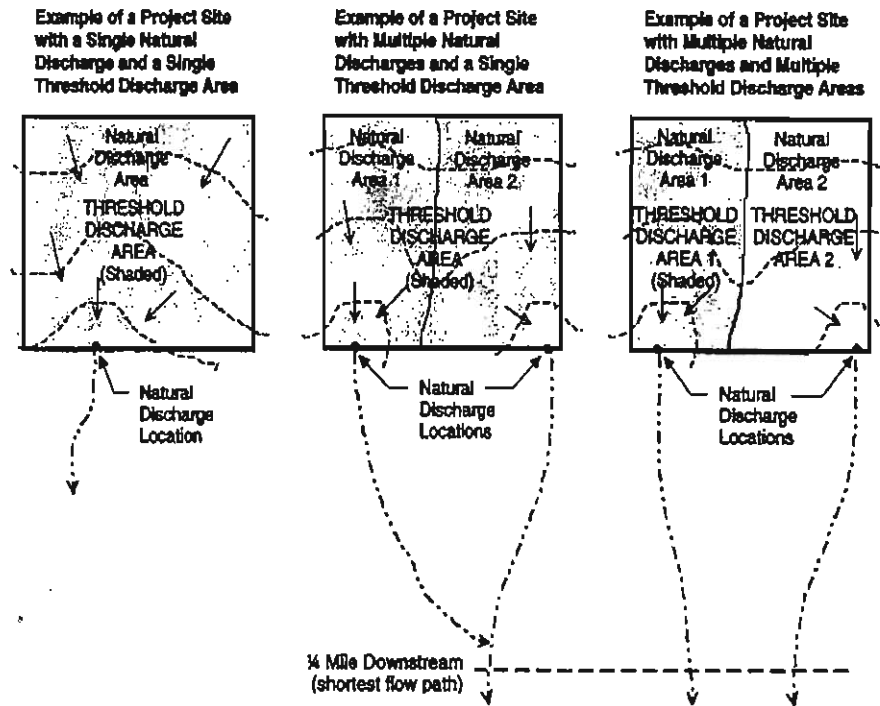
42 **YY. Stormwater drainage system** - Constructed and natural features which function
43 together as a system to collect, convey, channel, hold, inhibit, retain, detain, infiltrate,
44 divert, treat or filter stormwater.
45

1 **ZZ, Stormwater facility** - A constructed component of a stormwater drainage system
2 designed or constructed to perform a particular function, or multiple functions.
3 Stormwater facilities include, but are not limited to, pipes, swales, ditches, culverts,
4 street gutters, detention ponds, retention ponds, constructed wetlands, infiltration
5 devices, catch basins, oil/water separators, and biofiltration swales.
6

7 **AAA. Stormwater Management Manual for Western Washington (Stormwater**
8 **Manual)** - This manual, as prepared by and updated by the Department of Ecology,
9 contains BMPs to prevent, control or treat pollution in stormwater and reduce other
10 stormwater-related impacts to waters of the State and shall be interpreted to mean the
11 current edition. The Stormwater Manual is intended to provide a supplement to this
12 BMC to control the quantity and quality of stormwater runoff from new development and
13 redevelopment. The Stormwater Manual shall be used for the guidance of designs,
14 reports and construction for all development and redevelopment within the City of
15 Bellingham except where BMC 15.42 provides for more specific direction regarding
16 stormwater management.
17

18 **BBB. Stormwater Site Plan** - The comprehensive report containing all of the technical
19 information and analysis necessary for the City of Bellingham and other regulatory
20 agencies to evaluate a proposed new development or redevelopment project for
21 compliance with stormwater requirements. Contents of the Stormwater Site Plan will
22 vary with the type and size of the project, and individual site characteristics. It includes a
23 Construction Stormwater Pollution Prevention Plan ("Construction SWPPP") and a
24 Permanent Stormwater Control Plan ("PSC Plan"). The Stormwater Site Plan shall be
25 prepared in accordance with the Ecology Manual and/or other City of Bellingham
26 guidance documents including this code.
27

28 **CCC. Threshold Discharge Area** - An onsite area draining to a single natural
29 discharge location or multiple natural discharge locations that combine within one-
30 quarter mile downstream (as determined by the shortest flow path). The examples
31 below illustrate this definition. The purpose of this definition is to clarify how the
32 thresholds of the DOE Manual and this code are applied to project sites with multiple
33 discharge points.
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DDD. **Waterbody** - Surface waters including rivers, streams, lakes, marine waters, estuaries, and wetlands.

