



ORDINANCE NO. NS-2538

AN ORDINANCE OF THE CITY COUNCIL AMENDING BEND MUNICIPAL CODE TITLE 16 TO UPDATE THE CITY'S REQUIREMENTS FOR POST-CONSTRUCTION SITE RUNOFF CONTROL IN COMPLIANCE WITH THE CITY'S MUNICIPAL SEPARATE STORM SEWER SYSTEMS PERMIT

Recitals

- A. The City of Bend has a National Pollutant Discharge Elimination System Municipal Separate Storm Sewer System Permit (NPDES MS4) issued by the Oregon Department of Environmental Quality (DEQ) under the Federal Clean Water Act. This permit governs stormwater and requires the City to take certain implementation measures in order to protect surface water quality, discharge stormwater through its stormwater infrastructure, and maintain regulatory compliance.
- B. The City's current permit became effective in January 2022 and includes an implementation schedule for various permit sections through 2026. The City accomplished one of the permit's requirements in 2024 through amendments to the Bend Municipal code by Ordinance NS-2505, updating requirements for erosion control on construction sites, among other changes.
- C. Under the permit schedule, requirements for Post-Construction Site Runoff for New Development and Redevelopment must be in place by November 1, 2025.
- D. The City has for many years been applying such stormwater management requirements to most larger development projects, but some development types have been exempted. This Ordinance will align the City's requirements with the permit requirements.
- E. These amendments include applying minimum stormwater management requirements to all projects that create or replace 5,000 square feet or more of impervious surface in total.
- F. The City Council finds that the amendments through this Ordinance are necessary and appropriate to meet the requirements of the City's NPDES MS4 permit and other applicable law.

Based on these findings, THE CITY OF BEND ORDAINS AS FOLLOWS:

Section 1. Bend Municipal Code Title 16 is amended as shown on the attached Exhibit A.

Section 2. If any provision, section, phrase, or word of this ordinance or its application to any person or circumstance is held invalid, the invalidity does not affect other provisions that can be given effect without the invalid provision or application.

Section 3. All other provisions of the Bend Municipal Code remain unchanged by this ordinance and remain in effect.

First Reading Date: September 17, 2025

Second Reading and adoption by roll call vote: October 1, 2025

YES: Kebler, Franzosa, Méndez, Riley, Perkins, Norris, Platt

NO:



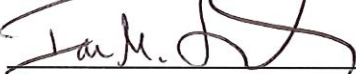
Melanie Kebler, Mayor

Attest:



Ashley Bontje, City Recorder

Approved as to form:



Ian Leitheiser, City Attorney



Language Assistance Services & Accommodation Information for People with Disabilities

You can obtain this information in alternate formats such as Braille, electronic format, etc. Free language assistance services are also available. Please contact Elisabeth O'Keefe at eokeefe@bendoregon.gov or 541-317-3018. Relay Users Dial 7-1-1.



Servicios de asistencia lingüística e información sobre alojamiento para personas con discapacidad

Puede obtener esta información en formatos alternativos como Braille, formato electrónico, etc. También disponemos de servicios gratuitos de asistencia lingüística. Póngase en contacto con Elisabeth O'Keefe en eokeefe@bendoregon.gov o 541-317-3018. Los usuarios del servicio de retransmisión deben marcar el 7-1-1.

Title 16

GRADING, EROSION CONTROL, STORMWATER, ILLICIT DISCHARGE, TREE PROTECTION, AND WELLS

16.05.040 Central Oregon Stormwater Manual.

The Central Oregon Stormwater Manual (COSM) is adopted by the City as the design manual for stormwater. Stormwater design professionals are required to be familiar with and use the COSM. All activities and facilities governed by this title shall be in compliance with the COSM and the City of Bend Standards and Specifications. In case of a conflict, the City of Bend Standards and Title 16 ~~latter will~~ will control. The City Manager may adopt guidance documents and procedures related to implementation of provisions of this title. The COSM may be updated and expanded periodically, and the City may adopt or amend a Bend Supplement and/or stormwater standards and requirements specific to the City of Bend. [Ord. NS-2505, 2024; Ord. NS-2176, 2012]

16.05.060 Definitions and Acronyms.

The following definitions apply in this title:

Access road means a road within one mile of a construction site, designated on an approved construction plan and used during site clearing, grading and construction for the transport of equipment, hauling of fill, and other equivalent vehicular traffic to and from the construction site.

Approval authority means the respective City Department/Division that approves the required permit or measure.

Areas of special interest (ASI) means river corridor and upland areas of special interest as described in BDC [2.7.630](#) and [2.7.700](#).

Bedrock means naturally occurring solid rock.

Berm means a mound, small rise or hill that is used for landscaping or visual screening purposes.

Best management practice (BMP) means a technique, activity, maintenance procedure, structural and/or managerial practice, and/or prohibition of a practice that, when used singly or in combination in a designated manner, is proven to be effective in preventing or reducing the release of pollutants and other adverse impacts to downstream or down-gradient systems. BMPs include, but are not limited to, those listed in the COSM.

