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**STAFF REPORT FOR THE PLANNING COMMISSION WORKSESSION
FEBRUARY 6, 2016**

**GRADING AND EROSION CONTROL, HILLSIDE DEVELOPMENT AND LARGE FILL REGULATIONS
(PC-2016-5384)**

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SECTION 1.0 INTRODUCTION

The Multnomah County Comprehensive Plan is a policy document that guides future growth and development in Unincorporated Multnomah County. The Plan contains hundreds of policies and strategies relating to a wealth of topics, separated into 12 Chapters.

<https://multco.us/landuse/comprehensive-plan>

1. Introduction and Citizen Involvement
2. Land Use
3. Farm Land
4. Forest Land
5. Natural Resources
6. Historic and Cultural Resources
7. Natural Hazards
8. Parks and Recreation
9. Rural Economy
10. Housing
11. Public Facilities
12. Transportation

This staff report implements a number of Comprehensive Plan policies and strategies primarily found in the ‘Grading and Fill’ subsection of Chapter 2 and in the ‘Water Quality and Erosion Control’ subsection of Chapter 5 that protect water quality, preserve high value soils and reduce risk of earth movement (landslides). In this case, implementation will occur through both adoption of new development review regulations and refinement of existing regulations

applicable to development requests involving soil grading and fill activity. Applicable Comprehensive Plan policies and strategies are listed in Attachment A. An on-line link to the full Multnomah County Comprehensive Plan is provided on page 1 of this staff report.

The proposed code amendments in Section 2.0 of this report are separated into three subsections because regulations for soil disturbing activities are located in three different subsections of county code.

1. Grading and Erosion Control Regulations

Most construction projects qualify for review through the Grading and Erosion Control (GEC) regulations. However, an over the counter Minimal Impact Project (MIP) review exists for small projects on relatively level ground that are not near water. Both projects are non-discretionary (Type 1 reviews).

2. Hillside Development Regulations

Projects proposed on geologically sensitive lands, including those potentially susceptible to landslides, require a Hillside Development (HD) review, which includes requirement for Geotechnical Engineer or Engineering Geologist oversight. This is a discretionary, Type 2 review.

3. Large Fill Regulations

Large Fills (over 5,000 cubic yards of fill material) require Conditional Use Type III review. In addition to the Conditional Use standards, the applicant is required to satisfy Hillside Development regulations.

One of the most pressing issues related to ground disturbing activities for the Land Use Program is addressed by Comprehensive Plan Policy 2.42: *Establish standards for qualifying topsoil fill as a routine agricultural management practice exempt from County review requirements, and* Policy 2.43: *Establish limits for fill that does not qualify as an agricultural management practice and is subject to County review requirements.*

Over the years, there have been numerous instances of large volumes of fill dirt being imported to resource-zoned lands (Exclusive Farm Use and Commercial Forest Use zones) in Multnomah County. Often times the source of the fill is construction waste from an urban development project. Construction excavators seek to minimize cost for disposal of excavated material and will pay willing landowners to receive excess fill. Other times the source of fill material is dredged from a local river as shipping channels are maintained for maritime passage. Farmers will occasionally accept importation of fill material to make an area of the farm more conducive to growing crops by making the land better drained, or by placing nutrient rich topsoil on top of less productive soil.

County GEC and HD regulations include a range of permit exemptions. One of the exemptions is for “Routine agricultural management practices.” The problem arises when property owners receiving fill claim the exemption even though the volume and extent of the fill suggest this may not be the case. Meanwhile, County staff may struggle with the exact meaning of ‘routine agricultural management practices’ due to a lack of a clear definition and/or related standards. This staff report addresses this Agricultural Fill issue and others as outlined below.

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Amendments proposed in this staff report fall into the following general categories, which in aggregate help preserve water quality, preserve farm soils and minimize risk of earth movement:

- **Housekeeping** – Update references to policies, plans and manuals. Includes grammatical edits.
- **Agricultural Fill & Ground Disturbing Activity Associated with Forest Practices** – Clarify exemption limits, qualifying criteria and process.
- **Dredge Fills in Sauvie Island / Multnomah Channel Planning Area** – New criteria established.
- **Minimal Impact Project** – Add fill volume threshold.
- **Instream Work and Stream Crossings** – New criteria established.
- **New Definitions** – Key terms defined to provide guidance to Agricultural Fill exemption and for identifying hydrologic scour.
- **Residential Gardening and Landscape Maintenance** – Establishes thresholds and examples.
- **New Exemptions** – For National Resource Enhancement / Restoration Projects, removal of flammable vegetation and septic tank replacements.
- **Large Fill** – Clarify 5,000 cubic yards is a cumulative measurement. Includes WRG and High Value Soils to the list of areas Large Fills shall not be allowed.

Section 2.0 below contains a number of staff notes to explain the intent of each amendment and to direct the reader to the applicable Comprehensive Plan policies and strategies. More information is located in the Multnomah County Comprehensive Plan (online link provided on page 1). A list of relevant policies and strategies is provided as Exhibit A.

SECTION 2.0 PROPOSED CODE AMENDMENTS

Staff Note: Chapters 29 and 33 text is used for illustration purposes. Code amendments will be applied to other chapters of code prior to Planning Commission hearing including applicable sections of Chapters 11.15, 34, 35, 36 and 38.

The following text formatting is used to differentiate existing, proposed and deleted language:

Bold = Existing language to remain

Double Underline = Proposed new language

~~Strikethrough~~ = Language proposed for removal

* * * = separates non-contiguous code sections (if applicable)

PROPOSED CODE AMENDMENTS SECTION 2.0 of the report is broken into three subsections:

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- SUBSECTION 2.1 GRADING AND EROSION CONTROL
- SUBSECTION 2.2 HILLSIDE DEVELOPMENT PERMIT AND EROSION CONTROL
- SUBSECTION 2.3 LARGE FILLS

SUBSECTION 2.1 GRADING AND EROSION CONTROL

Staff Note: Multnomah County Code 29.330 – 29.348 (applicable outside of the West of Sandy River Plan Area) is provided below for illustrative purposes. Amendments will also be transposed to 29.350 – 29.365 (applicable in West of Sandy River Area) prior to Board Hearing.

§ 29.330- PURPOSES.

The purposes of the Grading and Erosion Control Subdistrict are to promote the public health, safety and general welfare, and minimize public and private losses due to earth movement hazards in specified areas and minimize erosion and related environmental damage in unincorporated areas of the county, all in accordance with ORS 215, OAR 340-41-455 for the Tualatin River Basin, and applicable the County Comprehensive Framework Plan Policies related to Public Facilities Policy No. 37. This subdistrict is intended to:

Staff Note: The Comprehensive Framework Plan was updated in 2016 and Policy No. 37 (Utilities) no longer exists. The current Plan contains a number of policies, particularly in Chapter 11, relating to Public Facility Development.

- (A) Protect human life;
- (B) Protect property and structures;
- (C) Minimize expenditures for rescue and relief efforts associated with earth movement failures;
- (D) Control erosion, production and transport of sediment;
- (E) Regulate land development actions including excavation and fills, drainage controls and protect exposed soil surfaces from erosive forces; and
- (F) Control stormwater discharges and protect streams, ponds, and wetlands.

§ 29.331 EROSION CONTROL RELATED DEFINITIONS.

For the purpose of this subchapter, the following definitions shall apply unless the context requires a different meaning.

CUT.

- (1) An excavation;
- (2) The difference between a point on the original ground surface and the point of lowest elevation on the final grade;
- (3) The material removed in excavation work.

DISTURBED AREA. The total area of alteration of the naturally occurring ground surface resulting from construction activities whether permanent or temporary.

DRAINAGE AREA. The subject property together with the watershed (acreage) contributing water runoff to and receiving water runoff from the subject property.

DRAINAGEWAY. Any natural or artificial stream, swale, creek, river, ditch, channel, canal or other open watercourse.

EARTH MOVEMENT. Any type of land surface failure resulting in the downslope movement of material. The term includes, but is not limited to, soil creep, mudflow, rockslides, block failures, and massive landslides.

EROSION. The wearing away or removal of earth surface materials by the action of natural elements or forces including, but not limited to, wind, water or gravity.

EXCAVATION. Any act by which earth, sand, gravel, rock or any similar material is dug into, cut, quarried, uncovered, removed, displaced, relocated or bulldozed, including the conditions resulting therefrom.