EEE. **Watershed Master Plan, the Plan or the Stormwater Comprehensive Plan** - Means documents created for the comprehensive management of stormwater for the City of Bellingham urban areas and suburban fringe areas and are adopted by reference. The documents include the current editions of Volume I and II of the 1995 Watershed Master Plan, the Stormwater Management Handbook, the 2007 Stormwater Comprehensive Plan and all future updates to these documents.

FFF. **Wetlands** - 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. Wetlands do not include those artificial wetlands intentionally created from non-wetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from non-wetland

1 areas to mitigate the conversion of wetlands. (Waterbodies not included in the definition
2 of wetlands as well as those mentioned in the definition are still waters of the State.)

3 GGG. **Vegetation** – Means all organic plant life growing on the surface of the earth.

4 **Section 3: Bellingham Municipal Code Section 15.42.050 is hereby amended as**
5 **follows:**

6
7 **15.42.050 - General Requirements**

8
9 **A. Stormwater Management Plan Adopted: [UNCHANGED]**

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11 **B. Stormwater Best Management Practices (BMPs):**

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13 **1. General:** BMPs shall be used to control pollution from stormwater. BMPs
14 shall be used to comply with the standards in this Ordinance. BMPs are in the latest
15 edition of Ecology's Stormwater Technical Manual, hereinafter referred to as
16 Ecology's Manual.

17
18 **2. Low Impact Development (LID):** Stormwater BMPs within the LID
19 Guidance Manual, including prerequisite conditions, design specifications,
20 maintenance requirements, and stormwater modeling criteria, are hereby approved
21 for use subject to the City's stormwater review process, Ecology acceptance and the
22 compliance with special standards for Basin One of the Lake Whatcom Watershed.

23
24 **3. Experimental BMPs:** In those instances where appropriate BMPs are not in
25 Ecology's Manual or the LID Guidance Manual, experimental BMPs should be
26 considered. Experimental BMPs are encouraged as a means of solving problems in
27 a manner not addressed by the Manual in an effort to improve stormwater quality
28 technology. Experimental BMPs must be approved in accordance with the approval
29 process outlined in Ecology's Manual.

30
31 **C. Illicit Discharges:** Illicit discharges to stormwater drainage systems are prohibited.
32 Such discharges are at a minimum declared a nuisance and are subject to abatement.
33 Discharges that cause or contribute to a violation of State water quality standards are
34 subject to the compliance, enforcement and penalties of this Chapter and other applicable
35 City, County, State and Federal regulations.
36 For Basin One of Lake Whatcom, activities and actions that result in the discharge of water
37 exceeding an average of 0.15 pounds of phosphorus per acre per year from a site or that
38 result in the discharge of water exceeding State water quality standards for fecal coliform are
39 considered an illicit discharge.

40
41 **D. Restrictions on Commercial Phosphorous-Based Fertilizers: [UNCHANGED]**

42
43 **Section 4: Bellingham Municipal Code Section 15.42.060 is modified as follows:**

1
2 **15.42.060 – Approval Standards**

3 A. New Development Requirements

4 All new development shall provide protection for the quality of the waters of the State
5 of Washington by the application of Best Management Practices and/or Source Controls.
6

7 All new development that requires either a building permit or has a land disturbance
8 area greater than 500 sf shall at a minimum comply with Minimum Requirement #2 within
9 BMC Section 15.42.060.F, all other applicable federal, state, and local ordinances, codes
10 and regulations for stormwater management and shall obtain a stormwater permit from the
11 City of Bellingham prior to commencement of activity. In addition, New Development that
12 exceeds certain other thresholds, as further identified herein, shall be required to comply
13 with additional Minimum Requirements as follows.

14
15 1. The following New Development shall comply with Minimum Requirements #1
16 through #5 within BMC Section 15.42.060.F:

- 17 a. New Single Family homes or duplexes, or
18
19 b. Developments that create or add 2,000 square feet, or greater, of
20 new, replaced, or new plus replaced impervious surface area, or
21
22 c. Land disturbing activity of 5,000 square feet or greater, or
23
24 d. A subdivision, or the lots created from a subdivision, that contains two
25 or fewer lots and is not likely to exceed the land disturbance and/or
26 impervious thresholds from future property development, or
27
28 e. Developments within the Lake Whatcom Watershed that create or
29 add, 120 square feet or greater, of new, replaced or new plus replaced
impervious surface area, or
30
31 f. Land disturbing activity within the Lake Whatcom Watershed of 500
square feet or greater, or
32
33 g. Other development that is determined by the Public Works Director to
contain a significant risk for the degradation of stormwater.