Blasting means any activity entailing the use of explosives for the purpose of producing an explosion to demolish structures or to fragment rock for mining, quarrying, excavation and construction.

Blasting performance standards mean measures intended to provide a minimum threshold for controlling stormwater pollution associated with blasting activity, and are used to determine if the requirements in this title have been met (see BC [16.10.090](#)).

Brushing means the selective removal of vegetation.

Building footprint means the outline of a building, as measured around its foundation.

Canopy or **tree canopy** means all portions of the tree with foliage.

Central Oregon Stormwater Manual (COSM) means the most current version of the stormwater design guidance manual adopted by the City of Bend and any City of Bend-specific supplements.

City means City of Bend, Oregon.

Clearing means the cutting or removal of vegetation, including trees.

Clearing and grading performance standards mean measures intended to provide a minimum threshold for controlling stormwater pollution associated with clearing and grading activity, and are used to determine if the requirements in this title have been met (see BC [16.10.070\(A\)](#)).

Construction activity means any activity that includes, but is not necessarily limited to, land disturbance and/or land-disturbing activity; hauling of soil and rock; handling of building

materials and construction tools; or operation of motorized machinery and motor vehicles on a site or on any access routes to a site.

Cut and fill performance standards mean measures intended to provide a minimum threshold for controlling stormwater pollution associated with cut and fill activity, and are used to determine if the requirements in this title have been met (see BC [16.10.070\(B\)](#)).

Detention means the process of collecting and holding surface and stormwater runoff temporarily in a designed facility such as a pond.

Detention facility means an above ground 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.

Development. See definition in BDC Chapter [1.2](#).

Development approval means written consent from the review authority.

Diameter at breast height (DBH) means the diameter or thickness of a tree trunk measured at four and one-half feet above the ground. For multi-stemmed trees, the DBH is found by taking the square root of the sum of all squared stem DBHs rounding to the nearest whole number measured four and one-half feet above the ground. Example: You have three stems that measure 5", 6" and 8" so the DBH would be $\sqrt{5^2+6^2+8^2} = \sqrt{25+36+64} = \sqrt{125} = 11"$.

Discharge means any addition or introduction of any pollutant, surface runoff, or any other substance whatsoever into the municipal storm sewer system, a dry well, drill hole or into waters of the State.

Discharger means any person who causes, allows, permits or is otherwise responsible for a discharge including, without limitation, any operator of a construction site or commercial/industrial facility.

Drainage submittal means the submittal of documentation including narrative, basin maps, plans, calculations and other supporting documentation to demonstrate that the proposed project will adequately treat and dispose of the stormwater (see BC [16.15.010](#) and COSM Chapter 3).

Dripline means an imaginary line around a tree or shrub at a distance from the trunk equivalent to the tree canopy.

Earth material means any rock, natural soil or fill, and/or any combination of those materials.

Equivalent residential unit (ERU) means a configuration of development or impervious surface estimated to contribute an amount of runoff to the City's stormwater system that is approximately equal to that created by the average developed single-family residence. One ERU is equal to 3,800 square feet of impervious surface area. All single-family residences are one ERU, regardless of impervious surface area.

Erosion means the progressive detachment and removal of particles, including soil and rock fragments, from the earth's surface by means of water, wind, ice, gravity or mechanical processes, including but not limited to vehicular traffic.

Erosion and sediment control (ESC) measures are those best management practices that when implemented correctly help prevent soils from moving and eroded sediment from leaving a site.

Erosion and sediment control (ESC) performance standards mean measures intended to provide a minimum threshold for controlling stormwater pollution associated with erosion and sediment control activity, and are used to determine if the requirements in this title have been met (see BC [16.10.080](#)).

Erosion and sediment control plan (ESCP) means a specific plan prepared by or under the direction of an Oregon licensed professional engineer or other certified professional as authorized by the City Engineer, or a plan or template provided by the City, that includes a specific set of best management practices and construction sequencing that are designed to control surface runoff and erosion, and to retain sediment on a site both before, during and after development. For the purposes of this title, an ESCP must be prepared in accordance with the COSM.

ERU means equivalent residential unit.

ESC means erosion and sediment control.

Excavation means the removal of earth material.

Fill means the deposit of earth material by mechanical means.

Good housekeeping practice means a BMP related to the transfer, storage, use, or cleanup of materials performed in a regular manner that minimizes the discharge of pollutants to the storm drain system and/or receiving waters.

Grade means the vertical location of the ground surface. **Existing grade** means the existing condition of the elevation of the ground surface or the natural grade prior to grading, placement of fill, or the excavation or removal of earth from the site. **Rough grade** means the stage at which the grade substantially conforms, in an unfinished state, to an approved clearing and grading sketch or plan. **Finished grade** means the final grade of the site after all clearing and grading has been completed that conforms to an approved clearing and grading sketch or plan. For sloping sites exceeding 12 percent slope, the finished grade shall not exceed four feet above or below the existing grade, unless the finished grade has been set through a site map and grading plan as specified in this title and approved by the City.