FILL.

(1) Any act by which earth, sand, gravel, rock or similar material is pushed, placed, dumped, stacked, pulled, transported, or in any way moved to a new location above the existing natural surface of the ground or on the top of a stripped surface, including the condition resulting there from.

(2) The difference in elevation between a point on the original ground surface and the point of higher elevation on a finished grade.

(3) The material used to make a fill.

GRADING. Any stripping, cutting, filling, stockpiling or any combination thereof, including the land in its cut or filled condition.

GRAVEL. Aggregate composed of hard and durable stones or pebbles, crushed or uncrushed, more than half of which is retained on a No. 4 sieve (2 mm).

GROUND DISTURBING ACTIVITY. Any activity that exposes soil through the use of motorized equipment.

MULCH. Organic materials, such as straw, bark, jute, coconut fibers, or nut shells spread over the surface of the ground, especially freshly graded or exposed soils, to prevent physical damage from erosive agents such as storm water, precipitation or wind, and which shield soil surfaces until vegetative cover or other stabilization measures can take effect.

ORDINARY HIGH WATER MARK. Features found by examining the bed and banks of a stream and ascertaining where the presence and action of waters are so common and usual, and so long maintained in all ordinary years, as to mark upon the land a character distinct from that of the abutting upland, particularly with respect to vegetation. For streams where such features cannot be found, the channel bank shall be substituted. In braided channels and alluvial fans, the ordinary high water mark shall be measured to include the entire stream feature.

SLOPE.

- (1) Any ground whose surface makes an angle from the horizontal; or
- (2) The face of an embankment or cut section.

SPOIL MATERIAL. Any rock, sand, gravel, soil or other earth material removed by excavation or other grading activities.

STREAM. Areas where surface waters flow sufficient to produce a defined channel or bed. A defined channel or bed is indicated by hydraulically sorted sediments or the removal of vegetative litter or loosely rooted vegetation by the action of moving water. The channel or bed need not contain water year-round. This definition is not meant to include irrigation ditches, canals, stormwater runoff devices or other entirely artificial watercourses unless they are used to convey Class 1 or 2 streams naturally occurring prior to construction. Those topographic features resembling streams but which have no defined channels (such as, swales) shall be considered streams when hydrologic and hydraulic analyses performed pursuant to a development proposal predict formation of a defined channel after development.

STREAM PROTECTION. Activities or conditions which avoid or lessen adverse water quality and turbidity effects to a stream.

TOPOGRAPHIC INFORMATION. Surveyed elevation information which details slopes, contour intervals and drainageways. Topographic information shall be prepared by a registered land surveyor or a registered professional engineer qualified to provide such information and represented on maps with a contour interval not to exceed ten feet.

TOPSOIL. The top organic and mineral rich layer of soil, typically less than 12-inches thick, that provides nutrients to growing plants.

Staff Note: This definition supports the routine agricultural fill exemption (see 29.339(F)).

VEGETATION. All plant growth, especially trees, shrubs, grasses and mosses.

VEGETATIVE PROTECTION. Stabilization of erosive or sediment-producing areas by covering the soil with:

- (1) Permanent seeding, producing long-term vegetative cover;
- (2) Short-term seeding, producing temporary vegetative cover;
- (3) Sodding, producing areas covered with a turf or perennial sod-forming grass; or
- (4) Netting with seeding if the final grade has not stabilized.

WATER BODY. Rivers, streams, sloughs, drainages, including intermittent streams and seeps, ponds, lakes, aquifers, wetlands, and coastal waters.

WATERCOURSE. A channel in which a flow of water occurs, either continuously or intermittently with some degree of regularity. Watercourses may be either natural or artificial.

§ 29.333 REQUIREMENTS FOR A MINIMAL IMPACT PROJECT.

The following are the minimum erosion control requirements for all ground disturbing activities where a permit is not otherwise required or exempt under this subchapter:

(A) Prior to initiating work, persons proposing ground disturbing activities shall provide to the County two copies of a map, drawn to scale, showing the property line locations, area of disturbance, ground topography (contours), roads and driveways, existing structures, trees with eight-inch or greater caliper or an outline of wooded areas, watercourses and include the location of the proposed development(s), erosion control measures, existing sanitary drainfields, existing drywells, and trees proposed for removal.

(B) Persons conducting ground disturbing activities are to utilize erosion control measures prescribed in the current edition of the “Erosion Prevention & Sediment Control Plans Technical Guidance Handbook.” Measures are to be installed prior to commencement of grading work and are to be maintained, in working order, through all phases of development.

(C) Persons creating new impervious surfaces exceeding 500 square feet shall install a stormwater drainage system. The system shall be designed to ensure that the rate of runoff for the 10 year 24 hour storm event is no greater than that which existed prior to development at the property line or point of discharge into a watercourse.

(D) The planning director may take steps to ensure compliance with the requirements of this subsection, including but not limited to, field inspections by County staff, post construction certification of the work, and the posting of a notice providing County contact information in the event that questions arise concerning work occurring on-site.

§ 29.336 PERMITS REQUIRED.

The following activities require a Grading and Erosion Control permit:

(A) All ground disturbing activities where:

(1) More than 10,000 square feet of surface area is disturbed (excluding the placement of gravel, or asphalt) at any one time; or

(2) Areas disturbed are within 200' by horizontal measurement from the top of the bank of a water body or from the boundary of National Wetlands Inventory mapped wetlands associated with a water body, whichever distance is greater; or

(3) Slopes before development are greater than 10 percent (10 Horizontal: 1 Vertical); or

(4) Unsupported finished slopes exceed a 33 percent (3 Horizontal: 1 Vertical) grade and five feet in height; or

(5) More than 500 cubic yards of fill is imported from an off-site location.

Staff Note: This amendment adds a volumetric threshold to the Minimal Impact Project concept which currently assesses projects based on area of disturbance, distance to water and slope.

(B) Hydrologic scour attributed to development (including development previously authorized through the Minimal Impact Process) resulting in visible or measurable erosion, turbidity, or sediment deposition within a water body. Visible or measurable erosion, turbidity or sediment deposition includes, but is not limited to:

(1) Increases water turbidity above the state water quality standard, where turbidity measured downstream of development is more than 10% above an upstream control point.

(2) Evidence of concentrated flows of water over bare soils or evidence of on-site erosion such as rivulets on bare soil slopes, where the flow of water is not filtered or captured on the site.

(3) Earth slides, mudflows, earth sloughing, or other earth movement associated with ground disturbing activities that leaves the property.

Staff Note: The language in (B) implements Comprehensive Plan Policy 5.12/Strategy 5.12-1 by defining 'visible or measurable' erosion and requiring hydrologic scour resulting in visible or measurable erosion to a Grading and Erosion Control permit review in compliance with Metro Title 3 water quality standards.

~~**(C) — Development projects subject to a hillside development permit do not require a separate grading and erosion control permit.**~~

Staff Note: This language has been moved to exemption section MCC 29.339.

§ 29.339 EXEMPT LAND USES AND ACTIVITIES.

The following are exempt from the provisions of this subchapter:

- (A) Test pits or borings excavated for purposes of geotechnical evaluation or septic system suitability.**
- (B) Cemetery graves, but not cemetery soil disposal sites.**
- (C) Excavations for wells.**
- (D) Mineral extraction activities as regulated by the county zoning code.**
- (E) Exploratory excavations under the direction of certified engineering geologists or geotechnical engineers.**
- (F) Routine agricultural management practices.**

(1) Routine agricultural management practices involving fill placement.

(a) Topsoil is the only fill material that can be placed on an agricultural site under the routine agricultural management practices provisions.

(b) Topsoil placement on an agricultural site shall only be deemed a routine agricultural management practice by the Planning Director after considering the following information provided by the applicant.

1. Existing site conditions including soil types:

2. Proposed topsoil soil types;

3. Proposed location, depth and volume of topsoil placement;

4. Proposed project timing; and

5. A farm management plan demonstrating how the topsoil will be employed in conjunction with a farm use as defined in ORS Chapter 215 and demonstrating that the volume of topsoil proposed is the minimum necessary.

(c) The Planning Director may require concurrence from agencies such as, but not limited to, the Oregon Department of Agriculture and the local Soil and Water Conservation Service. The Planning Director shall make the final determination through a Type I permit registration or a Type II permit if discretion is required.

