

# Low Impact Development Principles Project



## Chapter 23.76 CLEARING AND GRADING CODE

### 23.76.030 Definitions

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#### I. I Definitions

“Impervious surface – A non-vegetated surface area that either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development. A non-vegetated surface area which causes water to run off the surface in greater quantities or at an increased rate of flow from the flow present under natural conditions prior to development. Common impervious surfaces include, but are not limited to, roof tops, walkways, patios, driveways, parking lots or storage areas, concrete or asphalt paving, gravel roads, 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.”

### 23.76.035 Permit requirements.

- A. A clearing and grading permit is required for a project that involves any of the following described in subsections (A)(1) through (8) of this section, except as provided for in subsection B of this section. In applying this section, the total proposal shall be considered. Any project that requires a permit shall also comply with applicable provisions of Chapter 24.06 BCC, BCC Title 20, and any other applicable city codes.
1. Any clearing, filling, or excavation in a critical area or critical area buffer;
  2. Fill and/or excavation totaling over 50 cubic yards. Quantities of fill and excavation are separately calculated and then added together, even if excavated material is used as fill on the same site;
  3. Creation or addition of 2,000 square feet, or greater, of new, replaced, or new plus replaced impervious surface area;
  4. Over 1,000 square feet of clearing, as measured at the ground level. ~~Clearing includes disturbance of over 1,000 square feet at grade due to removal or pruning of trees;~~

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5. Rockeries and modular block walls over four feet in height as measured from the bottom of the base rock or block;
  6. Removal of more than five significant trees, as defined in LUC 20.50.046;
  - ~~6.7. or~~ Removal of more than 25 percent of the live crown of any significant tree, as defined in LUC 20.50.046, that is required to be preserved by a city code, plat condition, or other requirement. The live crown is the crown of the tree containing live foliage;
  - ~~7.8.~~ Any regrading or repaving of a parking lot used for stormwater detention; and
  - ~~8.9.~~ Removal of any significant tree from any lot in an R-1 land use district in the Bridle Trails subarea, pursuant to the provisions of LUC 20.20.900, now or as hereafter amended.
- B. The following activities are exempt from the requirements for a clearing and grading permit even if the criteria in subsection A of this section are exceeded:
1. Agricultural crop management of existing farmed areas;
  2. Routine landscape maintenance, as described in LUC 20.25H.055(C)(3)(h), now or as hereafter amended;
  3. Work needed to correct an immediate danger to life or property in an emergency situation as declared by the mayor or the city manager or his/her designee;
  4. Cemetery graves involving less than 50 cubic yards of excavation, and related filling, per each cemetery plot;
  5. Routine drainage maintenance of existing, constructed stormwater drainage facilities located outside of a critical area or critical area buffer, including, but not limited to, detention/retention ponds, wetponds, sediment ponds, constructed drainage swales, water quality treatment facilities such as filtration systems, and regional stormwater facilities that are necessary to preserve the water quality treatment and flow control functions of the facility. This exemption does not apply to any expansion and/or modification to already excavated and constructed stormwater drainage facilities; or
  6. Roadway repairs and overlays within public street rights-of-way for the purpose of maintaining the pavement on existing paved roadways, such that asphalt removal or milling does not expose more than 1,000 square feet of gravel base or subgrade. This exemption does not apply to curbs, gutters, sidewalks, utilities, new traffic calming devices, new roadways, or the widening of the paved surface of existing roadways.
- C. An exemption from a clearing and grading permit does not exempt the person or property owner doing the work from meeting all applicable city codes, including, but not limited to, the storm and surface water utility code (Chapter 24.06 BCC), which requires that sediment and other pollutants be kept from the drainage system.
- D. The director may categorize clearing and grading permits by different types for administrative purposes, and different fees may be charged for different types. A clearing and grading permit may be issued as a component of a building permit, or other permit, rather than as a separate

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permit. The director may require that single-family building permits and clearing and grading permits be combined.

- E. The director shall specify what submittal and application materials are required for a complete clearing and grading permit application, including the type of submittals, the required level of detail, the minimum qualifications of preparers of technical documents, and the number of copies. The director may administratively establish different submittal requirements for different types of clearing and grading permits. The director may, as well, administratively waive specific submittal requirements if he/she determines them to be unnecessary, or the director may require additional information if needed for review of an application.
- F. A construction stormwater pollution prevention plan, if required, must be submitted with the permit submittal and application materials described in subsection E of this section.
- G. As a condition of applying for a permit for a project that includes clearing and grading, the applicant shall allow the city to enter the subject property in order to evaluate the proposed clearing and grading. (Ord. 6196 § 1, 2014; Ord. 5906 § 7, 2009; Ord. 5663 § 1, 2006; Ord. 5452 § 3, 2003; Ord. 4754 § 2, 1995. Formerly 23.76.025.)

