

Bull Run Filtration Projects

Land Use Applications

Applications Narrative Guide	INTRODUCTION	
	SECTION 1: FILTRATION FACILITY SITE OVERVIEW	
	Section 1.A	Filtration Facility – Conditional Use Application Narrative
	Section 1.B	Filtration Facility – Design Review Application Narrative
	Section 1.C	Communications Tower – Conditional Use & Design Review Application Narrative
	SECTION 2: PIPELINE OVERVIEW	
	Section 2.A	Pipelines – Conditional Use Application Narrative
	Section 2.B	Pipelines – Design Review Application Narrative
	Section 2.C	Pipelines – EFU Review Application Narrative
	Section 2.D	Pipelines – SEC Review Application Narrative

Section 2.A: Pipelines

Conditional Use Application Narrative

Contents

Introduction and Relation to Other Narrative Sections.....	1
Pipeline Design and Zoning	1
Conditional Use Criteria	3
MCC 39.7500—Purpose	3
MCC 39.7505 General Provisions	3
MCC 39.7510 Conditions and Restrictions	3
MCC 39.7520 Uses.....	4
MCC 39.7515 Approval Criteria	5
Core Analysis Areas	6
Review of Pipeline Segments	9
Pipeline Segment 1	9
Pipeline Segment 2	11
Pipeline Segment 3	14
Pipeline Segment 4	16
Review of Intertie	18
Intertie Location and Design	21
Character of the Area Conclusion.....	23
Additional Standards in the CFU District	31
Review of Development Standards	31
MCC 39.7525 Restrictions	32

Figures

Figure 1. Pipeline Segments and Intertie	2
Figure 2. Example of Existing Air Vent and Access Vault (left) within Lusted Road ROW	6
Figure 3. Existing Drain in Lusted Road ROW.....	6
Figure 4. Intertie Core Analysis Area.....	7
Figure 5. Raw Water Pipelines—Segment 1	9
Figure 6. Residence and Accessory Structures (TL 1400).....	10
Figure 7. Tunnel Portal Site (foreground) Looking East along Underground Pipeline Corridor	10
Figure 8. Finished Water Pipelines—Segment 2.....	11
Figure 9. Farm Access Road, Looking South from Lusted Road	13

Bull Run Filtration Projects Land Use Applications

Figure 10. Finished Water Pipelines—Segment 3..... 14

Figure 11. Lusted Road with Existing Air Vents, Overhead Utility Lines 15

Figure 12. Lusted Road Distribution Main—Segment 4 17

Figure 13. Finished Water Intertie Core Analysis Area 19

Figure 14. Surface Nursery Headquarters..... 20

Figure 15. Glendale Farm 20

Figure 16. Residential House with Nearby Barns..... 20

Figure 17. Large Farm Building, Nearby Residence 20

Figure 18. Stream Corridor with Existing Conduit Appurtenance in Foreground..... 20

Figure 19. Roadside Pump Station and Utilities..... 20

Figure 20. Rendering of View Looking East Towards Intertie 22

Figure 21. Intertie Landscape Plan with Buffers 22

Figure 22. Farm Properties along the Raw Water Pipelines 25

Figure 23. Finished Water Pipelines and Intertie..... 26

Figure 24. Clip of County Comprehensive Plan Figure 5-6—Wildlife Habitat, with Project Site Identified 28

Figure 25. ODFW Western Oregon Deer & Elk Habitat Showing Project within Impacted Habitat 29

Introduction and Relation to Other Narrative Sections

This section includes background information, findings, and analysis in support of conditional use (CU) approval for the proposed project pipelines. The section demonstrates compliance with CU approval criteria for proposed pipelines in three applicable base zones: MUA-20, RR, and CFU. Compliance with applicable base zone development standards is demonstrated in the **Section 2 Overview**. This section builds on information provided in the **Introduction** and the **Section 2 Overview**. The proposed findings in this Section 2.A complement the findings in **Section 2.B Pipeline Design Review, Section 2.C Pipeline EFU Review, and Section 2.D Pipeline SEC Review**. Defined terms used in this **Section 2.A** are provided in the overall application **Introduction**.

Pipeline Design and Zoning

As a part of the project, two new raw water (RW) pipelines will intersect the existing Bull Run conduits in Lusted Road just north of the Multnomah County / Clackamas County line and redirect the flow to the new filtration facility. The finished water (FW) pipelines will then transmit filtered water from the filtration facility and reconnect to the existing conduits near Altman Road, maintaining gravity flow of filtered water to serve the Water Bureau's customers.

This Section 2 Overview describes the location and purpose of the four relevant pipeline segments subject to CU review and the finished water intertie. This section focuses on proposed pipelines and the intertie that require a CU permit in the MUA-20, RR and CFU zones (Figure 1).¹ As shown in Figure 1, this narrative for the pipelines CU review addresses:

- Segment 1: the RW pipelines cross three lots in the RR zone between the Multnomah Connection (along Lusted Road) and Dodge Park Boulevard, where the RR zone extends west to the center of the ROW.
- Segment 2: the FW pipelines travel in the MUA-20 zone from the filtration facility to the intertie; they are entirely in the Dodge Park Boulevard ROW with the exception of two lots, one on Carpenter Lane and one on Lusted Road;
- Segment 3: from the intertie, the pipelines follow Lusted and Altman Roads, which are split-zoned in Segment 3. The MUA-20 portions of the ROW are the south side of Lusted Road and the west side of Altman Road, beginning about 1,300 feet north of Lusted Road.
- Segment 4: the Lusted Road distribution main (LRDM) travels north in the Cottrell Road ROW in the MUA-20 zone then turns east in the CFU zone on Water Bureau property where the LHTF is located before connecting to the existing main.
- Intertie: the intertie is located south of Lusted Road in the MUA-20 zone.

¹ Findings addressing EFU review are provided in Section 2.C.

Bull Run Filtration Projects Land Use Applications

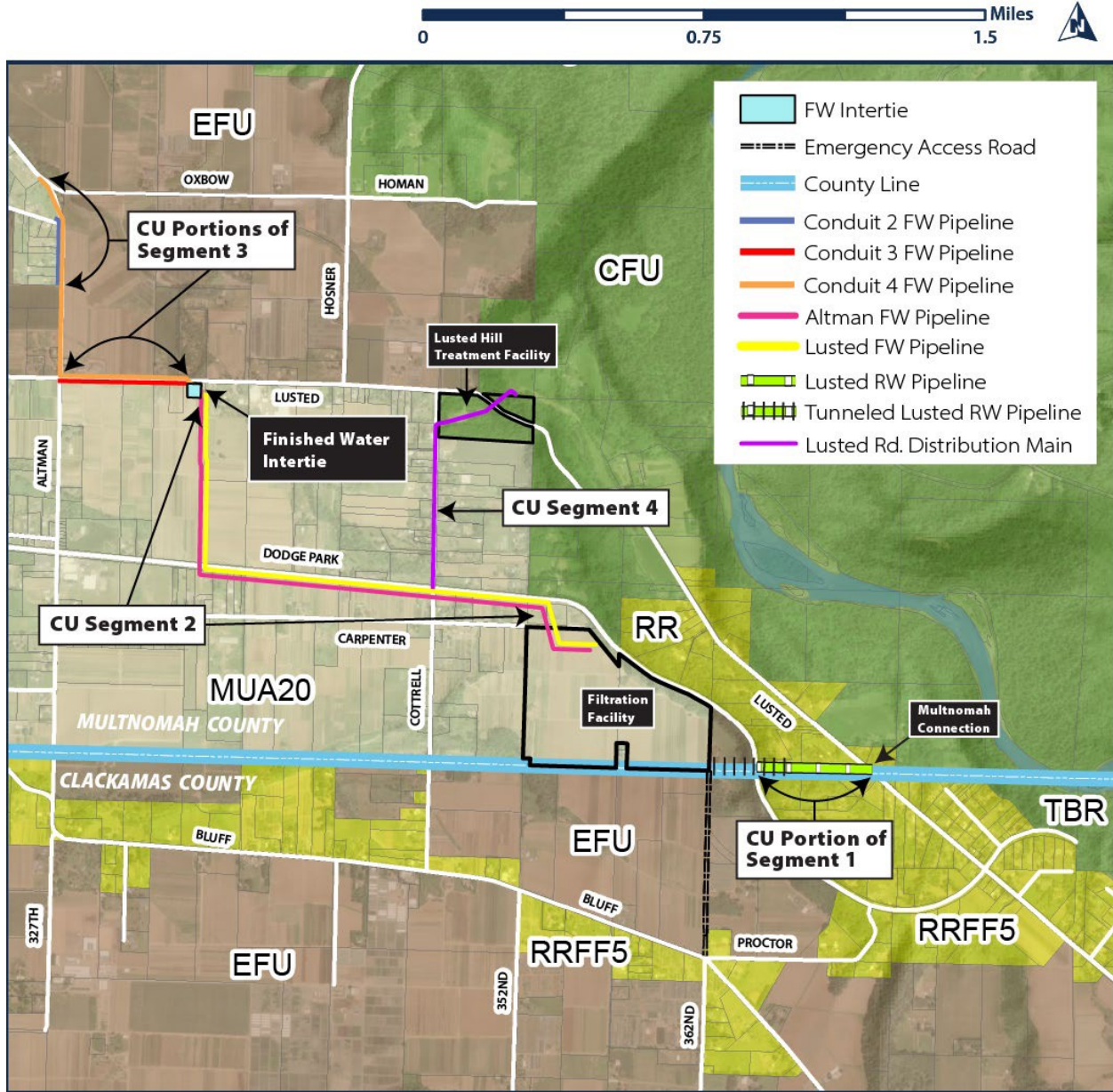


Figure 1. Pipeline Segments and Intertie

Conditional Use Criteria

Multnomah County CU provisions are quoted below in *italics*, followed by the Water Bureau response explaining how each provision is met for the pipelines in the MUA-20, RR, and CFU zones.

MCC 39.7500—Purpose

This subpart of MCC Chapter 39 provides for the review and approval of the location and development of special uses which, by reason of their public convenience, necessity, unusual character or effect on the neighborhood, may be appropriate as specified in each base zone.

Response: The **Introduction** explains the purpose and need for the filtration facility, which will provide a safe and clean water supply for almost one million people. As explained in **Section 2 Overview**, the proposed pipelines connect the filtration facility to the existing Bull Run conduit system. This community service use is permitted through the CU review process.

MCC 39.7505 General Provisions

- A. *Community Service approval shall be for the specific use or uses approved together with the limitations or conditions as determined by the approval authority.*

Response: As explained in the **Introduction** and **Section 2 Overview**, the project spans two counties and includes the filtration facility, the communication tower, the pipelines, intertie, and related appurtenances in Multnomah County and an emergency access road in Clackamas County. CU approval criteria are addressed below.

- B. *Uses authorized pursuant to this section shall be subject to Design Review approval under MCC 39.8000 through 39.8050.*

Response: **Section 2.B** addresses applicable design review criteria and development standards for the intertie and above-ground pipeline appurtenances.

- C. *A Community Service approval shall not be construed as an amendment of the Zoning Map, although the same may be depicted thereon by appropriate color designation, symbol or short title identification.*

Response: Applicant understands the nature of the approval and agrees that a CU approval does not change the zoning of the properties.

MCC 39.7510 Conditions and Restrictions

The approval authority may attach conditions and restrictions to any community service use approved. Conditions and restrictions may include a definite time limit, a specific limitation of use, landscaping requirements, parking, loading, circulation, access, performance standards, performance bonds, and any other reasonable conditions, restrictions or safeguards that would uphold the purpose and intent of this

Bull Run Filtration Projects Land Use Applications

Chapter and mitigate any adverse effect upon the adjoining properties which may result by reason of the conditional use allowed.

Response: The Water Bureau has designed the pipelines to minimize impacts on the surrounding area based on a series of technical studies found in Appendices identified in the **Introduction**. The Water Bureau has implemented the recommendations of these studies as part of the project design, including the design of the pipelines.

