

# Application for Type II Environmental Review

## Powell Butte Accessible Trails

### Request

The applicant requests an Environmental Review to construct two trails at Powell Butte Nature Park that will be accessible to those with disabilities.

### Site and Owner Information

**Owner:** Portland Water Bureau  
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Portland, OR 97204

**Applicant:** Tom Carter  
Portland Water Bureau  
1120 SW 5<sup>th</sup> Avenue, Room 600  
Portland, OR 97204

**Location:** SE 162<sup>nd</sup> Avenue & SE Powell Boulevard

**Site Address:** 16198 SE Powell Boulevard

**Legal Description:** TL 1100 0.63 ACRES, SECTION 12 1S 2E; TL 700 112.58 ACRES, SECTION 12 1S 2E; TL 500 6.36 ACRES, SECTION 07 1S 3E; TL 6900 11.40 ACRES, SECTION 18 1S 3E; TL 1, SEC 13 1S 2E; TL 1700 22.00 ACRES, SECTION 18 1S 3E; TL 2500, LOT 13, JENNELYND AC; TL 1800 0.56 ACRES, SECTION 18 1S 3E; TL 6700 2.67 ACRES, SECTION 18 1S 3E; TL 2300, LOT 1, BLOCK 5, ANDEREGG MEADOWS; TL 900 2.85 ACRES, SECTION 18 1S 3E; LOT 5&6 TL 3400, JENNELYND AC; TL 3700 12.41 ACRES, SECTION 18 1 S 3 E; TL 300 108.60 ACRES, SECTION 13 1 S 2 E; LOT 5-10, SYCAMORE AC; TL 400 7.88 ACRES, SECTION 13 1 S 2 E; LOT 11&12, SYCAMORE AC; LOT 13-18, SYCAMORE AC; LOT 19, SYCAMORE AC; TL 200 121.00 ACRES, SECTION 13 1 S 2 E; LOT A, JOHNSON CREEK PK.

**State ID Nos.:** 1S2E12DA 1100, 1S2E12 700, 1S3E07C 500, 1S3E18BB 6900, 1S2E13 100, 1S3E18B 1700, 1S3E18B 2500, S3E18B 1800, 1S3E18BB 6700, 1S3E18B 2300, 1S3E18B 900, 1S3E18B 3400, 1S3E18C 3700, 1S2E13 300, 1S2E13D 500, 1S2E13D 400, 1S2E13D 600, 1S2E13D 700, 1S2E13D 800, 1S2E13 200, 1S2E13C 600.

**Zoning:** Open Space (OS) with Environmental Protection (p) and Conservation (c) overlays.

**Plan District:** Johnson Creek Basin (South) Plan District

**Other Designations:** Powell Butte 2003 Master Plan as amended (LU 07-112412 CUMS, LU 10-169463 CUMS); Metro Title 13 High Value Habitat Areas; Scenic Resources Protection Plan

## INTRODUCTION

### **Reason for proposal:**

The Dogwood and Meadowland Trails at Powell Butte are intended to meet Portland Parks Bureau's standards for ADA-accessible hiking trails, which typically calls for crushed gravel surfaces on four-foot wide trails meeting certain grade and other standards. These trail standards also call for two-foot wide pullouts to allow resting and passing without leaving the trail surface.

These two trails have already been built to meet those standards under an existing active permit (#09-148418 CO). It was discovered that there are errors in the approved Exhibit C.31 of the land use decision LU 10-169463 CUMS EN AD, which had authorized this work. Exhibit C.31 limited the Dogwood Trail to 3 feet and specified a dirt surface for the Meadowland Trail.

The Portland Water Bureau is seeking to gain approval of revisions to Exhibit C.31 (and to a few of the associated detail drawings) that meet the intent of the Trail Master Plan as presented in the narrative of LU 10-169463. The specifications of width, pullouts, and trail surface material are the only substantive changes proposed to the decision in LU 10-169463. Construction management, tree protection, mitigation planting, and all other measures remain the same – in fact, most of this work has already been carried out as it was approved in LU 10-169463.

The proposed corrections are presented on a new set of plans that represent a subset of the full set of figures approved in LU 10-169463.

### **Potential outcomes:**

If the current proposal to amend the trail elements is approved, the permits will be revised to match and no further physical work will be required on these two trails.

If, on the other hand, this proposal is denied, then the Portland Water Bureau will narrow the Dogwood Trail to a three-foot width and remove the gravel from the Meadowland Trail. This work, including required restoration and mitigation, will be carried out in accordance with the approval in LU 10-169463 and the existing permit.

In either case, the vegetation planted will be monitored and maintained as specified in LU 10-169463.

### **A Note about the Figures:**

Normally, an environmental review calls for the applicant to provide plans showing the existing development and the proposed development, in part so that the two can be compared. But in this case, PWB has already constructed these trails, so in the literal sense, they are now the “existing condition.” The problem is that the literal “existing condition” in this case is also the “proposed condition.”

In order to make sense of the proposal and to be able to identify what differs from the previous approval in LU 10-169463, PWB is considering the approved plans in LU 10-169463 to be the “Existing Conditions” plans, and is proposing the trails as they are already constructed as the “Proposed Development” plans.

**Background:**

The Portland Water Bureau (PWB) gained final approval of LU 10-169463 CUMS EN AD in February 2011. This land use case modified certain elements of the earlier master plan approved under LU 00-00414 MS CU EN AD (referred to as the “2003 CUMP,” which stands for “Conditional Use Master Plan”), and included a new Trails Master Plan.

The approved development included many changes and improvements to the park’s trail system. Some trails are to be removed or relocated, while others are being reconstructed. At the end of the project, the trail system will be significantly improved.

In November, 2012, PWB received notification that a complaint had been registered with the Bureau of Development Services concerning the constructed width of the Dogwood Trail and the constructed width and surface material of the Meadowland Trail. The Dogwood Trail had been constructed with a crushed gravel tread four feet wide and periodic pullouts adding two feet to that width. The Meadowland Trail was also constructed four feet wide, and was also surfaced with crushed gravel.

Upon reviewing the approved building permit (see Sheet 558; Drawing No. Tra-Gen-0010 from permit #09-148418 CO) and the exhibits from the land use review (Exhibit C.31 from LU 10-169463), PWB discovered that the Dogwood Trail was originally approved in LU 10-169463 for a three-foot width, not four, and that the Meadowland Trail was approved for a dirt surface, not gravel. In addition, the approval in LU 10-169463 did not specify pullouts for passing on ADA trails.

Unfortunately, this is not consistent with the intention for these trails as described in the application narrative for LU 10-169463, nor with the Portland Parks Bureau’s *2009 Trail Design Guidelines for Portland’s Park System*. PWB did not catch these errors during the land use review and building permit review processes.

All other work on these two trails approved in LU 10-169463 will remain the same. The “desire” trails (informal trails created by hikers or erosion) were obliterated, trees were protected, gradients were corrected, connections to other trails were improved, erosion control methods were followed, and all ground disturbed by construction of these two trails has either already been restored and planted as specified in LU 10-169463, or will be restored and planted during the coming planting season.

**Additional non-substantive errors on figures:**

Note that during this review, PWB staff discovered a few additional errors in the “Trail Schedule,” which is a table in Exhibit C.31 (Figure 4.0 of the LUR application for LU 10-169463). All four of the trails with “Dogwood” in the name refer to detail number 7, but there is no detail number 7. Instead, detail number 6 is the “Accessible Gravel Trail” drawing. These are

not substantive errors, and PWB wishes to correct this drawing as part of the current environmental review in order to avoid any future confusion on this point. PWB does not believe it is necessary to address approval criteria in order to correct these minor errors, and so they will not be discussed further in this application.

**Existing and Intended Trail Configurations in LU 10-169463:**

In this discussion, the “intended” configuration is the proposal for these trails as described in the LUR application narrative. As noted, Exhibit C.31 as approved did not reflect the intended development.

The existing Dogwood Trail was described in the application for LU 10-169463 as a forest trail with many informal paths and no well-defined route. The existing Meadowland Trail was described as a single-track trail with pleasing curves and dips, but with an abrupt curve at one end that possessed poor sightlines to and from the adjoining Cougar trail.

The Dogwood trail was intended to be four feet wide with a crushed-gravel surface and periodic pullouts adding two feet of width for passing. These pullouts are intended to allow people using mobility devices to pass or be passed safely by other trail users. They are to be installed where trails intersect, at relatively tight curves, or where there are limited sightlines.

Meadowland Trail was intended to be realigned to become a low-gradient loop that connects to the Goldfinch Trail at two points. It was intended to be four feet wide with a crushed-gravel surface, which was to make it an accessible trail with a variety of pleasant meadow and forest-edge views.

In both cases, the crushed-gravel surfaces are intended to provide a slip-resistant surface in all weather conditions for visitors with impaired mobility or who are using mobility devices. Note that the four-foot trail width refers to the trail tread surface. There is typically a gravel apron on either side of the trail tread that extends another 6 inches or more on either side of the tread, depending on the terrain. This is shown in Detail 6 on Figure 3.1 of this application (also on Exhibit C.32 of LU 10-169463).

