



**RECLAMATION FILL  
AND DRAINAGE  
PLAN**

**Receiving Facility:**

**WEST SIDE QUARRY LLC**

**ADDRESS:**

**6655 SW Hergert  
Rd, Cornelius, OR  
97113**

**Prepared by:**

Steven Kidwell/Mining Consultant  
NW Safety Solutions LLC  
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**Table of Contents**

1. Limitations ..... 4

2. Introduction..... 5

3. Purpose..... 5

4. Background..... 6

5. Reclamation Import Fill Placement ..... 7

6. Reclamation Fill and Drainage Design ..... 10

7. Maps..... 15

    7.1 Permit Boundary Map ..... 17

    7.2 Permit Boundary Map (Enlarged)..... 18

    7.3 FEMA Flood Map as of April 2020 ..... 19

    7.4 Map Showing Waterways Outside of Reclamation Project ..... 19

8. Statement of Clean Fill ..... 20

9. Exhibits

    Limited Exemption Closure Plan ..... Exhibit 1

    Beneficial Use Determination (BUD-20151217) ..... Exhibit 2

## **Reclamation Fill and Drainage Plan**

**For the receiving facility located at**

**West Side Quarry LLC  
6655 SW Hergert Rd  
Cornelius, OR 97113**

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Preparation date:

January 21, 2021

Prepared by:

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## **1. Limitations**

- 1.1 NW Safety Solutions LLC is not liable for any noncompliance, on the part of West Side Quarry, for departure from this plan.
- 1.2 This Reclamation Fill Placement and Drainage Plan reflects this site's current conditions as they are found through inspection of site. Any required actions that may be described in this Plan are consistent with the State of Oregon and Department of Geology and Mineral industries regulations. The user of this plan is advised to check for any updates that may be applicable to the work being outlined under this Plan.
- 1.3 No guarantee or warranties are expressed or implied concerning the potential contaminants or environmental media. Northwest Safety Solutions LLC is not responsible for conditions and or consequences arising from information that may not be available at the time of the Plan preparation. No other warranty, either expressed or implied, is made.

## **Reclamation Fill and Drainage Plan**

### **West Side Quarry LLC**

### **West Side Rock/Haden Quarry**

**DOGAMI 34-0026**

**January 21, 2020**

## **2. Introduction**

- 2.1 This plan is prepared and submitted as an addendum to the existing Reclamation Plan for the site to address Reclamation Fill Placement, and Final Drainage plans for West Side Quarry LLC (previously known as Westside Rock/Hayden Quarry). The general document was prepared by Steve Kidwell of Northwest Safety Solutions LLC. The specific fill and drainage design (pages 9 – 12) were prepared by Lance Downs of Advanced Remediation Technologies, Inc.
- 2.2 This Plan applies to the reclamation of the West Side Quarry LLC (previously known as Westside Rock/Haden Quarry) located at 6655 SW Hergert Rd, Cornelius Oregon, Washington County, DOGAMI ID No. 34-0026, Tax lots 200, 405 and 700 (account # R2014484 and #R2014483)
- |  |   |
|--|---|
| Owner of tax lot 700:<br>Marvin and Carolyn Vanaken<br>44395 NW David Hill Road<br>Forest Grove OR 97116 | Owner of tax lot 200 & 405:<br>West Side Quarry LLC<br>PO Box 1060<br>Woodburn OR 97071 |
|--|---|
- 2.3 Currently overseeing the reclamation project:  
Person in charge of reclamation: Jeremy Philippi  
Company in charge: West Side Quarry LLC  
PO Box 1060  
Woodburn OR 97071
- 2.4 Operator has discontinued the mining process and is in the process of reclaiming the mined area back to its secondary beneficial use as stated in the Reclamation Plan Guideline: Current Washington county A/F zoning. The area of disturbance is approximately 56.6 acres. Little to no overburden from the mining process is available on site for reclamation placement, therefore, reclamation of the site will rely on imported fill material.
- 2.5 Section 7 (pages 13-17) of this Reclamation Fill Plan includes maps indicating the tax lot boundaries, the area disturbed by mining, the operating permit boundary, floodplain mapping, and general vicinity of the site.

## **3. Purpose**

- 3.1 It is West Side Quarry LLC's commitment to follow all regulations and guidelines from Federal, State, and local agencies to ensure the West Side Quarry site is reclaimed back, as close as possible, to its natural state before mining began. Consistent with these reclamation goals, the planned post-reclamation land use will be forestry.
- 3.2 West Side Quarry LLC will comply with the Washington County approved Land Use permit, dated April 17, 2017, which states, under subheading (post-mining use): "The post-mining use of the

expansion area shall be forest and wildlife habitat consistent with the provisions of the Reclamation Plan approved by DOGAMI. The operator shall provide the county with a copy of the Reclamation Plan approved by DOGAMI.” Washington County’s requirement for post-mining forestry use necessarily requires the placement of fill soil in order to achieve this post-mining use. West Side Quarry LLC recognizes these conditions to require the placement of fill material in sufficient quantities to ensure not greater than 2H:1V slopes for the post-mining use of the site for forestry uses.

- 3.3 The fill material will be brought in from outside sources and will be closely monitored for any potential contaminants that could have an environmental impact on this and surrounding areas.

#### 4. Background

- 4.1 As mentioned in a DOGAMI report titled, ” *REPORT OF ON-SITE INSPECTION,* ” (date of inspection January 2, 1996) explains the following about the mine in its early stages of development. It states:

“This is an old quarry, dating back to earlier than 1963. The enclosed map shows the area recognized as disturbed prior to 1972 and not naturally reclaimed. The map also shows the area which apparently was mined long ago by Washington County, but looks to be tree covered in the 1963 photo. The signature of the applicant is needed on the map to verify acceptance of the exempt areas. Vegetation is now stripped from the old county pit. The county pit area will not be included as part of the area exempt from reclamation unless an aerial photograph is submitted documenting that it was active between 1963 and 1972. That area is considered to be naturally reclaimed and will be covered by this reclamation plan, as will the areas of overburden storage outside of the old quarry because they are revegetated. If no activity takes place in the county quarry, the highwalls need not be resloped since they were on the property before this period of activity.”

The Limited Exemption area has an approved closure plan dated October 12, 2015, a copy of which is attached as Exhibit 1. In relevant part the closure plan provides:

“At this time, the proposed plan for the exempt area is to continue voluntary reclamation activities including backfilling and grading. Final sloping configurations are likely to be 3H:1V or flatter and will be voluntary seeded and planted with a variety of grasses, shrubs, and trees.

Re-grading, re-shaping, and re-vegetation practices as described in the Operating Permit Reclamation Plan will provide protection for areas that have potential to produce runoff or sediment. The majority of the soil and overburden has been stripped from the limited exempt area and utilized to backfill depleted areas at the site. Soil and overburden materials located within the Operating Permit area will be stripped and utilized for final reclamation purposes including the exempt area.”

Consistent with the Limited Exemption closure plan, the site (including the Limited Exemption area) will be reclaimed by the placement of fill to create slopes of not greater than 2H:1V for post-reclamation use of the Limited Exemption area for forestry.

- 4.2 The site has received fill material from Clean Water Services, located in Hillsboro, Oregon, which was approved by DEQ in a notification dated Jan. 27, 2016 entitled: Beneficial Use Determination (BUD-20151217) for Screened Street Sweeping Fines used as Mine Reclamation Fill. DOGAMI has concurred in the determination that this material could be beneficially used for reclamation material at the site. A copy of the approval is attached as Exhibit 2.

## 5. Reclamation Import Fill Placement

- 5.1 For purposes of this plan, the terms, phrases and words listed in this section and their derivatives shall have the indicated meanings:

**BENCH.** A relatively level step excavated into earth material on which fill is to be placed.

**COMPACTION.** The densification of fill material by mechanical means or through surcharge.

**FILL.** Deposition of earth materials by artificial means.

**GRADE.** The vertical location of ground surface.

**GRADING.** An excavation of fill or combination thereof.

**KEY.** A compacted fill placed in a trench excavated in earth material beneath the toe of a slope.

**SLOPE.** An inclined surface, the inclination of which is expressed as a ratio of horizontal distance to vertical distance.

**TERRACE.** A relatively level step constructed in the face of a graded slope for drainage and maintenance purposes.

- 5.2 For purposes of this plan, unless otherwise recommended in a separate, geotechnical report signed by a geotechnical engineer registered in the State of Oregon, in order to achieve stable slopes all fills shall comply with the provisions of this section:

**SURFACE PREPARATION.** The ground surface shall be prepared to receive fill by removing vegetation, topsoil and other unsuitable materials, and scarifying the ground to provide a bond with the fill material. A drainage zone at the base of the proposed fill may also be necessary in areas with evidence of significant surface water.

**BENCHING.** Where existing grade is at a slope steeper than five units horizontal to one unit vertical (20-percent slope) and the depth of the fill exceeds 5 feet benching shall be provided. A key shall be provided which is at least 10 feet in width and 2 feet in depth.

**FILL MATERIAL.** Fill material shall not include organic, frozen or other deleterious materials.

**COMPACTION.** All fill material shall be compacted to 90 percent of maximum density.

**MAXIMUM SLOPE.** The slope of fill surfaces shall be no steeper than is safe for the intended use.

**EROSION CONTROL.** The faces of fill slopes shall be prepared and maintained to control erosion. This control may be achieved through effective planting. Erosion control for the slopes shall be installed as soon as practicable and where necessary, check dams, cribbing riprap or other devices or methods shall be employed to control erosion and provide safety. All erosion control features shall be congruent with the Storm Water Pollution Control Plan for the site.