34 2. The following New Development shall comply with Minimum Requirements #1
35 through #10 within BMC Section 15.42.060.F:
36

- 1 a. Creation or addition of 5,000 square feet, or more, of new, replaced or
2 new plus replaced impervious surface area; or
3
4 b. Convert ¼ acres, or more, of native vegetation to lawn or landscaped
5 areas; or
6
7 c. Convert 2.5 acres, or more, of native vegetation to pasture; or
8
9 d. One acre or more of land disturbing activity; or
10
11 e. A subdivision containing two or more lots that is likely to exceed the
12 land disturbance and/or impervious thresholds from future property
13 development; or
14
15 f. Through a combination of impervious surface and land altering
16 activities the development will result in a 0.1 cfs increase in flow from the pre-
17 developed condition for the 100 year storm event as identified with a qualified
18 continuous flow duration model.
19
20 g. Other development that is determined by the Public Works Director to
21 contain a significant risk for the degradation of stormwater.

21 3. Lake Whatcom New Development

22 In addition to the requirements for New Development under 1 and 2 above, all New
23 Development that drains to Basin One of Lake Whatcom and that is subject to the Lake
24 Whatcom Regulatory Chapter (LWRC) 16.80 and that creates or replaces more than 300
25 sf of impervious or partially pervious surface shall provide for stormwater management
26 as follows:

- 27 a. An engineered stormwater site plan shall be provided, for review and approval,
28 which determines site specific controls to limit stormwater runoff and phosphorus
29 transport from the total site to levels associated with a predeveloped forested
30 condition. The plan shall at a minimum provide soils reports, groundwater
31 studies, hydrologic analyses, appropriate BMP's and BMP maintenance plans to
32 demonstrate the ability to meet this code. Additionally all stormwater site plans
33 shall maintain or create a minimum of thirty (30) percent "Natural Forested
34 Condition" upon the site per BMC 16.80..

35 Any BMP or combination of BMP's will be considered that would lead to
36 successful management of flow and phosphorus transport. Developed flow shall

1 meet the forested flow duration standards of this code and the DOE Manual.
2 Phosphorus transport through surface flow or interflow shall be limited to an
3 average discharge of no more than of 0.15 lbs/acre/yr. Possible BMP's include
4 but are not limited to:

- 5 i. Full Infiltration of up to the 100 year storm(with analysis of soil
6 suitability)
- 7 ii. Full Infiltration of up to the 2 year storm (with analysis of soil
8 suitability) and overflow connection to an adequately sized piped
9 conveyance system that drains directly to Lake Whatcom. Any open
10 channel elements must be found capable of conveying the 100 year
11 storm without erosion potential.
- 12 iii. On site water storage with reuse within a building (subject to
13 State Water Law)
- 14 iv. Forest Retention or Creation (with long term maintenance and
15 retention agreements)
- 16 v. Filtration of up to the 10 year storm (allowance dependant on long
17 term phosphorus removal ability)
- 18 vi. Forest Retention or Creation (that portion of any site that meets the
19 "natural forested conditions" contained within BMC16.80 shall be
20 considered to have met the pre-developed forested condition of this
21 code and the DOE Manual).
- 22 vii. Soil Remediation (with analysis of soil suitability and infiltration
23 capability).

24 OR

25 b. If the site has retained or created 75% or more of forested/native
26 vegetation on a site per Lake Whatcom Management code 16.80 and the site
27 will not exceed 2,000 square feet of impervious surface or up to 20% of the
28 total site whichever is the lesser. And the site will also not exceed 1,000 sf of
29 partially pervious surface as defined within BMC 16.80 or up to 10% of the
30 total site whichever is the lesser. And the total of impervious surface and
31 partially pervious surfaces will not together exceed 25% of the total site area
32 nor exceed 2,500 sf.

33 If these conditions can be met, stormwater mitigation for the site shall require
34 compliance to the maximum extent practicable with On Site Water
35 Management BMPs as provided for in the Manual.