**Existing Conditions Proposed for Approval in this LUR:**

The informal or “desire” paths were removed in the area of the Dogwood Trail and the disturbed ground is being restored in accordance with LU 10-169463. Other trails marked for obliteration in the area of the Dogwood and Meadowland Trails have been obliterated and are also being restored in accordance with LU 10-169463.

The Dogwood Trail was constructed as a four-foot wide trail with periodic pullouts that add two feet of width. It has a crushed-gravel surface.

The Meadowland Trail was constructed (or, in places, reconstructed) as a four-foot wide trail with a crushed-gravel surface.

Note that there are three substantive differences between this proposal and the approval in LU 10-169463, which are: 1) to add one foot of width to the Dogwood Trail; 2) to add two-foot-wide

pullouts in places on the Dogwood and Meadowland Trail where needed to allow for passing; and 3) to surface the Meadowland Trail with gravel, rather than soil.

The proposed width and surface materials meet the Bureau of Parks and Recreation's *2009 Trail Design Guidelines for Portland's Park System* for accessible nature trails, and will make these trails more accessible to visitors with mobility challenges, as envisioned in the park's master plan.

The existing and proposed trail locations are shown in detail on Sheet 1 (Area 1) and Sheet 2 (Area 3) of the attached Figures. The trail construction and obliteration details are shown in Sheet 3 (TRA-1) and Sheet 4 (TRA-2). Construction management details are on Sheet 5 (TR-EC-1) and Landscape Planting details are on Sheet 6 (LND-DET-1).

### **CONFORMANCE WITH THE TRAIL MASTER PLAN**

The existing Powell Butte Trail Master Plan was approved in land use review case LU 10-169463 CU MS EN AD. The Master Plan was developed through an extensive public involvement process that is detailed in the documents for that land use review case. In summary, the process included:

- Involvement of a Project Advisory Committee comprising multiple interest groups, including neighborhood associations, the Friends of Powell Butte, recreation groups, and nature-interest groups.
- Five open house meetings over a five-month period
- Four public opinion surveys at different project stages
- Website information
- Information postings at Powell Butte
- Meetings with individual interest groups
- Multiple media contacts resulting in a variety of stories in public print and electronic media

The resulting trail plan received general support, including its stated intention of increasing the variety and number of trails and experiences accessible to people with disabilities.

The Dogwood and Meadowland Trails were intended to be upgraded to provide improved accessibility. On pages 22 and 23 of the land use application for LU 10-169463, it states (*underlined italics added to highlight important points*):

“As shown on Figure 4.0, this proposal includes an update to the trail master plan based on an extensive public involvement process. Throughout the process, the PWB and PP&R carefully considered public feedback in formulating the proposed plan and balanced ecological and recreational interests in the final design. The proposed plan considered public safety, sustainability and impact on wildlife.

“The revised trail plan ensures that the park's natural resources are maintained and enhanced. Trails will avoid the 100-acre wildlife area and trails that adversely impact

potential wetlands or habitat will be removed. The public and PAC concurred that the final design provides a variety of trail experiences.

“*Trail design was driven by the City’s 2009 Trail Design Guidelines for Portland’s Park System* (Portland Parks & Recreation, May, 2009), which provides a range of width, cross-slope, longitudinal slope, surface, and sight distance possibilities dependent on the type of user. The proposed design is a network of mainly soft surface trails, which provide a variety of routes and loops. Some of the key design components include:

- Realign Dogwood Trail: Provide accessible forest experience: Move trail away from property lines, connect to PWB Vivian site access.
- (bullets listing other trails omitted)
- Improve Meadowland Trail: Provide accessible trail through meadow, oak, and mixed forest communities.”

But as noted previously, Figure 4.0 of that proposal – and in particular the Trail Schedule table in that figure – displayed these two trails incorrectly. The result was that the approved exhibit in that land use case does not, in fact, show these trails meeting the guidelines for accessibility set forth in the City’s 2009 Trail Design Guidelines.

The development proposed in the present application will correct this situation by approving construction of these trails in accordance with the City’s 2009 Trail Design Guidelines. The guidelines state:

#### “DEFINITION

PP&R’s accessible hiking trails have surface, slopes, and width that meet or exceed the dimensions of the *Forest Service Trail Accessibility Guidelines (FSTG)*. Trails with a longitudinal slope of less than 1 vertical to 20 horizontal and cross-slope that is less than or equal to 2% can be traversed by wheelchairs. Trail surfaces are firm and stable. Barriers such as steps, rocks or roots do not exist although the natural surface may have some irregularities, not to exceed 2” high. The goal is to provide access to natural settings without adding pavement. Path width is minimized unless high use is expected. Landings or wider portions of the trail are provided for resting and passing other trail users.

#### USERS

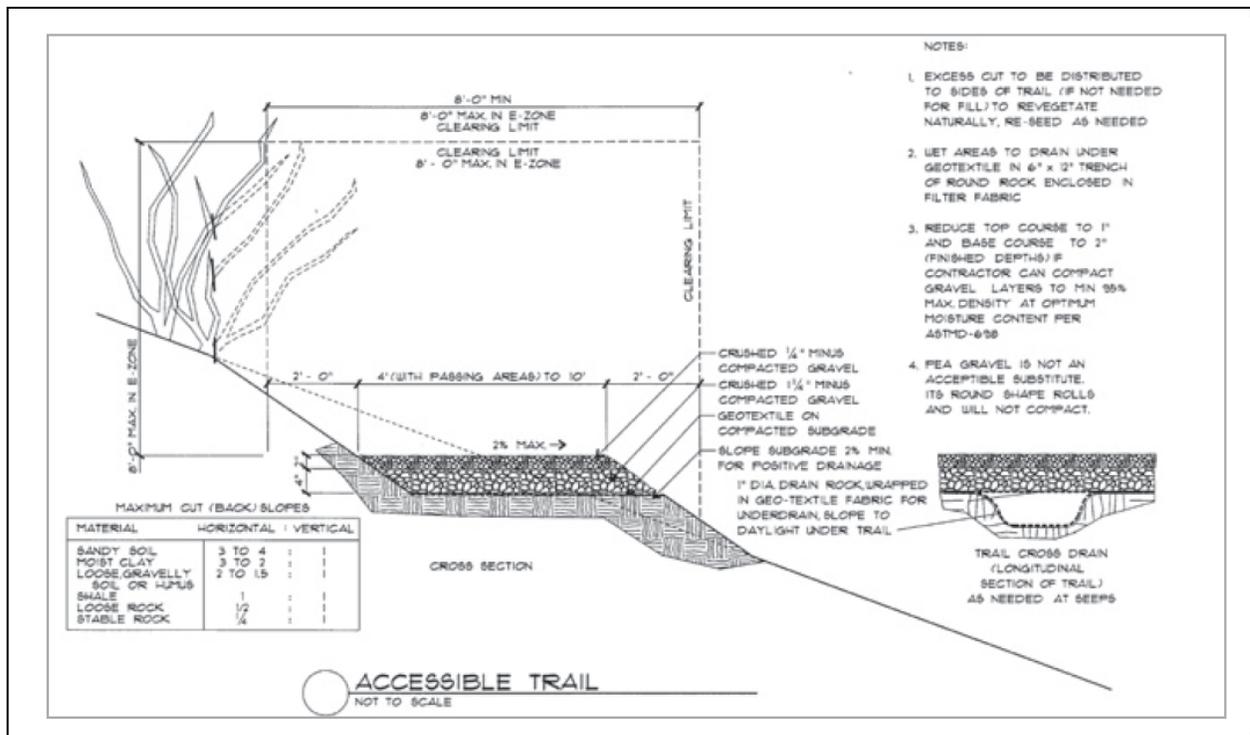
The accessible hiking trail requires fair balance and fitness. Single-file walking and (sometimes) running are desired use at minimum width. Wheelchairs (motorized or human-powered) and mobility scooters may be used, but surface is not as reliably firm and slip-resistant as a paved walking trail.

#### MATERIALS

Native soil and rock are most common although crushed rock or wood fiber are used as needed. Hand or guard railings and boardwalks may be added if necessary. Excellent drainage and gravel may be necessary at wet sites to provide slip-resistant surface through winter. Fibar is the brand name of an engineered, interlocking wood fiber that is accessible to wheeled modes. Equivalent products

produced locally may be substituted. Wood chips biodegrade and are difficult to maintain so provide width for hauling additional material.”

Width	4' (with passing areas) - 10'
Surface	Soil, gravel, Fibar (or engineered wood-fiber equivalent), wood chips
Longitudinal Slope	0 - 5% (8% for max. 50')
Cross-Slope	2%
Radius	Aesthetic consideration
Sight Distance	N/A except road crossings
Easement Width Tread	+ 10' min.
Side Slope	Varies
Vertical Clearance	8'
Horizontal Clearance	2' from side of tread



(Table and illustration from 2009 Trail Design Guidelines for Portland's Park System, Portland Parks & Recreation, May, 2009.)

To summarize, the *2009 Trail Design Guidelines* and the illustration of accessible trails it contains specify that accessible trails be constructed at least four feet wide with passing areas (bumpouts or pullouts) providing additional width in places to allow enough room for trail users to pass each other using mobility devices. The surface should be firm and stable, and gravel or other surfacing material is used where needed to ensure a slip-resistant surface through winter.