- 5.3 The final reclamation grading plan will result in about 3.2 million cubic yards of fill material being placed at the site. The contour for this plan is shown in the included C1, C2 and C3 drawings. West Side Quarry LLC expects that an average of 200 trucks will deliver fill material to the site each working day. Assuming that each truck carries about 12 cubic yards of loose fill, the average daily loose volume of fill that will be delivered to the site is 2,400 cubic yards per day. Assuming that the compaction of the fill material brought to the site results in a 10% reduction in volume (i.e. 1 cubic yard of loose fill is equal to 0.90 cubic yards of compacted fill), the reclamation of the site will be completed in approximately 6-8 years. The amount of material available for reclamation and the exact duration of the reclamation activities depend on various market conditions which West Side Quarry LLC cannot predict with certainty.
- 5.4 Material brought to this site will be closely monitored and documented with regard to:

- Where the material originated from (See Statement of Clean Fill document page 18 below) will be ascertained before the material will be accepted, only parties whom have provided a current Statement of Clean Fill will be permitted to bring material on site for use as reclamation fill;
- Recordkeeping of the material source will be accomplished through scale-ticketing and billing records retention;
- Material will be visually inspected to determine whether there are any known contaminants contained within. Visual inspection shall occur at the time the dump truck deposits the incoming load. Any material identified as not satisfying the clean fill standard shall be rejected and reloaded into the dump truck; and
- Any material which appears or is known to contain any environmental contaminants will not be accepted on site unless it has been approved by DEQ under a Beneficial Use Determination (BUD) or approved through a substantially similar to clean fill permit exemption.

West Side Quarry LLC will follow all regulations of DEQ which may include the sampling of soil on a random basis to determine that material is safe for this site. Unless approved by DEQ under BUD, all fill material will meet the DEQ General Management Directive - Clean Fill Determinations.

Material will be evaluated by personnel on site as it is received to ensure that all material satisfies the profile of “clean fill” pursuant to Oregon law, or satisfies an operative IMD clean fill determination from DEQ. Any material not satisfying these standards will be rejected and will not be included in the reclamation fill placement.

One material presently on site (glass cullet) is anticipated to be utilized for haul roads and reclamation fill. A work plan has been developed with DEQ to satisfy the IMD clean fill determination protocol for this material. Assuming qualification and approval by DEQ, the material will be used as part of the reclamation fill for the site. If the material does not satisfy the requisite standards, it will be removed from the site and not used as part of the reclamation fill for the site consistent with the ultimate disposal plan for the material.

Asphalt shingles is another material presently on site. This material will be removed from the site and used elsewhere consistent with standing Beneficial Use Determinations for incorporation of the material into asphalt paving material. This beneficial use will not occur on this site, consistent with the pending disposal plan for the material.

All imported fill used as reclamation backfill or other subsurface placement will meet the DEQ definition of “clean fill” as provided in OAR 340-093-0030 or the use must otherwise be specifically allowed by DEQ by rule, permit or other written authorization.

- 5.5 Stockpiling of material in the traditional sense is not anticipated to be used on site for two reasons; first, the quarry is intended to be actively reclaimed as material arrives onsite, and second, it is inefficient to handle or move the material multiple times when it does arrive. This approach has the added benefit of minimizing exposure time of the fill material pre-placement to stormwater and other erosions risks that may arise. In lieu of traditional stockpiling, material will be deposited by incoming trucks directly in proximity to the area of the site being actively filled. When sufficient quantity of material has been deposited and conditions permit, the material will be permanently placed within the site by use of mobile equipment such as, but not limited to, front end loaders and dozers.
- 5.6 The fill material will be brought to the site and placed in a controlled fashion. The ideal thickness of each lift will depend upon a variety of factors, including physical factors such as the material’s characteristics and the depth at which the fill is being placed. Consolidation of the fill placed at depth will occur due to the surcharge weight of the fill above it. At depth, fill can be placed in up to 4-foot



thick lifts and compacted by tracking the surface with several passes of heavy construction equipment such as a large dozer. The upper 15 feet of fill will be placed in 1 to 2-foot-thick lifts and compacted by tracking with equipment.

Fill cannot be compacted effectively if too wet; therefore, wet fill coming to the site will be placed in a thin lift (under 12-inches) and worked until it dries sufficiently for proper compaction. Alternatively, fill will be segregated from permanent placement until it becomes dry enough to place and compact.

Fill areas will be graded to promote stormwater drainage away from where fill is being placed and compacted, and diversion channels or berms will be constructed as necessary to divert stormwater away from the fill placement area.

- 5.7 It is anticipated the sequence for placement of fill will continue to occur in the southern portion of the site and progress towards the north portion of the site. The grading plan is shown as a proposed surface contour in the attached engineered exhibits. The proposed elevations of the final grading decrease from generally south (higher) to generally north (lower). The plan to haul fill material to the southern portion of the site and grade that material northward into the desired slope contours will accomplish the proposed final contours. Consistent with the fill placement directives in section 5.2, where necessary, benching and keying the surface of existing slopes to provide adequate bonding and anchorage of the fill will occur. As a northward progression of permanently placed fill is realized on site, any formerly used settling ponds or other stormwater facilities will give way to fill, the planned drainage channel, and the seeding and establishment of trees for the post-reclamation use of forestry. The sequencing for placement of fill is shown on C1, indicated as fill placement stage 1, stage 2 and then stage 3.
- 5.8 Consistent with the Stormwater Pollution Control Plan for the site, West Side Quarry LLC will control erosion of fill material by use of, but not limited to, appropriate grading, drain weirs (barriers), erosion fences or other best management practices to prevent pollutants (including sediment) from exiting the site within any discharged stormwater. As relevant to this reclamation fill plan some of the following best management practices authorized by the Stormwater Pollution Control Plan are identified below:
- To prevent channel erosion from occurring, drainage ways will be designed to withstand the peak flows without erosion, which will include using lining materials appropriate for peak flows such as drain rock or rip-rap;
  - Settling ponds will continue to be utilized down-slope from reclamation fill placement to control any soil/sediment from discharging in stormwater exiting the site;
  - Inspections of the stormwater facilities and the active reclamation fill areas will occur as required by the Stormwater Pollution Control Plan for the site.

Implementation of and monitoring of all stormwater facilities on site will be done in compliance with the Stormwater Pollution Control Plan for the site. Identification of specific features and requirements of the plan are included in the Stormwater Pollution Control Plan itself, and this reference is not intended to interfere with, but rather ensure consistency between this Reclamation Fill Plan and the Stormwater Pollution Control Plan.

It is typical in the region this site is located within to expect the majority of the annual rainfall (stormwater) during the late fall and winter months. The implementation of the best management practices in the Stormwater Pollution Control Plan, together with the within-discussed fill placement techniques and sequenced placement of fill should ensure safe and responsible earthwork activities may occur year-round. Stormwater facility inspections required under the Stormwater Pollution Control Plan will be utilized to ensure the ongoing protection of water quality.

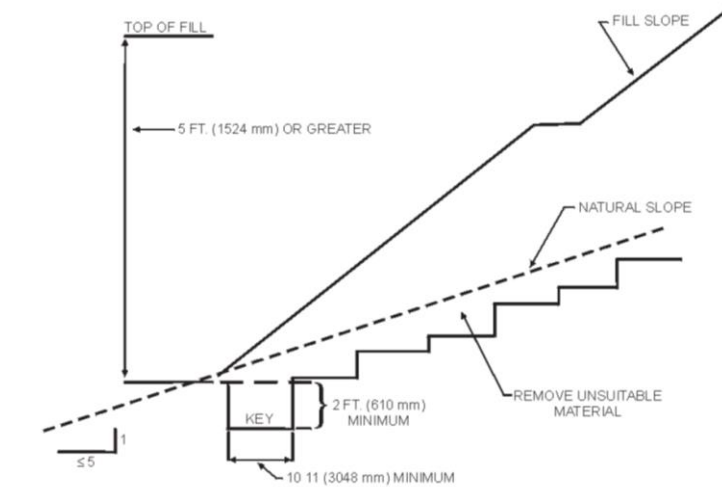
5.9 The final layer of soil used in the reclamation project will be such that it will support vegetative growth to ensure that the area will be brought back, as close as possible, to its original state prior to mining process. Tree planting for the post-reclamation forestry use will take place in this final layer of soil.

## 6. Reclamation Fill and Drainage Design

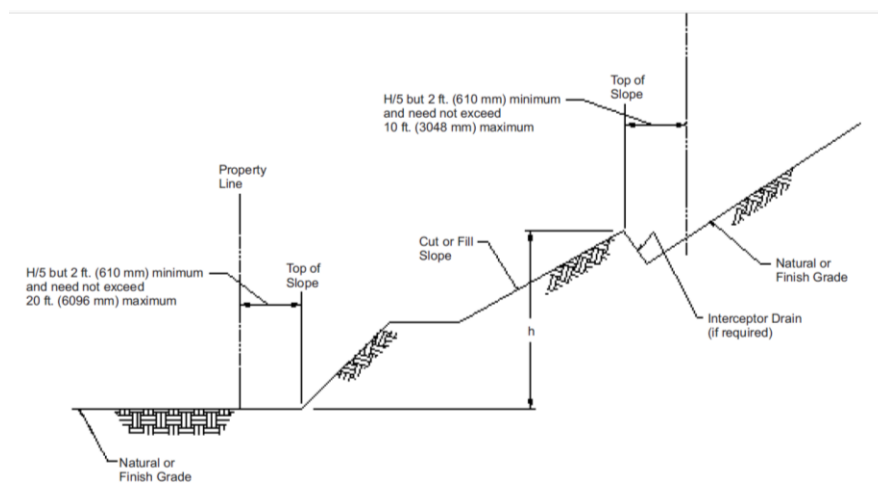
6.1 The contents of this section of the plan (pages 9 – 12) were prepared by Lance Downs PE, GE of Advanced Remediation Technologies, Inc.