Grading means land disturbance including excavation or filling of earth materials or any combination thereof.

Grading permit means a permit for any activities subject to BC Chapter [16.10](#), which may include but are not limited to tree removal, erosion control, excavation, fill, grading, and other activities, including but not necessarily limited to those related to construction, demolition, and site development.

Grading plan means a document that defines and describes what activities will take place in clearing and grading a site, typically in preparation for development.

Ground cover means a plant material or non-plant organic material (e.g., mulch, bark chips/dust) that is used to cover bare ground.

Grubbing means the removal of trees and other large plants by their roots.

IBC means International Building Code.

Illicit discharge means any discharge to a catch basin, surface water body, dry well or drill hole that is not composed entirely of stormwater, except conditionally exempt discharges pursuant to a NPDES permit or WPCF permit or rule authorization requirement specific to the inlet, discharges resulting from firefighting activities, or other exempt discharges as outlined in BC Chapter [16.20](#).

Illicit Discharge Manual means City of Bend Illicit Discharge Minimization Best Management Practices Manual.

Illicit drainage connection means any physical connection to a publicly maintained storm drain system composed of nonstormwater that has not been permitted by the public entity responsible for the operation and maintenance of the system.

Impervious surface means a hard surface area that either prevents or retards the entry of water into the soil mantle. Common impervious surfaces include building roofs, walkways, patios, driveways, parking lots, concrete or asphalt paving, gravel roads, and packed earthen materials.

Infiltration means the passage of water through the soil surface into the underlying geologic material.

Land disturbance and **land-disturbing activities** mean activities that include, but are not necessarily limited to, demolition, construction, clearing, grading, filling, excavation, tree removal, or compaction.

Low impact development (LID) means a stormwater management strategy that emphasizes conservation and use of existing natural site features integrated with distributed, small-scale stormwater controls to more closely mimic natural hydrologic patterns and prevent, reduce and treat runoff and pollutant loadings as close to the source as possible in residential, commercial, and industrial settings.

Mitigation means measures undertaken to rectify, repair, rehabilitate, restore and/or compensate for negative impacts that result from other actions.

MS4 means a municipal separate storm sewer system that is a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curb, gutters, ditches, manmade channels, or storm drains) owned or operated by a public body (created under State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes that discharge to the waters of the United States and which are not part of a publicly owned treatment works (POTW) as defined at [40 CFR 122.2](#).

National Pollutant Discharge Elimination System (NPDES) permit means a stormwater discharge permit issued by the U.S. EPA, Region X, in compliance with the Federal Clean Water

Act and its amendments, for the discharge of pollutants into the waters of the United States as defined in [40 CFR 122.2](#).

Native vegetation means the indigenous terrestrial and aquatic species that have evolved and occur naturally in a particular region, ecosystem, and habitat.

Nonstormwater discharge means any discharge to the storm drain system or receiving waters that is not entirely composed of stormwater or melted snow and ice.

NOV means notice of violation.

NRCS means Natural Resource Conservation Service.

OAR means Oregon Administrative Rules.

ODEQ means Oregon Department of Environmental Quality.

ORS means Oregon Revised Statutes.

P.E. means professional engineer in the State of Oregon.

Perimeter control means a physical barrier that prevents sediment from leaving a site, either by filtering sediment-laden runoff or by diverting runoff to a sediment trap or basin.

Phasing means developing a parcel of land in distinct phases, and stabilizing each phase using erosion and sediment control measures, before developing the next phase.

Pollutant means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, sewage sludge, garbage, munitions, oils and grease, paints, solvents, fertilizers, pesticides, other chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, concrete washout, rock, sand, dirt, and industrial, municipal, and agricultural waste discharged into water, and as otherwise defined in [40 CFR 122.2](#).

Pollution prevention means implementing one or a series of BMPs to prevent pollutants of any kind from entering the storm drainage system including drainage to a surface waterbody, a dry well or a drill hole.

Pollution source control plan means a plan that addresses the prevention and/or control of stormwater pollutants at their source.

Post-construction performance standards mean measures intended to provide a minimum threshold for controlling stormwater pollution associated with post-construction activity, and are used to determine if the requirements in this title have been met (see BC [16.15.040\(A\)](#)).

POTW means publicly owned treatment works.

Predevelopment means the natural condition before any type of development.

Redevelopment means a project that proposes to ~~add, create,~~ replace and/or alter impervious surfaces, other than routine maintenance, resurfacing, or repair.

Regulated tree means an individual tree with a trunk diameter of six inches or larger measured at four and one-half feet above the ground (known as DBH, for “diameter at breast height”). See BC Chapter [16.40](#), Tree Preservation and Removal.

Responsible party means the occupant, lessee, tenant, contract purchaser, owner, agent or other person having possession of property, or if no person is in possession, then the person in control of the use of the property, or in control of the supervision of development on the property.

Retaining wall means a wall designed to resist the lateral displacement of soil or other material, as defined in the current International Building Code (IBC).

Retention means the process of collecting and holding surface and stormwater runoff with no surface outflow.