In order to provide the expanded offering of accessible trails at Powell Butte, as was envisioned in the 2010 Trail Master Plan, PWB proposes to retain the Dogwood and Meadowland trails as constructed: four feet wide, crushed gravel surface, and with pullouts on the Dogwood Trail to allow users to pass each other easily, with or without mobility devices.

### **Site Description:**

The Powell Butte Nature Park covers approximately 610 acres in southeast Portland, south of SE Powell Blvd., north of Johnson Creek and the Springwater Corridor, and roughly between SE 143<sup>rd</sup> and SE 163<sup>rd</sup> Avenues.

The top of the butte is mainly open meadow with scattered trees. The meadow areas contain a great deal of invasive and nuisance non-native ground cover plants and shrubs. The first phase of work on Powell Butte Reservoir #2 has planted more than 900 trees that will eventually form an oak savannah landscape on parts of the butte. The sides of the butte are predominantly forested with Douglas fir, Bigleaf maple, Red alder, and Western red cedar. The forested areas are mostly within the environmental protection zone, while the meadows are in the environmental conservation zone (Figure 2.0).

The “Park Center” is being constructed east of the water reservoirs, and consists of the Interpretive Center, Caretaker’s House, Maintenance Building and Yard, and Visitor Parking Lot. Most park trails lead to this area, or connect with trails leading here.

### Zoning:

The park is generally zoned Open Space (OS) with Environmental Conservation and Environmental Protection overlays (see zoning map, Figure 1.0). It lies within the South Subdistrict of the Johnson Creek Basin Plan District.

### Natural Resources:

The project site is mapped in the Johnson Creek Basin Protection Plan as Resource Site #29. Resource values at the site include water, storm drainage, aesthetics, scenic, pollution and nutrient retention and removal, sediment trapping, recreation, education, and heritage. All of these values are found in some form within Powell Butte Nature Park.

### Soils

Based on historic well logs along the lower slopes of Powell Butte, as well as visible patterns of seepage at different elevations, relatively little precipitation infiltrates the cemented gravels that underlie most of the Butte. As a result, water is temporarily stored within the layers of fine-grained soils (called loess) above the cemented gravels, and moves laterally above the cemented-gravel aquitard to seep out onto the upper side slopes of the Butte.

This groundwater flow is further affected by fragipan layers occasionally found at shallow depths in the soil profile. Fragipans are weakly cemented silt layers that also slow the movement of rainwater downward through the topsoil, contributing to the lateral movement of shallow groundwater and surface water during wetter periods of the rainy season.

As a result, much of Powell Butte Nature Park has standing puddles and extensive muddy areas during the wet season.

#### Vegetation and Wildlife Habitat

The vegetation at Powell Butte falls into two primary categories. Approximately half of the site is a conifer-dominated forest, located mostly around the perimeter. The other half is open meadow (pasture) with a history of disturbance, which is currently dominated by non-native species.

The fields on top are now dominated by non-native grasses including tall fescue (*Festuca arundinacea*), bentgrass (*Agrostis* spp.), orchardgrass (*Dactylis glomerata*), and sweet vernal grass (*Anthoxanthum odoratum*). Common weedy forbs include ox-eye daisy (*Chrysanthemum leucanthemum*), Canada thistle (*Cirsium arvense*), and Saint John's wort (*Hypericum perforatum*).

The forest is dominated by Douglas-fir (*Pseudotsuga menziesii*), but often contains significant quantities of big leaf maple (*Acer macrophyllum*) as well. Some stands appear to be from 100 to 120 years old or even older, although much younger stands (50 to 60 years) are also present. Shrub cover is usually moderately dense with a variety of species, and sword fern (*Polystichum munitum*) is typically dense in the herb layer.

Drainageways, moist aspects, and wetter areas typically have western red cedar (*Thuja plicata*), which is often mixed with red alder (*Alnus rubra*) on the upper end. The edges of the forest typically have an assortment of deciduous trees and shrubs that includes red alder, big leaf maple, cascara (*Rhamnus purshiana*), California hazel (*Corylus cornuta* var. *californica*), and sweet cherry (*Prunus avium*).

This variety of vegetation, along with the seasonal wetlands and ephemeral drainageways, creates a corresponding variety of habitats. Powell Butte Nature Park provides important wildlife habitat for a diversity of bird, mammal, and amphibian species. For example, the park is home to rabbits, ring-necked pheasants, ground squirrels, raccoons, gray foxes, skunks, bats, owls, chipmunks, coyotes, and black-tailed deer.

## Impacts and Mitigation

The impacts to functional values resulting from construction of the entire trail system in accordance with the approved Trails Master Plan are summarized in the table below, copied from the application for LU 10-169463.

*Portion of Table 7, Impact and Mitigation Summary, from application for LU 10-169463.*

Project Component	Description	Schedule	Disturbance	Impact to Functional Values	Site Restoration and Mitigation
Updated Trail Master Plan improvements	Improvements to trail system, including ADA accessible trail improvements, culvert replacements (with bridges), boardwalks, viewpoints and interpretive signs	<p><u>Construction:</u> March 2011– Nov 2013</p> <p><u>Restoration:</u> 2013</p>	<p><u>Temporary:</u> Minor grading in disturbance area</p> <p><u>Permanent:</u> .Non-ADA trails will be compacted soft surface, disturbance area will be replanted with native groundcover; ADA trails will be paved with pervious asphalt concrete or built with 1/4" minus crushed aggregate that meet ADA standards. Five new bridges and two new boardwalks will be installed.</p>	<p>Temporary change to storm drainage, pollution/nutrient retention, sediment trapping functions due to culvert removal. Temporary recreational impacts due to closure of trails during construction work, including culvert removal and bridge construction. Scenic values will be improved through replacement of culverts with wooden bridges and removal of trails from potential wetlands.</p> <p>No impacts to native trees anticipated; however, it is possible that some hazard trees may need to be removed for safety.</p>	<p>Five culverts and associated fill will be removed. Multiple existing trails through potential wetlands will be removed or relocated.</p> <p>While not expected, if hazard trees require removal they will be replaced consistent with the CUMP standards.</p>

The only differences between the development approved in LU 10-169463 and this application are as follows:

### Dogwood Trail

The Dogwood Trail was constructed four feet wide, which is one foot wider for its entire length than LU 10-169463 approved. In addition, there are 10 two-foot-wide pullouts, which were constructed to allow users to pass each other. These pullouts are two feet wide and 10 feet long. The trail as constructed is about 3,000 feet long. The additional foot of width results in about 3,000 additional square feet of trail surface plus 200 square feet of pullouts. Therefore, approving the added width to the Dogwood Trail will result in adding about 3,200 square feet (0.07 acres) of permanent trail development to the previous approval in LU 10-169463.

### Meadowland Trail

The Meadowland Trail is to be surfaced with gravel to provide a year-round slip-resistant surface. This trail was already approved to be four feet wide, so there will be no additional developed area.

### Total disturbance

Both trails have already been constructed without removing or damaging any trees. The approved construction management plans were followed, and any temporary disturbance has been or is being restored as specified in LU 10-169463.

Construction of all trails approved in LU 10-169463 was to result in 2.7 acres of permanent new disturbance and 6.8 acres of temporary disturbance, while the approved trail removals will result in restoration of 4.4 acres. Therefore, the total area of permanent trails was to be 5.1 acres. If the increased width of the Dogwood Trail is approved, this will result in an additional 0.07 acres of permanent disturbance, an increase of about 1.4% in the area of new trails. This remains within the Type II review threshold established in the 2003 Conditional Use Master Plan (CUMP) of 110% of the area of the approved use.

The 2003 CUMP did not set forth a figure for the acreage approved for disturbance, but this figure was estimated in subsequent reviews using the approved CUMP maps. The total disturbance area approved by the 2003 CUMP is 93 acres (reported on p. 9 of the LU 09-125820 EN Notice of Decision). This figure – 93 acres – is the total allowable disturbance area within the CUMP area, and has not been modified by subsequent decisions.

In LU 10-169463, the approved plan, including the trail obliteration and new construction, has a total disturbance area of approximately 88 acres, 5 acres less than that approved by the 2003 CUMP. If the current proposal is approved, the total disturbance area will be approximately 88.1 acres. This is within the total allowed disturbance area approved in the 2003 CUMP.

#### Other Impacts

Construction of the Dogwood and Meadowland Trails did not involve replacement of any culverts. Neither of these trails obstructs or adversely affects any Scenic Viewpoints. No trees were removed in the modification of these trails. All temporary disturbance from the construction of these trails has been or is being environmentally restored.

#### Restoration and Mitigation plantings

Many “desire” trails in the Dogwood Trail area were obliterated and restored, and the Meadowland Trail was realigned and its former alignment restored. This work was part of the overall environmental mitigation plan approved in LU 10-169463.

The specific mitigation for creating new permanent disturbance areas for all trails at Powell Butte was the obliteration of 4.4 acres of trails. The desire trails in the Dogwood Trail area were obliterated and restored as part of this. All the obliterated trails and temporary disturbance areas are being re-seeded with native plants as part of the Powell Butte Reservoir #2 Project in accordance with the approved planting plans in LU 10-169463 and in permit #09-148418 CO.

PWB proposes no additional mitigation. The proposed mitigation for construction of trails in accordance with the new Trail Master Plan approved in LU 10-169463 was to be the obliteration of all desire trails identified in the field and the restoration of all areas disturbed by trail construction and obliteration.