Staff Note: The proposed language in F(1) above implements Comp Plan Policy 2.42 & 2.43 by establishing limits and standards for fill that does not qualify as an agricultural management practice.

(G) Residential gardening and landscape maintenance with a disturbed area of 20,000 square feet or less and at least 100 feet by horizontal measurement from the top of the bank of a watercourse, or the mean high watermark (line of vegetation) of a water body body of water or wetland. Landscape maintenance shall include normal pruning, limbing, removal and planting of trees and vegetation in conjunction with maintaining private or public grounds. Landscape maintenance does not include preliminary ground disturbing activity for a development project.

Staff note: The proposed language above in (G) implements Comprehensive Plan Policy 2.44/Strategy 2.44-1 adding thresholds, standards and definitions to the residential gardening and landscape maintenance exemption. 'Body of Water has been changed to 'water body' to align with the term used in the definition section.

(H) Emergency response activities intended to reduce or eliminate an immediate danger to life, property, or flood or fire hazards.

(I) Forest practices as defined by ORS 527 (the State Forest Practices Act) and approved by the state Department of Forestry. Ground disturbing activity associated with conversion of land to a non-forest practices use, such as a residential use, is not exempt from the Grading and Erosion Control provisions. In assessing whether an activity is a forest practice, the Planning Director may require concurrence from agencies such as, but not limited to, the Oregon Department of Forestry.

Staff note: The proposed language above implements Comprehensive Plan Policy 2.44/Strategy 2.44-2 considering verification thresholds and a concurrence requirement for grading and fill

projects that are conducted as part of a Forest Practices project.

(J) Grading activities attributed to routine road maintenance when undertaken by an organization operating under Limit 10, Section 4d of the Endangered Species Act.

(K) Natural resource enhancement or restoration plans, including weed removal, approved by the Soil and Water Conservation District or the Natural Resources Conservation District, that do not include placement of buildings or structures and do not entail grading in an amount greater than 10 cubic yards.

Staff Note: This exemption above has largely been modeled on a Significant Environmental Concern exemption (ex. 33.4515(A)(14)):

Enhancement or restoration of the riparian corridor for water quality or quantity benefits, or for improvement of fish and wildlife habitat, pursuant to a plan that does not include placement of buildings or structures and does not entail grading in an amount greater than 10 cubic yards. This exemption is applicable to plans that are approved by Soil and Water Conservation District, the Natural Resources Conservation District, or the Oregon Department of Fish and Wildlife under the provisions for a Wildlife and Habitat Conservation Plan, and submitted to the County.

The intent is to better align SEC and GEC county codes and also help encourage small natural resource enhancement projects. Supporting efforts by conservation districts aligns with Policy 5.8

(L) Removal of flammable vegetation and combustible growth within 30-feet of a structure for fire safety when grading does not exceed 10 cubic yards.

Staff Note: This exemption encourages owners to reduce fire risk by removing vegetation around structure, recognizing that complete vegetation removal may involve some amount of ground disturbing activity, particularly for stump pulling. The 30-foot distance matches the primary fire safety zone standards of the Commercial Forest Use Zoning district. This language relates to Comprehensive Plan Policy 7.7 - development requirements in areas prone to wildfire risk.

(M) Ground disturbing activities for replacement of a septic tank in the same location. This exemption does not extend to replacement of a sanitary drainfield.

Staff Note: This reflects current practice. Establishing clearly defined exemptions is encouraged by Comprehensive Plan Policy 2.44.

(N) Development projects subject to a Hillside Development Permit do not require a separate Grading and Erosion Control Permit.

Staff Note: This is a reminder and not a new standard.

§ 29.342 APPLICATION INFORMATION REQUIRED.

An application for development subject to the requirements of this Subdistrict shall include two copies of the following:

(A) A map, drawn to scale, showing the property line locations, area of disturbance, ground topography (contours), roads and driveways, existing structures, trees with eight-inch or greater caliper or an outline of wooded areas, watercourses and include the location of the proposed development(s), erosion control measures, existing sanitary drainfields, existing drywells, and trees proposed for removal.

(B) Calculations estimating the volume of all proposed cuts and fills.

(C) Documents stamped by an Oregon licensed Professional Engineer demonstrating that:

(1) Stormwater runoff attributed to the development will be managed on-site for a storm of ten-year, 24 hour design frequency or, is to be discharged to a watercourse in or adjacent to the property at pre-developed rates;

(2) Surcharges to sanitary drainfields have been reviewed by the City of Portland Sanitarian or other agencies authorized to review waste disposal systems; and

(3) Any new discharges into public right-of-ways have complied with the governing agencies discharge review process;

(D) Narrative, map or plan information necessary to demonstrate compliance with applicable provisions of the county zoning code. The application shall provide applicable supplemental reports, certifications, or plans relative to: engineering, soil characteristics, stormwater drainage, stream protection, erosion control, and/or replanting.

§ 29.345 GRADING AND EROSION CONTROL PERMIT STANDARDS.

Approval of development plans on sites subject to a grading and erosion control permit shall be based on findings that the proposal adequately addresses the following standards. Conditions of approval may be imposed to assure the design meets the standards:

(A) *Design standards for grading and erosion control.*

(1) *Grading standards.*

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(a) **Fill materials, compaction methods and density specifications shall be indicated. Fill areas intended to support structures shall be identified on the plan. The director may require additional studies or information or work regarding fill materials and compaction;**

(b) **Cut and fill slopes shall not be steeper than 3:1 unless a geological and/or engineering analysis certifies that steep slopes are safe and erosion control measures are specified;**

(c) **Cuts, and fills, and drainage provisions shall not endanger or disturb adjoining property or increase risk of earth movement hazard;**

Staff Note: Amendments above implement Comprehensive Plan Policies 5.11, 5.14, 5.5 and Policy 6 as well as Strategies 5.11-1 & 5.12-4 relating to protecting water quality from concentrated storm water runoff and reducing landslide hazards.

(d) **The proposed drainage system shall have adequate capacity to handle stormwater attributed to development on-site for a storm of ten-year frequency and maintain the existing flood carrying capacity of all watercourses on or adjacent to the property;**

(e) **Fills shall not encroach on natural watercourses or constructed channels unless measures are approved which will adequately handle the existing flood carrying capacity for the altered portion of the stream.**

(f) Fills in the Sauvie Island / Multnomah Channel Planning Area generated as a result of dredging activities shall only be approved:

(i) To assist in flood control;

(ii) If not encroaching on jurisdictional wetlands;

Staff Note: This implements Comprehensive Plan Policy 5.53. The county Large Fill provisions refer to "jurisdictional" wetlands which appears to be a common term used by Army Corps in the context of permitting. Generally, a jurisdictional wetland appears to include a National Wetlands Inventory mapped wetland or a wetland, which is not mapped but is found eligible during a delineation according to on-site conditions.

(iii) If not located on high value soils; and

Staff Note – The following underlined language below from Comp Plan Policy 5.53 has been removed from proposed regulation (iii) above so that all requests for fill placement on farm land soils will be evaluated through the proposed Routine Agricultural Management practice exemption provisions. Retaining the underlined language below would have the effect of setting a lower bar for placement of dredge spoils on farmland soils as compared to a request to place upland

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fill materials on farmland soils which did not appear to be the intent of Policy 5.53.

Not on high value farm land unless placement of such fill improves a farm's soils or productivity.

(iv) If not located in the Willamette River Greenway or Significant Environmental Concern subdistricts.

(g) A cumulative limit of 5,000 cubic yards of fill is allowed per site in all general zoning districts, except as authorized through the Large Fill provisions in the Multiple Use Agriculture-20 and Rural Residential zones.

Staff Note: Proposed language (g) above implements Comprehensive Plan Strategy 2.43-1 by clarifying maximum cumulative fill volumes allowed by zoning district.

(2) Erosion control standards.

(a) On sites within the Tualatin River Drainage Basin, erosion and stormwater control plans shall satisfy the requirements of OAR 340. Erosion and stormwater control plans shall be designed to perform as prescribed by the currently adopted edition of the "City of Portland Erosion and Sediment Control Manual, *Erosion Prevention & Sediment Control Plans Technical Guidance Handbook (1994)*" and the City of Portland Stormwater Management Manual "City of Portland Stormwater Quality Facilities, A Design Manual (1995)." Ground-disturbing activities within the Tualatin Basin shall provide a 100-foot undisturbed buffer from the top of the bank of a stream, or the ordinary high watermark (line of vegetation) of a water body, or within 100 feet of a wetland: unless a mitigation plan consistent with OAR 340 is approved for alterations within the buffer area.