Revegetation means placement of living plant material on sites or excavation and fill slopes where the natural vegetation has been removed.

Riparian Area. See definition in BDC Chapter [1.2](#).

Riparian corridor means the area within and adjacent to the Deschutes River and Tumalo Creek that includes water areas, fish and wildlife habitat, wetlands, and riparian vegetation and other State Planning Goal 5 resources to be conserved and protected. For purposes of this title, the riparian corridor is defined as the area within the WOZ.

Root protection zone means a circular area measured from the outside trunk of the tree equal to one foot in radius for every inch of tree at diameter at breast height. For off-site trees with

root protection zones that extend into the site, the root protection zone may be estimated but no less than the extent of the dripline.

Sensitive areas means wetlands, areas within a site with one or more regulated trees, steep slopes, floodplains and other natural resource areas designated for protection or conservation by the Bend Comprehensive Plan or the State of Oregon.

Site means, for purposes of this title, any lot or parcel of land, or a contiguous combination of lots, parcels and/or easements under the same ownership or unified control.

Site development envelope means that area of a site that is best suited for development, as determined by identifying sensitive areas (as defined in this title) for protection, setbacks, and other local standards and requirements.

Site map means a document that defines and describes specific attributes of a site proposed for development.

Slope means an inclined ground surface, the inclination of which is expressed as a ratio of horizontal distance to vertical distance or expressed as a percent of the change in elevation over a given distance.

SM Zone means surface mining zone.

Soil means naturally occurring unconsolidated sediments and deposits that overlay bedrock.

Soils and geological reconnaissance report (soils report) means a report based on adequate test borings (as necessary) that contains data regarding the nature, distribution, strength and erodibility of both existing soils and soils to be placed on the site, if any (see BC [16.10.020\(B\)](#)).

Source control practice means one or a series of best management practices that, when implemented correctly, controls pollutants at their source and limits their discharge into the storm drainage system, dry well or drill hole.

Stabilization means the use of practices that prevent exposed soil from eroding and/or increases the structural strength of a graded area.

Standards and Specifications mean the most recent version of the City of Bend Standards and Specifications for all public infrastructures in the City of Bend and apply to both City capital improvement projects and to private development projects.

Steep slope means slopes that are greater than 10 percent.

Stormwater means water from precipitation that collects on or runs off surfaces such as roofs, buildings, roads, or paved or unpaved land surfaces; that portion of precipitation that does not naturally percolate into the ground or evaporate, but flows, via overland flow, interflow pipes and other features of a stormwater drainage system, into a defined surface water body or constructed infiltration or evaporation facility.

Stormwater facility means a detention and/or retention pond, swale, dry well, or other surface water feature that provides storage during high rainfall events and/or water quality treatment.

Stormwater management means the process of collection, conveyance, storage, treatment, and disposal of stormwater to ensure control of the magnitude and frequency of runoff and to minimize the hazards associated with flooding. It also includes implementing controls to reduce the discharge of pollutants to streams and groundwater including management practices, control techniques and systems, design and engineering methods.

Stormwater performance standards mean measures intended to provide a minimum threshold for controlling stormwater quantity, flow, and/or pollution in the subject area, and are used to determine if the requirements of this title have been met.

Stormwater service means the operations of the City's stormwater utility in providing programs and facilities for maintaining, improving, regulating, collecting, and managing stormwater quantity and quality within the City's service area.

Stormwater system means any structure or configuration of ground that is used or by its location becomes a place where stormwater flows or is accumulated, including but not limited to dry wells, drill holes, swales, pipes, curbs, gutters, manholes, catch basins, ponds, creeks, open drainage ways, ditches and their appurtenances. **City stormwater system** means the portions of the stormwater system in public rights-of-way, within easements owned by the City, or on City property. **Private stormwater facility** means any stormwater facility on private property and not within an easement owned by the City.

Stormwater system maintenance agreement (SWMA) means a document executed by the property owner that is recorded in the Deschutes County Clerk's office to run with the land, that

requires the current and successor owners to maintain the stormwater system on the property so that the system continues to function as planned (see BC [16.15.050](#)).

Stream means a year-round flowing watercourse.

Structural Stormwater BMP: means physical stormwater controls that are designed, installed, and maintained to prevent or reduce the discharge of pollutants in stormwater to minimize downstream impacts of stormwater. Examples include but are not limited to storage, filtration, and infiltration practices such as drywells, wet ponds, grassed swales, filter strips, infiltration basins, or infiltration trenches.

Surface runoff means that portion of rain, snow melt, or irrigation water that does not naturally percolate into the ground or evaporate, but instead flows over the land or impervious surfaces.

Swale means a type of stormwater facility consisting of a broad, shallow depression used to provide a required volume of on-site storage for stormwater, typically planted with vegetation that filters and processes contaminants.

SWMP means stormwater management plan.

