

DATE: July 3, 2024
TO: Deschutes County Board of Commissioners
FROM: Deschutes County Solid Waste Department
SUBJECT: Parametrix
PROJECT NUMBER: Availability of Water at the Moon Pit Site
PROJECT NAME: Deschutes County SWMF Final Site Evaluations

This memo provides a focused overview of the water sources and water rights at the Moon Pit site, in response to questions raised at the first public hearing on June 12, 2024. Additional and more detailed information is available in Appendix G – Water Assessment, as part of the Deschutes SWMF Final Site Evaluation Report.

Existing Water Sources Onsite

The Moon Pit site has two water supply wells, Well A (DESC 5750) and Well B (DESC 9126). Well A is currently not in use and is designated for domestic use per the well log, which is limited to 5,000 gallons per day. Well B is an industrial well used primarily for onsite dust suppression and capable of producing 1,000 gpm, according to Hooker Creek.

Hooker Creek Water Rights & County Needs

There is no water right associated with Well A. As such, its use would be limited to the exempt use maximum of 5,000 gallons per day (gpd).

Water right permit G-12860 associated with Well B has a maximum use rate significantly greater than the anticipated future landfill operation water requirements. It is estimated that the landfill would require water rights authorizing a peak diversion rate of 50 gpm (0.11 cfs) to meet peak water demands in the summer. This is roughly 10% of the total peak diversion rate of 1.09 cfs under Hooker Creek water right G-12860. The maximum use rate of 1.09 cfs under Permit G-12860 is further broken down into 0.27 cfs (174,505 gpd) for dust control and 0.82 cfs (529,978 gpd) for gravel washing.

The dust control usage rate alone (0.27 cfs or 174,240 gpd) exceeds the anticipated needs. However, this water right permit was not offered with the property in the solicitation response letter. Following site selection, further discussion with Hooker Creek is recommended to coordinate transfer of a portion of water right permit G-12860 to the County for the landfill water needs. If a partial water right transfer from Hooker Creek cannot be secured, the County will need to explore other options such as applying for a new groundwater permit and/or acquisition of certificated water rights with the necessary rate and annual duty that can be transferred to the Moon Pit site for landfill operations.

Interim Water Lease Agreement

An interim water lease agreement has been discussed with Hooker Creek, in which a water cost of \$10 per 1,000 gallons (1 cent per gallon) was suggested. Hooker Creek stated that water could be sold to the County per this interim water lease agreement until the County is able to secure its own water rights that authorize withdrawal from the onsite wells. The annual operations budget (see



Appendix Q) includes a \$52,000 estimated annual cost for Hooker Creek water charges at this unit cost of \$0.01 per gallon.