MCC 39.7520 Uses

- A. *Except as otherwise limited in the EFU, all CFU and OR base zones, the following Community Service Uses and those of a similar nature, may be permitted in any base zone when approved at a public hearing by the approval authority.*

Allowed Community Service Uses in the EFU, CFU and OR base zones are limited to those uses listed in each respective base zone.

[...]

(6) Utility facilities, including power substation or other public utility buildings or uses, subject to the approval criteria in MCC 39.7515(A) through (H).

Response: The proposed water pipeline use in the RR and MUA-20 zones is a utility facility. In the CFU district, the applicable community service use listed under MCC 39.4080(A)(5) is the following:

Water intake facility, related treatment facility, pumping station, and distribution line. The term “distribution line” includes water conduits and water transmission lines.

In all three zones, the applicable approval criteria for the CUP are MCC 39.7515(A) through (H). Note that MCC 39.7515(I), which requires that certain uses primarily serve the rural area, is not applicable, per MCC 39.7520(A)(6) (RR and MUA-20 zones, “subject to the approval criteria in MCC 39.7515(A) through (H)”) and MCC 39.4080(A)(CFU: “For purposes of this Section, the applicable criteria of MCC 39.7515 shall be limited to Subsections (A) through (H) of that Section.”). Compliance with those applicable approval criteria is demonstrated in the MCC 39.7515 findings below.

- C. *Approval of a Community Service Use shall be deemed to authorize associated public utilities to serve the site, including energy and communication facilities.*

Response: Appendix L contains applicable service provider letters. Electric service to the proposed intertie site will be taken from the existing local transmission lines located along Lusted Road and an emergency generator will be located within the proposed structure for use during power outages.

MCC 39.7515 Approval Criteria

In approving a Community Service use, the approval authority shall find that the proposal meets the following approval criteria, except for transmission towers, which shall meet the approval criteria of MCC 39.7550 through 39.7575, wireless communications facilities, subject to the provisions of MCC 39.7705, and except for regional sanitary landfills, which shall comply with MCC 39.7600 through 39.7625.

Response: The proposed water pipeline use is a “utility facility” which is a community service use per MCC 39.7520(A)(6) in both the MUA-20 and RR base zones and subject to a CU review. In the CFU zone, the proposed water main is defined as a water distribution line, which is also a community service use per MCC 39.4080(A)(5). These community service uses are subject to approval criteria in Subsections (A) through (H) of MCC 39.7515, each of which is analyzed below.

A. Is consistent with the character of the area;

Response: For purposes of determining whether a proposal is consistent with the character of the area, the MCC requires identification of the area, a description of the character of the area, and a discussion of the character of the use—including potential visual, noise, odor, and traffic impacts—and how that character fits with the area. The area and character of the project study area is mapped and described in the **Introduction** and **Section 1.A**. The **Section 2 Overview** and this Section 2.A describe impact-specific (core) analysis areas for the pipelines and the intertie, related to potential impacts from pipelines, appurtenances, and the intertie on surrounding farm, forest, and rural residential land uses in each core analysis area, and by extension in the study area more broadly.

As described in the **Introduction**, the proposed pipelines pass through or are adjacent to rural residential, public facilities (roads and associated utilities), agricultural, and forest land uses in the study area. The pipelines and intertie are similar in design and function to the existing water utility facilities in the area. Water Bureau pipelines and appurtenances have existed in road ROW and public utility easements across private property in the study area for over 100 years. Local water districts served by the Bull Run water system have relied on water pipelines and related facilities in this area since the early 1900s. Thus, water pipelines and appurtenances preceded and support much of the development that has occurred in the study area—and have played a role in defining its character. Water facilities have co-existed with agricultural and forest operations as well as rural residential development in the study area since the 1890s and do not conflict with these land uses.

Today, the existing Bull Run Conduits 2, 3, and 4 traverse the study area through land in and around Lusted Road. There are over 10 miles of existing Water Bureau pipelines in the study area. There are also 176 existing Water Bureau pipeline appurtenances in the study area and 95 are at ground level or above ground, which include:

- 33 test stations
- 18 air valves
- 16 rectifiers
- 12 water drain valves
- 5 hatches
- 3 surge tanks

Bull Run Filtration Projects Land Use Applications

- 3 water quality sampling stations
- 3 valves
- 2 valve boxes

The Water Bureau's existing Lusted Hill Treatment Facility (LHTF) and the Hudson Intertie are also located in the study area. The existing Bull Run conduits, like the proposed pipelines, are underground facilities that generate no sound or odor, and require infrequent maintenance. Existing water pipelines, and the LHTF and Hudson Intertie, are part of the landscape and character of the area.

Core Analysis Areas

For the reasons stated in the **Section 2 Overview** and below, the proposed pipelines and related appurtenances are unlikely to have impacts beyond the road ROW or water utility easement where they are located. Nevertheless, an analysis was performed to ensure that potential impacts of the proposed use will not be significant, and are therefore consistent with the character of the study area. Since no impacts were found in the core analysis areas and the land use pattern within the core analysis areas is homogenous with the land use patterns in the larger study area, the detailed analysis of the more focused core analysis also applies to the areas of the larger study area further away from the pipelines and intertie. Note that county road ROWs in the study area vary from 40 to 100 feet. Proposed easements vary in width, with a majority of the easements being approximately 45-foot wide.

The proposed pipelines in the RR, MUA-20, and CFU zones will be constructed below grade within county road ROW or in easements on private property. Standard, low profile pipeline appurtenances such as accessways, vents, drains, and valve boxes are proposed at largely-spaced intervals along the pipeline alignments.

These appurtenances will function and look like existing Water Bureau infrastructure in the study area and are similar to other existing local utility equipment including fire hydrants, power poles, utility cabinets, and similar infrastructure. They will be located at-grade or low to the ground along the pipeline route (examples of existing appurtenances are shown in Figures 2 and 3). The above-ground appurtenances are reviewed as part of the Pipelines Design Review in **Section 2.B**.



Figure 2. Example of Existing Air Vent and Access Vault (left) within Lusted Road ROW



Figure 3. Existing Drain in Lusted Road ROW

Bull Run Filtration Projects Land Use Applications

Once the pipelines are installed, soil will be restored and seeded outside of paved areas to minimize erosion, closely matching the finished conditions along existing Water Bureau conduits in the study area. Land restoration plans for the pipeline corridors will restore existing grades and road surfaces and are designed to ensure that pre-installation activities such as farming will continue to the maximum extent possible after construction (see Appendix D.2, Agricultural Soil Restoration Study).

Unlike the proposed pipelines, the proposed intertie structure (without mitigation) potentially could have visual, auditory, and light impacts. For example, although the intertie structure is designed to mimic farm structures in the study area, as documented in **Section 1.A**, those structures often are visible from public roads and often have noise and glare impacts on nearby residential properties. To ensure that all potential impacts on nearby land uses are effectively mitigated, the core analysis area for the intertie is a quarter mile from the easement boundary, the area in which an unmitigated structure could potentially be visually significant.

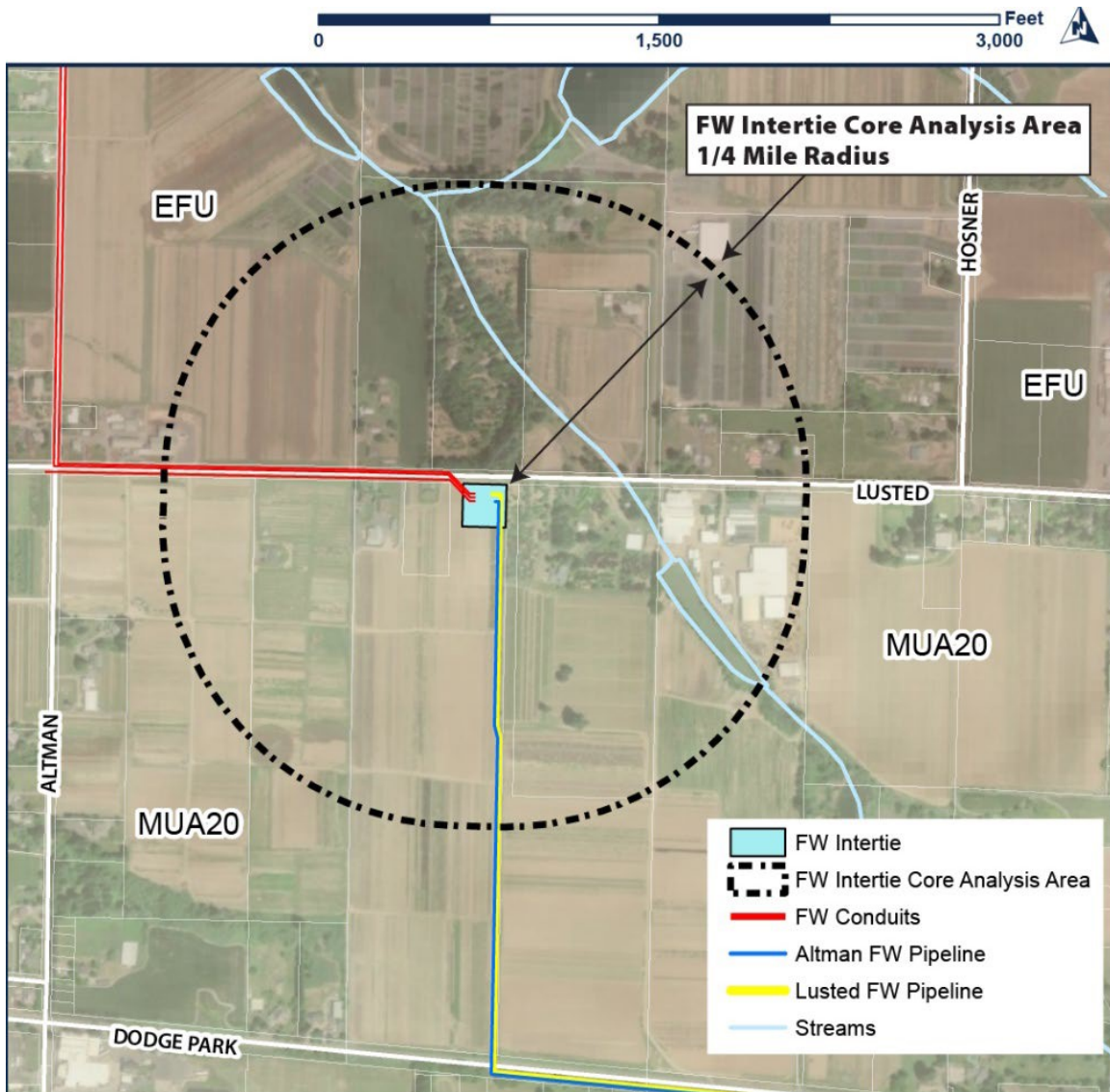


Figure 4. Intertie Core Analysis Area

Bull Run Filtration Projects Land Use Applications

With mitigation, the intertie is a low-profile facility, setback from the road and screened from public view with a dense buffer of trees and shrubs. The intertie itself will be located in a buried vault and the site will contain a single story, approximately 800 sf. electrical building. The electrical building will be the same size as a small, single-story barn or multi-car garage, and smaller than existing houses near the intertie site. It is also smaller than the existing Water Bureau building at the LHTF. In addition, a small stairwell cover and vent on the intertie vault are proposed.

In sum, the proposed pipelines and intertie are typical of existing utility equipment and water infrastructure in the study area, including the Water Bureau's gravity-fed water transmission system and related buildings and pipelines, which have long been a part of the local landscape and the character of the study area.

Review of Pipeline Segments

Pipeline Segment 1

Two RW pipelines will connect existing Bull Run conduits in and near Lusted Road to the filtration facility (Figure 5). The pipelines will tie in with existing Conduits 2, 3, and 4 at the Multnomah Connection and travel underground to the raw water tunnel portal near the base of a steep forested slope to the west. From the portal, the pipelines enter into a deep tunnel passing below the slope, Dodge Park Boulevard, and adjacent properties (including the property at the top of the slope in the EFU zone, addressed in **Section 2.C**) before reaching the filtration facility site.