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## **23.76.060 Clearing – Vegetation preservation and replacement.**

The applicant/permittee shall:

- A. Meet applicable Land Use Code requirements for tree retention and vegetation preservation, disturbance limitation, and new landscaping (including but not limited to LUC 20.20.520, Landscape development; LUC 20.20.900, Tree retention; Part 20.25H LUC, Critical Areas Overlay District; and Part 20.25E LUC, Shoreline Overlay District, now or as hereafter amended).
- B. Preserve natural vegetation for erosion and sedimentation control and water quality and quantity control as detailed in the clearing and grading development standards.
- C. Follow the methodology in the clearing and grading development standards (or equivalent methodology approved by the director) for preserving/replacing vegetation.

D. Mark clearing limits in the field prior to clearing.

~~D-E.~~ A tree preservation plan including information in accordance with LUC 20.20.900 shall be incorporated into the clearing and grading drawings and shall become part of all construction documentation. This information shall define spatial limits for tree protection and include detailed drawings of tree protection measures and all required mitigation plantings. The tree preservation information must be prepared by a certified arborist or a registered landscape architect in conjunction with a registered civil engineer. (Note: In most instances, the tree survey will serve as the basis for the tree preservation information.)

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E.F. When clearing activity is interrupted or suspended for any reason, the permittee shall stabilize the site(s) and maintain the erosion control BMPs consistent with BCC 23.76.090 and the clearing and grading development standards, now or as hereafter amended. If the city deems a construction site abandoned, the applicant or permittee shall install permanent erosion and sedimentation measures pursuant to BCC 23.76.090(F). (Ord. 5906 § 11, 2009; Ord. 5663 § 2, 2006; Ord. 5452 § 7, 2003; Ord. 4754 § 2, 1995.)

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## **23.76.090 Erosion and sedimentation control – Minimum requirement 2.**

- A. Purpose. The purpose of minimum requirement 2 is to prevent erosion and the discharge of sediment and other pollutants into the storm and surface water system and receiving waters using appropriate BMPs and site management techniques.
- B. Applicability.
  1. Minimum Requirement 2. This section describes requirements for applicants to prepare a construction stormwater pollution prevention plan (CSWPPP) for new development, redevelopment, and land disturbing activities that meet the thresholds set forth in this chapter. Applicants and permittees are responsible for preventing erosion and discharge of sediment and other pollutants into the storm and surface water system and receiving waters. The city does not offer erosivity waivers.
  2. Applicants and permittees shall comply with all applicable provisions of the Bellevue City Code, rules, standards, and manuals adopted for this chapter and Chapter 24.06 BCC including, but not limited to, Chapter 24.06 (Storm and Surface Water Code) and corresponding engineering standards, BCC Title 20 (Land Use Code), the clearing and grading development standards, any other applicable codes and standards, and the Washington State Department of Ecology's Stormwater Management Manual for Western Washington (2005), now or as the provisions are hereafter amended.
  3. Exemption. The director may exempt the following projects from the requirements of preparing a CSWPPP:
    - a. Projects that are covered under the Washington State Department of Ecology's construction stormwater general permit and the permittee is fully implementing and in compliance with the requirements of that permit. To apply for this exemption, the applicant must provide with its permit application materials a copy of the permit coverage letter from the Washington State Department of Ecology, and a copy of the corresponding stormwater pollution prevention plan (SWPPP).