The excerpt included above from Table 7 in the application for LU 10-169463 shows that the Accessible Trails were considered to be part of the proposed development, and therefore the proposed mitigation included mitigation for making Dogwood Trail four feet wide with periodic turnouts. The current application proposes only to correct the approved Exhibit C.31 to match the

development proposed in the application for LU 10-169463. All unnecessary and undesirable trails were identified and are being obliterated and restored under permit #09-148418 CO. The proposed increase in permanent disturbance results only from correction of the trail dimensions approved in the Table on Exhibit C.31

The overall mitigation activities on the butte are quite extensive. In accordance with the approvals in LU 09-125820 and LU 10-169463, PWB is carrying out environmental mitigation on approximately 35 acres of Powell Butte as well as restoration of about 76 acres disturbed by construction of Reservoir #2 and the other approved facilities.

### **Construction Management**

PWB developed a construction management approach specifically for use in trail construction. This approach was approved in LU 10-169463, was approved in permit #09-148418 CO, and was followed in constructing these trails.

If the current proposal is approved, there will be no further alterations of the Dogwood and Meadowlands Trails. If the current proposal is not approved, any alterations that PWB makes to these trails will be carried out in conformance with the construction management approach approved in LU 10-169463 and the construction permit #09-148418 CO, which is still active.

The Construction Management Plan as proposed for LU 10-169463 included the following elements for trail construction:

“Construction management measures for trails will vary by trail type: soft and hard surface trails.

Soft surface trails will be constructed using hand tools or with small motorized equipment. Disturbance areas will vary by trail type and location, limited as shown in Figure 4.0 (*Note: this is Exhibit C.31 in LU 10-169463*). Existing vegetation in the trail corridor will be stockpiled and utilized to restore decommissioned trails. Fall line trails will be relocated to eliminate erosion impacts and improve user safety. Trails will be graded to direct surface water away from trail surfaces. Cut and fill slopes will be covered with native forest debris to encourage re-establishment of plants.

Hard surface trails include asphalt and gravel trails. These include accessible routes and service roads that are utilized as trails. Trail construction includes grading of the trail bed, placement of rock, compaction and where specified, installation of asphalt. The graded areas adjacent to the trail will be reseeded or covered with native forest debris.

Erosion control for trail work will include placement of coir wattles in all places where active erosion is taking place or where earthwork activities require protection of adjacent resources. Generally this includes all trail construction and culvert removal and stream restoration. Detailed erosion control methods are shown on Figures 7.11 and 7.12. (*Note: these are Exhibits C.73 and C.74 in LU 10-169463. See TRA-EC 1 in this application..*)

Trail decommissioning will include a variety of techniques that are intended to minimize the erosion that is taking place in the trail bed, encourage plants to reestablish, and obscure the abandoned route. Techniques will include scarification of the trail bed, regrading of the trail bed, placement of earth at gullies, planting of salvaged plants, seeding of native plants, and placement of woody debris to discourage use.”

The trail construction details and Construction Management Plan are reflected in the approved exhibits in LU 10-169463. The exhibits that relate to the current proposal, and which are included in Appendix A of this application for reference purposes, are

- C.31. Figure 4.0 Trails - Composite
- C.32. Figure 4.1 Trails – Construction Details
- C.33. Figure 4.2 Trails – Typical Cross-Sections
- C.34. Figure 4.3 Trail Obliteration
- C.75. Figure 7.13 Trails – Construction Management Plan
- C.76. Figure 7.14 Trails – Erosion control details

The Dogwood and Meadowland Trails were constructed under permit number 09-148418 CO, which was approved in conformance with the approval of LU 10-169463. All approved construction methods were followed.

### **Alternatives Analysis**

There are essentially two practicable alternatives: 1) alter the newly-constructed trails to meet the specifications approved in LU 10-169463; or 2) approve the current proposal for a wider Dogwood Trail and a gravel-surfaced Meadowland Trail.

Moving or obliterating these trails was not considered to be a practicable alternative. The Trail Master Plan, which includes the approved trail locations, was revised during an extensive public involvement process leading to the approval of LU 10-169463. These trail locations satisfy the multiple purposes and goals of the plan, which include public safety, sustainability, impact on wildlife, and the provision of a variety of trail experiences. If the trails are relocated or obliterated, they are unlikely to conform to the Trail Master Plan.

The table below (on the following page) is from Table 4 of the application for LU 10-169463. It summarizes the desired changes from the trail plan in the 2003 CUMP, explains the reasons for the changes, and compares the impacts from approval of the changes to the Trail Master Plan.

Under both “Trail System” and “ADA Accessibility,” the table lays out the desire for accessible additions to the trail network in order to provide additional recreational opportunities for the elderly and disabled. As discussed above in this application, the Meadowland and Dogwood trails were envisioned as elements in the expansion of accessible trails.

If these two trails were either obliterated or relocated, it would not meet the amended Trail Master Plan’s purpose of expanding the network of accessible trails, and in particular the purpose of meeting the “demonstrated public demand for an accessible forest experience.” Therefore, these were not considered to be practicable alternatives.

Alternative 1 – Modify the trails to match the specifications approved in LU 10-169463.

The Meadowland Trail would be partially excavated and re-surfaced with soil. The Dogwood Trail would be partially re-excavated. Disturbed areas would be replanted. The recently re-planted temporary disturbance areas would be re-disturbed. After these areas are restored again, the long-term developed area would be equal to the approved amount of development in LU 10-169463, which approved a total of 5.1 acres of trail area. However, the effect would be that the Trail Master Plan’s goal of an expanded network of accessible trails and recreation opportunities would not be met as envisioned.

Project Component	Proposal Compared to 2003 CUMP	Reason for Change	Comparative Impacts	2003 CUMP Site Plan	Current LUR Plan
<b>Trail Plan Amendment</b>					
Trail System	<p>Improve various trail segments and realign existing trails to provide a network of mostly soft surface, multi-use trails. Decommission “desire” trails (informal trails developed by erosion/human use). Remove trails from potential wetlands.</p> <p>Realign base-to-summit trails, improve switchbacks and neighborhood access while reducing erosion impacts.</p> <p>New trails are designed to increase contiguous habitat areas.</p>	<p>To meet demonstrated public demand for an accessible forest experience, with a variety of routes and loops with more curves and length.</p> <p>Reduce fall-line impacts (e.g., erosion/slippage) and maintenance concerns.</p> <p>Increase accessibility for limited-mobility users and to local residents.</p> <p>Minimize disturbance in sensitive areas and potential wetlands.</p> <p>Create more accessible routes.</p>	<p>Additional grading is required to build and reroute trails, but overall permanent impact is reduced.</p> <p>Trails are removed from wetland areas, and culverts at five stream crossings are replaced by bridges.</p> <p>Enhanced erosion-control design.</p> <p>Increased safety.</p>	Figures 4-D4 and 4-D5	Figures 4.0 thru 4.7
ADA accessibility	<p>Add and widen landings to improve accessible route to Mountain Finder. Extend paving to mountain-view finder. There will also be formal seating such as benches and tables in the Park Center area along ADA accessible trails where appropriate.</p> <p>Increase number of trails that are completely accessible or higher challenge accessible.</p>	<p>To provide additional opportunity for limited-mobility users to take advantage of trail system and scenic vistas.</p>	<p>Increased recreational opportunity for elderly and disabled.</p> <p>Minor additional trail grading and paving.</p>	Figure 4-D4	Figure 3.1

*(Portion of Table 4 – CUMP Amendments, from page 39 of Exhibit A.1 of LU 10-169463.)*

Alternative 2 – Approve construction of the trails to match accessible trail specifications.

Both the Meadowland and Dogwood Trails would be left as they were constructed. There would be no additional temporary disturbance. There would be a 1.4 percent increase (approximately 0.07 acres) in the developed area of trails in the park. The effect would be that the goal of an expanded network of accessible trails and recreation opportunities would be met as envisioned in the Trail Master Plan.

The mitigation approved in LU 10-169463 is obliteration of 4.4 acres of “desire” trails and restoration of these areas. Trail construction, obliteration, and restoration as approved in LU 10-169463 was to result in 2.7 acres of permanent new disturbance and restoration of 4.4 acres of obliterated trails. This was proposed as the mitigation for all trails. As noted above, the Dogwood and Meadowland trails were intended to be accessible, so the mitigation approved in LU 10-169463 includes mitigation for the proposed accessible trail dimensions and pullouts.

In addition, the previously-approved mitigation for trail construction was the obliteration and restoration to a natural condition of all unnecessary or undesirable trails. All such trails have been identified and are being obliterated and restored under permit #09-148418 CO. Therefore, there are no more such trails identified to remove.

If no additional mitigation is performed, the addition of 0.07 acres of trail to the trail network will result in creation of a total of about 2.8 acres of new trail disturbance (as compared to 2.7 acres) and a total of 5.2 acres of permanent trails (as compared to 5.1 acres). PWB proposes that the obliteration and environmental restoration of all unnecessary or undesirable trails that was approved in LU 10-169463 is sufficient mitigation, and that no additional mitigation is needed to ensure that there is no net loss of environmental resources on the butte.