Staff Note: References to the current plan names are updated. On-line links to the currently adopted edition of the City of Portland Erosion and Sediment Control Manual and City of Portland Stormwater Management Manual are:

<https://www.portlandoregon.gov/bds/43966>

<https://www.portlandoregon.gov/bes/64040>

(b) Stripping of vegetation, grading, or other soil disturbance shall be done in a manner which will minimize soil erosion, stabilize the soil as quickly as practicable, and expose the smallest practical area at any one time during construction;

(c) Development plans shall minimize cut or fill operations and ensure conformity with topography so as to create the least erosion potential and adequately accommodate the volume and velocity of surface runoff;

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(d) Temporary vegetation and/or mulching shall be used to protect exposed critical areas during development;

(e) Whenever feasible, natural vegetation shall be retained, protected, and supplemented;

1. A 100-foot undisturbed buffer of natural vegetation shall be retained from the top of the bank of a stream, or from the ordinary high watermark (line of vegetation) of a water body, or within 100 feet of a wetland;

2. The buffer required in subsection (e)1. may only be disturbed upon the approval of a mitigation plan which utilizes erosion and stormwater control features designed to perform as effectively as those prescribed in the currently adopted edition of the “City of Portland Erosion and Sediment Control Manual *Erosion Prevention & Sediment Control Plans Technical Guidance Handbook (1994)*” and the City of Portland Stormwater Management Manual “City of Portland Stormwater Quality Facilities, A Design Manual (1995).” and which is consistent with attaining equivalent surface water quality standards as those established for the Tualatin River Drainage Basin in OAR 340;

(f) Permanent plantings and any required structural erosion control and drainage measures shall be installed as soon as practical;

(g) Provisions shall be made to effectively accommodate increased runoff caused by altered soil and surface conditions during and after development. The rate of surface water runoff shall be structurally retarded where necessary;

(h) Sediment in the runoff water shall be trapped by use of debris basins, silt traps, or other measures until the disturbed area is stabilized;

(i) Provisions shall be made to prevent surface water from damaging the cut face of excavations or the sloping surface of fills by installation of temporary or permanent drainage across or above such areas, or by other suitable stabilization measures such as mulching or seeding;

(j) All drainage provisions shall be designed to adequately carry existing and potential surface runoff to suitable drainageways such as storm drains, natural watercourses, drainage swales, or an approved drywell system;

(k) Where drainage swales are used to divert surface waters, they shall be vegetated or protected as required to minimize potential erosion;

(l) Erosion and sediment control devices shall be required where necessary to prevent polluting discharges from occurring. Control devices and measures which may be required include, but are not limited to:

- velocity;
1. Energy absorbing devices to reduce runoff water
 2. Sedimentation controls such as sediment or debris basins. Any trapped materials shall be removed to an approved disposal site on an approved schedule;
 3. Dispersal of water runoff from developed areas over large undisturbed areas.

(m) Disposed spoil material or stockpiled topsoil shall be prevented from eroding into streams or drainageways by applying mulch or other protective covering; or by location at a sufficient distance from streams or drainageways; or by other sediment reduction measures;

(n) Such non-erosion pollution associated with construction such as pesticides, fertilizers, petrochemicals, solid wastes, construction chemicals, or wastewaters shall be prevented from leaving the construction site through proper handling, disposal, continuous site monitoring and clean-up activities.

(o) Erosion and stormwater control plans involving ground disturbing activities within a Water Body or Watercourse shall use instream BMPs designed to perform as prescribed in the City of Portland Erosion and Sediment Control Manual and the City of Portland Stormwater Management Manual.

Staff Note: Implements numerous Comprehensive Plan Policies previously referenced which help protect water quality. Providing a reference to a source of instream Best Management Practices (BMPs) will provide technical guidance for some of the highest risk projects from an erosion control perspective. Instream BMPs are detailed and voluminous and therefore staff is recommending simple references to the City of Portland's Manuals which contain the technical information.

(p) Stream crossings shall follow Oregon Department of Fish and Wildlife fish passage regulations where native migratory fish are currently or have historically been present, except as prescribed in the Significant Environmental Concern subdistrict.

Staff note: The language above implements Comprehensive Plan Strategy 5.12-5 relating to stream crossings.

(B) Responsibility.

(1) Whenever sedimentation is caused by stripping vegetation, regrading or other development, it shall be the responsibility of the person, corporation or other entity causing such sedimentation to remove it from all adjoining surfaces and drainage systems prior to issuance of occupancy or final approvals for the project;

(2) It is the responsibility of any person, corporation or other entity doing any act on or across a communal stream, watercourse or swale, or upon the floodplain or right-of-way thereof, to maintain as nearly as possible in its present state the stream, watercourse, swale, floodplain, or right-of-way during such activity, and to return it to its original or equal condition.

(C) *Implementation.*

(1) *Performance bond.* A performance bond may be required to assure the full cost of any required erosion and sediment control measures. The bond may be used to provide for the installation of the measures if not completed by the contractor. The bond shall be released upon determination the control measures have or can be expected to perform satisfactorily. The bond may be waived if the director determines the scale and duration of the project and the potential problems arising therefrom will be minor.

(2) *Inspection and enforcement.* The director may take steps to ensure compliance with the requirements of this subsection, including but not limited to, inspections, peer review of engineering analysis (at the applicant's expense), post construction certification of the work, and the posting of a notice providing County contact information in the event that questions arise concerning work occurring on-site. The requirements of this subdistrict shall be enforced by the planning director. If inspection by county staff reveals erosive conditions which exceed those prescribed by the Grading and Erosion Control Permit, work may be stopped until appropriate correction measures are completed.

(D) *Final approvals.* A certificate of occupancy or other final approval shall be granted for development subject to the provisions of this subdistrict only upon satisfactory completion of all applicable requirements.

§ 29.348 PERMIT FEE.

A fee for a grading and erosion control permit is imposed and the amount will be set by Board resolution.

SUBSECTION 2.2 HILLSIDE DEVELOPMENT AND EROSION CONTROL - HD

Staff Note: Amendments to Chapter 33 proposed below will be applied Hillside Development regulations captured in other chapters of county code prior to Board hearing including Chapters 34, 35, 36, 38 and 11.15.

§ 33.5500- PURPOSES

The purposes of the Hillside Development and Erosion Control subdistrict are to promote the public health, safety and general welfare, and minimize public and private losses due to earth movement hazards in specified areas and minimize erosion and related environmental damage in unincorporated Multnomah County, all in accordance with ORS 215, LCDC Statewide Planning Goal No. 7 and OAR 340– 41– 455 for the Tualatin River Basin, and applicable the Multnomah County Comprehensive Framework Plan Policies related to development limitations Policy No. 14. This subdistrict is intended to:

Staff Note: The Comprehensive Framework Plan has been updated and Policy No. 14 (Development Limitations) no longer exists. The current Plan contains a number of policies relating to development limitations, although this term is not used specifically as a policy heading in the current Comprehensive Plan, and applicable policies are found throughout the plan.

- (A) Protect human life;
- (B) Protect property and structures;
- (C) Minimize expenditures for rescue and relief efforts associated with earth movement failures;
- (D) Control erosion, production and transport of sediment; and
- (E) Regulate land development actions including excavation and fills, drainage controls and protect exposed soil surfaces from erosive forces; and
- (F) Control stormwater discharges and protect streams, ponds, and wetlands within the Tualatin River and Balch Creek Drainage Basins.

§ 33.5505 PERMITS REQUIRED

Hillside Development Permit: All persons proposing development, construction, or site clearing (including tree removal) on property located in hazard areas as identified on the "Slope Hazard Map", or on lands with average slopes of 25 percent or more shall obtain a Hillside Development Permit as prescribed by this subdistrict, unless specifically exempted by MCC 33.5510.

§ 33.5510 EXEMPT LAND USES AND ACTIVITIES

The following are exempt from the provisions of this Chapter:

- (A) Development activities approved prior to February 20, 1990; except that within such a development, issuance of individual building permits for which application was made after February 20, 1990 shall conform to site-specific requirements applicable herein.