1 OR

2 c If the site redevelopment creates or replaces more than 120
3 square feet and less than 300 square feet of impervious surface or partially
4 pervious surfaces and the addition of said surfaces does not cause the
5 property to be in non compliance with the limits on such surfaces through
6 BMC 16.80, the site shall provide mitigation for stormwater and phosphorus
7 transport at the rate of ten square feet of mitigation for every one square foot
8 of creation or replacement of these surfaces.

9 Impervious surfaces developed under this method shall at a minimum be
10 mitigated to the standard provided for by an On Site Water Management Plan
11 as provided in the Manual.

12 Mitigation of partially pervious surfaces shall at a minimum be by way of lawn
13 removal.

14 OR

15 d. Construction of phosphorus limiting or flow limiting facilities only on a property
16 may be permitted outright with a no fee stormwater permit upon review of the
17 facilities for compliance with Lake Whatcom Management standards.

18
19 **B. Redevelopment Requirements**

20 All Redevelopment shall provide protection for the quality of the waters of the State
21 of Washington by the application of Best Management Practices and/or Source Controls.

22 All Redevelopment that requires either a building permit or has a land disturbance
23 area greater than 500 sf shall at a minimum comply with Minimum Requirement #2 within
24 this BMC Section 15.42.060.F, all other applicable federal, state, and local ordinances,
25 codes and regulations for stormwater management and shall obtain a stormwater permit
26 from the City of Bellingham prior to commencement of activity. In addition, all
27 Redevelopment that exceeds certain thresholds, as further identified herein, shall be
28 required to comply with additional Minimum Requirements as follows.

29 1. The following Redevelopment shall comply with Minimum Requirements #1
30 through #5 within BMC Section 15.42.060.F for the new and replaced impervious
31 surfaces and the land disturbed:

32 a. The new, replaced, or total of new plus replaced impervious surfaces
33 is 2,000 square feet or more, or 5,000 square feet or more of land disturbing
34 activities; or
35

1 b. A subdivision, or the lots created from a subdivision, that contain two
2 or fewer lots and is not likely to exceed the land disturbance and/or
3 impervious thresholds from future property development; or

4 c. Any redevelopment within the Lake Whatcom Watershed that creates
5 or adds, 120 square feet or greater, of new, replaced or new plus replaced
6 impervious surface area; or

7 d. Any land disturbing activity within the Lake Whatcom Watershed of
8 500 square feet or greater; or

9 e. Other development that is determined by the Public Works Director to
10 contain a significant risk for the degradation of stormwater.

11 2. The following Redevelopment shall comply with Minimum Requirements #1
12 through #10 within BMC Section 15.42.060.F for the new impervious surfaces and converted
13 pervious areas:

14 a. Creation or addition of 5,000 square feet, or more, of new, replaced or
15 new plus replaced impervious surface area; or

16
17 b. Converts $\frac{3}{4}$ acres, or more, of native vegetation to lawn or landscaped
18 areas; or

19 c. Converts 2.5 acres, or more, of native vegetation to pasture; or

20 d. One acre or more of land disturbing activity; or

21 e. A subdivision, containing two or more lots, that is likely to exceed the
22 land disturbance and/or impervious thresholds from future property
23 development; or

24 f. Through a combination of new impervious surface and land altering
25 activities, the development results in a 0.1 cfs increase in flow from the pre-
26 developed condition for the 100 year storm event as identified with a qualified
27 continuous flow duration model.

28 g. Other development that is determined by the Public Works Director to
29 contain a significant risk for the degradation of stormwater.

30
31 3. Lake Whatcom Redevelopment

1 In addition to the requirements for Redevelopment under 1 and 2 above, all
2 redevelopment that drains to Basin One of Lake Whatcom, and, that is subject the Lake
3 Whatcom Regulatory Chapter (LWRC)16.80, and, that creates or replaces more than
4 300 sf of impervious or partially pervious surface, shall provide for stormwater
5 management as follows:

- 6 a. An engineered stormwater site plan shall be provided, for review and
7 approval, which determines site specific controls to limit stormwater runoff
8 and phosphorus transport from the total site to levels associated with a
9 predeveloped forested condition. The plan shall at a minimum provide
10 soils reports, groundwater studies, hydrologic analyses, appropriate
11 BMP's and BMP maintenance plans to demonstrate the ability to meet
12 this code. Additionally all stormwater site plans shall maintain or create a
13 minimum of thirty(30) percent "Natural Forested Condition" upon the site
14 per BMC 16.80.