### **Summary of Proposal:**

PWB seeks approval to leave the Dogwood and Meadowland Trails as they have been constructed. This is different from the specifications that were approved in Exhibit C.31 in LU 10-169463, but is in accordance with the proposals described and justified in Exhibit A.1 of that LUR.

Although the narrative application for LU 10-169463 (Exhibit A.1) clearly described that these two trails are to be constructed to meet accessibility standards and expand the accessible trail network on Powell Butte, PWB mistakenly proposed specifications in Exhibit C.31 of that review that did not achieve this objective. This proposal is intended to correct that mistake.

The specific differences for which PWB seeks approval are 1) increased width from three feet to four feet plus periodic two-foot wide passing areas (“pullouts”) for the Dogwood Trail; and 2) gravel surface instead of soil surface for the Meadowland Trail. These two changes are reflected in Sheets 1 and 2 (labeled “Area 1” and “Area 3”) of the current proposal, which are modified from the approved plans in permit #09-148418 CO. Trail construction and obliteration details are illustrated in Sheets 3 and 4 (TRA-1 and TRA-2), construction management details are in Sheet 5 (TR-EC-1), and planting details are in Sheet 6 (LND-DET-1).

## **ENVIRONMENTAL REVIEW FINDINGS**

The review procedure and approval criteria are determined by the 2003 CUMP (specifically, Condition H of the Order of City Council for LUR 00-00414 CU MS EN EV AD). The 2003 CUMP established thresholds for future reviews of projects within the Powell Butte CUMP boundary and as well as approval criteria for those reviews.

This section provides findings to support assignment of the Type II procedure and approval criteria to this proposal, and to support approval of an environmental review under these approval criteria. The thresholds and criteria set forth in the 2003 CUMP have not been amended in subsequent land use reviews.

## **Type II Review Procedure Thresholds**

The applicable procedure is determined by the thresholds established by Condition H of LU 00-00414, which are as follows:

*[The development, use or action is] allowed by the Master Plan and*

- *Does not require a higher level of review.*
- *Except for trail improvements, the development or use and disturbance area is outside of the Environmental Protection Zone.*
- *The development or use is no greater than 110% larger or more intense than that shown on the approved Master Plan site plan.*
- *The disturbance area is no greater than 110% of that shown on the approved Master Plan site plan.*

*OR*

- *Construction of new trail or relocation of an existing trail.*

Item by item:

- The proposed project is allowed by the Master Plan, which specifically approves construction of trails in these locations as part of the Trails Master Plan (as amended by LU 10-169463).
- Outside the area covered by this Master Plan, discretionary review of public recreational trail construction in an Environmental Overlay Zone is by Type I procedure (33.430.230.A), so the Zoning Code does not require a level of review higher than Type II. The CUMP imposes Type III reviews for boundary expansions or contractions; this proposal does not change the master plan boundaries in any way. The CUMP imposes a Type III review for uses not allowed by the Master Plan, but trails are specifically allowed by the Master Plan as approved in LU 10-169463. Based on these thresholds, the CUMP does not require a level of review higher than Type II. Finally, Type III review is required for proposals allowed by the Master Plan but exceeding the thresholds for the Type I or II review – and this requirement cannot be addressed until all thresholds have been considered. This is discussed briefly at the conclusion of this section.
- The proposal, although partly in the Environmental Protection Zone, is a trail improvement which is excepted by this threshold.
- The development adds 0.07 acres, or 1.4%, to the total area of the trail network. It is less than 110% of that approved by the Master Plan as amended by LU 10-169463.
- The disturbance area does not change, and is thus less than 110% of that approved by the Master Plan.

**OR**

- The current proposal is not for new or relocated trails, but rather for improvements to two previously-approved trails. The locations of the trails do not change from those approved in LU 10-169463.

In summary, the current proposal does not exceed any of the thresholds for Type II review under the 2003 CUMP, is allowed by the Master Plan, and also would not require a higher level of review under the Zoning Code. It also does not involve any elements that would trigger a Type III review (e.g., expansion of the CUMP boundaries). Therefore, this proposal should be reviewed under the Type II Approval Criteria laid out in the 2003 CUMP.

### **Review of CUMP Approval Criteria:**

The 2003 CUMP establishes the following Approval Criteria for a Type II Review:

***1. The development or use is in substantially the same area as shown on the approved Master Plan site plan.***

The trails will remain in substantially the same locations approved in LU 10-169463. These locations are shown on Sheet 1 (Area 1) and Sheet 2 (Area 3), which are adapted from the approved plans of permit #09-148418 CO. That permit was approved in conformance with Exhibit C. 31 of LU 10-169463, which is the approved site plan for the Trails Master Plan.

***2. The construction management plan prevents adverse impacts to areas outside of the approved disturbance area.***

All ground disturbing activity during trail construction followed the approved methods and materials approved in LU 10-169463 and permit #09-148418 CO. Trail construction hours of operation are limited to between 7 AM and 6 PM, Monday through Friday. The applicable methods and materials are presented on Sheet TR-EC-1 (Sheet 5 of 6). At project completion, all temporary construction management measures will be removed and the areas will be planted and restored.

Special construction management measures were used, and will continue to be used, in trail construction and removal. Construction management measures for trails vary by trail type: soft and hard surface trails. Soft surface trails are constructed using hand tools or with small motorized equipment.

Dogwood and Meadowland Trails are categorized as “hard surface” trails because they are proposed to have gravel surfaces. Hard surface trails include accessible routes as well as service roads that are utilized as trails. Hard-surface trail construction includes grading of the trail bed, placement of rock, compaction, and where specified, installation of asphalt. The graded areas adjacent to the trail are reseeded or covered with native forest debris.

Disturbance areas and construction details vary by trail type and location, and are illustrated in Figures 5.0 and 5.1.

Existing vegetation in each trail corridor was stockpiled and is being used to restore decommissioned trails. Fall line trails were relocated to eliminate erosion impacts and improve user safety. Trails were graded to direct surface water away from trail surfaces. Cut and fill slopes were covered with native forest debris to encourage re-establishment of plants.

Erosion control for trail work includes placement of coir wattles in all places where active erosion is taking place or where earthwork activities require protection of adjacent resources. Generally this includes all trail construction, culvert removal, and stream restoration. Detailed erosion control methods are the same as approved in LU 10-169463, and are shown on Exhibits C.75 and C.76 from that decision in Appendix A.

Trail decommissioning employs a variety of techniques intended to minimize the erosion that can take place in the trail bed, encourage plants to reestablish, and obscure the abandoned route. Techniques include scarifying the trail bed, re-grading the trail bed, placing earth at gullies, planting salvaged plants, seeding native plants, and placing woody debris across decommissioned trails to discourage future use.

Together, these construction management methods confine disturbance caused by trail work to the approved disturbance area and prevent erosion or other adverse construction impacts from affecting adjacent areas.

### ***3. A mitigation/restoration plan ensures no net loss of resource values.***

The project site is mapped in the Johnson Creek Basin Protection Plan as Resource Site #29. Resource values at the site include water, storm drainage, aesthetics, scenic, pollution and nutrient retention and removal, sediment trapping, recreation, education, and heritage. All of these values are found in some form within Powell Butte Nature Park.

The site's water quality functions and storm drainage functions will not be affected by the proposal. Both trails will remain permeable and avoid creating additional runoff or affecting its quality.

The aesthetic and scenic functions of the site are also discussed below under criterion #4, where it is shown that the scenic viewpoints are not affected by the proposal. Gravel surfacing on the Meadowland Trail is a natural material that provides an aesthetically pleasing appearance as it ages and the trail edges soften with plant growth. The extra width proposed for the Dogwood Trail will maintain the aesthetic appearance of its setting, especially as the trail edges soften with the accumulation of forest litter and vegetation.

The proposed changes to the Meadowland and Dogwood Trails do not have any effect on the site's pollution and nutrient retention and removal or sediment trapping functions. The proposed surfaces are permeable and non-polluting themselves so these functions will be preserved.

The site's recreation functions will be significantly improved because the proposed changes to these two trails will enlarge the network of trails accessible to visitors with disabilities.

The site's education functions will be marginally improved by the proposed changes because improvements to the Dogwood Trail will provide opportunities for disabled visitors to experience and learn about Powell Butte's forest habitat. There are currently no accessible trails in forest habitat at Powell Butte, and the Dogwood Trail as approved in LU 10-169463 does not meet accessibility standards.

The site's heritage functions include its farming past and a "heritage" tree on the southwest side of the butte. The current proposal will have no effect on these functions.

Wildlife habitat is an important natural resource at Powell Butte. Overall, construction of the trail master plan approved in LU 09-149643 resulted in creation of approximately 2.7 acres of new trail area and 6.8 acres of temporary disturbance area. To mitigate for this, approximately 4.4 acres of trails were obliterated and restored to a natural condition in accordance with the plans approved in LU 09-149643. This work restored the disturbed areas of all trails removed from the trail network, all *ad hoc* (also called “desire”) trails that were created by erosion or visitors, and the abandoned sections of trails that were moved. The obliteration and restoration work resulted in a net reduction of about 1.7 acres of permanent disturbance due to trails on the butte (i.e., 4.4 acres of restoration minus 2.7 acres of new permanent trail area).