(B) General Exemptions – Outside the Tualatin River and Balch Creek Drainage Basins, all land-disturbing activities outlined below shall be undertaken in a manner designed to minimize earth movement hazards, surface runoff, erosion, and sedimentation and to safeguard life, limb, property, and the public welfare. A person performing such activities need not apply for a permit pursuant to this subdistrict, if :

- (1) Natural and finished slopes will be less than 25 percent; and,**
- (2) The disturbed or filled area is 20,000 square feet or less; and,**
- (3) The volume of soil or earth materials to be stored is 50 cubic yards or less; and,**
- (4) Rainwater runoff is diverted, either during or after construction, from an area smaller than 10,000 square feet; and,**
- (5) Impervious surfaces, if any, of less than 10,000 square feet are to be created; and,**
- (6) No drainageway is to be blocked or have its stormwater carrying capacities or characteristics modified.**

(C) Categorical Exemptions – Notwithstanding MCC 33.5510 (A) and (B) (1) through (6), the following activities are exempt from the permit requirements, except that in the Tualatin River Drainage Basin, activities which effect water quality shall require a Permit pursuant to OAR 340-41-455 (3):

- (1) An excavation below finished grade for basements and footings of a building, retaining wall, or other structure authorized by a valid building permit. This shall not exempt any fill made with the material from such excavation, nor exempt any excavation having an unsupported finished height greater than five feet.**
- (2) Cemetery graves, but not cemetery soil disposal sites.**
- (3) Excavations for wells, except that sites in the Tualatin Basin shall require Erosion Control Plans for spoils or exposed areas consistent with OAR 340-41-455 (3).**
- (4) Mineral extraction activities as regulated by MCC 33.6500 through 33.6535, except that sites in the Tualatin Basin shall require Erosion Control Plans for spoils or exposed areas consistent with OAR 340-41-455 (3).**
- (5) Exploratory excavations under the direction of certified engineering geologists or geotechnical engineers.**
- (6) Routine agricultural **crop** management practices.**

(a) Routine agricultural management practices involving fill placement.

(1) Topsoil is the only fill material that can be placed on an agricultural site under the routine agricultural management practices provisions.

(2) Topsoil placement on an agricultural site shall only be deemed a routine agricultural management practice by the Planning Director after considering the following information provided by the applicant.

a. Existing site conditions including soil types;

b. Proposed topsoil soil types;

c. Proposed location, depth and volume of topsoil placement;

d. Proposed project timing; and

e. A farm management plan demonstrating how the topsoil will be employed in conjunction with a farm use as defined in ORS Chapter 215 and demonstrating that the volume of topsoil proposed is the minimum necessary.

(3) The Planning Director may require concurrence from agencies such as, but not limited to, the Oregon Department of Agriculture and the local Soil and Water Conservation Service. The Planning Director shall make the final determination through a Type I permit registration or a Type II permit if discretion is required.

(7) Residential gardening and landscape maintenance with a disturbed area of 20,000 square feet or less and at least 100 feet by horizontal measurement from the top of the bank of a watercourse, or the mean high watermark (line of vegetation) of a water body body of water or wetland. Landscape maintenance shall include normal pruning, limbing, removal and planting of trees and vegetation in conjunction with maintaining private or public grounds. Landscape maintenance does not include preliminary ground disturbing activity for a development project.

(8) Emergency response activities intended to reduce or eliminate an immediate danger to life, property, or flood or fire hazards.

(9) Forest practices as defined by ORS 527 (The State Forest Practices Act) and approved by the Oregon Department of Forestry. Ground disturbing activity associated with conversion of land to a non-forest practices use, such as a residential use, is not exempt from the Hillside Development Permit provisions. In assessing whether an activity is a forest practice, the Planning Director may require concurrence from agencies such as, but not limited to, the Oregon Department of Forestry.

(10) Grading activities attributed to routine road maintenance when undertaken by an organization operating under Limit 10, Section 4d of the Endangered Species Act-

(11) Natural resource enhancement or restoration plans, including weed removal, approved by the Soil and Water Conservation District or the Natural Resources Conservation District, that do not include placement of buildings or structures and do not entail grading in an amount greater than 10 cubic yards..

(12) Removal of flammable vegetation and combustibile growth within 30-feet of a structure for fire safety when grading does not exceed 10 cubic yards.

(13) Ground disturbing activities for replacement of a septic tank in the same location. This exemption does not extend to replacement of a sanitary drainfield.

(14) Development projects subject to a Hillside Development Permit do not require a separate Grading and Erosion Control Permit.

§ 33.5515 APPLICATION INFORMATION REQUIRED

An application for development subject to the requirements of this subdistrict shall include the following:

- (A) A map showing the property line locations, roads and driveways, existing structures, trees with 8-inch or greater caliper or an outline of wooded areas, watercourses and include the location of the proposed development(s) and trees proposed for removal.**
- (B) An estimate of depths and the extent and location of all proposed cuts and fills.**
- (C) The location of planned and existing sanitary drainfields and drywells.**
- (D) Narrative, map or plan information necessary to demonstrate compliance with MCC 33.5520 (A). The application shall provide applicable supplemental reports, certifications, or plans relative to: engineering, soil characteristics, stormwater drainage, stream protection, erosion control, and/or replanting.**
- (E) A Hillside Development permit may be approved by the Director only after the applicant provides:
 - (1) Additional topographic information showing that the proposed development to be on land with average slopes less than 25 percent, and located more than 200 feet from a known landslide, and that no cuts or fills in excess of 6 feet in depth are planned. High groundwater conditions shall be assumed unless documentation is available, demonstrating otherwise; or****

(2) A geological report prepared by a Certified Engineering Geologist or Geotechnical Engineer certifying that the site is suitable for the proposed development; or,

(3) An HDP Form– 1 completed, signed and certified by a Certified Engineering Geologist or Geotechnical Engineer with his/her stamp and signature affixed indicating that the site is suitable for the proposed development.

(a) If the HDP Form– 1 indicates a need for further investigation, or if the Director requires further study based upon information contained in the HDP Form– 1, a geotechnical report as specified by the Director shall be prepared and submitted.

(F) Geotechnical Report Requirements

(1) A geotechnical investigation in preparation of a Report required by MCC 33.5515 (E) (3) (a) shall be conducted at the applicant’s expense by a Certified Engineering Geologist or Geotechnical Engineer. The Report shall include specific investigations required by the Director and recommendations for any further work or changes in proposed work which may be necessary to ensure reasonable safety from earth movement hazards.

(2) Any development related manipulation of the site prior to issuance of a permit shall be subject to corrections as recommended by the Geotechnical Report to ensure safety of the proposed development.

(3) Observation of work required by an approved Geotechnical Report shall be conducted by a Certified Engineering Geologist or Geotechnical Engineer at the applicant’s expense; the geologist’s or engineer’s name shall be submitted to the Director prior to issuance of the Permit.

(4) The Director, at the applicant’s expense, may require an evaluation of HDP Form– 1 or the Geotechnical Report by another Certified Engineering Geologist or Geotechnical Engineer.

(G) Development plans shall be subject to and consistent with the Design Standards For Grading and Erosion Control in MCC 33.5520 (A) through (D). Conditions of approval may be imposed to assure the design meets those standards.

§ 33.5520 GRADING AND EROSION CONTROL STANDARDS

Approval of development plans on sites subject to a Hillside Development Permit shall be based on findings that the proposal adequately addresses the following standards. Conditions of approval may be imposed to assure the design meets the standards:

(A) Design Standards For Grading and Erosion Control

(1) Grading Standards

(a) Fill materials, compaction methods and density specifications shall be indicated. Fill areas intended to support structures shall be identified on the plan. The Director or delegate may require additional studies or information or work regarding fill materials and compaction;

(b) Cut and fill slopes shall not be steeper than 3:1 unless a geological and/or engineering analysis certifies that steep slopes are safe and erosion control measures are specified;

(c) Cuts, and fills, and drainage provisions shall not endanger or disturb adjoining property or increase risk of earth movement hazard;

(d) The proposed drainage system shall have adequate capacity to bypass through the development the existing upstream flow from a storm of 10-year design frequency;

(e) Fills shall not encroach on natural watercourses or constructed channels unless measures are approved which will adequately handle the displaced streamflow for a storm of 10-year design frequency;

(f) Fills in the Sauvie Island / Multnomah Channel Planning Area generated as a result of dredging activities shall only be approved:

(i) To assist in flood control;

(ii) If not encroaching on jurisdictional wetlands;

(iii) If not located on high value soils; and

(iv) If not located in the Willamette River Greenway or Significant Environmental Concern subdistricts.