15 Any BMP or combination of BMP's will be considered that would lead to
16 successful management of flow and phosphorus transport. Developed
17 flow shall meet the forested flow duration standards of this code and the
18 DOE Manual. Phosphorus transport through surface flow or interflow shall
19 be limited to an average discharge of no more than of 0.15 lbs/acre/yr.
20 Possible BMP's include but are not limited to:

- 21 i. Full Infiltration of up to the 100 year storm(with analysis of soil
22 suitability)
- 23 ii. Full Infiltration of up to the 2 year storm(with analysis of soil
24 suitability) and overflow connection to an adequately sized piped
25 conveyance system that drains directly to Lake Whatcom. Any
26 open channel elements must be found capable of conveying the
27 100 year storm without erosion potential.
- 28 iii. On site water storage with reuse within a building (subject to
29 amendment of State Water Law)
- 30 iv. Filtration of up to the 10 year storm (allowance dependant on long
31 term phosphorus removal ability)
- 32 v. Forest Retention or Creation (that portion of any site that meets
33 the "natural forested conditions" contained within BMC16.80 shall
34 be considered to have met the pre-developed forested condition of
35 this code and the DOE Manual).
- 36 vi. Soil Remediation (with soils analysis)

37 OR

1 b. If, the total site has retained or will create 75% or more of forested/native
2 vegetation on the site, and will contain less than 2,000 square feet of
3 impervious surface, and will not exceed 20% impervious surface on the
4 site, and will contain less than 1,000 square feet of partially pervious
5 surface, and will not exceed 10% partially pervious surface, and the total
6 of impervious surface and partially pervious surface will not exceed 25%
7 of the total site area nor will it exceed 2,500 sf of these combined
8 surfaces.

9 And if the impervious surfaces developed under this method are mitigated
10 to the standard provided for by an On Site Water Management Plan as
11 provided for in 15.42 in the Manual.

12 Then, the total site development shall be considered to comply fully with
13 stormwater standards.

14 OR

15 c. If the site redevelopment creates or replaces more than 120 square feet
16 and less than 300 square feet of impervious surface or partially pervious
17 surfaces and the addition of said surfaces does not cause the property to
18 be in non compliance with the limits on such surfaces through BMC
19 16.80, the site shall provide mitigation for stormwater and phosphorus
20 transport at the rate of ten square feet of mitigation for every one square
21 foot of creation or replacement of these surfaces.

22 Impervious surfaces developed under this method shall at a minimum be
23 mitigated to the standard provided for by an On Site Water Management
24 Plan as provided in the Manual.

25 Mitigation of partially pervious surfaces shall at a minimum be by way of
26 lawn removal.

27 OR

28 d. Construction of phosphorus limiting or flow limiting facilities only on a
29 property may be permitted outright with a no fee stormwater permit upon
30 review of the facilities for compliance with Lake Whatcom Management
31 standards.

32
33 C. If the runoff from the new impervious surfaces and converted pervious surfaces is not
34 separated from runoff from other surfaces on the project site, the stormwater treatment
35 facilities must be sized for the entire flow that is directed to them.

1 D. On a case by case circumstance, the Minimum Requirements in BMC Section
2 15.42.060.F may be met for an equivalent (flow and pollution characteristics) area within the
3 same site. For public road projects, the equivalent area does not have to be within the
4 project limits, but must drain to the same receiving water. Approval of equivalency shall be
5 determined by the Public Works Director or his assignee.

6 E. Additional Requirements and Allowances for New and Redevelopment

7 1. For road-related projects, except for projects that drain to Basin One of Lake
8 Whatcom, runoff from the new, replaced and/or new plus replaced impervious
9 surfaces and converted pervious surfaces (including pavement, shoulders, curbs,
10 and sidewalks) shall meet all of the Minimum Requirements listed in BMC Section
11 15.42.060.F, subject to the modification to Minimum Requirement #7 in (2) below.
12 The project limits shall be defined by the length of the project and the width of the
13 right-of-way.

14 2. For the replaced surfaces for road-related projects, Minimum Requirement #7
15 is modified as follows:

16 Replaced surfaces may be allowed to be mitigated differently than new surfaces.
17 When required to comply with the forested standard of Minimum Requirement #7 in
18 BMC Section 15.42.060.F only 50% of the replaced surfaces must be mitigated to
19 comply with the forested standard. The remaining 50% of the replaced surfaces may
20 either be considered in the forested condition or if desirous, may be considered in the
21 condition existing as of September 1, 1995 as may be determined using aerial
22 photography or other means acceptable to the City.