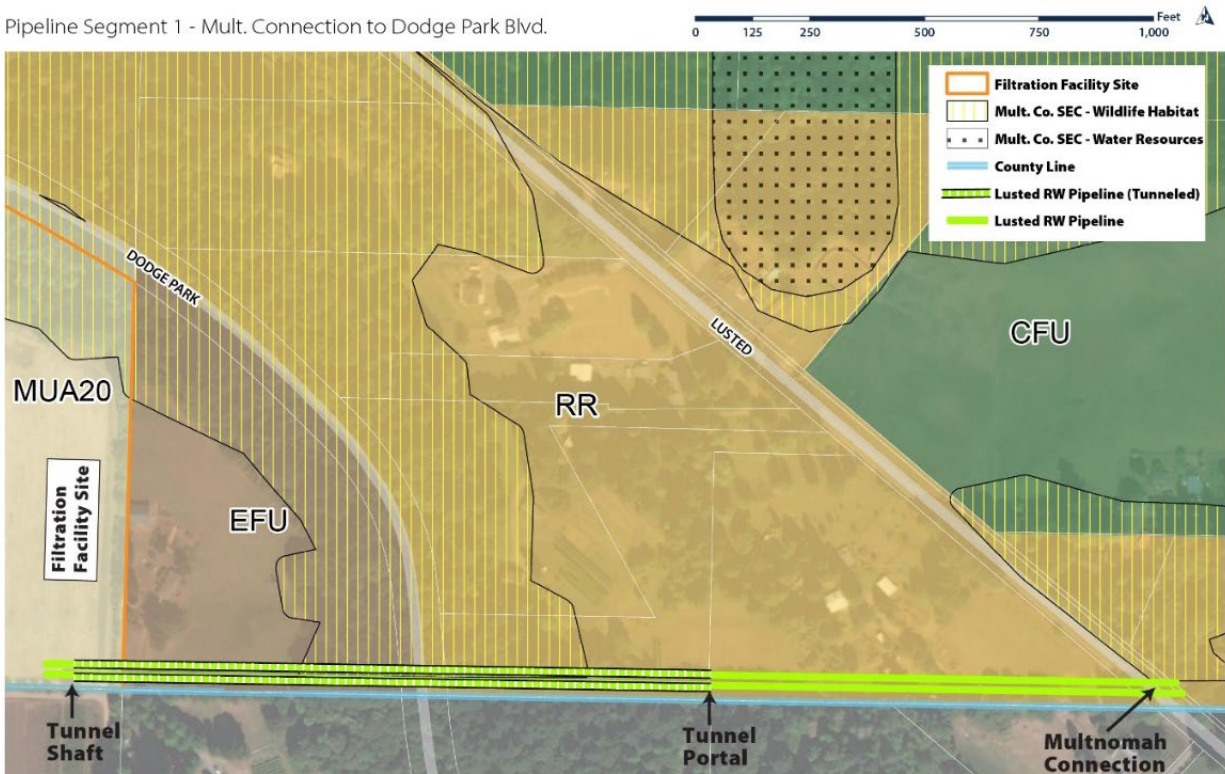


Figure 5. Raw Water Pipelines—Segment 1

The RR zone along this segment extends from the lots on either side of Lusted Road to Dodge Park Boulevard, where zoning changes to EFU.² The pipelines will cross three properties in the RR zone: tax lots 800, 1400, and 1500 (1S4E23C).³ On tax lot 800, a pipeline connection will be made to an existing conduit on Water Bureau property adjacent to Lusted Road. On tax lot 1400, the pipelines will extend below an open field and adjacent driveway, running parallel to and approximately 50 feet north of the south property line (Figure 7). Approximately 600 feet west of Lusted Road, the pipelines will be auger-bored beneath a man-made pond. The pipelines will continue an additional 400 feet west to the

² See EFU review section (Section 2.C).

³ Section 2 Overview and Appendix K provide Lot of Record maps and documentation for these lots.

Bull Run Filtration Projects Land Use Applications

proposed tunnel portal, which is located on the east side of tax lot 1500. From the portal, a deep tunnel will carry the pipelines beneath Dodge Park Boulevard, the western border of the RR zone and the limit of this CU review. Pipeline appurtenances include buried access vaults, at-grade hatches, and air vents as described below.



Figure 6. Residence and Accessory Structures (TL 1400)



Figure 7. Tunnel Portal Site (foreground) Looking East along Underground Pipeline Corridor

The terrain is fairly level across tax lots 800, 1400, and the east side of tax lot 1500. To the west of the portal, a steep forested slope climbs towards Dodge Park Boulevard. This forested slope contains protected forest habitat (SEC-h) resources. The tunnel will be bored deep beneath the forest habitat area, with no impact to the ground surface, trees, or vegetation, thereby avoiding impact to forest habitat resources. The SEC-h resources are reviewed in **Section 2.D**.

The area is characterized by the prominent forest bluff to the west and by rural residential and small-scale agricultural uses on the flatlands near Lusted Road. Rural homes and farm and utility buildings are common along Lusted Road. Within and adjacent to Lusted Road the Water Bureau already has three existing Bull Run water conduits and the LRDM with associated appurtenances. The existing conduits connect south to the Hudson Intertie near Hudson Road. The two RR-zone lots each have a single-family residence with accessory structures such as garages, barns, and sheds. There is a garden and small pasture area on the site. Trees and vegetation are common outside of the developed areas on this and adjacent properties.

Discussion of Potential Impacts

The two proposed RW pipelines connect to existing Lusted Road conduits. In addition to the existing water conduits and appurtenances, land adjacent to the 75-foot easement includes single family residences, sheds and other outbuildings, a garden and pasture, open fields and forest. The potential impact area (core analysis area) for this segment of subsurface pipeline is the three RR lots and a 100-foot segment of Lusted Road, as shown on Figure 5.

The proposed pipelines will be buried at depth; soil will be restored and reseeded to minimize erosion. Soil restoration of existing agricultural areas will include the retention and replacement of the topsoil and other measures described in the Agricultural Soil Restoration Study in Appendix D.2. Existing driveway and vehicle access will be restored within the easements. The owner's dirt driveway will be

Bull Run Filtration Projects Land Use Applications

improved with base material and gravel to provide more reliable, year-round access. North of the pond noted above, the drive will be slab-supported to improve separation from the nearby pond. The pipelines leading to the portal will have buried access vaults with at-grade hatches. These vaults and two at-grade pipeline drains are set to the side of the driveway for ease of access and with separation from existing gardens. At Lusted Road, there are at-grade valve boxes provided for operation of buried valves, and there will be three low air vents, two to the east of Lusted Road and one to the west. They will be set back from the road and from existing driveways. These above-ground appurtenances are reviewed in more detail as part of the Design Review findings in **Section 2.B**.

There is no light, odor, or noise producing equipment associated with the pipelines along the raw water alignment (Segment 1). Farm production units were evaluated in the Agricultural Compatibility Study, Appendix D.1, and the proposed pipelines were found to have no significant farm impacts. For these reasons and because the underground pipelines and appurtenances, including at-grade vault hatches, valve boxes, and low-profile vents, are similar in design and function to those along the existing Bull Run conduits in the study area, the proposed Segment 1 pipelines are consistent with the character of the area.

Pipeline Segment 2

Two FW pipelines will connect the filtration facility to the intertie at Lusted Road (Figure 8).

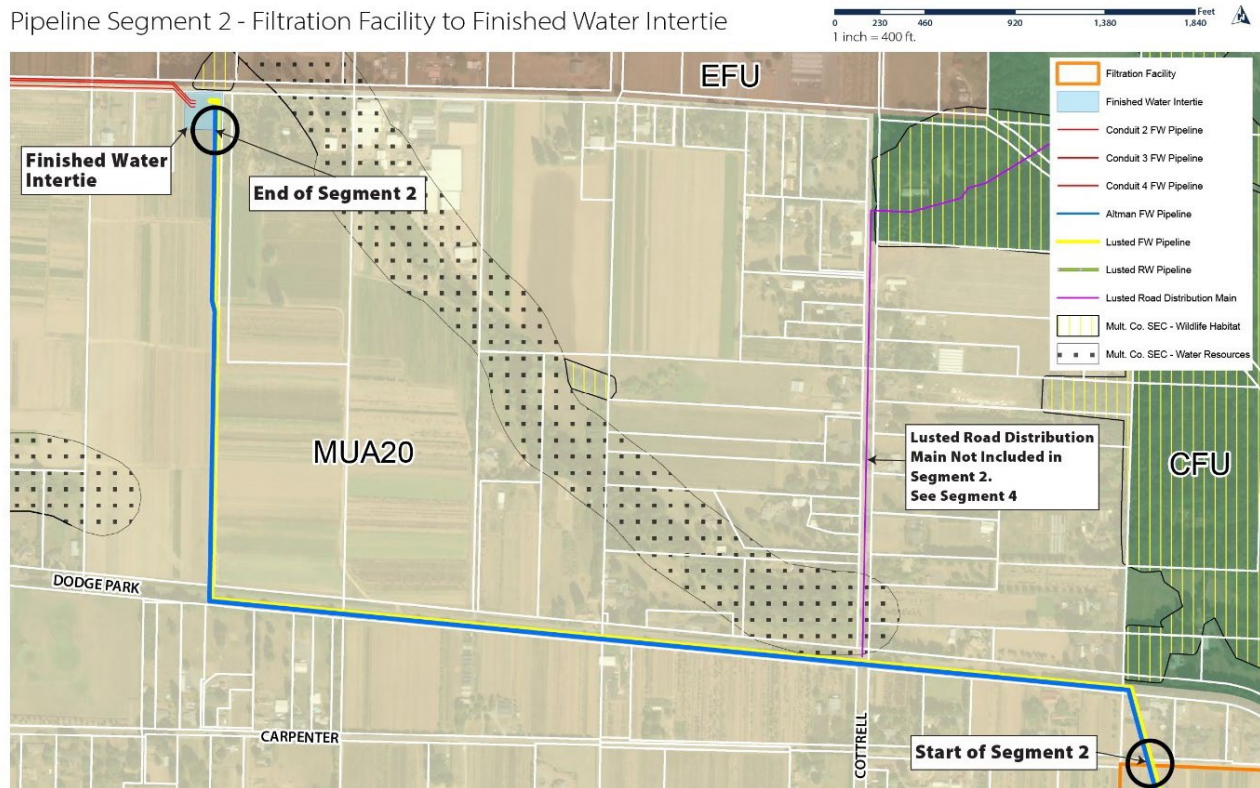


Figure 8. Finished Water Pipelines—Segment 2

Bull Run Filtration Projects Land Use Applications

The pipelines will be bored underground from the filtration facility north to Dodge Park Boulevard, crossing below Carpenter Lane and tax lot 300 (1S4E22DB) owned by the Water Bureau. The pipelines will extend west in the road ROW for approximately 4,600 feet before turning north. From Dodge Park Boulevard, the pipelines extend north in an easement across tax lot 900 (1S4E21A), following an existing farm access road along the eastern edge of the property.

At the north end of tax lot 900, south of Lusted Road, the pipelines connect to the proposed intertie. Figure 8 shows pipeline Segment 2 between the filtration facility and the finished water intertie.

The Water Bureau owned lot on Carpenter Lane has a single-family dwelling and large accessory structure. The pipeline will predominantly be bored under the lot and be positioned to avoid developed areas. The pipelines then extend west in the Dodge Park Boulevard ROW.

Dodge Park Boulevard is classified as a Rural Collector roadway (according to the County's *Functional Classification of Roadways*), has a 100-foot ROW, and two paved travel lanes. Each lane has 12-feet of pavement and a paved or gravel shoulder varying in width. Roadside vegetation includes grasses and blackberry brambles, with shrubs and trees along the edges of the ROW in some sections. From the east end of the alignment, where Dodge Park Boulevard is cut into the slope, the roadway slopes uphill to the west, rising approximately 60 feet. At the west end, before the alignment turns north, the roadbed is elevated on fill above surrounding farm fields. There are no driveways on the south side of Dodge Park Boulevard; all the properties that have frontage on the south side of the road take access from Carpenter Lane. Overhead utility lines are located on the north side of the ROW for the entire length of Segment 2. The Pleasant Home Water District has a pipeline under the north side of the pavement and a communications line exists under the south side of the pavement.