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- ii. 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
    - iii. Activities where there is 100 percent infiltration of surface water runoff within the site in approved and installed erosion and sediment control facilities.
  - b. Clearing, grading, and hauling are not allowed during periods of heavy rain.
- D. Construction Stormwater Pollution Prevention Plan (CSWPPP) Elements. The applicant shall include each of the 12 elements below in the CSWPPP and ensure that they are implemented, unless site conditions render the element unnecessary and the exemption from that element is clearly justified in the CSWPPP. The CSWPPP shall include a narrative, drawings, and a turbidity and pH monitoring plan as described in the clearing and grading development standards. All BMPs shall be clearly referenced in the narrative and marked on the drawings. The CSWPPP narrative shall include documentation to explain and justify the pollution prevention decisions made for the project.
  - 1. Preserve Vegetation/Mark Clearing Limits.
    - a. Before beginning land disturbing activities, including clearing and grading, clearly mark all clearing limits, critical areas and critical area buffers, and trees that are to be preserved within the construction area.
    - b. The duff layer, native topsoil, and natural vegetation shall be retained in an undisturbed state to the maximum degree practicable, and, where applicable, meet the requirements of LUC 20.20.520.
  - 2. Establish Construction Access.
    - a. Construction vehicle access and exit shall be limited to one route, if possible.
    - b. Access points shall be stabilized with quarry spalls, crushed rock, or other equivalent BMP to minimize the tracking of sediment onto public roads.
    - c. Wheel wash or tire baths shall be located on site, if the stabilized construction entrance is not effective in preventing sediment from being tracked onto public roads.
    - d. If sediment is tracked off site, roads shall be cleaned thoroughly as directed by the city or at a minimum at the end of each day, or more frequently during wet weather. Sediment shall be removed from roads by shoveling or pickup sweeping and shall be transported to a controlled sediment disposal area.
    - e. Street washing is allowed only after sediment is removed in accordance with subsection (D)(2)(d) of this section. Street wash wastewater shall be controlled by pumping back on site or otherwise be prevented from discharging into the storm and surface water system or receiving waters.

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3. Control Flow Rates.
  - a. Properties and waterways downstream from development sites shall be protected from erosion due to increases in the velocity and peak volumetric flow rate of stormwater runoff from the project site.
  - b. Where necessary to comply with subsection (D)(3)(a) of this section, stormwater retention or detention facilities shall be constructed as one of the first steps in grading. Detention facilities shall be functional before construction of site improvements (e.g., impervious surfaces).
  - c. If permanent infiltration ponds are used for flow control during construction, these facilities should be protected from siltation during the construction phase.
4. Install Sediment Controls.
  - a. Stormwater runoff from disturbed areas shall pass through a sediment pond, or other appropriate sediment removal BMP, before leaving a construction site or prior to discharge to an infiltration facility. Runoff from fully stabilized areas may be discharged without a sediment removal BMP, but shall meet the flow control performance standard of subsection (D)(3)(a) of this section.
  - b. Sediment control BMPs (sediment ponds, traps, filters, etc.) shall be constructed as one of the first steps in grading. These BMPs shall be functional before other land-disturbing activities take place.
  - c. BMPs intended to trap sediment on site shall be located in a manner to avoid interference with the movement of juvenile salmonids attempting to enter off-channel areas or drainages.
5. Stabilize Soils.
  - a. Exposed and unworked soils shall be stabilized by application of effective BMPs described in the clearing and grading development standards that prevent erosion.
  - b. To prevent erosion, no soils should remain exposed and unworked for more than the time periods set forth below:
    - i. During the dry season (May 1st – September 30th): seven days.
    - ii. During the wet season (October 1st – April 30th): one day.
  - c. The time period may be adjusted by the city, if the permittee can show that local precipitation data justify a different standard.
  - d. Soils shall be stabilized at the end of the shift before a holiday or weekend, if needed, based on the weather forecast.

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- e. Soil stockpiles must be stabilized from erosion, protected with sediment trapping measures, and, where possible, be located away from the storm and surface water system and receiving waters.
6. Protect Slopes.
- a. Comply with applicable provisions of BCC 23.76.080.
  - b. Design and construct cut and fill slopes to minimize erosion.
  - c. Off-site stormwater (run-on) or groundwater shall be diverted away from slopes and undisturbed areas with interceptor dikes, pipes, and/or swales. Off-site stormwater should be managed separately from stormwater generated on the site.
  - d. At the top of slopes, collect drainage in pipe slope drains or protected channels to prevent erosion. Temporary pipe slope drains 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, one-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 be modeled as “landscaped area.”
  - e. Excavated material shall be placed on the uphill side of trenches, consistent with safety and space considerations.
  - f. Check dams shall be placed at regular intervals within constructed channels that are cut down a slope.
7. Protect Drain Inlets.
- a. Storm drain inlets made operable during construction shall be protected so that stormwater runoff does not enter the conveyance system without first being filtered or treated to remove sediment.
  - b. Inlet protection devices shall be cleaned or removed and replaced when sediment has filled one-third of the available storage (unless a different standard is specified by the product manufacturer).
8. Stabilize Channels and Outlets.
- a. 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.

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Alternatively, the 10-year, one-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 be modeled as “landscaped area.”