If the current proposal is approved, it will result in the creation of about 0.07 acres of permanent trail disturbance in addition to that approved in LU 09-149643. Nevertheless, the net effect of approving these trails in accordance with ADA accessibility goals still results in a net reduction of about 1.6 acres of permanent trail disturbance on the butte.

The amount of area that is disturbed by trail development is a reasonable proxy for the quality of habitat resource values in the Master Plan area. The net reduction in the area of permanent trail disturbance indicates that there will be no net loss of resource values as a result of building the Trail Master Plan to meet the stated accessibility goals.

***4. Views from Scenic Viewpoints shown on page 68 of the Scenic Resources Protection Plan will not be blocked or impaired.***

The scenic resources protected at Powell Butte’s Scenic Viewpoints are described in the *Scenic Resources Protection Plan* as “striking views to the northwest, north, southeast, and south from many vantage points. Several mountains are visible, including Mt. Hood.” The protected view corridors provide distant vistas.

The Dogwood Trail is not visible from any of the Scenic Viewpoints indicated. The proposed gravel surface on the Meadowland Trail will not block or impair the Scenic Viewpoints because it is flush with the ground and constructed of natural materials. Therefore, approving accessible design for these trails will not block or impair the views from the Scenic Viewpoints.

***5. Designated outdoor storage and maintenance areas and maintenance buildings will be landscaped to mitigate for adverse impacts to scenic views from Scenic Viewpoints shown on page 68 of the Scenic Resources Protection Plan.***

The current proposal for these trails is unrelated to this approval criterion. They are not near the maintenance areas or buildings, and they will have no additional traffic impacts.

***6. There are no additional traffic impacts that require traffic improvements or additional parking spaces.***

The current proposal for these two trails will not create any additional traffic impacts or create the need for additional parking spaces. The proposed changes result from an error in a table in one exhibit in LU 10-169463. The analysis of traffic impacts resulting from all development

proposed in LU 10-169463 included the assumption that these two trails would be constructed to meet accessibility standards. Therefore, any potential traffic impacts were already included in the previous land use review case, and the current proposal will have no additional impacts.

***7. All Zoning Code requirements are met unless superseded by the Master Plan***

All Zoning Code requirements applicable to recreational trails on Powell Butte are superseded by the Master Plan.

***8. All Master Plan standards are met.***

The Master Plan development standards are listed on pages 45-48 of the Master Plan, and are addressed below.

Minimum Building Setback

*20 feet from p-zoned lands, and 1 foot from the property boundary for every 1 foot of building height.*

The proposal includes no buildings or structures, so this standard does not apply.

Minimum Outdoor Activity Setback

*25 feet from an R-zoned property if not illuminated; 50 feet from an R-zoned property if illuminated; 20 feet from p-zoned lands.*

Outdoor recreation, such as the use of the trails in this proposal, is not regarded as an Outdoor Activity (called “Exterior Work Activities” in the current Zoning Code). This standard does not apply.

Minimum Parking Setback

*10 feet from a site or p-zone boundary when improved to an L2 standard; 20 feet when improved to an L1 standard. Topography and/or existing vegetation may fulfill landscape requirements when they result in equal or better screening.*

This proposal does not involve parking, so this standard does not apply.

Extensions into Setbacks

*Minor building projections may extend into a setback as provided in PCC 33.110.220. C.*

This proposal does not include a building or structure, so this standard does not apply.

Exterior Storage

*Exterior storage of materials, equipment and solid waste shall comply with the setback standards for buildings. The periphery of such storage areas shall be landscaped to an L3 standard except at entries to such areas.*

This proposal does not involve exterior storage areas, so this standard does not apply.

### Mechanical Equipment

*The periphery of mechanical equipment located on the ground shall be landscaped to an L3 standard. Mechanical equipment on roofs shall be screened from view from the ground level of any abutting R-zoned lands.*

This proposal does not include mechanical equipment, so this standard does not apply.

### Hazardous Substances

*Storage and use of consumer quantities of hazardous substances is permitted consistent with applicable requirements of this Plan, the Building Code and the Fire Bureau. Temporary storage and use of package quantities of hazardous substances is permitted in conjunction with an emergency declared by the Director of the Water Bureau. If Portland City Code Title 33 is amended to allow it, storage and use of package quantities of hazardous substances not in conjunction with an emergency is permitted consistent with applicable standards.*

This proposal does not involve storage or use of hazardous substances, so this standard does not apply.

### Landscaping and Screening

*Required landscaping and screening shall comply with applicable provisions of Portland City Code sections 33.248.030 through 33.248.070. Plantings required for environmental mitigation shall comply with Portland City Code section 33.248.090 and 33.430.*

No landscaping or screening is required for recreational trails, so this standard does not apply.

### Pedestrian and Bicycle Trails

*Pedestrian and bicycle trails shall be improved to meet minimum standards of the Portland Pedestrian Guide (Office of Transportation Engineering and Development, 1998).*

Section D of the Portland Pedestrian Guidelines (1998), provides guidelines for pathways and stairs. These guidelines address issues such as right-of-way width, lighting signage and materials. However, the majority of these guidelines pertain to stairways and pathways adjacent to roadways. No stairs or pathways within the public right-of-way are proposed. Therefore, these standards are not applicable to the proposed modifications to the Meadowland and Dogwood trails. The updated trail plan included in this application uses the PP&R 2009 *Trail Design Guidelines*.

### Equestrian Trails

*Equestrian trails shall be at least 5 feet wide and shall be surfaced with bark or wood chips or other suitable natural material.*

Neither the Dogwood Trail nor Meadowland Trail is designated for equestrian use.

### Fences

*Fences are permitted up to 8 feet high and of any material, provided they do not obstruct sight distance at intersections and are within approved disturbance areas.*

This proposal does not include a fence, so this standard does not apply.

#### Utility Lines and Outfalls

*The disturbance area shall be no more than 40 feet wide for a public outfall or utility line with a diameter of 48 inches or more and shall be no more than 30 feet wide for a public outfall or utility line with a diameter less than 48 inches. Disturbance areas shall be planted..., (etc.)*

This proposal does not include a utility line or outfall, so this standard does not apply.

#### Tree Preservation, Removal and Replacement

*(1) Trees may be removed if they are not in an Environmental Protection Zone..., (etc.)*

*(2) Trees not on the Portland Plant List in the open meadow area shown on the Site Plan may be removed without replacement. Other trees may be removed...(etc.)*

This proposal does not removing or replacing any trees. All trail construction was conducted in accordance with the tree preservation measures approved in LU 10-169463. This standard does not apply to the proposed changes to the two trails.

#### Excavations and Fills

*Excavations and fills shall comply with Portland City Code chapter 33.830. In addition, to the extent practicable given the needs of the structure in question, fills and structures shall balance excavations so that original contours are restored.*

Chapter 33.830, Excavation and Fills, was deleted from the City's Zoning Code in June 2003. This chapter regulated excavation such as that planned for the preliminary reservoir excavation. Section 33.830.020 exempted R and OS zones with Environmental Overlay zoning because they were subject to more restrictive excavation and fill requirements. Therefore, no excavation and fill review is (or would previously have been) required. This standard does not apply.

#### Erosion Control

*Erosion Control shall conform to the Erosion Control Manual (2000), City of Portland, Bureau of Environmental Services, and PCC Chapter 24. 70 (Clearing, Grading and Erosion Control). All development between November 1 and April 30 of any year which disturbs more than 500 square feet of ground, requires wet weather measures described in the City's Erosion Prevention and Sediment Control Technical Guidance Handbook.*

Erosion control and stormwater management treatments were designed for the project using Bureau of Environmental Services' best management practices conforming to the current Erosion Control Manual (Handbook) and Title 10 and 1200-C permit provisions. These measures were approved in permit #09-148418 CO and were used in constructing these trails. Approving the proposed changes to the trails will not result in any additional construction work, so this standard is met.

### Traffic Management and Monitoring

*At least every five years the applicant shall monitor traffic volume on the butte on a daily basis during peak usage periods. The applicant shall submit a traffic impact study to the Office of Transportation when monitoring shows that average daily vehicle trips to the site during peak usage exceeds 110 percent of the traffic volume reported in the traffic study conducted in support of the 2000 Master Plan. Based on the new traffic study, the Director of the Office of Transportation may require the applicant to improve the Powell Boulevard frontage of the site or other nearby street sections or intersections affected by the increased traffic to maintain the design capacity of those streets, to improve intersections functioning below a level of service D, or to remedy existing hazards in an amount roughly proportional to the impact of traffic associated with the butte.*

Recent traffic studies were completed in 2008 and 2010. The 2008 study was reviewed by PBOT and no transportation improvements were required. This standard is met.

### Vehicle and Bicycle Parking

*At least 40 vehicle parking spaces and at least 10 bus/trailer spaces shall be provided in phase 1. Parking spaces shall comply with Portland City Code Chapter 33.266.130. At least 10 short term bicycle parking spaces that comply with Portland City Code Chapter 33.266.220 shall be provided in phase 1. No bicycle spaces are required to be covered. Bicycle spaces shall be situated in the vicinity of the parking lot or activity areas.*

As approved under the CUMP Amendment (LU 10-169463), the new parking area provides parking for 65 vehicles, four of which comply with ADA-accessibility requirements, and four bus/trailer spaces. In addition, nine bike staples providing parking for 18 bicycles are being installed near the Interpretive Center. While parking plans are generally consistent with this standard, the standard was replaced through the CUMP amendment addressing the Park Center. The current proposal does not involve adding or removing any vehicle or bike parking, so this standard has been met.