(g) A total cumulative limit of 5,000 cubic yards of fill is allowed per site in all general zoning districts, except as authorized through the Large Fill provisions in the Multiple Use Agriculture-20 and Rural Residential zones.

(2) Erosion Control Standards

(a) On sites within the Tualatin River Drainage Basin, erosion and stormwater control plans shall satisfy the requirements of OAR 340. Erosion and stormwater control plans shall be designed to perform as prescribed by the currently adopted edition of the City of Portland Erosion and Sediment Control Manual *“Erosion Prevention & Sediment Control Plans Technical Guidance*

Handbook (1994)²² and the City of Portland Stormwater Management Manual **“City of Portland Stormwater Quality Facilities, A Design Manual (1995).”** Land-disturbing activities within the Tualatin Basin shall provide a 100-foot undisturbed buffer from the top of the bank of a stream, or the ordinary high watermark (line of vegetation) of a water body, or within 100-feet of a wetland; unless a mitigation plan consistent with OAR 340 is approved for alterations within the buffer area.

(b) Stripping of vegetation, grading, or other soil disturbance shall be done in a manner which will minimize soil erosion, stabilize the soil as quickly as practicable, and expose the smallest practical area at any one time during construction;

(c) Development Plans shall minimize cut or fill operations and ensure conformity with topography so as to create the least erosion potential and adequately accommodate the volume and velocity of surface runoff;

(d) Temporary vegetation and/or mulching shall be used to protect exposed critical areas during development;

(e) Whenever feasible, natural vegetation shall be retained, protected, and supplemented;

1. A 100-foot undisturbed buffer of natural vegetation shall be retained from the top of the bank of a stream, or from the ordinary high watermark (line of vegetation) of a water body, or within 100-feet of a wetland;

2. The buffer required in 1. may only be disturbed upon the approval of a mitigation plan which utilizes erosion and stormwater control features designed to perform as effectively as those prescribed in the currently adopted edition of the **“City of Portland Erosion and Sediment Control Manual Erosion Prevention & Sediment Control Plans Technical Guidance Handbook (1994)”**²² and the City of Portland Stormwater Management Manual **“City of Portland Stormwater Quality Facilities, A Design Manual (1995).”** and which is consistent with attaining equivalent surface water quality standards as those established for the Tualatin River Drainage Basin in OAR 340;

(f) Permanent plantings and any required structural erosion control and drainage measures shall be installed as soon as practical;

(g) Provisions shall be made to effectively accommodate increased runoff caused by altered soil and surface conditions during and after development. The rate of surface water runoff shall be structurally retarded where necessary;

(h) Sediment in the runoff water shall be trapped by use of debris basins, silt traps, or other measures until the disturbed area is stabilized;

(i) Provisions shall be made to prevent surface water from damaging the cut face of excavations or the sloping surface of fills by installation of temporary or permanent drainage across or above such areas, or by other suitable stabilization measures such as mulching or seeding;

(j) All drainage provisions shall be designed to adequately carry existing and potential surface runoff to suitable drainageways such as storm drains, natural watercourses, drainage swales, or an approved drywell system;

(k) Where drainage swales are used to divert surface waters, they shall be vegetated or protected as required to minimize potential erosion;

(l) Erosion and sediment control devices shall be required where necessary to prevent polluting discharges from occurring. Control devices and measures which may be required include, but are not limited to:

1. Energy absorbing devices to reduce runoff water velocity;

2. Sedimentation controls such as sediment or debris basins. Any trapped materials shall be removed to an approved disposal site on an approved schedule;

3. Dispersal of water runoff from developed areas over large undisturbed areas.

(m) Disposed spoil material or stockpiled topsoil shall be prevented from eroding into streams or drainageways by applying mulch or other protective covering; or by location at a sufficient distance from streams or drainageways; or by other sediment reduction measures;

(n) Such non-erosion pollution associated with construction such as pesticides, fertilizers, petrochemicals, solid wastes, construction chemicals, or wastewaters shall be prevented from leaving the construction site through proper handling, disposal, continuous site monitoring and clean-up activities.

(o) On sites within the Balch Creek Drainage Basin, erosion and stormwater control features shall be designed to perform as effectively as those prescribed in the "City of Portland Erosion and Sediment Control Manual and the City of Portland Stormwater Management Manual "Erosion Prevention & Sediment Control Plans Technical Guidance Handbook (1994)". All land disturbing activities within the basin shall be confined to the period between May first and October first of any year. All permanent vegetation or a winter cover crop shall be seeded or planted by October first the same year the development was begun; all soil not covered by buildings or other impervious surfaces must be completely vegetated by December first the same year the development was begun.

Staff Contact: Adam Barber

(p) Erosion and stormwater control plans involving ground disturbing activities within a Water Body or Watercourse shall use instream BMPs designed to perform as prescribed by the currently adopted edition of the City of Portland Erosion and Sediment Control Manual and the City of Portland Stormwater Management Manual.

(q) Stream crossings shall follow Oregon Department of Fish and Wildlife fish passage regulations where native migratory fish are currently or have historically been present, except as prescribed in the Significant Environmental Concern subdistrict.

(B) Responsibility

(1) Whenever sedimentation is caused by stripping vegetation, regrading or other development, it shall be the responsibility of the person, corporation or other entity causing such sedimentation to remove it from all adjoining surfaces and drainage systems prior to issuance of occupancy or final approvals for the project;

(2) It is the responsibility of any person, corporation or other entity doing any act on or across a communal stream watercourse or swale, or upon the floodplain or right-of-way thereof, to maintain as nearly as possible in its present state the stream, watercourse, swale, floodplain, or right-of-way during such activity, and to return it to its original or equal condition.

(C) Implementation

(1) Performance Bond – A performance bond may be required to assure the full cost of any required erosion and sediment control measures. The bond may be used to provide for the installation of the measures if not completed by the contractor. The bond shall be released upon determination the control measures have or can be expected to perform satisfactorily. The bond may be waived if the Director determines the scale and duration of the project and the potential problems arising therefrom will be minor.

(2) Inspection and Enforcement. The requirements of this subdistrict shall be enforced by the Planning Director. If inspection by County staff reveals erosive conditions which exceed those prescribed by the Hillside Development, work may be stopped until appropriate correction measures are completed.

(D) Final Approvals

A certificate of Occupancy or other final approval shall be granted for development subject to the provisions of this subdistrict only upon satisfactory completion of all applicable requirements.

§ 33.5525 HILLSIDE DEVELOPMENT AND EROSION CONTROL RELATED DEFINITIONS

(A) *Certified Engineering Geologist* – Any person who has obtained certification by the State of Oregon as an engineering geologist.

(B) *Cut*:

(1) An excavation;

(2) The difference between a point on the original ground surface and the point of lowest elevation on the final grade;

(3) The material removed in excavation work.

(C) *Development Area* – The total area of alteration of the naturally occurring ground surface resulting from construction activities whether permanent or temporary.

(D) *Drainage Area* – The subject property together with the watershed (acreage) contributing water runoff to and receiving water runoff from the subject property.

(E) *Drainageway* – Any natural or artificial stream, swale, creek, river, ditch, channel, canal or other open water-course.

(F) *Earth Movement* – Any type of land surface failure resulting in the downslope movement of material . The term includes, but is not limited to, soil creep, mudflow, rockslides, block failures, and massive landslides.

(G) *Erosion* – The wearing away or removal of earth surface materials by the action of natural elements or forces including, but not limited to, wind, water or gravity.

(H) *Excavation* – Any act by which earth, sand, gravel, rock or any similar material is dug into, cut, quarried, uncovered, removed, displaced, relocated or bulldozed, including the conditions resulting therefrom.

(I) *Fill*:

(1) Any act by which earth, sand, gravel, rock or similar material is pushed, placed, dumped, stacked, pulled, transported, or in any way moved to a new location above the existing natural surface of the ground or on the top of a stripped surface, including the condition resulting therefrom.

(2) The difference in elevation between a point on the original ground surface and the point of higher elevation on a finished grade.

(3) The material used to make a fill.

(J) *Geotechnical Engineer* - A Civil Engineer, licensed to practice in the State of Oregon, who by training, education and experience is competent in the practice of geotechnical or soils engineering practices.