The area outside the Dodge Park Boulevard ROW is characterized by rural residential and agricultural uses. Farm fields growing nursery stock are common south of the ROW and to a lesser extent to the north; most fields are managed by surrounding farm operators that transport nursery stock and equipment to and from fields as necessary. Residential uses include single-family residential dwellings with residential accessory structures such as garages and sheds. Residential yards include trees, shrubs, and gardens, and on larger properties, the remaining portions of land contain agricultural fields primarily used for nursery stock production. Some properties have agricultural structures including barns or storage sheds.

As the alignment turns north from Dodge Park Boulevard, the pipelines travel in an easement along the eastern edge of tax lot 900, below an existing farm access road for much of their length before reaching the intertie site. The property over which the easement travels (tax lot 900) is used for nursery stock production, farm buildings, residences, and accessory structures. A view of the northern portion of the easement along the easterly side of tax lot 900 is shown in Figure 9.

Bull Run Filtration Projects Land Use Applications



Figure 9. Farm Access Road, Looking South from Lusted Road

Discussion of Potential Impacts

The two proposed below-ground FW pipelines in the MUA-20 zone will be bored beneath and have no impact on Carpenter Lane and residential uses on tax lot 300 north of the facility site. Buried access vaults are located at the north edge of the lot.

The underground pipelines will then enter Dodge Park Boulevard ROW, turn west and travel on the south side of the ROW, generally within the roadside embankment. Access vaults will be installed at three locations within the Dodge Park Boulevard ROW with accesses set back from the existing paved area of the road. These appurtenances are reviewed in more detail as part of the Design Review findings in **Section 2.B**. These appurtenances are similar to existing utility equipment in the study area, including the appurtenances along the existing Water Bureau conduits. As proposed, the appurtenances will blend in with other utilities that characterize the roadside environment in the study area (see for example Figures 2 and 3, and Figure 2 in **Section 2.B**).

Next, the Segment 2 alignment travels along the eastern edge of tax lot 900, a lot zoned MUA-20 that is primarily in nursery-stock production and contains a farmhouse and agricultural buildings in the northwest corner of the property approximately 500-feet away from any proposed project facilities. The pipelines are designed to avoid impacts to surrounding uses, through siting at the edge of the property, following an existing access road, and being buried below ground. Soils will be restored and reseeded to minimize erosion. Soil restoration of existing agricultural areas will include the retention and replacement of the topsoil and other measures as described in the Agricultural Soil Restoration Study in Appendix D.2. The existing farm road will be improved with base material and gravel to provide more reliable, year-round access along the entire route, both for the Water Bureau and the farmer. Appurtenances include access vaults and drains at the south end of tax lot 900, adjacent to the Dodge Park Boulevard ROW. Additional access vaults with vent piping are located along the access road to the north.

Bull Run Filtration Projects Land Use Applications

There is no light, odor, or noise producing equipment associated with the pipelines or appurtenances along Segment 2. The farm production unit on tax lot 900 was evaluated in the Agricultural Compatibility Study, Appendix D.1, and the proposed pipelines were found to have no significant farm impacts. For these reasons, and because the underground pipelines and the appurtenances are similar in design and function to the those along the existing study area Bull Run conduits and to other utility equipment in the study area, the proposed Segment 2 pipelines are consistent with the character of the area.

Pipeline Segment 3

From the intertie, the three pipelines will extend west in the Lusted Road ROW and then two pipelines will turn north in the Altman Road ROW (Figure 10). Three single pipe sections of this segment are within the MUA-20 zone and subject to conditional use review.⁴

Pipeline Segment 3 - Fresh Water Intertie to C2/C3/C4 Connection

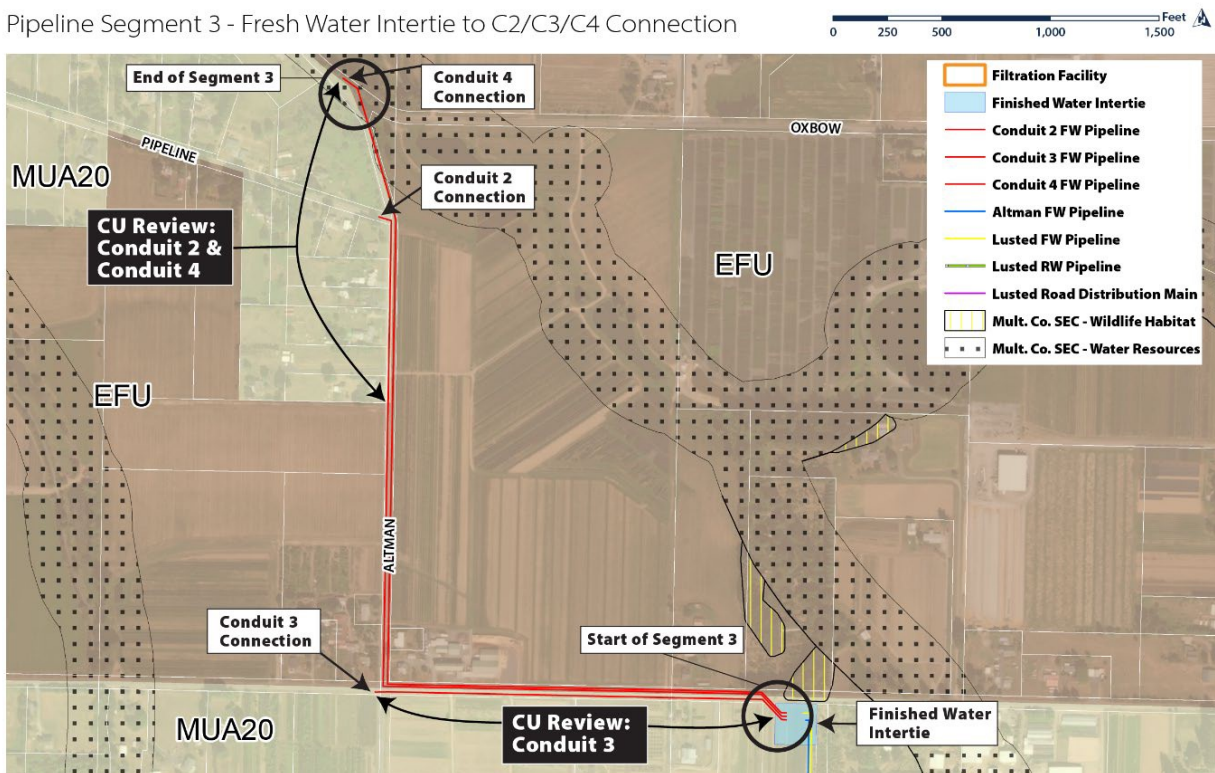


Figure 10. Finished Water Pipelines—Segment 3

Three pipelines are proposed in the Lusted Road ROW, one of which is within the area south of the centerline zoned MUA-20, connecting with Conduit 3 just past Altman Road. On Altman Road, the two remaining pipelines enter another split-zoned section of ROW about 1,300 feet north of Lusted Road. One pipeline is within the MUA-20 area west of the centerline, which extends 820 feet before connecting with existing Conduit 2 in Pipeline Road. The final pipeline crosses from EFU into MUA-20 before reaching Conduit 4 at Oxbow Drive.

⁴ The proposed pipelines in ROW in the EFU zone are an allowed use under MCC 39.4220(G), as discussed in the Section 2 Overview.

Bull Run Filtration Projects Land Use Applications

Thus, Segment 3 contains three sections of pipe in the MUA-20 zone, one in Lusted Road and two in Altman Road.

Lusted Road is classified as a Rural Collector roadway and has two 10-foot paved travel lanes within a 60-foot ROW. There is little to no shoulder along most of the roadway located along the pipeline alignment. Overhead utility lines are located on the south side of the ROW along the entire length of Lusted Road. The Water Bureau's existing Conduit 3 travels on the southern shoulder and below the road with an appurtenance along the roadside, including an existing vent shown in Figure 12. Roadside vegetation consists predominantly of grasses along the edges of the ROW. The pipeline will span approximately 1800 feet from the intertie west to the intersection with Altman Road and rise in elevation approximately 27 feet.



Figure 11. Lusted Road with Existing Air Vents, Overhead Utility Lines

The area outside the Lusted Road ROW is characterized by agricultural and rural residential uses. Residential uses are found in proximity to the intertie and include single-family residences and accessory structures such as garages and sheds. Farm fields growing nursery stock are found both north and south of the ROW. Glendale Farms' operations buildings are located at the intersection of Lusted and Altman Roads.

Altman Road is classified as a Rural Local Road and has a 40-foot-wide ROW, with two paved 10-foot travel lanes. The shoulder area along this section of roadway consists predominantly of grasses; areas of gravel and residential landscaping also occur within the ROW. Overhead utility lines are located on the west side of the Altman Road ROW. Existing Water Bureau conduits cross Altman Road at Lusted and Pipeline roads. Heading north from Lusted Road, Altman Road travels over rolling hills to the intersection with Oxbow Drive.

Land zoned MUA-20 to the west of Altman Road is characterized by rural residential uses. Residential uses include single-family residential dwellings with residential accessory structures such as garages and sheds. Residential yards include trees, shrubs, and gardens.

Discussion of Potential Impacts

There are three sections of FW pipeline in the MUA-20 zone: one extending approximately 1,800 feet on the south side of Lusted Road, the second extending 820 feet on the west side of Altman Road, and the third right before reaching Conduit 4 at Oxbow Drive. These are underground pipelines and associated appurtenances located entirely within the road ROW. The proposed pipelines will be buried at depth, with the ground surface restored to existing site conditions. Small surface appurtenances will be located along the alignment and set back from the roadway. Along the pipeline on the south side of Lusted Road, in the MUA-20 zone, there are two access vaults. The access vaults are underground structures with at-grade hatches. One vault includes low vent piping similar to the existing vent in Figure 11. In the MUA-20 (west) section of Altman Road, there is one access vault with vent piping, also similar to existing pipeline appurtenances in the study area. All appurtenances will be within the ROW, set back from the roadway and (on Altman Road) away from an existing residential driveway.

Pipeline appurtenances are reviewed in more detail as part of the Design Review findings in **Section 2.B**. These appurtenances are similar in design and function to existing Water Bureau appurtenances and to existing utility equipment in the study area. As proposed, the pipelines and appurtenances will blend in with the roadside environment in the study area.

There is no light, odor, or noise producing equipment associated with the pipelines or appurtenances along Segment 3. The farm production units were evaluated in the Agricultural Compatibility Study, Appendix D.1, and the proposed pipelines were found to have no significant farm impacts. For these reasons and because the underground pipelines and the appurtenances are similar in design and function to the those along the existing study area Bull Run conduits and to other utility equipment in the study area, the proposed Segment 3 pipelines are consistent with the character of the area.

Pipeline Segment 4

A local distribution main, Lusted Road Distribution Main, supplies water to existing local water customers and five wholesale water districts. See **Introduction**, Figure 6 and accompanying text. Currently, the main is fed from existing Conduits 2 and 4 with the connection just east of the LHTF. Once the new filtration facility is online, the main will need to receive water from the facility.