6.2 Embedded below as C1, C2, & C3 are the engineered fill designs, channel drainage engineered designs, and cross-section profiles of the planned fill and channel drainage designs. The baseline surface contouring was developed from watershed Lidar flown in 2012 to establish surrounding surface elevations within the permitted boundaries. Baseline Lidar contouring was at 1-foot vertical elevation ( $\pm 0.1$  ft.). The site area finished grade surface was modeled to approximate the historical contouring of the USGS 7.5 Minute Series, Laurelwood Quadrangle, Oregon, dated 1956. This information was also used to re-establish and approximate historical drainage.

6.3 General fill will be placed as backfill throughout the previously mined area. Fill placement should be graded in steps, with graded drainage. Cross-section diagrams are provided:

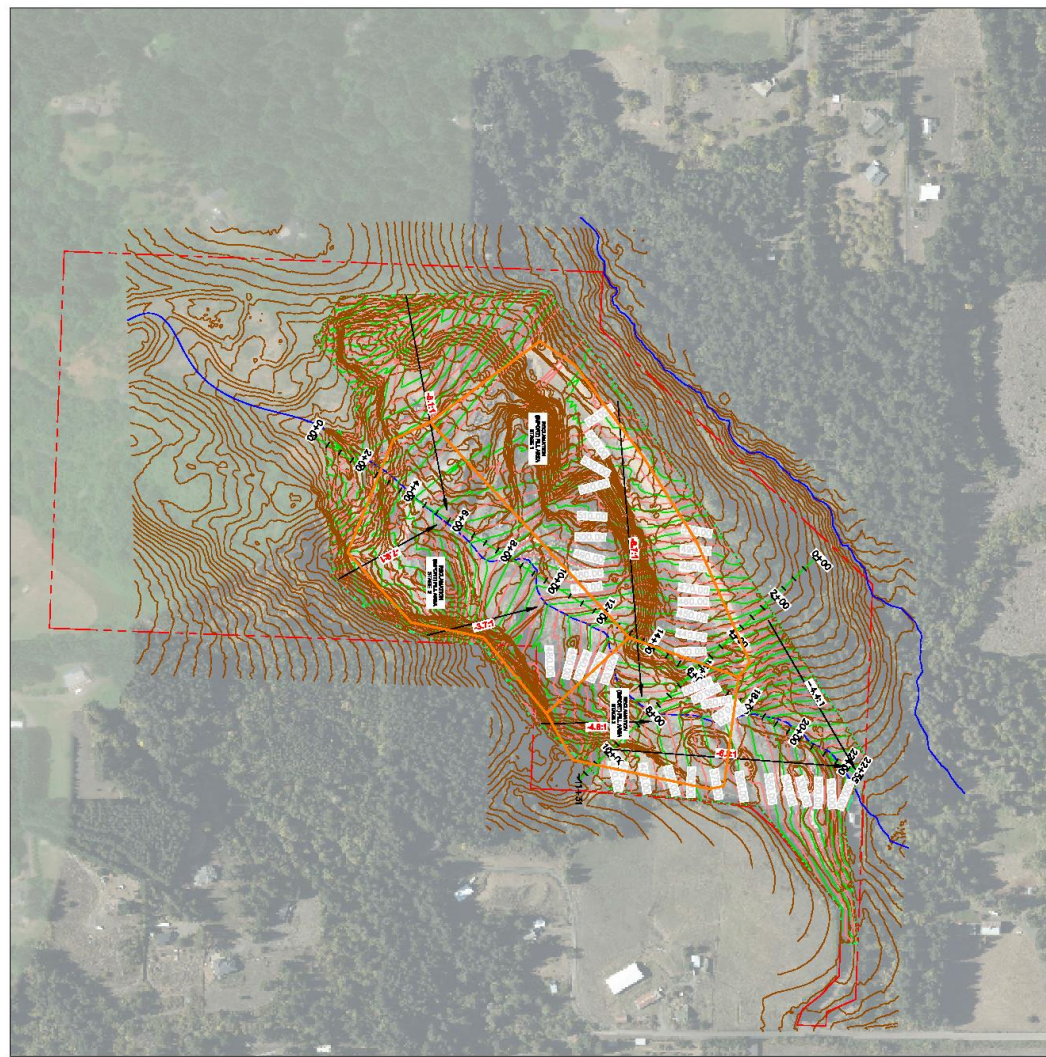


Grading Dimensions



Drainage Dimensions

- 6.4 The planned drainage channel has been designed based upon hydrological calculations supporting the proposed armoring of said channels. The hydrological calculations are included as part of C1. Drainage channel construction design and cross-section profile are included as part of C2. Hydrologic analysis was performed to determine the peak rate of flow or volume of water the drainage channel will need to convey or store. Understanding these peak flow discharges or volumes is essential to determine the type, size, location, and design of hydraulic facilities utilized in the construction of the channel drainage. The Santa Barbara Urban Hydrograph procedure was used to analyze peak flow stormwater drainage, water quality, and water storage system design. The Santa Barbara Urban Hydrograph procedure is a nationally accepted methodology for hydrologic analysis. The provided hydrological calculations support the included design of the drainage channel and its features on this site. The drainage channel design incorporates the features and facilities necessary to withstand modeled storm events up and through a 25-year stormwater event on the site. The design incorporates historical topographical slopes of 12% constructed with step-pools (channel drop pools) to allow for reduced velocities of peak flows. Rock utilized in armoring the drainage channel is described in the attached design to further reduce flow velocity and minimize erosion.
- 6.5 Areas where fill slopes are anticipated, should be properly prepared prior to placement of material. Preparation will include benching and keying the surface of existing slopes to provide adequate bonding and anchorage of the fill. Proper surface preparation, selection of fill material, placement techniques, and compaction, consistent with the directives of section 5.2 will result in adequate bonding and anchorage of the fill. A drainage zone at the base of the proposed fill may also be necessary in areas with evidence of significant surface water.



**RECLAMATION PLAN**  
**WEST SIDE QUARRY**  
**DOGAMI #34-0026**  
 LOCATED IN SECTION 20 T1S, R3W,  
 WILLAMETTE MERIDIAN, WASHINGTON COUNTY, OREGON



- LEGEND**
- EXISTING SURFACE CONTOUR
  - PROPOSED SURFACE CONTOUR
  - PROPOSED CENTER OF DRAINAGE
  - PROPOSED FILL STAGES LINES
  - PROPOSED FINAL GRADE SLOPE

RECLAMATION FILL TO BE APPLIED IN STAGES AS INDICATED ON DRAWING. FINAL GRADING TO OCCUR AFTER THE FILL STAGES OF RECLAMATION SURFACE. EROSION CONTROL MEASURES TO BE UTILIZED DURING FILL STAGES.



IDENTIFY PRESERVATION OF PROPOSED FINAL RECLAMATION SURFACE. MAXIMUM VERTICAL SIDE SLOPE IS 3:1 AND CHANNELS IN FIRM BEDS WILL BE 1:1 TO 1.5:1.

**NOTE:**  
 THE SUBMITTER SHALL CONTINUE TO MAINTAIN THE QUARRY TO AVOID COLLAPSE OF THE QUARRY. THE SUBMITTER SHALL MAINTAIN THE QUARRY TO AVOID COLLAPSE OF THE QUARRY. THE SUBMITTER SHALL MAINTAIN THE QUARRY TO AVOID COLLAPSE OF THE QUARRY.

**DRAINAGE AREA FLOW CALCULATION FOR ANTICIPATED PEAK CHANNEL FLOW RATES**

Area	Area (Acres)	Runoff Coefficient (C)	Time of Concentration (min)	Peak Discharge (cfs)
Area 1	1.2	0.3	15	1.2
Area 2	1.5	0.4	18	1.5
Area 3	1.8	0.5	20	1.8
Area 4	2.1	0.6	22	2.1
Area 5	2.4	0.7	24	2.4
Area 6	2.7	0.8	26	2.7
Area 7	3.0	0.9	28	3.0
Area 8	3.3	1.0	30	3.3
Area 9	3.6	1.1	32	3.6
Area 10	3.9	1.2	34	3.9
Area 11	4.2	1.3	36	4.2
Area 12	4.5	1.4	38	4.5
Area 13	4.8	1.5	40	4.8
Area 14	5.1	1.6	42	5.1
Area 15	5.4	1.7	44	5.4
Area 16	5.7	1.8	46	5.7
Area 17	6.0	1.9	48	6.0
Area 18	6.3	2.0	50	6.3
Area 19	6.6	2.1	52	6.6
Area 20	6.9	2.2	54	6.9
Area 21	7.2	2.3	56	7.2
Area 22	7.5	2.4	58	7.5
Area 23	7.8	2.5	60	7.8
Area 24	8.1	2.6	62	8.1
Area 25	8.4	2.7	64	8.4
Area 26	8.7	2.8	66	8.7
Area 27	9.0	2.9	68	9.0
Area 28	9.3	3.0	70	9.3
Area 29	9.6	3.1	72	9.6
Area 30	9.9	3.2	74	9.9
Area 31	10.2	3.3	76	10.2
Area 32	10.5	3.4	78	10.5
Area 33	10.8	3.5	80	10.8
Area 34	11.1	3.6	82	11.1
Area 35	11.4	3.7	84	11.4
Area 36	11.7	3.8	86	11.7
Area 37	12.0	3.9	88	12.0
Area 38	12.3	4.0	90	12.3
Area 39	12.6	4.1	92	12.6
Area 40	12.9	4.2	94	12.9
Area 41	13.2	4.3	96	13.2
Area 42	13.5	4.4	98	13.5
Area 43	13.8	4.5	100	13.8
Area 44	14.1	4.6	102	14.1
Area 45	14.4	4.7	104	14.4
Area 46	14.7	4.8	106	14.7
Area 47	15.0	4.9	108	15.0
Area 48	15.3	5.0	110	15.3
Area 49	15.6	5.1	112	15.6
Area 50	15.9	5.2	114	15.9
Area 51	16.2	5.3	116	16.2
Area 52	16.5	5.4	118	16.5
Area 53	16.8	5.5	120	16.8
Area 54	17.1	5.6	122	17.1
Area 55	17.4	5.7	124	17.4
Area 56	17.7	5.8	126	17.7
Area 57	18.0	5.9	128	18.0
Area 58	18.3	6.0	130	18.3
Area 59	18.6	6.1	132	18.6
Area 60	18.9	6.2	134	18.9
Area 61	19.2	6.3	136	19.2
Area 62	19.5	6.4	138	19.5
Area 63	19.8	6.5	140	19.8
Area 64	20.1	6.6	142	20.1
Area 65	20.4	6.7	144	20.4
Area 66	20.7	6.8	146	20.7
Area 67	21.0	6.9	148	21.0
Area 68	21.3	7.0	150	21.3
Area 69	21.6	7.1	152	21.6
Area 70	21.9	7.2	154	21.9
Area 71	22.2	7.3	156	22.2
Area 72	22.5	7.4	158	22.5
Area 73	22.8	7.5	160	22.8
Area 74	23.1	7.6	162	23.1
Area 75	23.4	7.7	164	23.4
Area 76	23.7	7.8	166	23.7
Area 77	24.0	7.9	168	24.0
Area 78	24.3	8.0	170	24.3
Area 79	24.6	8.1	172	24.6
Area 80	24.9	8.2	174	24.9
Area 81	25.2	8.3	176	25.2
Area 82	25.5	8.4	178	25.5
Area 83	25.8	8.5	180	25.8
Area 84	26.1	8.6	182	26.1
Area 85	26.4	8.7	184	26.4
Area 86	26.7	8.8	186	26.7
Area 87	27.0	8.9	188	27.0
Area 88	27.3	9.0	190	27.3
Area 89	27.6	9.1	192	27.6
Area 90	27.9	9.2	194	27.9
Area 91	28.2	9.3	196	28.2
Area 92	28.5	9.4	198	28.5
Area 93	28.8	9.5	200	28.8
Area 94	29.1	9.6	202	29.1
Area 95	29.4	9.7	204	29.4
Area 96	29.7	9.8	206	29.7
Area 97	30.0	9.9	208	30.0
Area 98	30.3	10.0	210	30.3
Area 99	30.6	10.1	212	30.6
Area 100	30.9	10.2	214	30.9