### Signs

*Signs shall comply with Portland City Code Chapter 33.286, except that signs that are not oriented to or intended to be legible from off-site shall be exempt.*

This proposal does not include any signs, so this standard does not apply.

### Street Trees

*Street trees will be native species where practical as determined by the City Forester. No permit will be issued for trees listed as a nuisance plant or prohibited plant on the Portland Plant List. Tree placement will be determined by the City Forester. Street trees shall also comply with Portland City Code Chapter 20.40 and 33.430.*

This proposal does not involve any street trees or development adjacent to any rights-of-way, so this standard does not apply. If any street trees are required by the City Forester as a result of this proposal, this standard will be met.

### Lighting

*Exterior lights shall be designed, placed and operated so they do not shine into or onto p-zoned or R-zoned lands and so that they minimize their visibility from off-site.*

This proposal does not include any exterior lights, so this standard does not apply.

### All Other Standards

*Standards that are not specifically stated here shall be those of the Zoning Code (base zone as modified by the plan district or overlay zone).*

The intent of the CUMP was to incorporate and refine as warranted all applicable code standards into the above development standards. No other standards are believed to be applicable to this proposal.

## **REVIEW OF CONDITIONS OF APPROVAL FROM PREVIOUS LAND USE DECISIONS**

### **OTHER LAND USE CASES**

As discussed in the 2009 land use application, there are prior quasi-judicial land use reviews on the Powell Butte site. These reviews are summarized below:

- **CU 95-73:** Conditional Use Request for granting of an easement for the construction, maintenance and operation of a water reservoir at Powell Butte.
- **CU 29-77:** CU request to construct one 50 million or two 25 million gallons storage reservoirs with a future expansion to a capacity of 200 million gallons.
- **CU 15-89:** Approval of a Conditional Use in order to establish a Powell Butte Nature Park generally in accordance with the proposed Powell Butte Master Plan.
- **LUR 94-00705 EN:** Controlled burn of open meadow portions of Powell Butte Nature Park.
- **LUR 00-00275:** Construction of a water pumping station, disinfectant tank and emergency overflow detention facility (on land adjacent to Center St).
- **LUR 00-00414 CU MS EN EV AD:** City Council approval with conditions of a Conditional Use Master Plan for Powell Butte and surrounding area; Environmental Review for development and activities included in the *Powell Butte Master Plan*; Environmental Review for vegetation removal and ground disturbance violations within an Environmental Zone; and Adjustment to 33.535.205.A to allow removal of trees greater than six inches in diameter, limited to species listed as Nuisance Plants or Prohibited Plants on the Portland Plant List, Hawthorne trees, and trees shown in the Master Plan as being removed for construction of water supply facilities as approved through this Master Plan.
- **LU 05-136340 EN:** PWB proposed to construct two existing storm water outfalls that are under access roads on Powell Butte to remedy existing erosive conditions and mitigate future erosion during normal rain events. Case was withdrawn by PWB on April 6, 2006.
- **LU 06-166575 EN:** Approval of an Environmental Review for a small equipment shed with ecoroof (Exhibits C.1 through C.8).

- **LU 07-112412 CUMS EN AD:** Approval a Master Plan Boundary expansion (Exhibit C.14) for either: 3.02 acres (Option 1); or 0.58 acres (Option 2). Approval of an Adjustment Review for Section 33.537.140.C to remove three trees (Project #1 a 6-inch tree and Project #2 an 8-inch and 9-inch tree identified on Exhibits C.4 and C.10). Approval of an Environmental Review for an upgrade to main pedestrian access trail from Powell Blvd to parking lot, service road reconstruction and roadside drainage improvements.
- **LU 09-125820 EN AD:** Approval of an Environmental Review for preliminary reservoir excavation for Reservoir #2, a 50 million gallon underground reservoir at Powell Butte, along with temporary soil stockpiling and temporary stormwater collection, treatment and disposal; erosion control and temporary construction fencing; relocation of the Goldfinch Trail to move the trail out of the reservoir construction area; widening of the main park entry road, from the SE 162<sup>nd</sup> Avenue/SE Powell Boulevard intersection, to approximately 1,000 feet south of SE Powell Boulevard, and construction of haul roads to provide construction access; removal of 119 native trees; removal of 8 acres of invasive hawthorn and Himalayan blackberry; and Approval of an Adjustment Review for removal of 47 native trees greater than 6 inches in diameter and farther than 10 feet from proposed structures or 5 feet from proposed paved areas; and replacing 91 conifer trees with Oregon white oak and other species of trees.
- **LU 10-169463-000-00-CU MS EN AD:** City Council approval of: Amendments to the Conditional Use Master Plan for Powell Butte, with the duration of the amended Master Plan to extend at least the requested five years from the date of the final decision, Environmental Review to construct water system and park center components, stormwater facilities, and trails; and Adjustment Review to allow a disturbance area wider than 40 feet for Conduit 5; to allow shrub plantings as shown on Exhibits C.46 through C.60; to allow tree removal as shown on Exhibits C.78 through C.89; and to allow parking lot planting as shown on Exhibits C.46 through C.60; which together, allows the implementation and development of 'Stage 2' construction of a new underground water reservoir, water system components, trails, and park improvements as approved through the Master Plan.

In general, the Conditions of Approval from prior land use reviews were addressed in the 2007 Environmental Review (LU 07-112412), LU 09-125820 EN AD, and the 2010 Conditional Use Master Plan Amendment, LU 10-169463 CU MS EN AD.

The conditions of approval have been met or are being met under permit #09-144138 SD (which approved site development measures) and under permit #09-148418 CO and all associated permits (which approved the development of Reservoir #2, its pipes, its appurtenances, all the Park Center buildings, and all trails).

The current proposal is intended only to correct two errors on Exhibit C.31 of LU 10-169463:

- 1) To approve constructing the Dogwood Trail 4 feet wide with two-foot wide pullouts at intervals; and
- 2) To approve constructing the Meadowland Trail with a crushed gravel surface.

Because this is minor change from the work approved in LU 10-169463, there is no change in the way that conditions of approval are being met.

Following is a review of the conditions of approval from the 2003 Master Plan and the two reviews of work for Powell Butte Reservoir #2.

### **2003 CONDITIONAL USE MASTER PLAN**

The Conditional Use Master Plan was approved by City Council on July 15, 2003 with the conditions shown in the Order of Council (LUR 00-00414 CU MS EN EV AD) dated November 21, 2002. Condition A set the duration of the Master Plan:

*A. The Conditional Use Master Plan shall expire ten years from the date this approval becomes effective (July 15, 2003). Approvals for development or uses shown in the Master Plan that have not begun by the date of Plan also expire and those developments or uses are subject to the land use regulations in place at that time.*

**Response:** The 2010 Conditional Use Master Plan Amendment (Case LU 10-169463 CU MS EN AD) extended the duration of the master plan to a range of 5 to 10 years from the effective date of the decision, which was February 17, 2011. The language from that decision is copied below:

Approve:

- Amendments to the Conditional Use Master Plan for Powell Butte, with the duration of the amended Master Plan to extend at least the requested five years from the date of the final decision of this Land Use Review, or until the approved Master Plan is superseded by a request to further amend and update the Master Plan, or until all proposed development approved under this amendment is completed, within a maximum of ten years from the date of the final decision;
- 

Therefore, the current proposal must be completed by, at latest, February 17, 2021. If approved, the necessary permit revision will be acquired within a few months. Since this would be essentially an approval of the existing construction, this development would be completed in a matter of months, rather than years. This condition can be met.

*B. Prior to issuance of any permit for any development or use approved by this Master Plan PWB shall update the Master Plan document and site plan, incorporating all modifications required by this approval and deliver four copies to the Land Use Review Section of the Office of Planning and Development Review.*

**Response:** All updates to the Master Plan document and site plan were completed in July 2003 and are shown in the Powell Butte CUMP. This condition has been met.

*C. Master Plan approval is limited to only those items listed in Phase 1. The Master Plan document shall be modified as necessary to reflect this.*

**Response:** The Master Plan document was modified in July 2003 to reflect this fact (see Condition B). This condition has been met.

*D. The Radio Frequency Transmission Facility, including the tower, shall be eliminated from the site plan and Master Plan.*

**Response:** The Radio Frequency and Transmission Facility, including the tower, were eliminated from the site plan and Master Plan. This condition has been met.

*E. The storage building shall be a maximum of 5,000 square feet within a maintenance yard of 40,000 square feet as shown on the Site Plan. The maintenance yard shall be in the location and general design as set forth on Exhibit H.29 and landscaping shall exceed L3 landscaping standard on the south and west sides of the yard by planting a double row of trees on those sides generally consistent with Exhibit H.29. The fence around the maintenance yard shall be painted to reduce its visual impact.*

**Response:** The maintenance yard is approximately 38,000 square feet. The storage / maintenance building is slightly less than 5,000 square feet. The location of the facility has been moved slightly west of the location shown in the 2003 master plan through the approved master plan amendment in the 2010 CUMP. A double row of native trees combined with L3 landscaping is being installed on the south and west sides of the yard. The fence around the maintenance yard will be painted green (or another approved natural color) as indicated in the Master Plan to reduce its visual impact. This condition is met.