Bull Run Filtration Projects Land Use Applications

Pipeline Segment 4 - Dodge Park Blvd. to LRDM Connection

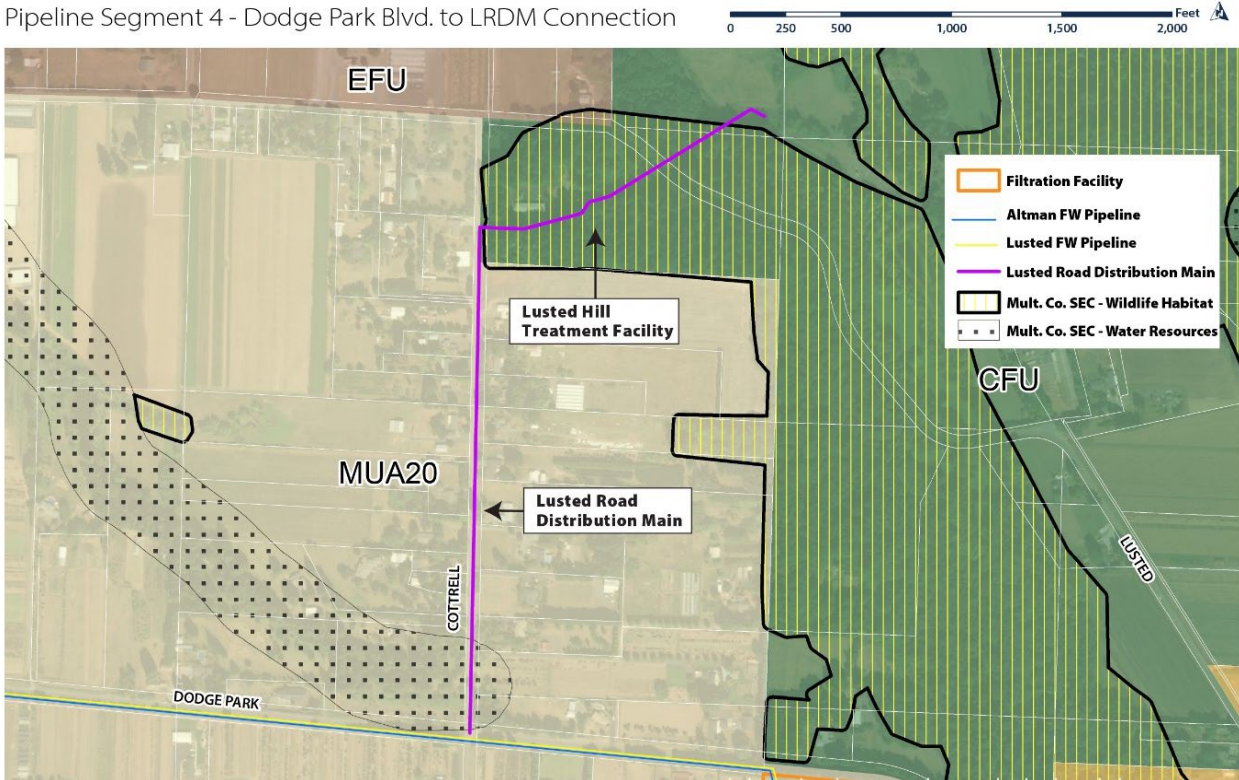


Figure 12. Lusted Road Distribution Main—Segment 4

A proposed new pipe will connect the new FW pipelines in Dodge Park Boulevard to the existing distribution main north of Lusted Road (Figure 12). The pipe is planned within the Cottrell Road ROW in the MUA-20 zone before crossing into the LHTF property in the CFU zone, where it connects to the existing main in an adjacent easement. The gravity-fed 12-inch main will be installed below ground using both trenchless construction and open cut methods. Once at the LHTF, the pipe will be open cut in the LHTF driveway and parking area and then bored below ground, parallel to existing Conduit 3, to the connection with the existing main.

There are two SEC crossings along this route. SEC requirements are addressed in **Section 2.D**. Through trenchless (auger boring) techniques, resource impacts are minimized in both cases.

Cottrell Road is classified as a Rural Local roadway and has a 60-foot-wide ROW, with two paved travel lanes, each 10-feet wide. The shoulder area along this section of road is predominantly grass, with some sections in gravel of varying width. Sections of the ROW contain trees and shrubs, including patches of residential landscaping. Overhead utility lines are located on the east side of Cottrell Road, and on both sides of the road to the north.

The MUA-20 area along Cottrell Road is characterized by rural residential uses intermixed with agricultural uses. Residential uses include single-family residential dwellings with residential accessory structures such as garages, sheds, shops, and other outbuildings. Residential yards include trees, shrubs, and gardens. Agricultural uses include nursery-crop fields, some with farm buildings and greenhouses.

Bull Run Filtration Projects Land Use Applications

The existing LHTF is located at the intersection of Cottrell and Lusted roads in the CFU zone. The main will cross the Water Bureau properties, tax lots 200 (1S4E22BA) and 100 (1S4E22BA), and then connect to the existing main in an easement on tax lot 801 (1S4E15C). The LHTF site contains the existing treatment utility buildings with parking and circulation areas surrounded by forest. A cleared utility corridor descends to Lusted Road and continues east to tax lot 801. Existing Bull Run Conduit 3 and other utility pipes run in this utility corridor. Tax lot 801 is partly farmed (nursery stock production) and partly forested, and includes underground water lines in easements.

Discussion of Potential Impacts

This distribution main will be underground for its entire length. The main will be auger bored for much of its length along the west side of Cottrell Road, avoiding any impact to Beaver Creek and associated SEC water resources. To maintain gravity flow, the proposed main along Cottrell Road will be buried deep. The bore pits and limited open trench sections will be restored to native soil and ground cover conditions.

There are only two appurtenances along this entire Segment 4: 1) a vent vault with vent piping, located in the ROW, northwest of the Dodge Park Boulevard and Cottrell Road intersection, and 2) an at-grade drain located in the Cottrell ROW approximately 50 feet north of the Dodge Park ROW. There are no appurtenances or above ground structures planned within the CFU district. In addition, the LRDM will be located within an established pipeline corridor and run parallel to Conduit 3. No part of the LRDM will be visible in the CFU district. Pipeline appurtenances are reviewed in more detail as part of the Design Review findings in **Section 2.B**. These appurtenances are similar to existing utility equipment in the study area and to the appurtenances along the existing Water Bureau conduits. As proposed, the appurtenances will blend in with the other utilities that characterize the roadside environment in the study area.

As noted previously, there is no light, odor, or noise producing equipment associated with the pipelines or appurtenances. The farm production units along Segment 4 were evaluated in the Agricultural Compatibility Study, Appendix D.1, and the proposed main was found to have no significant farm impacts. For these reasons, and because the underground pipelines and appurtenances are similar in design and function to the those along the existing study area Bull Run pipelines and to other utility equipment in the study area, the proposed Segment 4 distribution main is consistent with the character of the area.

Review of Intertie

The quarter-mile intertie core analysis area is shown in Figure 13 and includes 15 properties, ranging in size from 1.8 to 76 acres. Properties to the north of Lusted Road are zoned EFU and properties to the south are zoned MUA-20. The north fork of Beaver Creek flows north through the core analysis area and is covered by an SEC-wr overlay with areas of SEC-h at the edges.

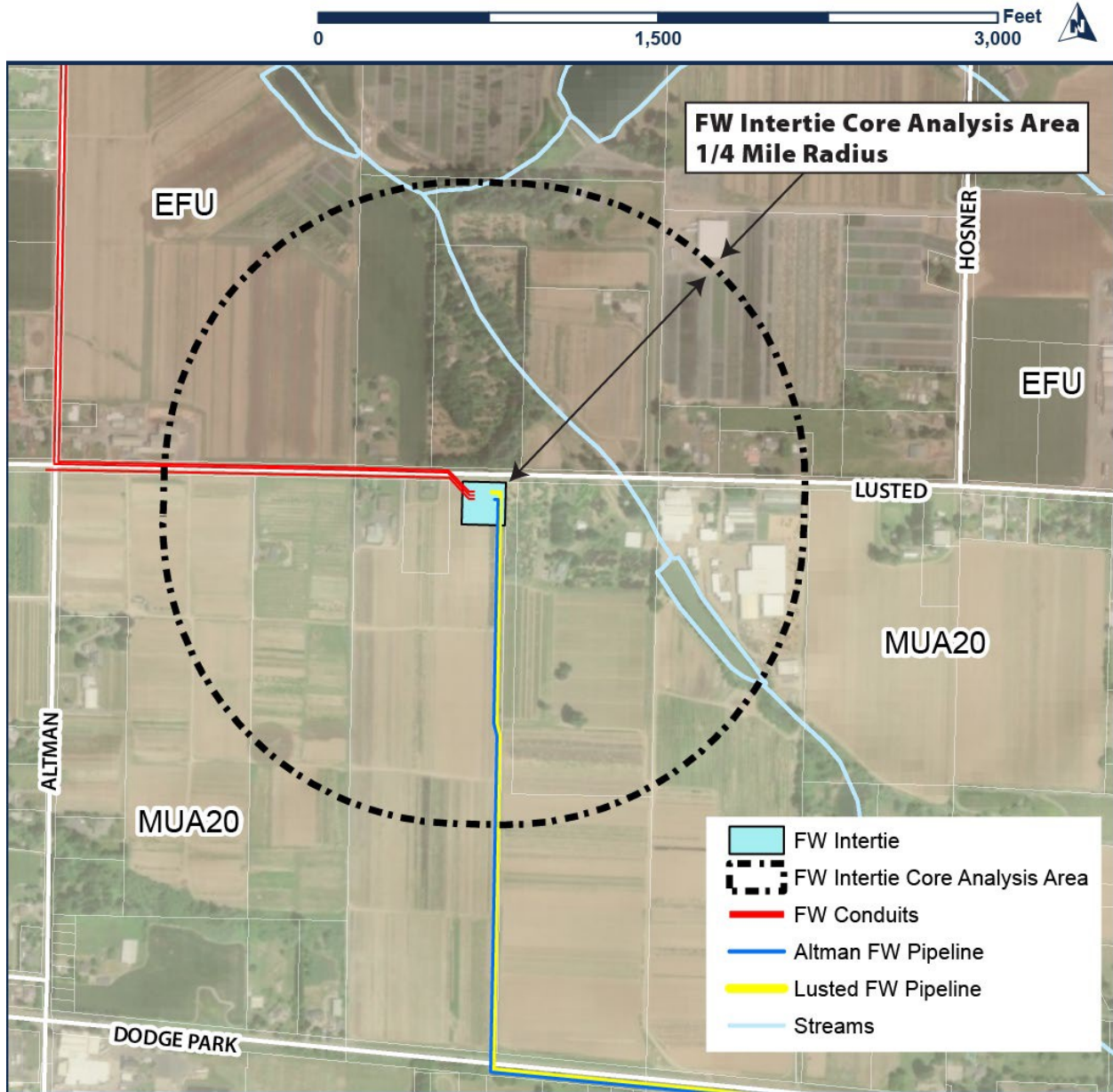


Figure 13. Finished Water Intertie Core Analysis Area

Much of the core analysis area is in agricultural production. Agricultural uses include large-scale nursery operations with offices, warehouses, loading areas, barns, and extensive farm fields in nursery stock production. Surface Nursery headquarters are located approximately 700 feet east of the intertie on Lusted Road (Figure 14). Glendale Farms’ main operations center is located a quarter mile to the west (Figure 15). Additional farm structures are visible from the intertie site (Figure 17).

Rural residential uses are found along Lusted Road, with one- and two-story single-family residential dwellings and accessory structures such as garages, barns, and sheds (Figure 16). Several of the farmed properties include farm dwellings.

Bull Run Filtration Projects Land Use Applications

Lusted Road contains an existing Bull Run water conduit with associated appurtenances (Figures 2 and 18). Other roadside utility structures include pump stations, fire hydrants, and overhead utility lines (Figure 19).



Figure 14. Surface Nursery Headquarters



Figure 15. Glendale Farm

The landscape is characterized by rolling hills with grades climbing to the west and south of the intertie site. Beaver Creek is approximately 500 feet east of the site, along a low-lying corridor that is highly fragmented by local nursery operations, including large irrigation ponds and impoundments and channelized and piped stream segments, in addition to vegetated reaches (Figure 18). Vegetated areas are found to the north and east of the intertie site. Most of the farm fields are in nursery crop production.



Figure 16. Residential House with Nearby Barns



Figure 17. Large Farm Building, Nearby Residence



Figure 18. Stream Corridor with Existing Conduit Appurtenance in Foreground



Figure 19. Roadside Pump Station and Utilities

Section 2.B provides additional documentation of the variety and character of buildings and structures in the area.

Intertie Location and Design

The intertie is located in a 140- by 160-foot easement in the MUA-20 zone, south of Lusted Road and approximately a quarter mile east of Altman Road (Figure 13). The intertie location was selected to avoid EFU-zoned land and SEC overlay zones north of Lusted Road. The actual pipelines intertie is designed as a below-grade concrete vault that connects the two parallel FW pipelines with valves and interconnections to three pipelines that serve existing “downstream” conduits. A small (about 800 sq. ft. and 16-foot tall) electrical building will house the necessary electrical and control panels for that intertie. The plan includes an access drive, security fence, and landscape buffer (Figure 21). The intertie provides reliability and system redundancy for the finished water system.