23 3. Other types of projects, except for projects that drain to Basin One of Lake
24 Whatcom, shall comply with all of the Minimum Requirements detailed in BMC
25 15.42.060.F for the new and replaced impervious surfaces if the total of new plus
26 replaced impervious surfaces is 5,000 square feet or more, and/or the valuation of
27 proposed improvements – including interior improvements – exceeds 50% of the
28 assessed value of the existing site improvements. With the exception that, for those
29 projects that meet the definition of redevelopment, only 50% of replaced surfaces
30 shall be required to comply with the forested standard of Minimum Requirement #7 in
31 BMC Section 15.42.060.F. The remaining 50% of the replaced surfaces may either
32 be considered in the forested condition or if desirous, may be considered in the
33 condition existing as of September 1, 1995 as may be determined using aerial
34 photography or other means acceptable to the City.

35 4. Underground utility projects that replace the ground surface with in-kind
36 material or materials with similar runoff characteristics are not subject to
37 redevelopment requirements except construction site erosion control.

1 F. Minimum Requirements for Stormwater Mitigation: The following are considered the
2 minimum requirements for stormwater mitigation

- 3 1. No Change
- 4
- 5 2. No Change
- 6
- 7 3. No Change
- 8 4. No Change
- 9 5. No Change

10 6. *Minimum Requirement #6: Runoff Treatment*

11 a. All projects subject to this minimum requirement shall utilize On-site
12 Stormwater BMPs for the treatment of runoff. Additionally, when the following
13 design thresholds are met or exceeded within a threshold discharge area an
14 engineered water quality facility shall be provided. All runoff treatment
15 facilities and BMPs shall be designed, sized and provided for in accordance
16 with the "Ecology Manual".

17 b. *Water Quality Design Thresholds*

- 18
- 19
- 20
- 21 i. Projects in which the total of new and/or replaced effective,
22 pollution-generating impervious surface (PGIS) is 5,000 square
23 feet or more in a threshold discharge area of the project, or
- 24 ii. Projects in which the total of new and/or replaced pollution-
25 generating pervious surfaces (PGPS) is three-quarters (3/4) of an
26 acre or more in a threshold discharge area, and from which there
27 is a surface discharge in a natural or man-made conveyance
28 system from the site.

29 c. *Additional Requirements.* Direct discharge of untreated stormwater
30 from pollution-generating impervious surfaces to ground water is prohibited,
31 except for the discharge achieved by infiltration or dispersion of runoff from
32 residential sites through use of On-site Stormwater Management BMPs.
33 Projects within Basin One of the Lake Whatcom Watershed shall meet these
34 standards for water quality in addition to those contained in other portions of
35 this code.

36 7. *Minimum Requirement #7: Flow Control*

37 a. *Applicability:* Projects must provide flow control to reduce the
38 impacts of stormwater runoff from impervious surfaces and land cover

1 conversions. All projects subject to this minimum requirement shall utilize
2 On-site Stormwater BMPs for flow control. Additionally, when the following
3 design thresholds are met or exceeded an engineered water quantity facility
4 shall be provided. All water quantity facilities and flow control BMPs shall be
5 designed and provided for in accordance with the Ecology Manual. The
6 thresholds and requirements below apply to projects that discharge
7 stormwater directly or indirectly into a fresh water. Those projects that meet
8 flow control exemption criteria of the Ecology Manual are eligible to apply for
9 modification to these requirements. Exception: The exemption of flow
10 standards for Lake Whatcom shall only be allowed with the written approval
11 of the Public Works Department. The basis of that approval shall be a finding
12 that no appreciable risk of water quality degradation will result from the
13 exemption.

14 b. Water Quantity Design Thresholds: The following require
15 construction of engineered flow control facilities and/or land use management
16 BMPs to satisfy this chapter and the Ecology Manual:

- 17 i. Projects in which the total of new, replaced or new plus replaced
18 effective impervious surfaces are 10,000 square feet or more in a
19 threshold discharge area; or
- 20 ii. Projects that convert $\frac{3}{4}$ acres or more of native vegetation to lawn
21 or landscape, or convert 2.5 acres or more of native vegetation to
22 pasture in a threshold discharge area, and from which there is a
23 surface discharge in a natural or man-made conveyance system
24 from the site; or
- 25 iii. Projects that, through a combination of new, replaced or new plus
26 replaced effective impervious surfaces and converted pervious
27 surfaces, cause a 0.1 cubic feet per second increase in the 100-
28 year flow frequency from a threshold discharge area as estimated
29 using the Western Washington Hydrology Model or other
30 approved model; or
- 31 iv. That portion of any development project in which the above
32 thresholds are not exceeded in a threshold discharge area shall
33 apply Onsite Stormwater Management BMPs in accordance with
34 Minimum Requirement #5.
- 35 v. Projects within Basin One of the Lake Whatcom Watershed.