TMDL means total maximum daily load, a calculation of the maximum amount of a pollutant that a waterbody can receive and still safely meet water quality standards. Under Section 303(d) of the Federal Clean Water Act, states, territories, and authorized tribes are required to develop lists of impaired waters (e.g., waters that are too polluted or otherwise degraded to meet the water quality standards set by the states, etc.) and TMDLs for these waters. (Source: United States Environmental Protection Agency.)

Tree preservation performance standards mean measures intended to provide a minimum threshold for preserving and protecting regulated trees and are used to determine if the requirements in this title have been met (see BC Chapter [16.40](#), Tree Preservation and Removal).

Tree preservation site plan means a plan developed in accordance with BDC [3.2.200\(B\)\(2\)](#).

UIC means underground injection control.

Underground injection control (UIC) system means any structure or activity that discharges fluids such as stormwater or septic effluent below the ground or subsurface. Common UIC designs include dry wells, drill holes, floor drains, trench drains, and drain fields.

Water Overlay Zone (WOZ) means areas of special designation adjacent to the Deschutes River and Tumalo Creek as described in BDC [2.7.600](#).

Wellhead protection area means an area within 500 feet of an undelineated water well (e.g., drinking or irrigation water); or within the modeled two-year-time-of-travel area for a delineated water well, or within setback areas designated in the City of Bend Standards and Specifications.

Work schedule means the schedule of anticipated clearing, grading, installation of ESC measures, and proposed inspection and maintenance schedule(s) for a construction site (see BC [16.10.020\(F\)](#)).

WPCF means water pollution control facility. [Ord. NS-2505, 2024; Ord. NS-2176, 2012]

Repealed by [Ord. NS-2505](#). **Chapter 16.15**

STORMWATER MANAGEMENT DESIGN STANDARDS AND POST-CONSTRUCTION MAINTENANCE CONTROLS

Sections:

- 16.15.010** **[Applicability and Drainage Submittal Requirements.](#)**
- 16.15.020** **[Exemptions.](#)**
- 16.15.030** **[Drainage Submittal Review and Approval Process.](#)**
- 16.15.040** **[Post-Construction Performance Standards for Stormwater Management.](#)**
- 16.15.050** **[Stormwater System Maintenance Agreement.](#)**

16.15.010 Applicability and Drainage Submittal Requirements.

A. *Applicability.* This section is applicable to all land development, including but not limited to applications for a clearing, grading and erosion control permit (permit), site plan applications,

and land division applications unless exempt. These provisions apply to any new development or redevelopment site within the City that meets one or more of the following criteria:

1. Projects ~~adding that create or replace~~ 5,000 square feet or more of impervious area or disturbing one or more acres.
2. Projects that propose a UIC facility.
3. Manufactured and mobile home parks.
4. Commercial building permits and site plans (including institutional and multifamily residential projects) prior to the issuance of the building or grading permits.
5. Clearing, grading and erosion control permits (not in conjunction with building permits).
6. Construction of new public or private road projects (not in conjunction with land use actions or permits).
7. Projects proposing the installation, removal, or modification of drainage systems.
8. Land development activities that are smaller than the minimum applicability criteria if the activities are part of a larger common plan of development that meets the applicability criteria, even though multiple, separate and distinct land development activities may take place at different times on different schedules.

B. *Drainage Submittal Requirements.*

1. Drainage submittals shall comply with City regulations, which include Title 16, the COSM and the City of Bend Standards and Specifications. In case of a conflict, the City of Bend Standards and Title 16 will control.
 2. All plans and calculations required in this section must be submitted to the City for review and acceptance as part of the permit or land use application.
 3. Residential, commercial, institutional, or industrial developments may apply stormwater management standards described in the COSM and in this title to common plan land development as a whole if the development is appropriately master planned, and has formal arrangements for stormwater drainage across multiple properties. Prior to final plat, individual residential lots in new subdivisions shall not be considered separate land
-

development projects, but rather the entire subdivision shall be considered a single land development project.

4. The responsibility for adhering to the standards in this title lies with the property owner.

5. Low impact development (LID) techniques are encouraged by the City and shall be incorporated into the site and facility design when deemed appropriate by the applicant after consultation with appropriate City officials. All projects should incorporate LID techniques to the degree practicable, and a description of the techniques considered and used should be added to the drainage submittal.

6. All projects shall meet the basic requirements for stormwater management as defined in the COSM. An applicant may use different methods to meet the basic requirements described in the COSM on a case-by-case basis subject to approval by the City. The applicability of the basic requirements depends on the type, size and location of the project as described in the COSM. On-site capture and containment systems can be deeper than those specified in the COSM as long as all ODEQ and Federal regulations are being met.

7. All stormwater will be contained within designed facilities as appropriate. Stormwater facilities shall be designed to provide service for the National Resource Conservation Service (NRCS) Type I 24-hour storm event, for a 25-year, 24-hour design storm, with a safe overflow path that:

- a. Has the capacity to convey the pre-development storm events per Oregon Drainage Law to an existing, historical, or natural drainage point as described in the COSM; or
- b. Maintains the 100-year design storm on site; or
- c. Provides for off-site safe passage of the 100-year, 24-hour design storm through formal agreements made with the City and any other affected land owners to safely provide and maintain off-site overflow routes.

