

## **Attachment E.2 Responses to County Comments on Geologic Hazard Permits**

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## Geologic Hazard Permits

1. Clarify the location of the ground disturbance zones in the GH overlay. 2. Pipeline Overview Narrative indicates no ground disturbance in overlay. Appendix I.3, Page 6-13 & I.4, Page 6-16 contradicts this statement. [39.5085 (A)(6)]

**Response:** Related to the location of ground disturbance, the application narrative Section 2 Overview was intended to distinguish between the LRWP Tunnel segment and LRDM segment:

*“The LRWP Tunnel segment is shown in Appendix I.3. **No ground disturbance is proposed within the GH Overlay for this segment.**”*

*The LRDM Backfeed Pipeline segment is shown in Appendix I.4, Sheets GH-04 through GH-06, ESC-004, and ESC 201.”* (Section 2 Overview, page 30, emphasis added).

That section of the narrative could have more clearly indicated that there is a small portion of ground disturbance proposed with the LRDM (discussed more below), although there is no ground disturbance proposed with the LRWP Tunnel.

“Ground Disturbing Activity” is defined in MCC 39.2000 as “Any excavating or filling or combination thereof.” Neither the LRWP Tunnel segment nor the LRDM segment involves any filling, which is defined in relevant part as the “deposit ... of any earth materials.” Materials will only be removed for these segments, not deposited. For the LRWP Tunnel, there will also be no “excavating,” which is defined in relevant part as:

*“Excavation – The motorized removal of earth material or other motorized activity resulting in the exposure of the ground surface or other earth layer to wind, water, ice, gravity, or other element, including, but not limited to, cutting, digging, grading, stripping, trenching, dredging, bulldozing, benching, terracing, mining or quarrying, and vegetation or tree removal. ....”* (MCC 39.2000, emphasis added)

For the LRWP Tunnel, there will be no exposure of the ground surface or other earth layer to the elements (and by extension no ground disturbance), because the entire length of the LRWP Tunnel in the GH zone will be below ground, installed with trenchless methods.

For the LRDM, indicates that most of the LRDM within the GH overlay will be installed trenchless, with no ground disturbance. And that a small, trenched portion is also proposed:

*A finished water (FW) connection at the Lusted Hill Treatment Facility (LHTF) (TLs 1S4E22BA-00100 and 00200) is proposed to connect to existing conduits within an easement on TL 1S4E15C-00801. This segment is also known as the LRDM. The LRDM segment within most of the GH Overlay is proposed to be installed trenchless, with no ground disturbance. **A small, trenched portion is proposed for 125 feet on a flat, upland portion of the site on the western side of the GH Overlay area.**”* (Section 2 Overview, page 29, emphasis added).

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The trenched portion of the LRDM within the GH overlay does cause a ground disturbance, and is the subject of the narrative, mapping, and information submitted in the GH application related to ground disturbance.

*2. Clarify if any concrete work will be completed in the GH overlay zone and if so, provide location for wash out and cleanup of concrete equipment 39.5085(A)(8).*

**Response:** No concrete work is proposed within GH overlay zone.

*3. Provide a map or documentation of the soil types where the work will occur within the site. [MCC 39.5085 (A)(10) & MCC 39.5085(C)].*

**Response:** The requested maps and documentation of soil types are provided in Completeness Attachment E, 2.0 MJ & J Responses, on p. 2 and 3.

*4. Appendix I.4 Lusted Road Distribution Main Geologic Hazards Permit form, page 10 states structural and non-structural fill is to be used. With respect to the non-structural or native fill, please provide a description of the fill materials, compaction methods, and density specifications (with calculations). [MCC 39.5085 (C)(1)(a)]*

**Response:** No fill is proposed to be deposited on either site. There will be no “deposit” of earth materials under the definition of fill in MCC 39.2000, rather, for the trenched portion of the LRDM within the GH overlay, excavated topsoil is proposed to be backfilled over structural fill<sup>1</sup> and pipelines in the same trench it was removed from. Nevertheless, the applicant is happy to provide additional information beyond what is provided in Appendix I.4 about the compaction methods and density specifications of the structural fill and topsoil if and as needed. As described in Application Appendix I.4, page 10, the project proposes to use properly compacted granular material as the structural fill around the pipe and native material at the surface.