**WEST SIDE QUARRY, LLC**  
**WEST SIDE QUARRY**  
 WASHINGTON COUNTY, OREGON

**SITE PLAN**

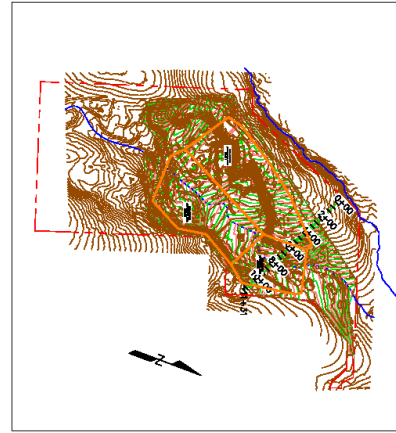
DATE	09/27/20
DRAWN	AD
CHECK	LAD
SCALE	1" = 150'
SHEET	3
OF	3

**"PARTNERS IN SERVICE"**

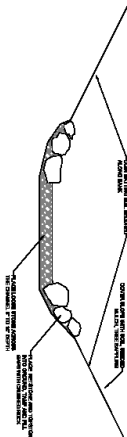
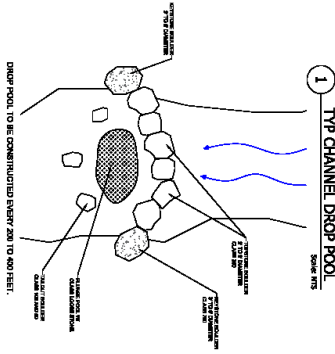
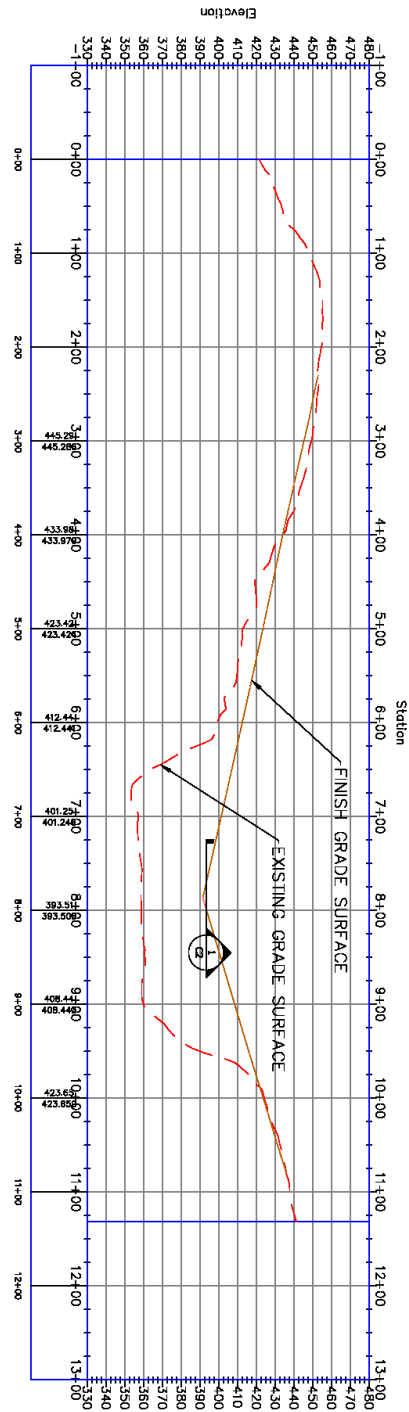
**Advanced Remediation Technologies, Inc**

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 CAMBY, OREGON 97113 503-588-3122

REVISION INFORMATION		
MILESTONE	DATE	REVIEWING AGENCY
RECLAMATION PLAN	11/25/20	DOGAMI



LAT CROSS SECTION PROFILE



1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPLICABLE AGENCIES AND AGENCIES OF THE STATE OF OREGON. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPLICABLE AGENCIES AND AGENCIES OF THE STATE OF OREGON. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPLICABLE AGENCIES AND AGENCIES OF THE STATE OF OREGON.

RECLAMATION PLAN  
 WEST SIDE QUARRY  
 DOGAMI #34-0028  
 LOCATED IN SECTION 20 T1S, R3W,  
 WILLAMETTE MERIDIAN, WASHINGTON COUNTY, OREGON

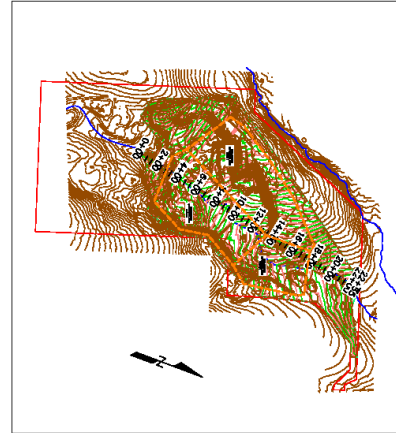
**WEST SIDE QUARRY, LLC**  
**WEST SIDE QUARRY**  
 WASHINGTON COUNTY, OREGON  
**CROSS SECTION, LATERAL**

"PARTNERS IN SERVICE"  
**Advanced Remediation Technologies, Inc**  
 600 NW 16 AVENUE, SUITE 104  
 CANBY, OREGON 97001 606-890-9112

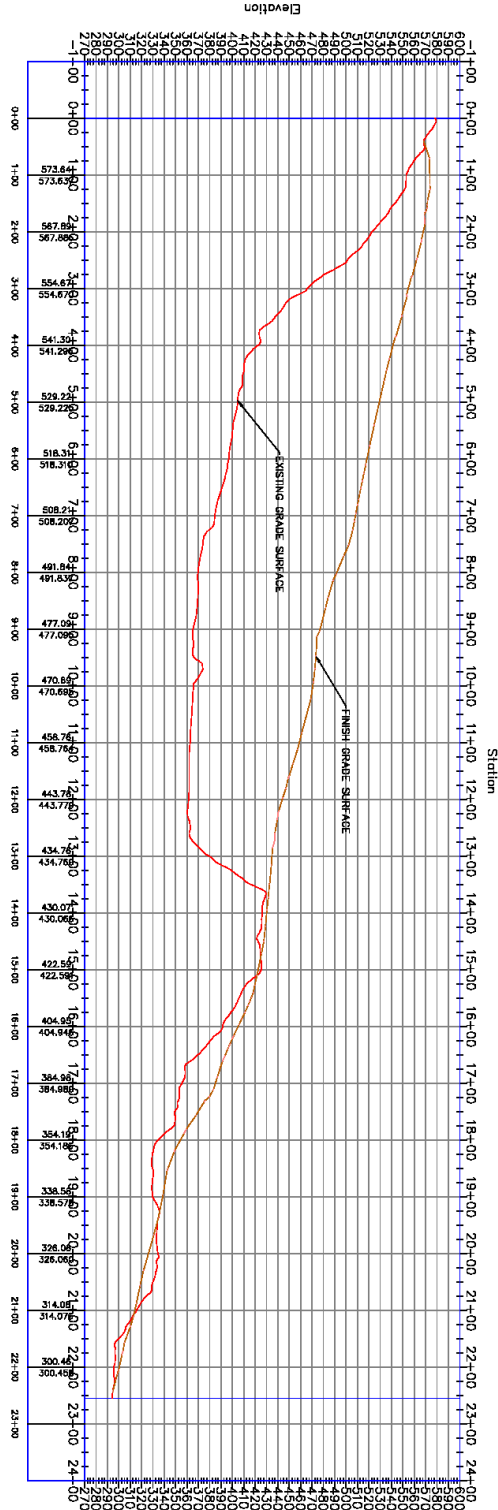


REVISION INFORMATION		
MILESTONE	DATE	REVIEWING AGENCY
RECLAMATION PLAN	11/25/20	DOGAMI

SHEET  
**C2** OF **3**  
 PROFILE



LONG CROSS SECTION PROFILE



**CROSS SECTION**  
**WEST SIDE QUARRY**  
 DOGAMI #34-0026  
 LOCATED IN SECTION 20 T1S, R3W,  
 WILLAMETTE MERIDIAN, WASHINGTON COUNTY, OREGON