Coordination with affected land owners to ensure safe passage is encouraged. Off-site drainage cannot be directed to irrigation district facilities without the district's written approval.

8. The drainage submittal should include appropriate field tests for verifying sizing and infiltration capability of stormwater facilities. All infiltration ponds and swales may be

tested before and after initial fracturing and shall be tested after final construction. Testing shall be per Chapter 4.3.2 of the COSM and shall be performed under the direction of a professional engineer.

9. The project shall meet the post-construction performance standards described in BC [16.15.040](#). [Ord. NS-2176, 2012]

16.15.020 Exemptions.

A. *Exemptions.* The following activities are exempt from the drainage submittal review and process provisions (BC [16.15.030](#)) of this section:

- ~~1. Individual single-family or duplex residential lots that are not part of a land division or phased development project that is otherwise subject to this title.~~
 - ~~2. Additions or modifications to existing single-family or duplex residential structures.~~
 - ~~3. Remodeling permits or tenant improvements that do not add 5,000 or more square feet of impervious surface.~~
 4. Maintenance and repair to any stormwater BMP deemed necessary by the City.
 5. Any emergency project that is immediately necessary for the protection of life, property or natural resources.
 6. Commercial agriculture practices involving working the land for production are generally exempt, except the construction of impervious surfaces as related to commercial agriculture.
 7. Forest practices regulated under the Oregon Forest Practices Act, except conversions from forest lands to other land uses.
 8. Actions by a public utility or any other governmental agency to remove or alleviate an emergency condition when the action does not alter the stormwater characteristics.
 - ~~9. Minor land-disturbing activities that do not require a clearing, grading and erosion control permit (permit).~~
-

-
10. Permits or applications for projects not physically disturbing the land.
 11. Public or private road and parking area preservation and/or maintenance projects such as:
 - a. Pothole and square cut patching;
 - b. Crack sealing;
 - c. Resurfacing with in-kind material without expanding the area of coverage;
 - d. Overlaying existing asphalt or concrete pavement without expanding the area of coverage;
 - e. Shoulder grading;
 - f. Maintaining existing drainage systems including reshaping or regrading drainage systems to original design;
 - g. Vegetation maintenance; or
 - h. ~~Addition of bicycle lanes or~~ ADA compliance work.
 12. Landscaping and maintenance on residential lots, including gardening, noncommercial agricultural activity, and limited clearing and grading.
 - ~~13. City of Bend public capital improvement projects, which must meet the equivalent standards as set forth in the City's Standards and Specifications.~~

B. *Exceptions.* An exception may be granted by the City to approve design elements that do not conform to or are not explicitly addressed by the COSM. The requirements of the COSM represent the minimum criteria for the design of stormwater management systems as required in the City of Bend. Designs that offer a superior or equivalent alternative to standard measures, or creative means not yet specified in the standards, must be reviewed and approved by the City. [Ord. NS-2176, 2012]

16.15.030 Drainage Submittal Review and Approval Process.

A. *Submittal Process.* The drainage submittal shall be submitted to the City as part of the clearing, grading and erosion control permit (permit) application required by BC Chapter [16.10](#). The City may charge a fee in an amount set by Council resolution for the permit. The plans shall be reviewed by the City for compliance with the COSM, the post-construction performance standards for stormwater management that are described in BC [16.15.040](#), and other applicable rules and standards prior to approval. The City may develop simplified drainage templates to meet the submittal requirements.

B. *Notification Required.* The City shall be notified prior to the commencement of any development covered by a drainage submittal.

C. *Applicant's Responsibilities.*

1. Any modifications to the drainage submittal shall be submitted to the City for approval. A new drainage submittal shall be submitted on request of the City.
2. Stormwater systems shall be tested for approval after construction. Stormwater systems shall be inspected when deemed necessary by the City during and after construction to assure consistency with the approved drainage submittal, and for compliance with this title.

D. *Conditions of Approval.* The following conditions apply to all approved drainage submittals:

1. Approval of the drainage submittal does not relieve the owner or responsible party from the duty to ensure the systems and their safety measures function as designed.
 2. Approval may be suspended or revoked at any time if conditions are not as stated or shown in the approved application or implementation of the drainage submittal is not proceeding in the approved manner.
 3. Approval of a drainage submittal may be suspended if the project is not completed within a two-year period or development has ceased for a period of more than two years. However, a one-year extension may be granted upon a written request that provides the reason(s) for the delay or cessation of development and specifies a time frame for completion or commencement of development activities.
-

-
4. If suspension or revocation of approval is necessary, the owner will receive notice of this decision and may appeal to the City Manager. A written request for appeal and hearing must be made within 10 days from the notice of suspension or revocation.
 5. If drainage submittal approval is suspended or revoked, the owner shall be required to submit a new plan for approval, with the requisite fee, prior to starting or continuing the planned project or development.
 6. Approval of any plans by the City shall not create a liability on the part of or cause of action against the City or City employee regarding the plan or its operation. [Ord. NS-2176, 2012]

16.15.040 Post-Construction Performance Standards for Stormwater Management.

A. *General Post-Construction Performance Standards.* Post-construction stormwater BMPs shall adhere to the following performance standards.