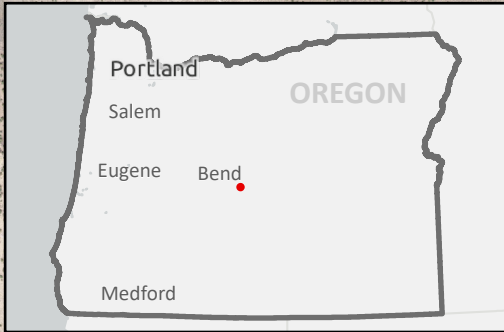
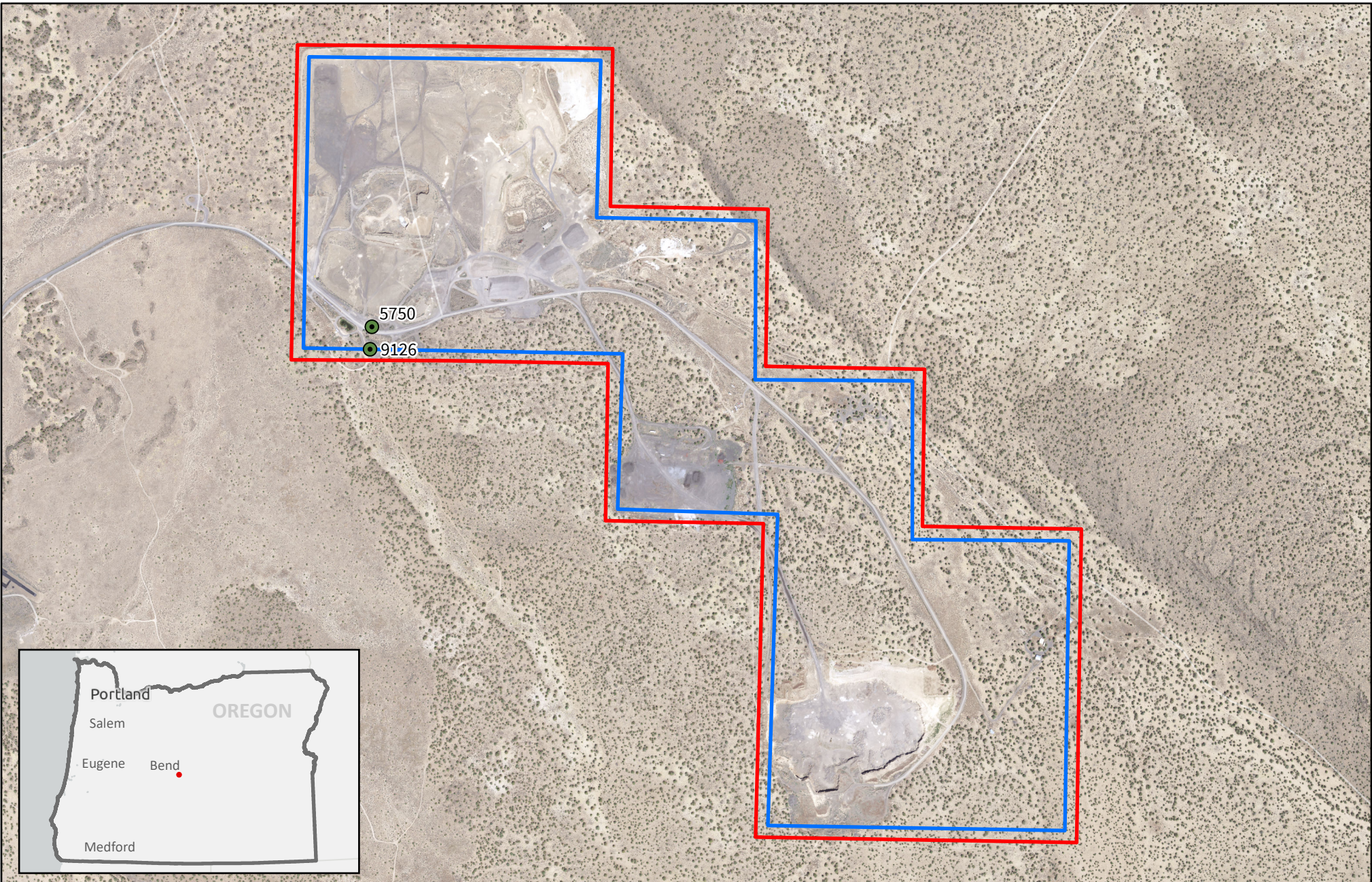
Onsite Fire Protection Measures

The fire flow need for the proposed structures is understood to be 60,000 (1,000 gpm for a 60-minute duration). A fire hydrant is anticipated near the proposed buildings. A water storage volume of 200,000 gallons has been planned for and accounted for in the cost estimate. Fires that occur within the landfill footprint are typically addressed by operations staff with soil cover and water trucks if necessary, each holding approximately 4,000 gallons with a pump rate of 550 gpm. Fires are typically more intense with yard debris and construction & demolition (C&D) debris operations - neither of which are planned at the Moon Pit site.

Attachments:

- Well Map
- Well Photos





Date: 12/11/2023
 Sources: Parametrix, ESRI
 PCS: NAD 1983 HARN StatePlane Oregon North FIPS 3601 Feet Intl
 Disclaimer: This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes.

- Proposed Development Area
- Site/Taxlot Boundary
- Water Well (Identified by log ID number)

Figure 1 - Moon Pit Site
 Deschutes SWMF Siting

Parametrix

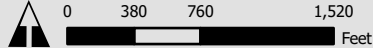




Photo 1. Well A (DESC 5750).



Photo 2. Well A (DESC 5750) and adjacent pump house structure.



Photo 3. Well B (DESC 9126).



Photo 4. Well B (DESC 9126 pump house structure).