DATE	09/28/20
DRAWN	LJO
CHECKED	LJO
SCALE	1" = 100'
PROFILE	
SHEET	03 of 3

**WEST SIDE QUARRY, LLC**  
**WEST SIDE QUARRY**  
 WASHINGTON COUNTY, OREGON  
**CROSS SECTION, LONGITUDINAL**

**"PARTNERS IN SERVICE"**  
**Advanced Remediation Technologies, Inc.**  
 100 NW 5th Avenue, Suite 504  
 Canby, Oregon 97109 503-265-2125



REVISION INFORMATION		
MILESTONE	DATE	REVIEWING AGENCY
RECLAMATION PLAN	11/25/20	DOGAMI

## 7. Maps



**DOGAMI ID#: 34-0026**

Permittee: Westside Rock-Hayden Quarry, LLC  
Site Name: Hayden Quarry  
Photo Source: Eagle Digital Imaging 5/6/2012  
Prepared By: E. Buchner 6/26/2012 Revised 5/8/2014

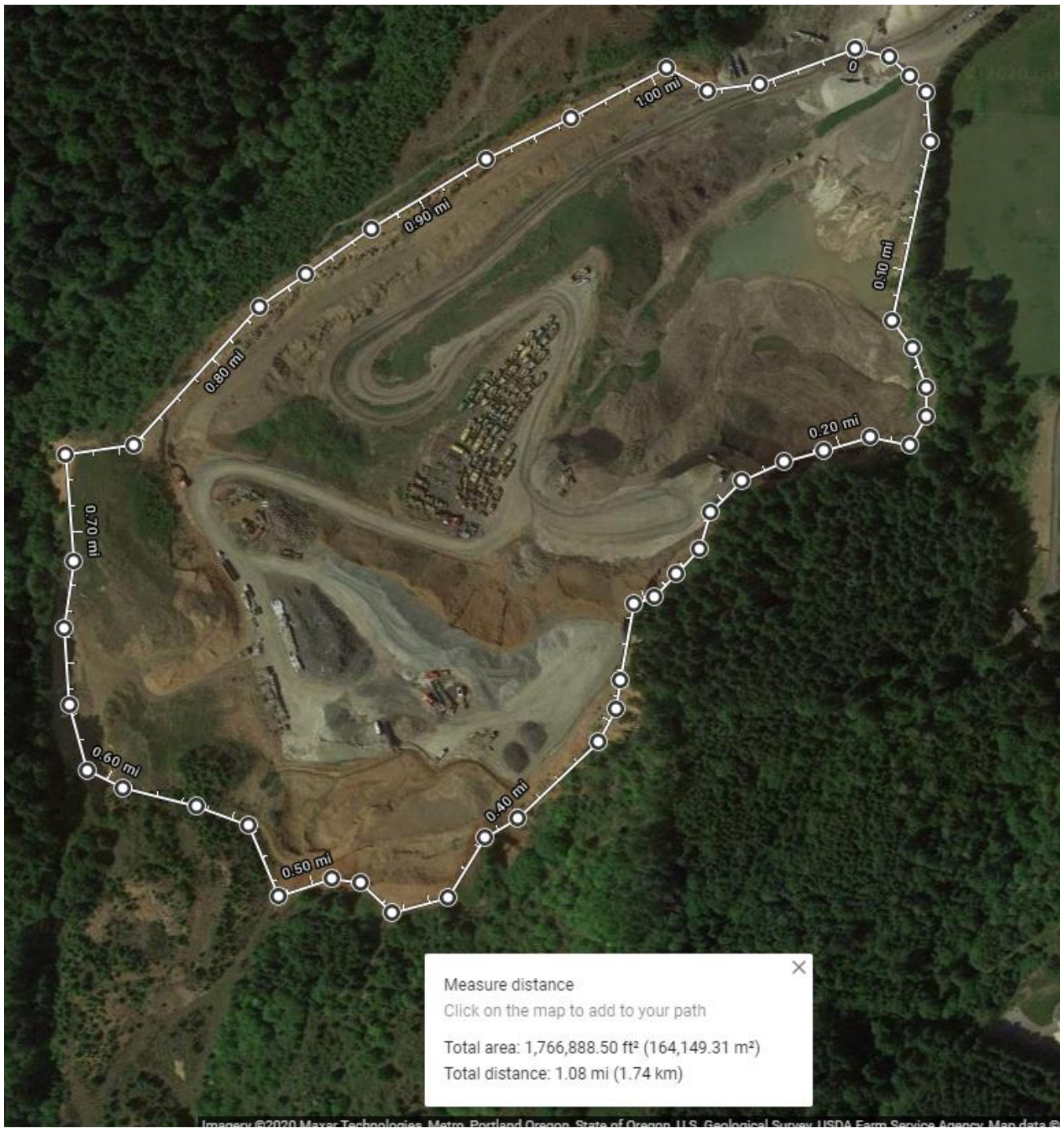
This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the suitability of the information.

A-GIS v102  
Oregon Lambert Projection: NAD 1983 HARN (EPSG 2094)  
S:\34\34\34-0026\34-0026 Areas & Maps\34-0026 GIS Area 2012 Rev 20140508.dwg

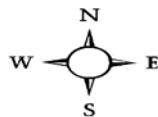


Oregon Dept. of Geology and Mineral Industries  
Mineral Land Regulation and Reclamation Program  
229 Broadbain St. SW  
Albany, OR 97321

Above picture was taken from a correspondence dated June 8, 2015. This shows perimeter of the disturbed area is the same as present totally approximately 56.6 acres.

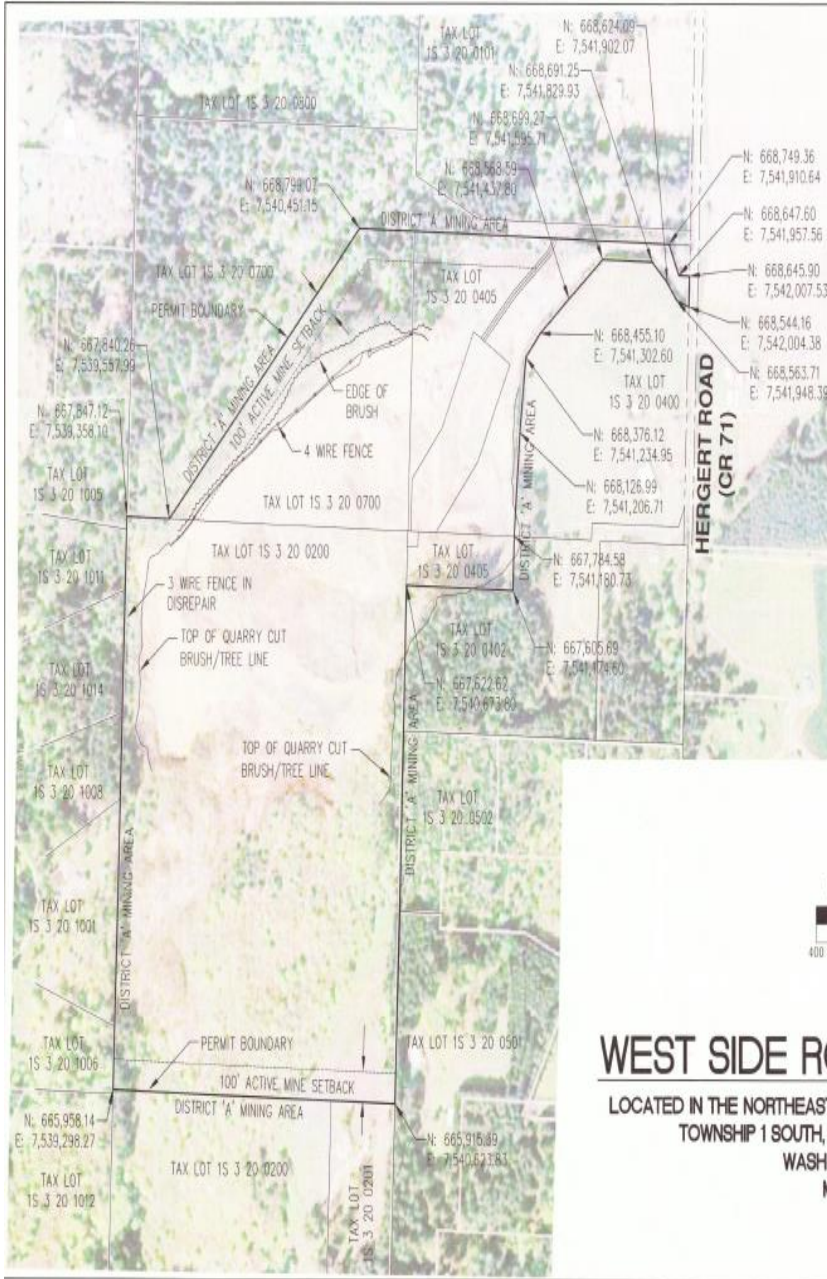


Above map shows the approximate perimeter distance of area to be reclaimed.