(K) *Geotechnical Report* – Any information required in addition to Form 1 which clarifies the geotechnical conditions of a proposed development site. Examples of this would be reports on test hole borings, laboratory tests or analysis of materials, or hydrologic studies.

(L) *Grading* – Any stripping, cutting, filling, stockpiling or any combination thereof, including the land in its cut or filled condition.

(M) *HDP Form– 1* – The form required for specified developments subject to the Hillside Development and Erosion Control subdistrict. It contains a geotechnical reconnaissance and stability questionnaire which must be filled out and certified by a Certified Engineering Geologist or Geotechnical Engineer.

(N) *Land-disturbing Activities* – Any act which alters earth, sand, gravel, or similar materials and exposes the same to the elements of wind, water, or gravity. Land-disturbing activities includes: excavations or fills, site grading, and soil storage.

(O) *Mulch* – Materials spread over the surface of the ground, especially freshly graded or exposed soils, to prevent physical damage from erosive agents such as storm water, precipitation or wind, and which shield soil surfaces until vegetative cover or other stabilization measures can take effect.

(P) *Ordinary High Water Mark* – Features found by examining the bed and banks of a stream and ascertaining where the presence and action of waters are so common and usual, and so long maintained in all ordinary years, as to mark upon the land a character distinct from that of the abutting upland, particularly with respect to vegetation. For streams where such features cannot be found, the channel bank shall be substituted. In braided channels and alluvial fans, the ordinary high water mark shall be measured to include the entire stream feature.

(Q) *Slope:*

(1) Any ground whose surface makes an angle from the horizontal; or

(2) The face of an embankment or cut section.

(R) *Slope Hazard Map* – A series of maps maintained and updated from time to time by the Office of the Director, Department of Community Services;

(S) *Spoil Material* – Any rock, sand, gravel, soil or other earth material removed by excavation or other grading activities.

(T) Stream – Areas where surface waters flow sufficient to produce a defined channel or bed. A defined channel or bed is indicated by hydraulically sorted sediments or the removal of vegetative litter or loosely rooted vegetation by the action of moving water. The channel or bed need not contain water year-round. This definition is not meant to include irrigation ditches, canals, stormwater runoff devices or other entirely artificial watercourses unless they are used to convey Class 1 or 2 streams naturally occurring prior to construction. Those topographic features resembling streams but which have no defined channels (e.g. swales) shall be considered streams when hydrologic and hydraulic analyzes performed pursuant to a development proposal predict formation of a defined channel after development.

(U) Stream Protection – Activities or conditions which avoid or lessen adverse water quality and turbidity effects to a stream.

(V) Topographic Information – Surveyed elevation information which details slopes, contour intervals and drainageways. Topographic information shall be prepared by a registered land surveyor or a registered professional engineer qualified to provide such information and represented on maps with a contour interval not to exceed 10 feet.

(W) Topsoil - The top organic and mineral rich layer of soil, typically less than 12-inches thick, that provides nutrients to growing plants.

(WX) Vegetation – All plant growth, especially trees, shrubs, grasses and mosses.

(XY) Vegetative Protection – Stabilization of erosive or sediment-producing areas by covering the soil with:

- (1) Permanent seeding, producing long-term vegetative cover;
- (2) Short-term seeding, producing temporary vegetative cover;
- (3) Sodding, producing areas covered with a turf or perennial sod-forming grass; or
- (4) Netting with seeding if the final grade has not stabilized.

(YZ) Water Body – Areas permanently or temporarily flooded which may exceed the deepwater boundary of wetlands. Water depth is such that water, and not the air, is the principal medium in which prevalent organisms live. Water bodies include rivers, creeks, lakes, and ponds.

(ZAA) Watercourse – Natural and artificial features which transport surface water. Watercourse includes a river, stream, creek, slough, ditch, canal, or drainageway.

SUBSECTION 2.3 LARGE FILLS

Staff Note: County Code defines a Large Fill as 'The addition of more than 5,000 cubic yards of material to a site (MCC 33.0005). Large Fills are only allowed in non-resource zoned property subject to approval of a Conditional Use Permit.

§ 33.0005 DEFINITIONS.

Large Fill – The addition of more than 5,000 cubic yards of material to a site. The 5,000 cubic yard threshold is a cumulative measurement including the total volume of smaller projects over time. A routine agricultural practice involving fill importation shall be deemed a Large Fill when the 5,000 cubic yard threshold above is exceeded.

Staff Note: The amendment above implements Comprehensive Plan Strategy 2.43-1 clarifying total cumulative fill limits.

* * *

§ 33.6700- PURPOSES

The purpose of the Large Fills section is to address the need for large fill sites in the unincorporated area of Multnomah County while protecting the rural character and natural resources of the County. These regulations are designed to:

- (A) To address the current problem of large fill areas and sites which have been largely unregulated;
- (B) Minimize potentially adverse effects on the public and property surrounding the fill site;
- (C) Acknowledge that natural resources, including high value soils, can be impacted by large fill sites;

Staff Note: The amendment above implements a number of Comprehensive Plan Policies designed to identify and protect natural resources including Policies 5.1, 5.2, 5.53.

- (D) Distinguish large fills as a use dependent to a large degree upon market conditions and resource size and that reclamation and the potential for future use of the land for other activities must also be considered;
- (E) Provide clear and objective standards by which these uses will be reviewed;
- (F) Recognize that large fills areas should not impede future uses otherwise allowed under the Comprehensive Framework Plan;

(G) To be consistent with state rules which do not currently list large fill sites as a use in farm and forest resource zones; and

(H) To clarify that at the time of adoption of this ordinance, Multnomah County has not made the determination that the use of large fills would or would not be consistent with other uses allowed in the farm and forest zones due to the fact that they are not uses allowed under state rules.

§ 33.6701 DEFINITIONS

(A) Topsoil - The top organic and mineral rich layer of soil, typically less than 12-inches thick, that provides nutrients to growing plants.

* * *

§ 33.6703 EXEMPT LAND USES AND ACTIVITIES

The following are exempt from the provisions of this Chapter:

(A) Routine agricultural management practices involving fill placement.

(1) Topsoil is the only fill material that can be placed on an agricultural site under the routine agricultural management practices provisions.

(2) Topsoil placement on an agricultural site shall only be deemed a routine agricultural management practice by the Planning Director after considering the following information provided by the applicant.

a. Existing site conditions including soil types;

b. Proposed topsoil soil types;

c. Proposed location, depth and volume of topsoil placement;

d. Proposed project timing; and

e. A farm management plan demonstrating how the topsoil will be employed in conjunction with a farm use as defined in ORS Chapter 215 and demonstrating that the volume of topsoil proposed is the minimum necessary.

(3) The Planning Director may require concurrence from agencies such as, but not limited to, the Oregon Department of Agriculture and the local Soil and Water Conservation Service. The Planning Director shall make the final determination through a Type I permit registration or a Type II permit if discretion is required.

§ 33.6705 EXCLUDED AREAS

Large fills shall not be allowed in:

(A) Areas designated SEC-s;

(B) Areas designated WRG;

(C)(B) Other stream areas protected by other local, state and federal agencies;

(D)(C) Jurisdictional wetlands which have not received fill permits from The Army Corp of Engineers and Division of State Lands; ~~or~~

(E)(D) 100 year floodplains;

(F) Areas of high value soils; or

Staff Note: The amendments above implement a number of Comprehensive Plan Policies designed to identify and protect natural resources including Policies 5.1, 5.2, 5.53. The policy question posed to the Planning Commission by the amendments above is whether Large Fills should also be prohibited in areas designated Willamette River Greenway (WRG) and on high value soils? Current regulations prohibit Large Fills in the SEC-stream overlay, other protected streams, in jurisdictional wetlands and in the 100-year flood plain.

(G) Lands outside the MUA-20 and RR zones.

Staff Note: Reiterates existing provisions limiting Large Fill permits to MUA-20 and RR zoning districts. This is a reminder which does not change current policy.