1. All stormwater BMPs shall be maintained in accordance with the approved stormwater system maintenance agreement as described in BC [16.15.050](#). The design of stormwater facilities shall incorporate maintenance accommodation and long-term maintenance reduction features in accordance with the latest version of the COSM.
 2. Overland flood routing paths shall be used to safely convey stormwater runoff to an adequate receiving area or stormwater BMP as defined under BC [16.15.010\(B\)\(3\)](#), such that the runoff is contained within the drainage easement for the flood routing path and does not cause flooding of buildings or related structures. The peak water surface elevation along flood routing paths shall be at least one foot below the finished grade elevation at the structure. When designing the flood routing paths, the conveyance capacity of the site's stormwater conveyance systems shall be taken into consideration.
 3. Velocity dissipation devices shall be placed at discharge locations and along the length of any surface waterbody outfall to provide nonerosive flow velocity from the structure to an adequate receiving stream or channel, so that the natural physical and biological
-

characteristics and functions of the receiving stream or channel are maintained and protected.

4. Stormwater drainage in excess of the predevelopment rates or volumes shall be retained on the lot of origin by meeting the current 25 year, 24-hour design storm event, subject to 100 year safe passage requirements in COSM, and not trespass onto the public right-of-way or private property except as provided below:

a. If the City determines that retaining the design storm amount of stormwater on the site of origin would pose a threat to public safety or adjacent properties. If the developer chooses to direct all or part of the runoff off-site and there is enough capacity in the conveyance system, the runoff or a specified portion thereof shall be directed to an off-site drainage facility approved by the City.

b. When runoff from non-City-owned property in excess of the predevelopment rates or volumes is directed to or allowed to flow to City-owned property or right-of-way, the owner(s) of the lot(s) of origin shall compensate the City for the costs it incurs for constructing, operating and maintaining the additional stormwater drainage and treatment capacity.

~~c. Access to and maintenance and operation of all stormwater facilities on private property shall be as required by the most current version of the COSM.~~

d. Residential, commercial, institutional or industrial developments may apply stormwater management standards described in this chapter to a common plan of land development as a whole if the development is appropriately master planned, and has formal arrangements for stormwater drainage across multiple properties. Prior to final plat approval, individual residential lots in new subdivisions shall not be considered separate land development projects, but rather the entire subdivision shall be considered a single land development project.

5. The City may require drainage easements where stormwater discharges must cross an adjacent or off-site property before reaching an adequate conveyance.

6. Stormwater facilities within residential subdivisions that serve multiple lots and/or a combination of lots and roadways shall be on a lot owned and maintained by an entity of common ownership, unless an alternative arrangement is approved by the City.

Stormwater facilities located on individual lots shall be maintained by the lot owner or, at the discretion of the City, be placed within an easement and maintained by an entity of common ownership.

7. Hydrologic parameters shall reflect the ultimate land development, shall be used in all engineering calculations, and shall follow required procedures outlined in the COSM. The stormwater design shall provide for treatment of runoff from the entire land development, to the extent practicable.

8. If runoff in excess of the predevelopment rates or volumes from a land development will flow to a municipal separate storm sewer system (MS4) or other publicly owned storm sewer system, then the applicant shall obtain authorization from the system's owner to discharge into the system. The City may require the applicant to demonstrate that the system has adequate capacity for any increases in peak flow rates and volumes.

9. All stormwater facilities and conveyance systems shall be designed in compliance with all applicable State and Federal laws and regulations, and all applicable erosion and sediment control and floodplain regulations.

10. The design of stormwater BMPs shall consider public health, safety and general welfare. These considerations include, but are not limited to:

- a. Preventing flooding of structures and roadways;
- b. Preventing standing water in facilities, manholes, inlets and other structures in a manner that promotes breeding of mosquitoes;
- c. Preventing attractive nuisance conditions and dangerous conditions due to velocity or depth of water, and/or access to orifices and drops; and
- d. Preventing aesthetic nuisances due to excessive slopes, cuts and fills, vegetation mortality, and other conditions.

11. All stormwater BMPs shall be designed to the standards of the most current version of the COSM, unless the City grants the applicant a waiver or the applicant is exempt from such requirements.

12. All new or refurbished stormwater inlets placed as part of a new development project shall be marked with a permanent “Do Not Dump” and/or “Protect Our Waters” or similar stamp or embossed image that has been approved by the City.

13. All new development projects shall prepare and submit to the City as-builts for all site impervious surfaces and permanent stormwater facilities.

14. All stormwater management designs shall preserve the natural hydrologic functions, stream channel characteristics, and groundwater recharge of the pre-developed site, to the extent practical. This shall be accomplished by:

- a. Treating runoff at the source;
- b. Disconnecting impervious surfaces;
- c. Preserving or enhancing natural flow paths and vegetative cover;
- d. Preserving or enhancing natural open spaces and riparian areas;
- e. Applying other measures that replicate pre-development hydrologic conditions.