# 7.1 Permit Boundary Map



**PREPARED FOR**  
KERR CONTRACTORS OF OREGON

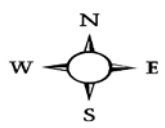
**PREPARED BY**  
AKS ENGINEERING & FORESTRY, LLC  
CONTACT: SAMANTHA BLANCO  
12965 SW HERMAN ROAD, SUITE 100  
TALAMON, OR 97062  
PHONE: (503) 563-8151

**NARRATIVE** THE PURPOSE OF THIS MAP IS TO SHOW THE CURRENT PERMIT BOUNDARIES AND AREA OF DISTURBANCE.

**BASIS OF BEARINGS** OREGON STATE PLANE COORDINATE SYSTEM, NORTH ZONE, NAD 83(1983) INTERNATIONAL FEET.



**WEST SIDE ROCK HAYDEN QUARRY**  
LOCATED IN THE NORTHEAST 1/4 AND IN THE SOUTHEAST 1/4 OF SECTION 20,  
TOWNSHIP 1 SOUTH, RANGE 3 WEST, WILLAMETTE MERIDIAN,  
WASHINGTON COUNTY, OREGON  
MLRR ID. NO. 34-0026



**AKS ENGINEERING & FORESTRY, LLC**  
12965 SW HERMAN ROAD, SUITE 100  
TALAMON, OR 97062  
PHONE: (503) 563-8151  
www.aks-engineering.com

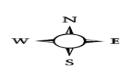
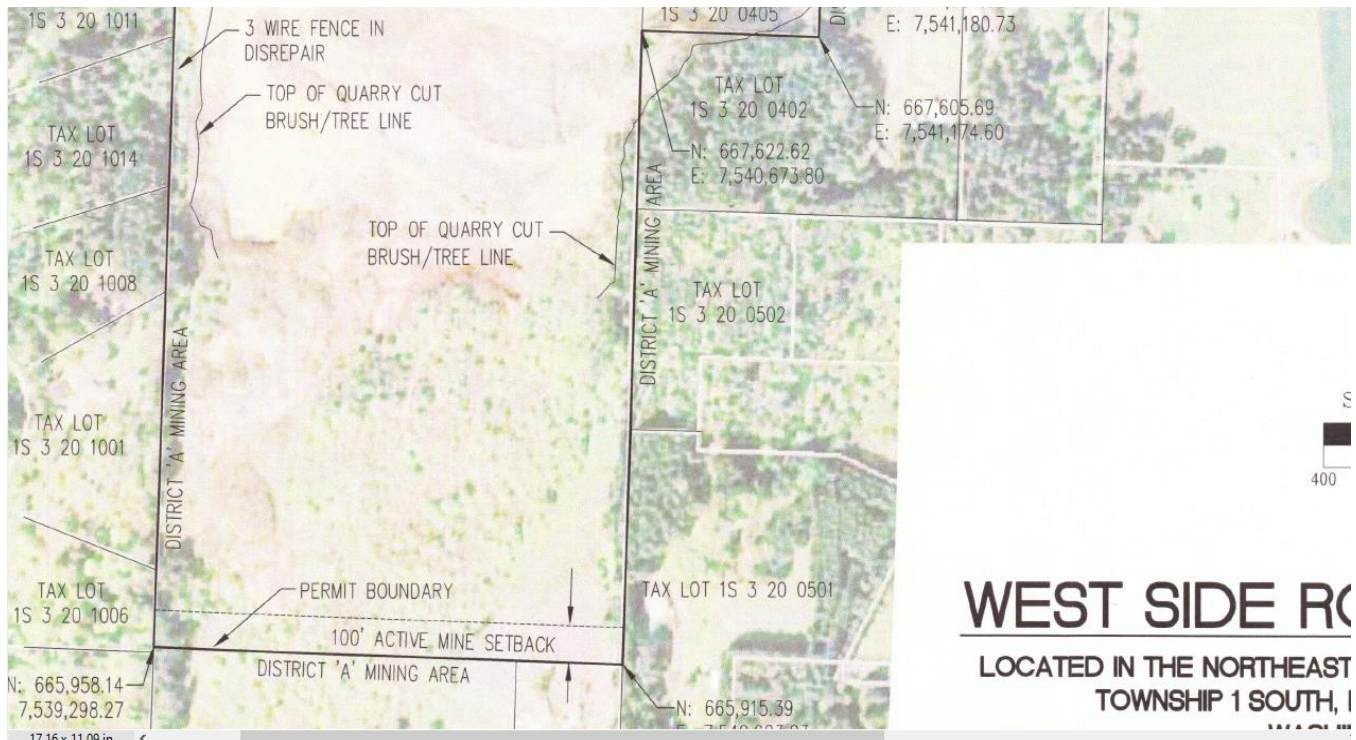
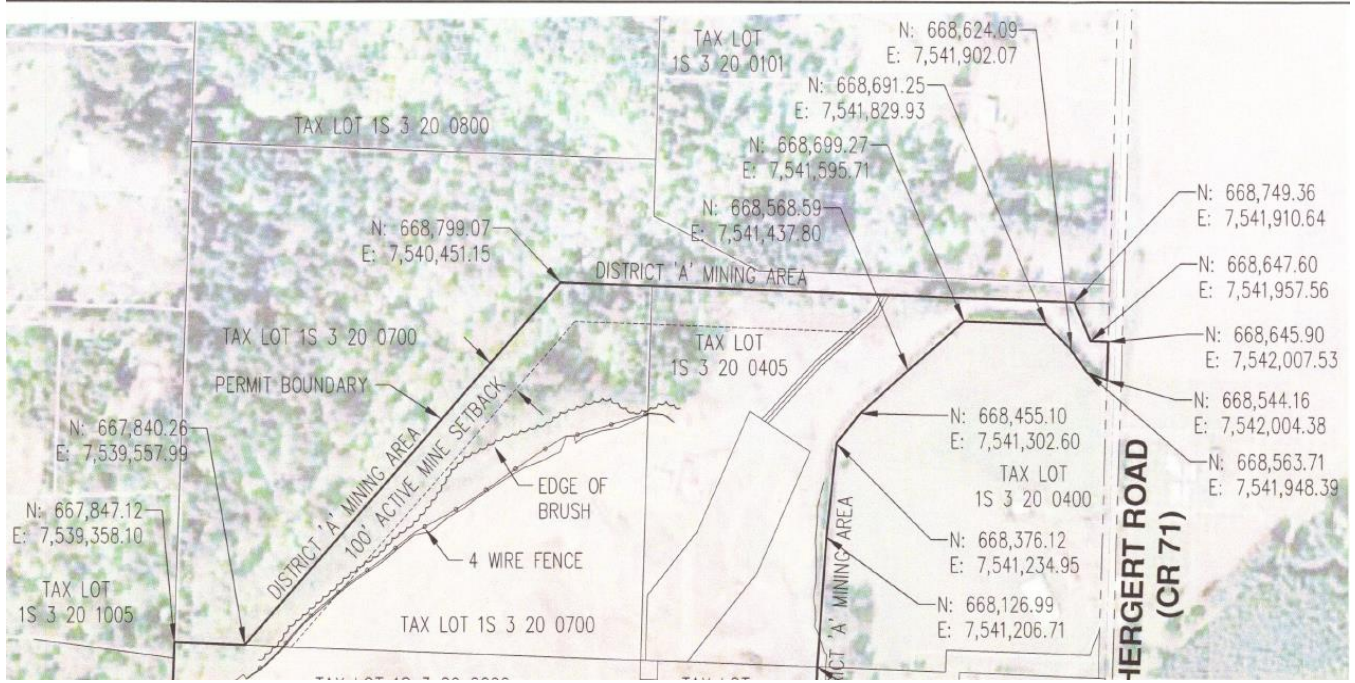
REGISTERED PROFESSIONAL LAND SURVEYOR  
EXPIRES 12/31/2015

**WEST SIDE ROCK HAYDEN QUARRY**  
WASHINGTON COUNTY OREGON  
100' SETBACK

**PERMIT BOUNDARY MAP**

SCALE:	200
DATE:	09/21/2015
PROJECT:	WEST SIDE ROCK HAYDEN QUARRY
CLIENT:	KERR CONTRACTORS OF OREGON
DATE:	09/21/2015
PROJECT:	WEST SIDE ROCK HAYDEN QUARRY
CLIENT:	KERR CONTRACTORS OF OREGON
DATE:	09/21/2015
PROJECT:	WEST SIDE ROCK HAYDEN QUARRY
CLIENT:	KERR CONTRACTORS OF OREGON
DATE:	09/21/2015
PROJECT:	WEST SIDE ROCK HAYDEN QUARRY
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PROJECT:	WEST SIDE ROCK HAYDEN QUARRY
CLIENT:	KERR CONTRACTORS OF OREGON
DATE:	09/21/2015
PROJECT:	WEST SIDE ROCK HAYDEN QUARRY
CLIENT:	KERR CONTRACTORS OF OREGON

## 7.2 Permit Boundary Map (Enlarged)



**WEST SIDE ROAD**  
 LOCATED IN THE NORTHEAST  
 TOWNSHIP 1 SOUTH, I  
 WASHINGTON

### 7.3 FEMA Flood Map as of April 2020



### 7.4 Map Showing Waterways Outside of Reclamation Project



<https://www.google.com/maps/@45.472468,-123.0679399,15z>

**8. Statement of Clean Fill**

**West Side Quarry LLC  
6655 SW Hergert Road (NO MAIL)  
Cornelius, OR 97113**

To: All West Side Quarry Customers.

May 1, 2020

Starting immediately, all jobs requiring our dirt dump will require a signed letter from DEQ or the General Contractor, stating that the material coming into our dump site is free of contaminants. All material will meet and comply with OAR 340-093-0030. There will be no exceptions to this policy.

Below is a list of things we will NOT ACCEPT in our dump site.

- 1. Wood products of any kind. i.e.:( root balls, branches, lumber ETC.)
- 2. Grass or leaves.
- 3. Plastic pipe, road cloth.