*F. The Master Plan site plan and all other applicable maps in the Master Plan document shall be modified to include those lands added to the Plan since initial Plan submittal (newly-acquired land and Bull Run pipeline and reservoir overflow line corridors).*

**Response:** The Master Plan site plan and other applicable maps were updated in the July 2003 Master Plan document. In addition, newly acquired land includes approximately 0.63 acres of land obtained through a lot line adjustment for Tax Lot 700 Section 12 IS2E, approved through LU 07-112412 CUMS EN AD and recorded on February 5, 2009. This condition has been met.

*G. Development standards are proposed in pages 26-29 of the Master Plan shall be modified [as stated in the decision]:*

**Response:** The development standards referenced above have been modified as indicated in the July 2003 Master Plan document and are addressed in the previous section of this application. This condition has been met.

*H. The following table [as shown in the decision] shall replace the text found on pages 21-31 dealing with future reviews and Table 4 on page 32 of the Master Plan:*

**Response:** The development review procedure with review thresholds and approval criteria was updated in the July 2003 Master Plan document. This condition has been met.

*I. All disturbance areas shall be revegetated with native groundcover. Planting can be either with potted growth or seeding, but must be at a level that will achieve 80% groundcover within one growing season. At least 8 species of plants must be used. Fifty percent of any seed mix used*

*must be grass and 50 percent flowers when measured by area covered. If cover and species requirements are not met within one year or two growing seasons from final inspection, replanting is required and the requirements of this section must be met within one year of replanting.*

**Response:** All disturbance areas will be planted with native groundcover designed to achieve 80% cover in one growing season. The construction of the trails is in conformance with the landscaping plans approved in LU 10-169463 (see Exhibit C.47 in Appendix A). As shown in the landscaping plans, eight species of plants meeting this condition will be used. The PWB will replant any areas that fail to meet the cover and species requirements within two growing seasons. Full compliance with this revegetation condition will be met following completion of the construction work and re-grading of the site.

*J. The PWB shall monitor the survival rate of all planting used for remediation for the environmental violation for at least three years. An 80% survival rate for trees and shrubs and 80% groundcover is required. If the number of trees and shrubs or amount of groundcover drops below this level, new planting to achieve the required level shall be installed.*

**Response:** Remediation plantings were installed in 2000 by PWB and were maintained for two years. In 2003, the five mitigation areas were inspected and re-planted where necessary by the Bureau of Environmental Services' Watershed Revegetation Program. Environmental Services maintained the vegetation and monitored the survival rates yearly through 2007 and replaced any trees that did not survive. This condition has been met.

*K. Improvement of the upper parking lot shall include striping of over-size stalls to accommodate bicycle loading/unloading, and striping of drop-off areas and handicapped parking spaces. Trees shall be planted uphill from the parking lot to provide shade to at least one-third of the parking lot surface. Selection of the species to be planted, and the spacing and locations of the trees shall be coordinated with the City Forester, with consideration to be given to balancing the desire for shade against avoiding adverse impacts on the designated vistas and scenic resources from uphill of the trees.*

**Response:** The approved plans include 65 new over-size stalls which were designed to accommodate bicycle loading and unloading. As shown on the approved planting plans in Appendix A, trees will be planted throughout the parking area to provide shade to at least one-third of the parking lot surface. These species were selected in coordination with the PWB botanist and City Forester and were designed to preserve important scenic vistas. This condition has been met.

*L. Prior to issuance of any development permit for any park or recreation improvement, including any parking lot improvements, Applicant shall improve the existing pedestrian connection adjacent to the main access road between SE Powell Boulevard at SE 162nd Avenue and the Park Center, to provide a continuous 6-foot wide gravel surface.*

**Response:** A new trail was installed in 2008 providing an improved pedestrian connection along the main entry road between SE Powell Boulevard at SE 162nd Avenue and the Park Center.

This project was approved in 2007 by Permit #0714307 and LU 07-112412 CUMS EN AD. This condition has been met.

*M. Prior to issuance of any development permit for any park or recreation improvement, including any parking lot improvements, bicycle parking facilities shall be provided in the vicinity of the Park Center, consistent with Zoning Code requirements.*

**Response:** Ten bicycle parking spaces were installed in the Park Center in 2003. As a result of the proposed construction, these spaces are being removed. The spaces are being replaced in the Park Center as shown on the site plans in Appendix A, and four additional spaces will be provided in the maintenance yard. This condition has been met.

*N. To assure an appropriate balance in scheduling the construction of new water system and park facilities, development of the 50 MG reservoir shall be coincident with development of the following parks facilities; parking lot improvements, interpretive center/public restroom remodeling, maintenance yard and storage building, and relocation of the caretaker residence.*

**Response:** The components of construction cited above - Reservoir #2, parking lot improvements, interpretive center/public restroom remodeling, maintenance yard and storage building, and relocation of the caretaker residence – were all approved in LU 10-169463, and are being constructed together under a number of building permits that are issued under a main permit, which is #09-148418 CO. This condition has been met.

*O. Within one year of master plan approval, Applicant shall plant trees to provide shade to the planned detention pond location. The trees shall consist of at least 101 deciduous native trees listed on the Portland Plant List. The trees shall be planted south and southwest (uphill) of the planned detention pond location that is indicated on the Phase 1 Hydrology Exhibit of the Powell Butte Hydrology, Detention and Water Quality Report. The trees shall be at least six feet in height and spaced at an average of 10 feet on centers. The trees shall be planted in a band approximately 16 feet deep with no root ball closer than six feet from the edge of the pond.*

**Response:** This condition was modified through a conditional use master plan amendment approved in LU 10-169463, and now reflects the current stormwater design. The 101 trees are to be planted along the new permanent stormwater treatment facilities, which include vegetated swales. This condition is met.

*P. Within the tree removal corridor for the pump station, final design of the pipeline will continue to analyze alternative pipeline alignment options to preserve, if practical and feasible, large Douglas fir trees in the approved tree removal corridor. The mitigation/restoration plan for the pump station will include planting of Douglas fir trees on both sides of the pipeline trench. The access road and staging/parking area for the pump station shall be finished with a gravel surface.*

**Response:** No pump station is currently proposed as part of the site preparation or subsequent construction stages. This condition does not apply to the current proposal.

## **2009 RESERVOIR EXCAVATION AND SITE PREPARATION (LU 09-125820 EN AD)**

The 2009 land use review for excavation and site preparation was approved with conditions (LU 09-125820 EN AD). The majority of these conditions were recently verified through the permit review for the site development permit, #09-144138 SD. However there are two conditions that are specific to the proposal being constructed under the reservoir permit, which is #09-148418 CO. These are Conditions F and G.

### **Condition F**

*At the time of land use review for actual construction of Reservoir #2, PWB shall provide plans showing construction of the vegetated swales as permanent stormwater management facilities in the areas shown in the Powell Butte Master Plan, Figure 4C-II.*

**Response:** PWB proposed and is constructing a series of vegetated swales and ponds which will provide permanent stormwater management onsite. This condition is met.

### **Condition G**

*At the time of land use review for actual construction of Reservoir #2 PWB shall include plans showing planting of 101 deciduous native trees (at least 6 feet in height, spaced approximately 10 feet on center, in a screen at least 16 feet deep) south and southwest (uphill) of the permanent stormwater swales, as required in Powell Butte Master Plan Condition O.*

**Response:** This condition was modified by the master plan amendment requested in this land use application. The stormwater swales were redesigned to a more naturalistic configuration, and the 101 trees are being planted along them to provide shade. This condition is met.

## **2010 REVIEW FOR CONSTRUCTION OF RESERVOIR #2, APPURTENANCES, ADDITIONAL BUILDINGS, AND TRAIL MASTER PLAN (LU 10-169463 CU MS EN AD).**

The 2010 Conditional Use Master Plan Amendments, Environmental Review, and Adjustments were approved by City Council February 17, 2011. This review addressed the applicable conditions of approval from the 2003 Master Plan and imposed additional conditions on subsequent development. This decision required all conditions of approval to be met or addressed in order for the Portland Water Bureau to acquire the permits needed to construct the approved facilities. All of the conditions were met or addressed in PWB's permit applications, and BDS issued permit #09-148418 CO and associated permits.

## **Conclusion**

PWB requests approval of a conditional use master plan amendment, an environmental review pursuant to the approval criteria allowed by the 2003 CUMP, and three adjustments to develop the park and water facilities included in the 2003 CUMP and 2010 CUMP Amendment outlined in this application. The proposed development will enhance regional recreational opportunities and provide future regional water supply facilities. The mitigation plan included with this application ensures that the development will not impact the site's long-term resource values. The proposed landscaping improvements – approximately 1,794 trees and 27,357 shrubs, along

with a new 0.42-acre wetland will provide a long-term environmental, scenic and recreational public benefit. As demonstrated in these findings, the proposal meets all of the applicable approval criteria.

## **APPENDIX A**

### **APPLICABLE EXHIBITS FROM LU 10-169463 CU MS EN AD**

The enclosed exhibits are for reference purposes. The current proposal seeks to modify the development shown on these exhibits. For the current proposal, see the set of Figures.