§ 33.6710 APPLICATION INFORMATION REQUIRED

An application for a large fill site shall include the following:

(A) A scaled site plan showing the subject property and all uses, roads, parcels, structures and water features within 1,500 feet of the fill area, when such information can be gathered without trespass;

(B) A contour map at 5' intervals showing both existing and proposed contours with datum;

(C) A geotechnical report for the entire fill area. The report shall include but not be limited to:

(1) Methods of site preparation;

- (2) Specific fill methods to be used including techniques such as benching and terracing;**
- (3) Compaction methods;**
- (4) Drainage analysis showing pre and post development runoff conditions;**
- (5) Underground drainage systems utilized for fill compaction shall have a hydraulic analysis to determine the amount of water to be accommodated;**
- (6) Known landslides and other geologically unstable areas within 1,500 feet surrounding the fill area; and**
- (7) An erosion control plan for year round protection of the fill site from erosion. The plan should include erosion control measures for:
 - (a) Winter stabilization;**
 - (b) Rainy season operations in spring and fall;**
 - (c) Summer operations;**
 - (d) Timelines for the various phases;****
- (D) Written findings demonstrating how the proposal complies with MCC 33.6715;**
- (E) A copy of the deed(s) to all parcels on which the fill site will be located;**
- (F) A written description of the project including specific timelines for all phases and proposed hours of operation;**
- (G) Application materials required to comply with MCC 33.5515 and 33.5520 (Hillside Development and Erosion Control permit standards);**
- (H) A reclamation plan submitted by a licensed landscape architect demonstrating that reclaimed surfaces conform with the natural landforms of the surrounding terrain.**

§ 33.6715 CRITERIA FOR APPROVAL

The approval authority shall find that:

- (A) The applicant demonstrates that the property shall be capable of being used as provided in the Comprehensive Plan and the underlying district after the fill operation.**

(B) The applicant has shown that the following standards can or will be met by a specified date:

(1) Access and traffic.

(a) Prior to any filling activity, all on-site roads used in the fill operation and all roads from the site to a public right-of-way shall be designed and constructed to accommodate the vehicles and equipment which will use them.

(b) All on-site and private access roads shall be paved or adequately maintained to minimize dust and mud generation within 100 feet of a public right-of-way.

(c) No material shall be tracked or discharged in any manner onto any public right-of-way.

(d) The applicant shall submit a traffic management plan that identifies impacts to existing County infrastructure and an assessment as to the ability of the existing infrastructure to withstand increased traffic loading and usage. The County Engineer shall review the submitted plan and shall certify, based on findings relating to the *Multnomah County Rules for Street Standards*, that the road(s) identified in the plan:

1. Are suitable for all additional traffic created by the fill operation for the duration of the activity, or

2. If the roads are unsuitable for all additional traffic created by the fill operation for the duration of the activity that:

A. The applicant has committed to finance installation of the necessary improvements under the provisions of 02.200 (a) or (b) of the *Multnomah County Rules for Street Standards*, and

B. A program has been developed for the number and weight of trucks that can safely be accommodated at specific levels of road improvement. Based upon those findings, the Hearing Authority may attach related conditions and restrictions to the conditional use approval.

(e) Truck movements related to the dumping of materials shall occur entirely on-site and not utilize the public right-of-way or private easements.

(f) Proposals in proximity to state highway facilities need to be reviewed by the Oregon Department of Transportation.

(2) Buffer requirements.

(a) All existing vegetation and topographic features which would provide screening and which are within 100 feet of the proposed area of fill shall be preserved. The applicant shall demonstrate that the existing screening is sufficient to ensure the project site will not noticeably contrast with the surrounding landscape, as viewed from an identified viewing areas, neighboring properties, or accessways, or

(b) If existing vegetation and topography is insufficient to obscure the site from neighboring properties, accessways or identified key viewing areas, the applicant shall propose methods of screening and indicate them on a site plan. Examples of screening methods include landscape berms, hedges, trees, walls, fences or similar features. All required screening shall be in place prior to commencement of the fill activities.

(c) The Approval Authority may grant exceptions to the screening requirements if:

1. The proposed fill area, including truck line-up area and fill areas are not visible from any neighboring properties, key viewing areas and accessways identified in (b) above, or

2. Screening will be ineffective because of the topographic location of the site with respect to surrounding properties.

(3) Signing.

One directional sign for each point of access to each differently named improved street may be allowed for any operation. Signing shall be specified and controlled by the standards of MCC 33.7490.

(4) Timing of Operation.

(a) Hours of operation shall be specified on each application. At a maximum operating hours shall be allowed from 7:00 am to 6:00 pm. Large fills shall not operate on Sundays or on New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day, and Christmas Day.

(b) The placement of fill materials shall not occur from October 1st - May 1st.

(5) Air, water, and noise quality.

(a) The applicant shall obtain and comply with the standards of all applicable permits from the Department of Environmental Quality. Copies of all required permits shall be provided to Multnomah County prior to beginning filling. If no permits are required, the application shall provide written **confirmation confirmation of that from the Department of Environmental Quality.**

(b) Sound generated by an operation shall comply with the noise control standards of the Department of Environmental Quality. Compliance with the standards may be demonstrated by the report of a certified engineer.

(6) Minimum Setbacks.

(a) For filling activities the minimum setback shall be 100 feet to a property line, or if multiple parcels, to the outermost property line of the site.

(b) For access roads and residences located on the same parcel as the filling or processing activity, setbacks shall be as required by the underlying district.

(7) Reclaimed Topography.

All final reclaimed surfaces shall be stabilized by ground control methods as specified by the landscape architect. Reclaimed surfaces shall conform with the natural landforms of the surrounding terrain.

(8) Safety and security.

Safety and security measures, including fencing, gates, signing, lighting, or similar measures, shall be provided to prevent public trespass and minimize injury in the event of trespass to identified hazardous areas such as steep slopes, water impoundments, or other similar hazards.

(9) Phasing program.

Each phase of the operation shall be reclaimed within the time frame specified in subsection (11) or as modified in the decision.

(10) Timeline.

Timelines for Large fill Conditional Use Permits shall be for a two-year period unless otherwise approved by the Approval Authority. The applicant may request a longer time period for completion as part of the initial application. If an approval has been issued, the applicant may request a longer time period for completion pursuant to the procedures for a Type III permit as described in MCC Chapter 37. If completion of a large fill project extends beyond two years, the applicant shall submit an engineering report prepared and signed by a licensed engineer at least once per year by October 31, or as otherwise specified by the Approval Authority. The engineering report shall describe at a minimum the following:

(a) The amount of fill added to the site since the start of the fill or the last engineering report and stability measures used and planned for the new fill;

(b) Future fill locations within the approved site and stability measures planned both within and outside the fill site;

(c) Incidents of landslide or other instability within and outside the fill site, clean-up efforts for these incidents, and measures used and planned to prevent future incidents.

(11) Reclamation Schedule.

(a) Reclamation shall begin within twelve (12) months after fill activity ceases on any segment of the project area. Reclamation shall be completed within three (3) years after all filling ceases, except where the Approval Authority finds that these time standards cannot be met.

(b) The owner shall provide an acceptable guarantee of financial surety to the County prior to beginning work. The applicant shall provide an estimate of the cost to implement the approved plan. Estimated costs shall be based upon the current local construction costs. The financial guarantee shall be 150 percent of the estimated cost to complete the plan. The financial guarantee may be reduced to 125 percent of the cost in cases where the property owner has a written contract with a contractor to guarantee completion of the work which has been reviewed and approved by the County. All such contracts are subject to review by the County. Prior to release of the financial guarantee, the applicant shall submit a report from a licensed professional engineer whose main area of expertise is geotechnical engineering to the County, approving the construction and reclamation and certifying its completion.

§ 33.6720 MONITORING

(A) The Planning Director shall periodically monitor all fill operations. The dates and frequency of monitoring shall be determined by the Approval Authority based upon the number and type of surrounding land uses and the nature of the fill operation. If the Director determines that a fill operation is not in compliance with the approval, enforcement proceedings pursuant to MCC 33.0910 or as deemed appropriate by the Multnomah County Attorney shall be instituted to require compliance.

(B) For multiple year projects, prior to commencement of material placement in the spring, an engineers report shall be submitted detailing the condition of the fill after the rainy season. The report shall include any remediation needed and any necessary modifications to fill placement due to failure, slumpage, slides, etc.

SECTION 3.0 ATTACHMENTS

ATTACHMENT A POLICIES AND STRATEGIES IN THE MULTNOMAH COUNTY
COMPREHENSIVE PLAN RELATED TO REGULATION OF SOIL
GRADING AND FILLING ACTIVITIES