Things we WILL ACCEPT

- 1. Clean Fill Dirt
- 2. Clean Concrete. (rebar cut short)
- 3. Clean Asphalt Paving (asphalt which has been applied to the land to form a street, road, path, parking lot, highway, or similar paved surface and that is weathered, consolidated, and does not contain visual evidence of fresh oil).
- 4. Brick, Paver's, CMU Blocks, Granite.

Statement of Clean Fill

I (printed name) \_\_\_\_\_ with (company name) \_\_\_\_\_

Hereby state that the material coming from (project name) \_\_\_\_\_

at (location) \_\_\_\_\_ meets requirements set forth in OAR

340-093-0030 and is free of contaminants, and any other debris not accepted by West Side Quarry LLC.

I also understand that material dumped at West Side Quarry LLC and rejected, will be reloaded and a service charge applied for loader time.

Signed: \_\_\_\_\_

Date: \_\_\_\_\_

Thank You  
Jeremy Philippi  
West Side Quarry LLC  
503-724-4666

DOGAMI – MINED LAND RECLAMATION  
229 BROADALBIN STREET SW  
ALBANY, OR 97321-2246

GRANT OF LIMITED EXEMPTION CLOSURE PLAN

LE INFORMATION

DOGAMI ID# 34-0026  
LE Holder Westside Rock-Hayden Quarry, LLC  
Mailing Address P.O.Box 250  
City / State / Zip Hillsboro, Oregon, 97123  
Phone (503)351-2917 (cell) Fax (503)357-9326 (quarry)  
E-mail \_\_\_\_\_

CONTACT PERSON FOR THE SITE– if different than the LE Holder

Name John Malnerich  
Phone (503)351-2917 Other Phone(\_\_\_\_\_) \_\_\_\_\_  
E-mail wsrjohn@me.com

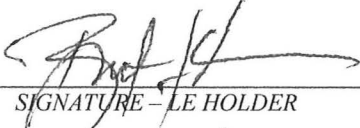
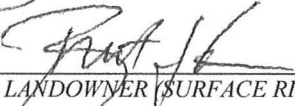

RECEIVED  
MLRR  
OCT 15 2015

LANDOWNER(S) – if different from LE Holder (Attach a separate piece of paper if necessary)

Name Kerr Contractors, Inc. Attn: Brent Kerr  
Mailing Address 395 Shenandoah Lane NE  
City / State / Zip Woodburn, Oregon, 97071  
Phone (\_\_\_\_\_) \_\_\_\_\_ Fax (\_\_\_\_\_) \_\_\_\_\_  
E-mail \_\_\_\_\_

SITE INFORMATION

What is the primary commodity (basalt, cinder, sand and gravel, etc)? Basalt

 SIGNATURE – LE HOLDER	<u>Brent J. Kerr</u> PRINT OR TYPE NAME	<u>owner</u> TITLE	<u>10/12/2015</u> DATE
 SIGNATURE – LANDOWNER (SURFACE RIGHTS)	<u>Brent J. Kerr</u> PRINT OR TYPE NAME	<u>owner</u> TITLE	<u>10/12/2015</u> DATE
 SIGNATURE – LANDOWNER (MINERAL RIGHTS)	<u>JOHN R. MALNERICH</u> PRINT OR TYPE NAME	<u>operator</u> TITLE	<u>10/12/2015</u> DATE

INSTRUCTIONS AND REQUIREMENTS ON REVERSE

# Grant of Limited Exemption Closure Plan-Hayden Quarry

DOGAMI #34-0026

RECEIVED  
MLRR  
OCT 15 2015

October 12, 2015

Basalt is the commodity at this material source and primary uses include construction fill, base rock aggregate, and rip rap materials. All mining related disturbance outside of the exempt area is covered by a DOGAMI Operating Permit and will therefore be reclaimed as per the Operating and Reclamation Plan. The post mining beneficial land use plan for the Operating Permit area is forestry.

There are no springs or wetlands within the exempt area. The site currently maintains a DEQ NPDES 1200-A Stormwater Discharge Permit. There are two designated discharge points at the site which allow treated stormwater runoff to discharge from the site however stormwater discharge generally only occurs during rare storm events. As shown on the attached map, stormwater and sediment controls including settling ponds and constructed bio-swale areas located at the site will be left in place to become more vegetated and stormwater will resume the natural drainage into the unnamed stream located to the northeast.

At this time, the proposed plan for the exempt area is to continue voluntary reclamation activities including backfilling and grading. Final sloping configurations are likely to be 3H:1V or flatter and will be voluntary seeded and planted with a variety of grasses, shrubs, and trees.

Re-grading, re-shaping, and re-vegetation practices as described in the Operating Permit Reclamation Plan will provide protection for areas that have potential to produce runoff or sediment. The majority of the soil and overburden has been stripped from the limited exempt area and utilized to backfill depleted areas at the site. Soil and overburden materials located within the Operating Permit area will be stripped and utilized for final reclamation purposes including the exempt area.

The access roads and working floor adjacent to the exempt area are graveled to reduce erosion and sediment generation. The limited exempt area will continue to be utilized for stockpiling of processed material from the active excavation area.

Existing equipment within the exempt area includes dozers and loaders. With the exception of the fuel tanks located within the equipment on site, no fuel or oil is stored in the exempt area. Mobile refueling occurs as needed and is performed using fuel tanks located within service trucks/trailers. All mining related equipment including the heavy equipment will be removed from the site once mining operations are complete.

There are no petroleum products or any toxic or hazardous substances or materials stored on site.

Any remaining stockpiles will be sold or graded. Any and all excess materials in the site, including but not limited to; refuse, structures, foundations, abandoned equipment or metal debris will be removed prior to final closure of the site.

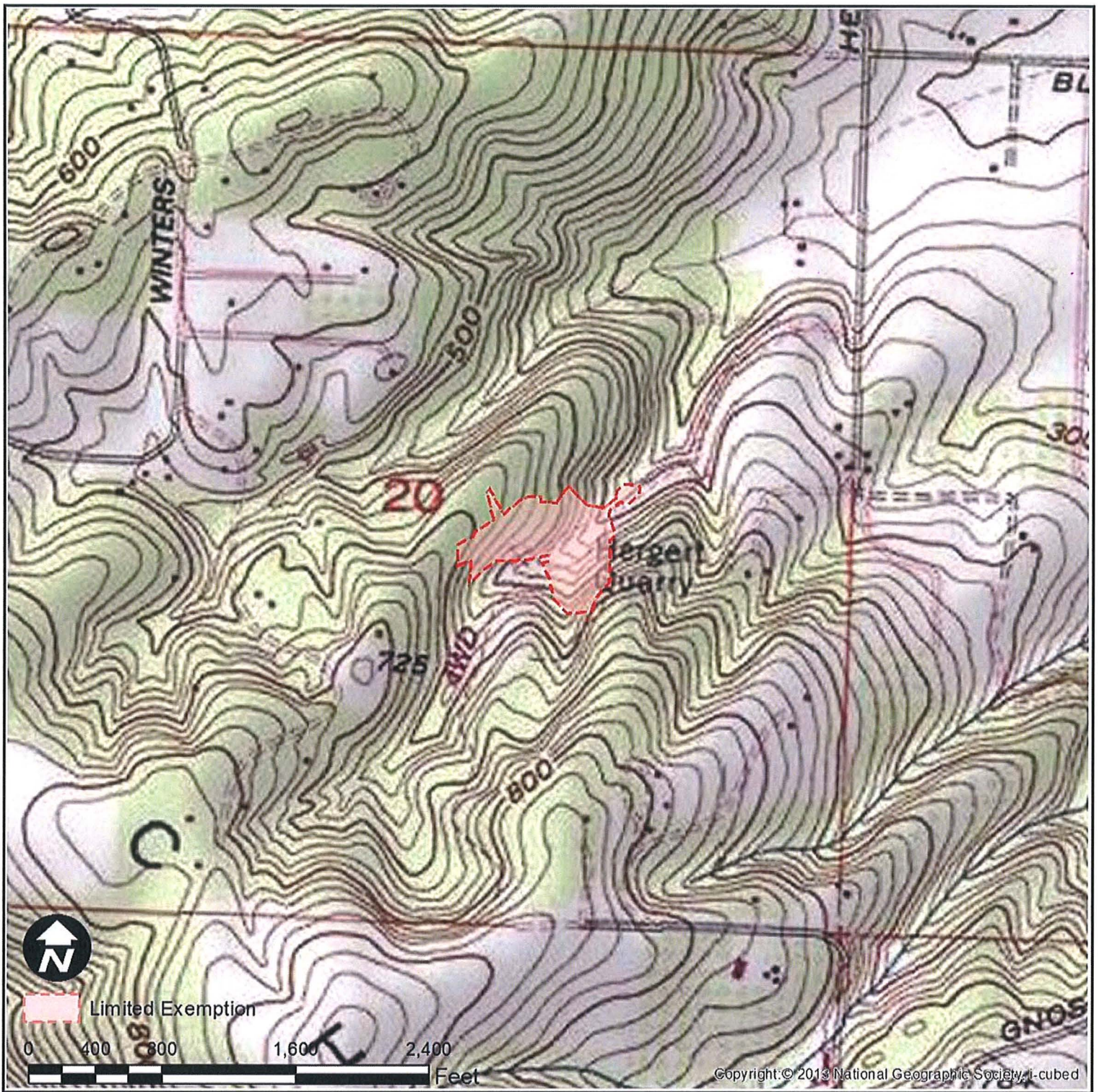
No off site impacts from erosion or sedimentation will occur.

Signature:



Date:





## LE Closure Plan - Site Topography

**DOGAMI ID#: 34-0026**

Permittee: Westside Rock-Hayden Quarry, LLC

Site Name: Hayden Quarry

Latitude: 45.46879

Longitude: -123.0803

DOGAMI has no control over, and makes no representations or warranties regarding the quality, accuracy, or legality of the content provided by others. The permittee is solely responsible for the accuracy and completeness of the Closure Plan Map. Please review carefully. By signing, you release DOGAMI from all claims or liability related to the content presented within the Closure Plan Map.