Discussion of Potential Impacts

The intertie was designed as a low-profile facility set mostly below ground, with a few above grade features, such as the small utility building, vault stairwell cover, and ventilation louvre. All above grade features are set back and screened from neighboring properties and Lusted Road. The potential for light, noise, traffic, or other impacts is reviewed below.

The lighting associated with the facility is shielded and directed downward to contain all lighting within the intertie facility site. As documented in the Intertie Lighting Study, Appendix F.1, the exterior lighting layout for the intertie was designed with the rural site location, safety, security, and potential lighting trespass in mind. Two pole mounted lights and a wall-mounted light on the electrical building are located and designed to meet Illuminating Engineering Society (IES) Standards and comply with County dark sky lighting standards (MCC 39.6850) as documented in **Section 2.B**.

The lighting study found that when all the lights are energized, there will be no light trespass outside of the intertie site boundary. In addition, dense evergreen and shrub buffers will screen views of the facility from adjacent properties.

The emergency generator and the intertie valves are the only sources of operation sound associated with the intertie. The generator will be housed in an insulated (concrete block) building and the generator’s exhaust pipe will include a muffler and the air inlets and air outlets of the building will include acoustical silencers to ensure sound attenuation. The intertie valves will be located in a below-ground concrete vault with vents. The vault design also incorporates sound muffling features, such as silencers added to vent openings. Multnomah County noise standards are based on the time of day, with a 50 dBA limit from 10 PM to 7 AM and a 60 dBA limit from 7 AM to 10 PM (MCC 15.269.A). **The Intertie Acoustical Study, Appendix F.2, shows that the intertie meets County noise standards.**

The intertie will have no more than one roundtrip per week by Water Bureau staff in a pickup truck or fleet vehicle. For comparison, a single-family dwelling typically produces 10 vehicle trips (5 roundtrips) per day. The intertie will take access from an existing farm road located on tax lot 900. The Traffic Impact Study, Appendix C.1, documents sight distance safety at the intertie access and shows that the intertie will have no impact on local traffic conditions.

Bull Run Filtration Projects Land Use Applications

Landscaping proposed at the intertie includes large evergreen trees and shrubs to screen the facility. Directly across the street from the facility is a dense grove of trees, and large mature trees can be seen on the north side of Lusted Road looking east and west from the intertie site. On the south side of Lusted Road, east of the intertie site, is a tree farm with mature ornamental trees with a backdrop of large evergreen trees. The proposed landscaping is similar to existing landscaping in the area, providing continuity in the surrounding landscape (Figure 20). The proposed landscape site plan is shown in Figure 21.



Figure 20. Rendering of View Looking East Towards Intertie

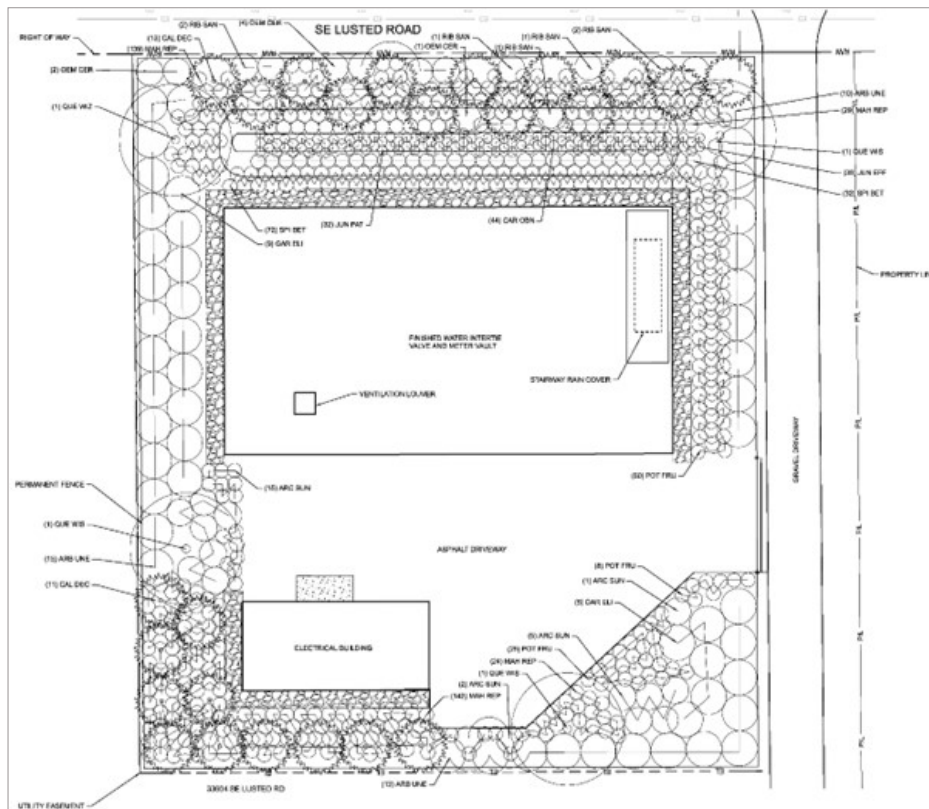


Figure 21. Intertie Landscape Plan with Buffers

Character of the Area Conclusion

Water pipelines, appurtenances, and associated structures have been part of, and have supported, the rural development in the study area for more than 100 years, and are therefore innately consistent with the character of the area. As described above, the project was designed to locate pipelines to the maximum extent in public road ROW. Where avoidance of environmental zones required the pipelines to be located on private property (see **Introduction**, Table 3 and accompanying text), existing farm roads were used for pipeline routes and land will be returned to pre-development or better conditions, and easements will allow vehicles to access adjacent properties.

The intertie will not emit light, sound, or vibration beyond the property line. The intertie will have shielded exterior lighting that contains light and glare on-site; moreover, the entire site will be screened by evergreen trees and shrubs. Sounds from the vault and the emergency generator will be muffled by insulation and building design and will meet County noise standards. With one site visit per week, there are substantially fewer vehicle trips associated with the intertie than a residential property. The electrical building will be less than 800-square feet, smaller than most of the houses and residential accessory structures in the area. The pipeline intertie itself will be buried in a vault and will not be visible from neighboring properties or Lusted Road.

The proposed landscaping with evergreen shrubs and trees around the intertie will be consistent with the character of surrounding properties along Lusted Road as it continues the canopy of evergreen trees along the roadway. The proposed intertie, pipelines, and appurtenances are consistent with those already existing in the study area, which have been part of the landscape and character of the area for more than 100 years.

B. Will not adversely affect natural resources;

Response: The vast majority of the pipelines alignment is located in ROW, and therefore is not in a natural resource state. Other portions of the pipeline intentionally were designed to follow existing farm roads and other previously cleared areas that are also not in a natural resource state.

The natural resources protected by MCC 39.5500-5860 are identified as areas of Significant Environmental Concern (SEC) zoning and protections are implemented by applicable SEC overlay zones. The proposed pipelines will cross SEC overlays in only two locations outside the road ROW. Compliance with SEC requirements is demonstrated in **Section 2.D** of this narrative.

As shown in **Section 2.D**, the Water Bureau has prioritized avoidance of natural resources throughout the design development process. Pipelines were realigned to avoid crossings of streams and other natural resource areas or to only pass through SEC areas in road ROW. In some cases, it was not feasible to construct pipelines without passing through county SEC zones outside the road ROW. However, the Water Bureau's design approach has resulted in the following measures to fully protect these natural resources:

- The **RW pipelines** extending west from Lusted Road to the filtration facility site must pass through an SEC-habitat overlay zone. To avoid impacts on natural resources in this area, the pipelines will be placed in deep tunnels bored approximately 150-200 feet below the surface, avoiding all impacts to natural resources or the ground surface whatsoever. A Wildlife

Bull Run Filtration Projects Land Use Applications

Conservation Plan (Appendix G.1), prepared by a professional environmental scientist, documents that there will be no impacts to resources protected by the SEC-h overlay. Therefore, these natural resources will not be adversely affected.

- One of the **FW pipelines** must connect with an existing conduit in Oxbow Drive which is covered by the SEC-water resource overlay zone. To minimize impacts, the pipeline will be constructed entirely within the Altman Road and Oxbow Drive ROWs, with no impacts to the stream or riparian vegetation.
- The **Lusted Road Distribution Main (LRDM)** connecting the filtration facility with the existing distribution main must pass through (a) the Beaver Creek SEC-wr overlay and (b) the forested SEC-h overlay on the LHTF site. To minimize SEC-wr impacts, the pipeline is located entirely within the Cottrell Road ROW, with a trenchless 390-foot segment bored below the roadway and below the stream culvert in the roadway, resulting in no impacts to the stream or riparian vegetation. To minimize SEC-h impacts at the LHTF, the pipeline is proposed in non-forested areas (including the LHTF driveway and parking area), with a trenchless 600-foot section of the main bored below ground, within an existing utility corridor, parallel to the existing Conduit 3. Therefore, the natural resources through with the LRDM will not be adversely affected.

Thus, the project will not adversely affect natural resources through a multi-tiered avoidance and protection strategy that includes (a) locating pipeline corridors outside of resource areas, (b) use of trenchless construction methods, (c) prioritizing placement of pipelines in public road ROWs, and (d) where ROW was not available, prioritizing placement of pipelines within previously cleared areas and existing utility corridors.

B. The use will not:

1. *Force a significant change in accepted farm or forest practices on surrounding lands devoted to farm or forest use; nor*
2. *Significantly increase the cost of accepted farm or forest practices on surrounding lands devoted to farm or forest use.*

Response: The Agricultural Compatibility Study (Appendix D.1) and the Forest Compatibility Study (Appendix D.3) describe the accepted farm and forest practices on surrounding lands and review possible impacts associated with the proposed pipelines and intertie.

Most of the proposed pipelines (1.8 miles, 65 percent of length) are located within developed county ROWs. As shown in Appendix D.3, the pipelines will not significantly affect accepted forest practices or significantly increase the cost of accepted forest practices on surrounding lands devoted to forest use. As described in Sections 17-18 of the Agricultural Compatibility Study, in general the pipelines have very few externalities or sensitivities which could be potential sources of impacts from the pipelines on neighboring accepted farm or forest practices. For example, the pipelines are odorless, silent, and produce no vibration, air emissions, mud, dust, or litter.

Bull Run Filtration Projects Land Use Applications

There are two⁵ sections of pipeline that cross through farmland in permanent easements. The first is in the RW pipelines section referred to in the Agricultural Compatibility Study as “R1” and “R2”⁶ (Figure 22). The two pipelines enter property R1 and continue west to property R2, where the pipelines enter a tunnel portal. The two pipelines continue west in a tunnel and pass under Dodge Park Boulevard. Hay, pasture, and cattle production are the current farm uses of property R1 with only two head of cattle raised. The same owner has hay and pasture production available on adjoining property R2. The Water Bureau will allow the property owner to continue hay, pasture, and cattle production within the permanent easement so there is no significant reduction in land available for these farm uses.