The City may exercise discretion in the application of this standard, especially in cases of infill development, redevelopment, or other unique circumstances.

15. If hydrologic, geologic, topographic, or land use conditions warrant greater control than that provided by the minimum control requirements, the City may impose additional requirements deemed reasonable and necessary to control the volume, timing, rate and/or quality of runoff in excess of the predevelopment rates or volumes. In these cases the City may restrict the use of certain stormwater BMPs, require pretreatment above the minimum standards in the COSM, and/or require a pollution source control plan. Example conditions that may warrant greater control include, but are not limited to:

- a. Stormwater generated within the drainage basins of problem flooding areas as noted on the City’s capital improvement project prioritization list;
 - b. Stormwater discharges that are conveyed with nonstormwater discharges;
 - c. Stormwater in areas underlaid by naturally impermeable layers;
-

-
- d. Stormwater discharged in important groundwater management areas such as wellhead protection areas; and
 - e. Stormwater discharged to surface water outfalls or directly to waterbodies such as the Deschutes River or Tumalo Creek. [Ord. NS-2176, 2012]

16.15.050 Stormwater System Maintenance Agreement.

A. *Responsible Party.* Owners are responsible for the operation and maintenance of stormwater facilities on their property.

B. *Requirement for Stormwater System Maintenance Agreement (SWMA).* ~~If a project~~ For all projects that meet requiring a drainage submittal criteria in BC 16.15.010, and requires structural or nonstructural stormwater BMPs measures, the owner shall execute a stormwater system maintenance agreement prior to or concurrently with the City granting final approval of any development plan or other development for which a permit is required under this title. The stormwater system maintenance agreement shall be recorded in the office of the Deschutes County Clerk and shall run with the land.

1. For all land divisions (subdivisions and partitions), a SWMA must be recorded against the parent parcel(s) prior to the recording of the final plat.

C. *Required Elements for Stormwater System Maintenance Agreement.* The stormwater system maintenance agreement shall be in a form approved by the City, and shall, at a minimum:

1. Require the owner of the property, including successor owners, to maintain the stormwater system on the property so that the system continues to function as planned.
2. Grant the City the right to enter the property at reasonable times with at least 24-hour notice except in instances of emergency to inspect the system and take corrective action.

D. *Maintenance Responsibility.* Property owners shall maintain in good condition and promptly repair and restore all structural ~~and nonstructural~~ stormwater BMPs, and all necessary access routes and appurtenances (e.g., graded surfaces, walls, drains, check dams and structures, UICs, catch basins, pipes, vegetation adjacent to the inlets and within the facility, erosion and sedimentation controls, and other protective devices).

E. *Maintenance Records Required.* The owner or other responsible party shall make at least annual inspections of the facilities and maintain records of such inspections. Stormwater BMP inspection, maintenance and repair records shall be retained by the owner or their designee for a period of five years, and shall be made available to the City upon request.

F. *Maintenance Inspection by Stormwater Authority.* The City shall retain the right to conduct periodic inspections for all stormwater BMPs, which shall be documented in writing. The inspection shall document any maintenance and repair needs, and any discrepancies from the stormwater system maintenance agreement.

Whenever necessary to make an inspection to enforce any of the provisions of this title, or whenever the City has reasonable cause to believe that there exists in any building or upon any premises any condition that may constitute a violation of the provisions of this title, City personnel may inspect buildings or premises at all reasonable times; provided, that:

1. If the building or premises is occupied, City personnel shall first present proper credentials and request entry.
2. If the building or premises is unoccupied, City personnel shall first make a reasonable effort to locate the owner or other persons having charge or control of the building or premises and request entry.
3. The property owner or occupant has the right to refuse entry but, in the event entry is refused, the City may seek a warrant to authorize entry and inspection.

Routine or area inspections shall be based upon such reasonable selection processes as may be deemed necessary to carry out the objectives of this title, including, but not limited to, random sampling and/or sampling in areas with evidence of stormwater pollution, illicit discharges, or similar factors.

G. *Failure to Provide Adequate Maintenance.* In the event that the stormwater BMP has not been maintained and/or becomes a danger to public safety or public health, the City shall notify the responsible party personally or by registered or certified mail. The notice shall specify the measures needed to comply with the stormwater system maintenance agreement, and shall specify that the responsible party has 30 days or other time frame mutually agreed to between the City and the responsible party to complete the necessary measures to comply with the

agreement. If such measures are not completed, then the City may pursue enforcement procedures.

If a responsible person fails or refuses to meet the requirements of an inspection report or the stormwater system maintenance agreement, the City, after 30 days' written notice (except, in the event the violation constitutes an immediate danger to public health or public safety, 24-hour notice shall be sufficient), may correct a violation of the design standards or maintenance requirements by performing the necessary work to place the facility in proper working condition. This necessary corrective or maintenance work shall be performed at the owner's expense. [Ord. NS-2176, 2012]