*5. Narrative for the Lusted Road Distribution Main work indicates that any remaining earth materials will be hauled off site. For all haul truck trips, please provide a statement of the total daily number of fill haul truck trips, travel timing, and loaded haul truck weights. [MCC 39.5085(C)(1)(b)]*

**Response:** Fill haul regulations apply to earth materials brought to (deposited on) the site, rather than removed from the site. Fill permit approval is required for fill haul deposited in Multnomah County. As discussed above, no fill is proposed to be deposited on either site undergoing Geologic Hazards review.

*6. Statements were provided addressing MCC 39.5085(C)(3)(a), but no slope or geologic maps. If relying on MCC 39.5085(C)(3)(a), please provide the required information. [MCC 39.5085(C)(3)(a)].*

**Response:** As noted in the application narrative Section 2: Pipelines Overview, p.38, in response to MCC 39.5085(C)(3)(a-c):

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<sup>1</sup> By structural fill, we intend to refer to the “materials ... to physically support and/or protect a structure or access road for essential and public facilities subject to earthquake or tsunami building code requirements of the Oregon Structural Specialty Code” in MCC 39.2000 and MCC 39.5085(B).

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*“The project has prepared stamped and signed GHP Form 1s addressing both areas where pipeline components intersect with GH Overlay areas. These are provided in Appendices I.3 and I.4. As demonstrated in Appendices I.1.b, I.1.c, I.3 and I.4, a geotechnical engineer has certified that the proposed design within GH Overlay areas is suitable for the proposed development and geologic conditions.”*

The project has provided GHP Form 1s per MCC 39.5085(C)(3)(c), and is therefore not relying on MCC 39.5085(C)(3)(a).

*7. Please provide a copy of the Geologic Hazard Report and if the borings are not in the report. [MCC 39.5085(C)(3)]*

**Response:** Boring logs related to GH Overlay areas are provided in Appendix A to Completeness Attachment E.2.

*8. Please clarify the location where vegetation is to be removed and where all soil disturbance activities will occur within the GH overlay zones. [MCC 39.5090(H)].*

**Response:** As described above, the only ground disturbance is proposed for the LRDM segment. However, even for that short portion of the LRDM segment, the trenching for the open cut portion of the pipe installation will be entirely within existing cleared areas of the Water Bureau’s Lusted Hill Treatment Facility (LHTF), in the driveway and parking area and a cleared area to the east. More information about these cleared areas is provided in application narrative Section 2.D: Pipelines – SEC Review, and depicted in Figure 12 and Figure 13 on pages 19 and 20. As shown in those figures, excavation within the GH Overlay is proposed only within existing cleared areas; no vegetation is proposed for removal. Areas proposed for soil disturbance are shown in Application Appendix I.4, Sheets GH-04 through GH-06. Methods for minimizing erosion, stabilization, and exposure of the smallest practical area are provided in ESC-004 in Completeness Attachment E.2. No other soil disturbance within GH Overlay areas is proposed.

*9. Clarify disposal of materials mentioned on 1.4 Lusted Road Distribution Main Geologic Hazards Permit form, page 10. MCC 39.5090(S).*

**Response:** Please see highlighted areas of ESC-004 in Completeness Attachment E.2 for clarity related to storage of materials and temporary erosion control methodologies.

*10. Provide more information and erosion control plan for the ground disturbance for the raw water pipeline and the Lusted Road Distribution Main. Erosion control plans must be provided for all locations where the earth will be disturbed and will need to be stabilized to prevent erosion. [MCC 39.5085(A)(12)]*

**Response:** Erosion and Sediment Control (ESC) applications were prepared for all project elements and were submitted to Multnomah County on January 24, 2023.