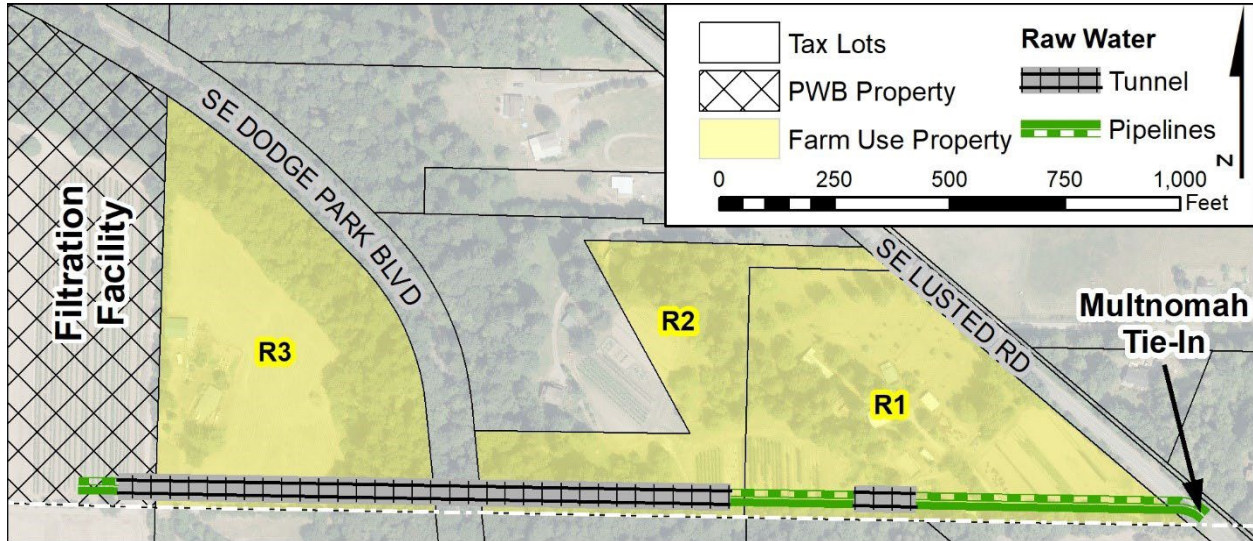


Figure 22. Farm Properties along the Raw Water Pipelines

The second is where the FW pipelines extend from Dodge Park Boulevard to Lusted Road, shown on Figure 23. The Agricultural Compatibility Study refers to this property as property “F11.” The pipelines will be sited in an easement along the east edge of property F11, generally underneath an existing farm road. The permanent easement in property F11 extends farther into the farm use area for the footprint of the intertie at the northeast corner of F11. Following construction, existing site conditions including the farm road will be restored and farm practices will continue where possible, as documented in the Agricultural Compatibility Study (Appendix D.1) and in the Agricultural Soil Restoration Study (Appendix D.2).

⁵ Property “F29” in the Agricultural Compatibility Study also extends onto a property with farm use, where the LRDM connects to the existing distribution main. However, this is located in an existing easement area for the existing distribution main, and does not involve any disturbance of lands devoted to farm use, and therefore is not included in detail in this summary of the Agricultural Compatibility Study. The Agricultural Compatibility Study provides a property-by-property analysis of every lot devoted to farm use along the pipeline alignments in Section 18.

⁶ Property “R1” is in the EFU zone and addressed in Section 2.C of this narrative.

Bull Run Filtration Projects Land Use Applications

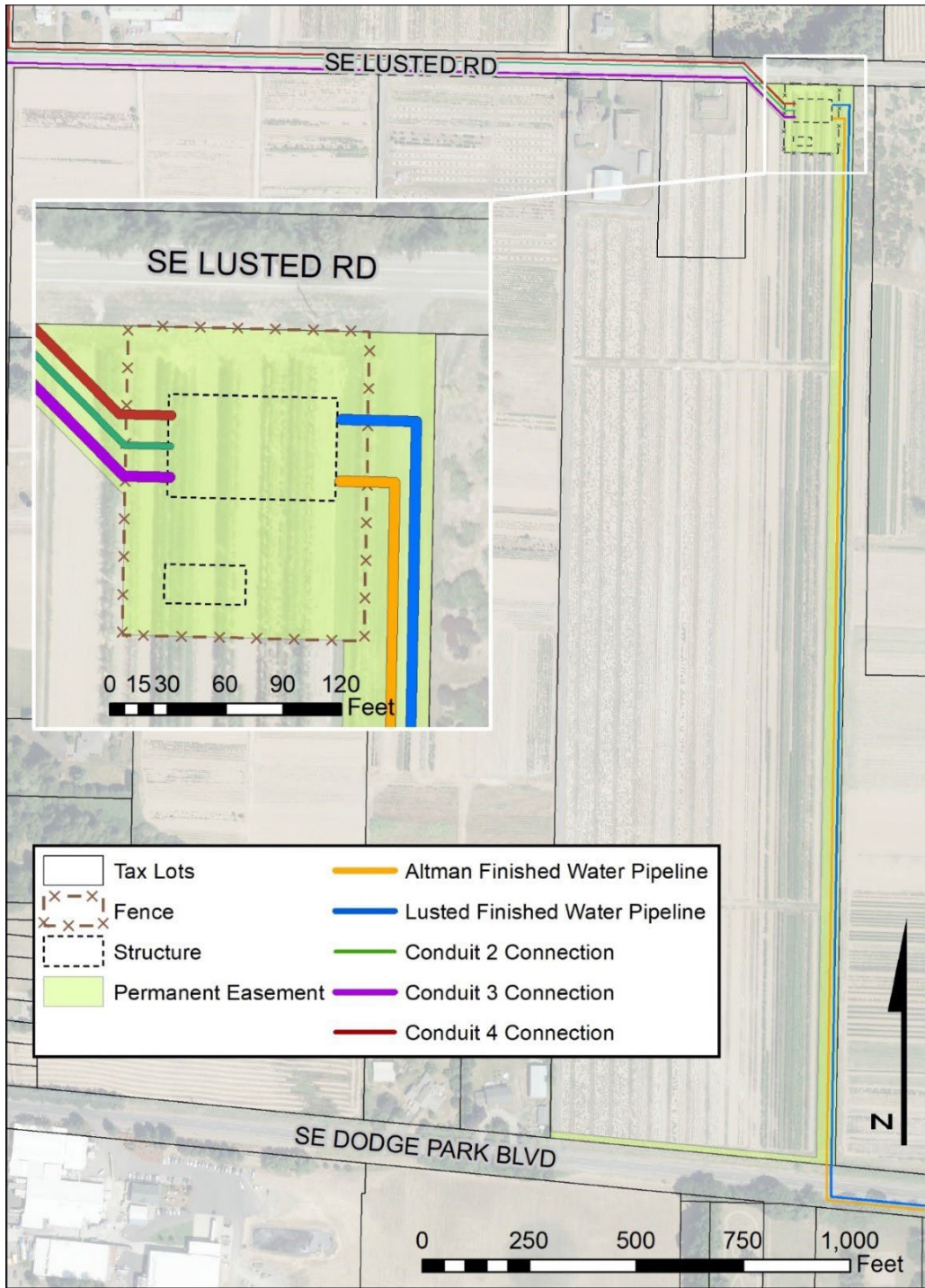


Figure 23. Finished Water Pipelines and Intertie

Note that the ROW and permanent easement areas for the pipelines and intertie are not located on “surrounding lands” for purposes of this approval criterion. Nevertheless, the Water Bureau has designed the proposed pipeline system to reduce any impacts to farm properties below the level of significance by, among other things: (1) using existing ROW, farm roads, or non-cropland areas wherever possible instead of taking a more direct route through cropland; (2) disrupting as little cropland as

Bull Run Filtration Projects Land Use Applications

possible by reducing the easement areas to the minimum possible size to accommodate the use; (3) agreeing to provisions in the easement documents themselves that will allow continued use of farmed area in the permanent easements where possible, such as along the edge of the pipelines on property “F11” and in the pasture area of properties “R1” and “R2”; and (4) engaging a soils expert to prepare a best-practices plan for restoring that continued-use farmland area back to pre-construction productivity, and implementing that plan, as documented in the Agricultural Compatibility Study (Appendix D.1) and in the Agricultural Soil Restoration Study (Appendix D.2). *See, e.g.*, Appendix D.1, Section 18.2.2 (farm use property “F11”). Pipelines on farm use property will be buried to a depth with at least seven feet of soil cover, which will not restrict accepted farm practices within the farmed area.

The intertie is designed to contain light and noise within the boundaries of the site and there are no dust, vibrations, odors, or air quality impacts associated with intertie operations, as described under Criterion A above and in the Agricultural Compatibility Study, Sections 16-18. Vegetative screening further buffers the intertie from nearby properties.

The TIS in Appendix C.1 addresses the traffic patterns and level of service throughout the surrounding road network. Only one trip/week is anticipated for the intertie. There are no identified impacts from the number of trips generated by the proposed intertie on local agricultural or residential uses.

As shown in the Agricultural Compatibility and Forest Compatibility Studies (Appendices D.1 and D.3), which are incorporated here by reference, the pipelines and intertie will not force any significant changes to accepted farm or forest practices nor cause any significant increases in cost of those practices in the surrounding lands. Therefore, this criterion is met.

B. Will not require public services other than those existing or programmed for the area;

Response: Service provider letters from public service providers serving the intertie site are provided in the following appendices:

- Police / Sheriff: Appendix L.2 Multnomah County Sheriff Form – FW Intertie.
- Electricity: Appendix L.5b PGE Will Serve Letter.
- Water Service: Appendix L.9b PHWD Will Serve Letter – FW Intertie.
- Wastewater Service: The intertie has no restrooms, sinks, or other features that would require wastewater service. Water service to the site will be provided by the PHWD only to serve a hose bib at the electrical building and provide irrigation for establishment of landscaping. Both will be captured by the on-site stormwater system (Appendix H.2).
- Stormwater: Appendix H.2. Because stormwater will be managed on site, no public services for stormwater are required for the intertie.
- Fire Protection: Appendix L.10b Multnomah County Fire District 10 / Gresham FD.

These providers confirm adequate service is available to serve the proposed intertie and no additional public services will be required. Outside of the intertie, the pipelines do not require any public services. This criterion is met.

Bull Run Filtration Projects Land Use Applications

E. Will be located outside a big game winter habitat area as defined by the Oregon Department of Fish and Wildlife or that agency has certified that the impacts will be acceptable;

Response: The County’s Comprehensive Plan identifies Oregon Department of Fish and Wildlife (ODFW) elk and deer winter range areas on the East Multnomah County Wildlife Habitat map (Figure 24). The range areas identified are in the northern portion of the County in the vicinity of the Columbia River and along the Sandy River, north of Oxbow Park. Thus, the proposed project will be located outside big game winter range habitat areas, as shown in the County’s Comprehensive Plan.

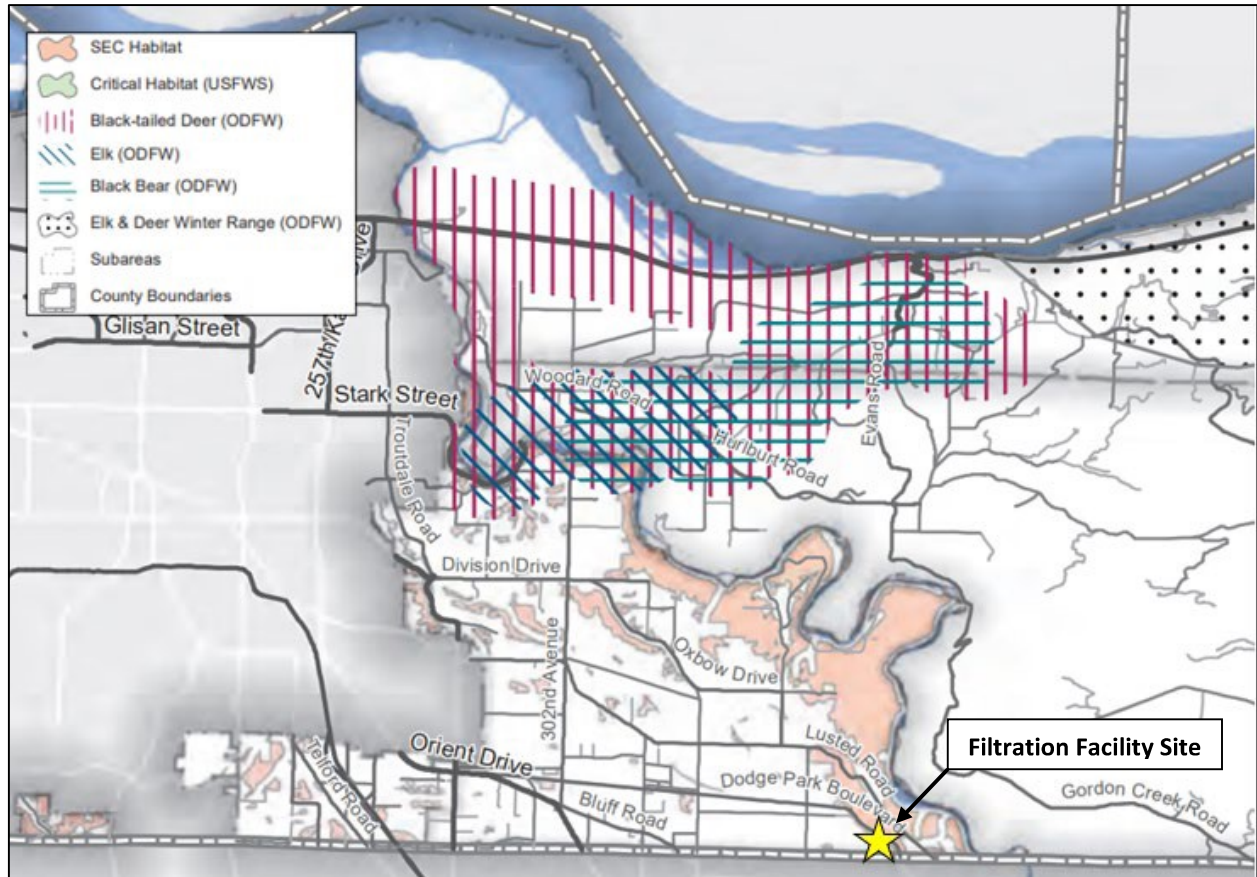


Figure 24. Clip of County Comprehensive Plan Figure 5-6—Wildlife Habitat, with Project Site Identified

In the County’s pre-application conference notes (PA 2022-15566), staff recommended contacting ODFW to “verify that the subject site is outside of the Big Game Winter Habitat Area. Submit any maps or documents that you use to support your finding for MCC 39.7515(E).”