36
37 c. Standard Flow Control Methodology: Stormwater discharges shall
38 match developed discharge durations to predeveloped durations for the range
39 of predeveloped discharge rates from 50% of the 2-year peak flow up to the
40 full 50-year peak flow. The pre-developed condition to be matched shall be a
41 forested land cover. This standard requirement is waived for sites that will

1 reliably infiltrate all the runoff from impervious surfaces and converted
2 pervious surfaces.

3 d. Alternate Flow Control Methodology: A modified SCS/SBUH
4 Methodology may be used as an alternate to Department of Ecology Western
5 Washington Hydrology Model if adjustments shown below are utilized and the
6 project area is less than one-acre in size. At such time as the City of
7 Bellingham has a calibrated HSPF model available for use, this alternate flow
8 control allowance will be re-evaluated by the Public Works Director for
9 suspension of the allowance.

10 i. Adjusted target peak flow standard. Limit the peak rate of
11 runoff from individual development sites to 50 percent of the pre-
12 developed condition 2-year, 24-hour design storm. Limit the peak rate
13 from the 10-year, 24-hour design storm to the pre-developed condition
14 peak rate from the 2-year, 24-hour design storm. Limit the peak rate
15 from the 100-year, 24-hour design storm to the pre-developed
16 condition peak rate from the 10-year, 24-hour design storm.

17 ii. Restricted variable assumptions.

18 (a) The flow path length assumed for sheet flow runoff in
19 the pre-developed condition calculations shall be 300 feet.

20 (b) The Manning's effective roughness coefficient for pre-
21 developed forested conditions shall be 0.80.

22 (c) The curve numbers for the pre-developed conditions
23 shall be selected from the Ecology Manual and shall be good
24 forest. The post developed condition shall also be taken from
25 the Ecology Manual.

26 8. No Change

27 9. No Change

28 10. No Change

29 G. No Change

30
31 **Section 5:** Bellingham Municipal Code Section 15.42.070 is hereby amended as
32 follows:

33
34 A. No Change
35

1
2
3 B. No Change

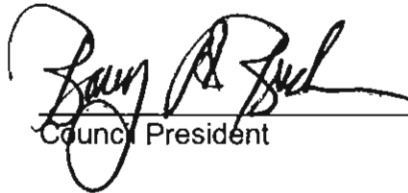
4
5 C. No Change

6
7 D. No Change

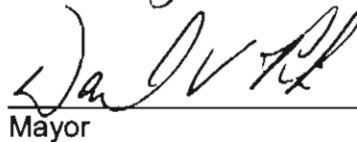
8
9 E. **City Action:** In addition to any other remedies the City may have under this
10 Chapter or at law or in equity, nothing in this Chapter or elsewhere within this Code shall
11 prevent the City from effecting repairs or maintenance to stormwater facilities if the Director
12 of Public Works (or designee) determines that imminent danger to public safety, health or
13 welfare, or public or private property, or critical areas or habitat is likely as a result of the
14 actions or inaction of the property owner(s). If the City affects repairs or maintenance, the
15 cost will be charged to the property owner(s) together with any penalties incurred under this
16 chapter and any costs of collection (including attorneys' fees), all of which shall be
17 considered a lien against the subject property and also collectable as a personal debt against
18 the property owner(s).

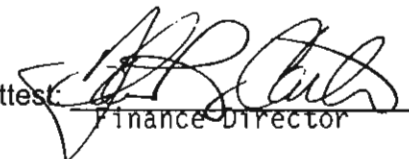
19 **Section 6: Effective Date**

20
21
22
23
24 PASSED by the Council this 29th day of June, 2009.

25
26
27 
28
29 Council President

30
31
32
33
34 APPROVED by me this 1st day of July 2009.

35
36
37 
38
39 Mayor

40
41
42
43 Attest: 
Finance Director

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9
10

Approved as to form:


Office of the City Attorney

Published: July 3, 2009