- b. 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.
9. Control Pollutants.
- a. All pollutants, including waste materials and demolition debris, that occur on site shall be handled and disposed of in a manner that does not cause contamination of stormwater.
  - b. Cover, containment, and protection from vandalism shall be provided for all chemicals, liquid products, petroleum products, and other materials that have the potential to pose a threat to human health or the environment. On-site fueling tanks shall include secondary containment.
  - c. Maintenance, fueling, and repair of heavy equipment and vehicles shall be conducted using spill prevention and control measures. Contaminated surfaces shall be cleaned immediately following any spill incident.
  - d. Wheel wash or tire bath wastewater shall be discharged to a separate on-site treatment system or to the sanitary sewer upon approval by the King County Wastewater Treatment Division and the city’s utilities department.
  - e. Application of fertilizers and pesticides shall be conducted in a manner and at application rates that will not result in loss of chemicals to stormwater runoff. Manufacturers’ label requirements for application rates and procedures shall be followed.
  - f. BMPs shall be used to prevent or treat contamination of stormwater runoff by pH modifying sources. 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, dewatering concrete vaults, concrete pumping and mixer washout waters. Permittees are required to adjust the pH of stormwater if necessary to prevent violations of water quality standards.

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- g. Permittees are required to obtain written approval from the Washington State Department of Ecology before using chemical treatment other than CO<sub>2</sub> or dry ice to adjust pH. Permittees shall provide the city with a copy of Ecology's written approval before commencing treatment.

## 10. Control Dewatering.

- a. 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.
- b. Clean, nonturbid water from dewatering activities, such as well-point ground water, can be discharged to the storm and surface water system or directly into receiving waters; provided the dewatering flow does not cause erosion or flooding of receiving waters. Clean dewatering water should not be routed through stormwater sediment ponds.
- c. Other dewatering disposal options may include: (i) infiltration; (ii) transport off site in vehicle, such as a vacuum flush truck, for legal disposal in a manner that does not pollute receiving waters; (iii) on-site chemical treatment or other suitable treatment technologies approved by the city; (iv) sanitary sewer discharge upon approval from the King County Wastewater Treatment Division and the city's utilities department, if there is no other option; or (v) use of a sedimentation bag with outfall to a ditch or swale for small volumes of localized dewatering.
- d. Highly turbid or contaminated de-watering water shall be handled separately from stormwater.

## 11. Maintain BMPs.

- a. All temporary and permanent erosion and sediment control BMPs shall be inspected, maintained and repaired as needed to assure continued performance of their intended function in accordance with BMP specifications.
- b. 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.

## 12. Manage the Project.

- a. Development projects shall be phased to the maximum degree practicable and shall take into account seasonal work limitations.
- b. Permittees shall maintain, and repair as needed, all sediment and erosion control BMPs to assure continued performance of their intended function.

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- c. Permittees are required to periodically inspect their sites. Site inspections shall be conducted by a certified erosion and sediment control lead who shall be identified in the CSWPPP and shall be present on site or on call at all times.
    - d. Permittees are required to maintain, update and implement their CSWPPP. Permittees are required to modify their CSWPPP whenever there is a change in design, construction, operation, or maintenance at the construction site that has, or could have, a significant effect on the discharge of pollutants to the storm and surface water system or receiving waters.
- E. Additional Erosion and Sedimentation Control Requirements.
  - 1. In addition to the 12 CSWPPP elements listed in subsection D of this section, the director may impose the following extraordinary BMPs or other additional measures, as appropriate for the project:
    - a. Funding additional city inspection time, up to a full-time inspector;
    - b. Stopping work if necessary to control erosion and sedimentation; or
    - c. Constructing additional erosion and sedimentation BMPs.
  - 2. If the initially implemented BMPs do not adequately control pollutants, erosion, and sedimentation, additional BMPs shall be installed, including but not limited to the extraordinary BMPs described in subsection (E)(1) of this section. It is the permittee's responsibility to ensure sediment or other pollutants do not leave the site and enter the storm and surface water system or receiving waters in an amount that would violate the discharge prohibitions set forth in BCC 24.06.125.
- F. Permanent Erosion and Sedimentation Control.
  - 1. Permanent erosion and sedimentation control shall be provided per the clearing and grading development standards. Disturbed areas of the site that are not covered by permanent improvements such as buildings, parking lots, and decks shall be mulched or vegetated.
  - 2. The permittee must complete the required permanent erosion control within seven days of completed grading unless the weather is unsuitable for transplanting. In that case, the permittee must maintain temporary erosion control until permanent restoration can be completed. The period between work completion and final planting shall not exceed six months without written authorization from the director. (Ord. 6196 §§ 3 – 6, 2014; Ord. 5906 § 15, 2009; Ord. 5452 § 13, 2003; Ord. 4754 § 2, 1995.)