The Water Bureau contacted Steve Niemela, ODFW’s Watershed Manager for the North Willamette Watershed District. As documented in Appendix E.8a, Mr. Niemela verified that the subject site is “in Impacted Habitat, not in winter range or even year-round range.” The ODFW mapping of the project site area is shown on Figure 25 (Appendix E.8b). The ODFW map confirms, as Mr. Niemela states, that the entire project is located within Impacted Habitat, not in winter range habitat area.

Bull Run Filtration Projects Land Use Applications

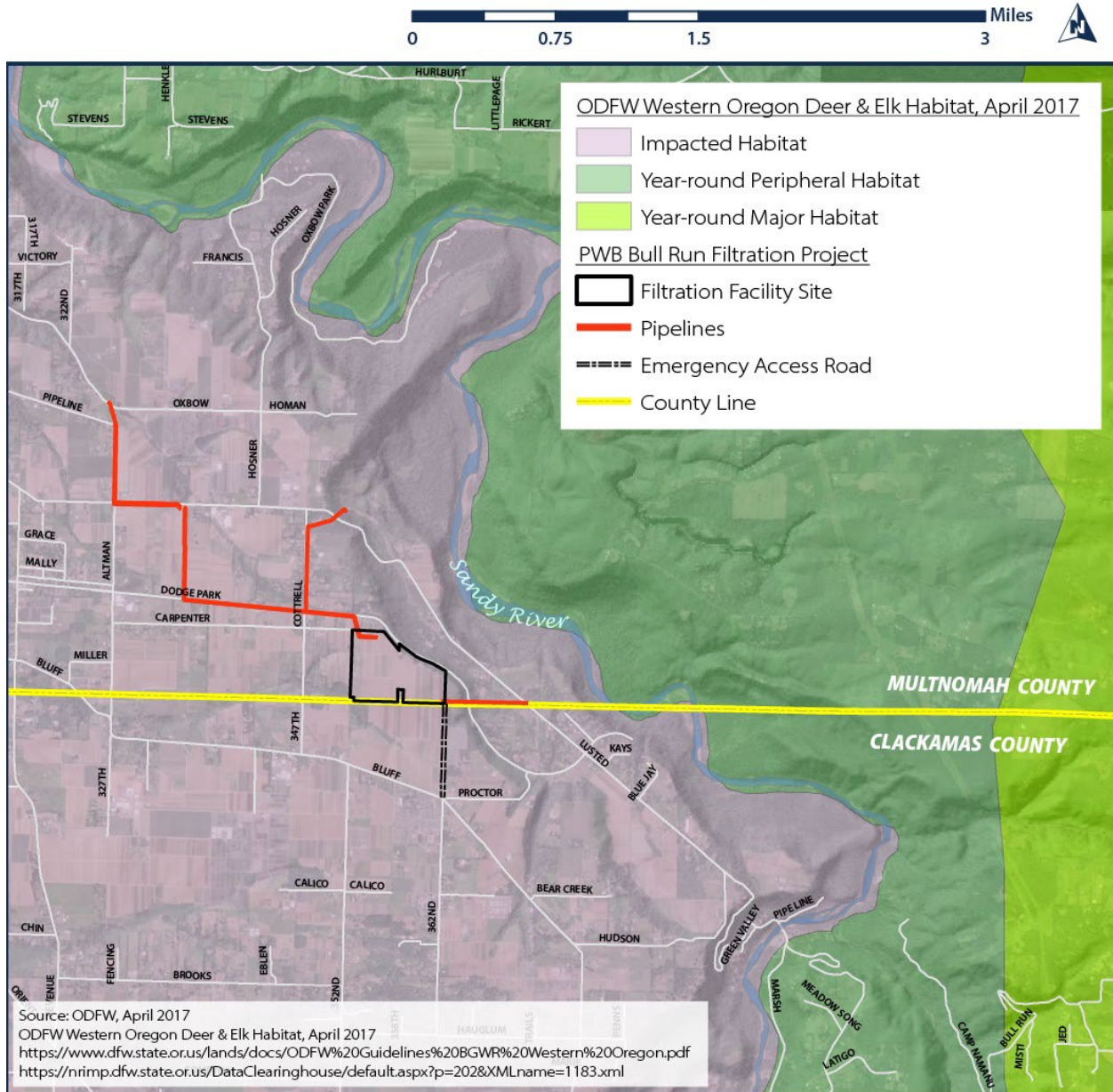


Figure 25. ODFW Western Oregon Deer & Elk Habitat Showing Project within Impacted Habitat

For these reasons, the proposed project will be located outside big game winter range habitat areas as defined by ODFW. This criterion is met.

B. Will not create hazardous conditions;

Response: There are no hazardous materials associated with the proposed water pipelines or intertie. No hazardous materials will be used or stored at the intertie facility.

Bull Run Filtration Projects Land Use Applications

The TIS in Appendix C.1 reviews the intertie access location for intersection sight distance safety and finds there to be adequate sight distance for vehicles entering and exiting the intertie driveway.

In Appendix I.2, a licensed Oregon geotechnical engineer confirms that the pipelines and intertie do not pose geologic hazards. Geohazard (GH) Permits for development within GH overlay zones are addressed in the **Section 2** Overview and Appendix I.

For these reasons, the intertie and pipelines will not create hazardous conditions and this approval criterion is met.

C. Will satisfy the applicable policies of the Comprehensive Plan;

Response: For the LHTF application (Appendix O.3, Case File #T3-2019-11784), for this same approval criterion county staff and the hearings officer found the following policies applicable to approval of the Water Bureau's LHTF facility located on Cottrell Road, less than one mile from the proposed intertie and pipelines. These policies are addressed below:

11.12 A water supply system for new development shall be by either of the following methods:

- 1. Connection to a public water system having adequate capacity to serve the development and all other system customers.*
- 2. A private water system that produces safe drinking water with sufficient volume and pressure to meet applicable Building Code and Fire Protection Code.*

Response: The intertie site is served by the public Pleasant Home Water District (PHWD) and the Water Bureau has been coordinating closely with the district throughout the project design process. In Appendix L.9.b, the PHWD has confirmed that it has adequate capacity to serve the intertie site from the 6-inch water main in Lusted Road. No other portion of the pipelines requires water service. Therefore, this policy of the Comprehensive Plan is satisfied.

11.13 Wastewater disposal for new development shall be by any of the following methods:

- Connection to a public sewer system having adequate capacity to serve the development and all other system customers.*
- A private system that meets Oregon Department of Environmental Quality regulations.*

Response: The proposed pipelines and intertie will not require wastewater disposal. The intertie has no restrooms, sinks, or other features that would require sewage service. Water service to the site will be provided by the PHWD only to serve a hose bib at the electrical building and provide irrigation for establishment of landscaping. Both will be captured by the on-site stormwater system (Appendix H.2). Therefore, this policy of the Comprehensive Plan is satisfied.

11.17 As appropriate, include school districts, police, fire protection, and emergency response service providers in the land use process by requiring review of land use applications from these agencies regarding the agency's ability to provide the acceptable level of service with respect to the land use proposal.

Bull Run Filtration Projects Land Use Applications

Response: The proposed pipelines and intertie are unstaffed facilities with no habitable structures. There will be no impact on schools related to the proposed utility facilities. As indicated in Appendix L.2, the Multnomah County Sheriff's Office has confirmed that police and emergency response service is adequate to serve the proposed project. As documented in Appendix L.10.b, the Gresham Fire Department has confirmed the required access, circulation, and water pressure needs for the intertie and has indicated that it can serve the intertie site. Therefore, this policy of the Comprehensive Plan is satisfied.

H. Will satisfy such other applicable approval criteria as are stated in this Section.

Response: The applicable approval criteria are addressed in this Section 2.A, along with **Section 2 Overview** and **Sections 2.B** and **2.D**. This approval criterion is met.

In the West of Sandy River Rural Planning Area, the use is limited in type and scale to primarily serve the needs of the rural area.

Response: This criterion does not apply, as described above. MCC 39.7520(A)(6) (RR and MUA-20 zones, "subject to the approval criteria in MCC 39.7515(A) through (H)") and MCC 39.4080(A)(CFU: "For purposes of this Section, the applicable criteria of MCC 39.7515 shall be limited to Subsections (A) through (H) of that Section.").

Additional Standards in the CFU District

Development in the CFU district is subject to additional standards, including the "Use Compatibility Standards" of MCC 39.4100. These standards are addressed in **Section 2 Overview**.

Note that the LRDM will be buried underground for its entire length within the CFU zone. There are no appurtenances that rise to the surface. In addition, the LRDM will be located within an established pipeline corridor and run parallel to Conduit 3. No part of the LRDM will be visible in the CFU zone. The buried pipe will connect to the existing distribution main in the same area.

Review of Development Standards

This subsection reviews the applicable standards, or restrictions, for community service uses in the MUA-20, RR, and CFU base zones. These standards include limits on yards, parking, and signs. Additional base zone standards are reviewed in **Section 2.B Pipelines Design Review**.

Bull Run Filtration Projects Land Use Applications

MCC 39.7525 Restrictions

A building or use approved under MCC 39.7520 through 39.7650 shall meet the following requirements:

A. *Minimum yards in EFU, CFU, MUA20, RR, BRC, OCI, OR and PH-RC, UF-20, LR10, Base zones:*

1. *Front yards shall be 30 feet.*
2. *Side yards for one-story buildings shall be 20 feet; for two-story buildings, 25 feet.*
3. *Rear yards shall be as required in the base zone.*

[...]

Response: As described in **Section 2** Overview, all structures associated with the intertie and pipelines comply with the base zone yard standards, as modified by this section MCC 39.7525. Therefore, this standard is met.

D. *Off-street parking and loading shall be provided as required in MCC 39.6500 through 39.6600.*

Response: Off-street parking and loading is addressed in **Section 2.B** Pipeline Design Review.

E. *Signs for Community Service Uses pursuant to the provisions of MCC 39.6700 through 39.6820.*

Response: The applicable sign criteria are reviewed in **Section 2.B** Pipeline Design Review.

F. *In the MUA-20, RR, and BRC, SRC and RC base zones, the length of stay by a person or vehicle in a camp, campground, campsite or recreational vehicle park shall not exceed a total of 90 days during any consecutive 12-month period by an individual, group or family.*

Response: No camping is proposed as part of this application.

G. *Other restrictions or limitations of use or development not required under this subsection shall be provided in the base zone.*

Response: Additional applicable MUA-20, RR, and CFU base zone standards are reviewed in **Section 2** Overview.