Permittee: 












Date: 10/12/2015



# Limited Exemption Closure Plan Map

Permit ID: **34-0026**

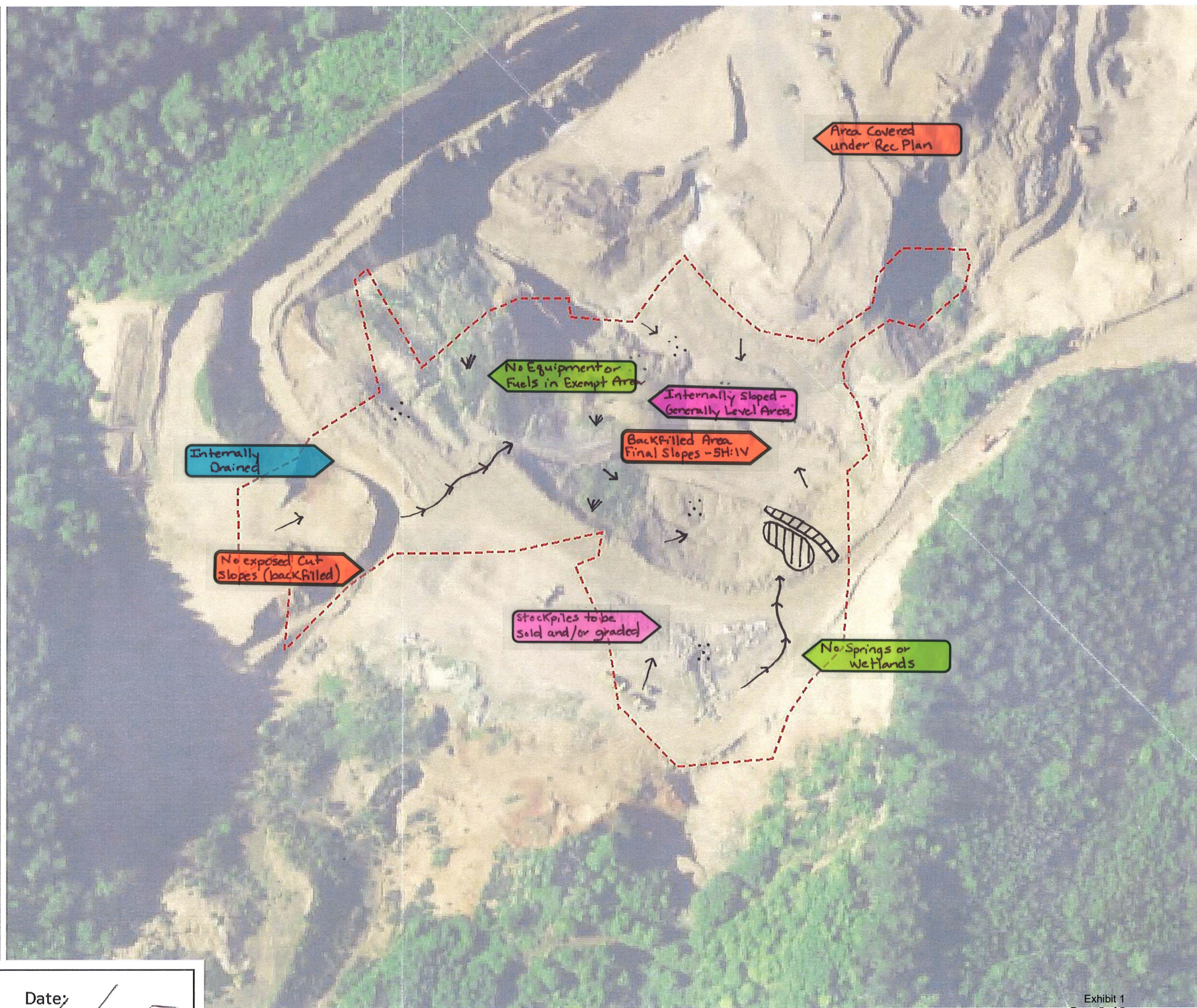
## LEGEND

-  CULVERT
-  RETENTION BERM
-  DRAINAGE PATTERN
-  CONVEYANCE DITCH
-  DRAINAGE AREA
-  ROCK CHECK DAM
-  VEGETATION
-  INFILTRATION
-  DISCHARGE TO NATURAL DRAINAGE
-  SETTLING POND/LOW LYING AREA
-  LIMITED EXEMPTION BOUNDARY

RECEIVED  
MLRR  
OCT 15 2015



DOGAMI has no control over, and makes no representations or warranties regarding the quality, accuracy, or legality of the content provided by others. The permittee is solely responsible for the accuracy and completeness of the Closure Plan Map. Please review carefully. By signing, you release DOGAMI from all claims or liability related to the content presented within the Closure Plan Map.



Permittee: *John R. Malverich*  
**JOHN R. MALVERICH**

Date: *10/12/2015*



# Oregon

Kate Brown, Governor

## Department of Environmental Quality

Northwest Region  
2020 SW 4th Ave, Suite 400  
Portland, OR 97201  
(503) 229-5263  
FAX (503) 229-6945  
TTY 711

January 27, 2016

Ryan J. Sandhu, PE  
Clean Water Services Field Operations Manager  
2550 SW Hillsboro Highway  
Hillsboro, OR 97123  
[SandhuR@CleanWaterServices.org](mailto:SandhuR@CleanWaterServices.org)

### RE: Beneficial Use Determination (BUD-20151217) for Screened Street Sweeping Fines used as Mine Reclamation Fill

Dear Mr. Sandhu:

The Department of Environmental Quality (DEQ) has reviewed Clean Water Services' December 11, 2015 application for a case-specific solid waste Beneficial Use Determination (BUD). DEQ has determined the following proposed uses for screened street sweepings meet the requirements for a case-specific BUD described in Oregon Administrative Rule (OAR) 340-093-0260 through 340-093-0290 . This BUD approval is limited to the materials, approved uses, and conditions specified in Table 1. The conditions of the BUD are intended to prevent adverse impacts to human health and the environment.

**Table 1: Conditions of BUD 20151217**

Solid Waste	Beneficial Use	Conditions on Use
Clean Water Services screened street sweeping fines	Mine reclamation fill	<ol style="list-style-type: none"> <li>1. Street sweeping fines must pass a one-inch screen to remove litter. Litter will be sent to a DEQ-approved landfill.</li> <li>2. Material cannot be used in residential areas (including mixed use commercial/residential or agricultural/residential) or on, or adjacent to, properties including schools, daycares, or any other property consistently encountered by children or other sensitive populations.</li> <li>3. Material use must be consistent with applicable engineering and commercial standards.</li> <li>4. Material use must be in accordance with an approved DOGAMI mining permit and fill/reclamation plan and operating plan.</li> <li>5. Use of the street sweeping fines at any mine other than the Westside quarry must be pre-approved by DEQ and DOGAMI.</li> <li>6. The material should not be used in any wetland mitigation required as part of mine reclamation.</li> <li>7. Concentrations of hazardous substances in the material must be below human health occupational risk-based screening levels identified in the most current version of the DEQ Environmental Cleanup and Tanks Program Risk-Based Concentrations for Individual Chemicals (or the Environmental Protection Agency Regional Screening Level Summary Table, if the contaminant of concern is not addressed in the prior DEQ reference).</li> <li>8. Material must not be stored or used near water or wetland areas in</li> </ol>

		<p>such a way that would allow discharge to groundwater or surface water.</p> <p>9. Material must be stored and managed to prevent nuisance conditions or releases to the environment such as dust, runoff, objectionable odors and unsightliness.</p> <p>10. Material use must comply with all applicable federal, state, and local regulations.</p> <p>11. Ongoing sampling must be conducted at least annually according to the most current version of the sampling plan originally approved by DEQ on June 19, 2014. Analytical results reported to DEQ should include all the constituents of concern, including the constituents with laboratory detection limits that exceed the cleanfill screening level. The conditions of this BUD are subject to change based on future sample results.</p> <p>12. Records of all uses identifying the user, quantity, location and purpose of use must be kept for a period of five years and submitted to DEQ for review annually by January 31 (for the preceding year).</p> <p>13. All conditions of use must be provided in writing to end users of the material and owners of the property upon which the material is applied.</p>
--	--	---

DEQ's determination is based on a review of Clean Water Services' proposed beneficial uses of street sweeping fines demonstrating the case-specific beneficial use performance criteria outlined in OAR 340-093-0290 are met for the approved uses. Details of DEQ's review are provided in the attached case-specific evaluation report.

Per OAR 340-093-0290(9), DEQ may modify or revoke this case-specific BUD at any time based on new information showing the potential to cause adverse impact to public health, safety, welfare, or the environment.

If you have any questions or concerns please contact Heather Kuoppamaki (DEQ BUD 20151217 project manager f) by phone at (503) 229-5478, or email at [kuoppamaki.heather@deq.state.or.us](mailto:kuoppamaki.heather@deq.state.or.us). DEQ appreciates your cooperation in protecting Oregon's environment.

Sincerely,



Audrey O'Brien, Manager  
DEQ Northwest Region Environmental Partnerships

Enclosure: Beneficial Use of Solid Waste Determination Evaluation Form

Cc: Bill Mason, DEQ Groundwater Hydrologist ([mason.bill@deq.state.or.us](mailto:mason.bill@deq.state.or.us))  
Heather Kuoppamaki, DEQ Environmental Engineer, [kuoppamaki.heather@deq.state.or.us](mailto:kuoppamaki.heather@deq.state.or.us)

# Beneficial Use of Solid Waste Determination Evaluation Form



State of Oregon  
Department of  
Environmental  
Quality

Applicant: Clean Water Services  
BUD#: 20151217  
Solid Waste: Municipal street sweepings  
Summary of Proposed Beneficial Use: Mine reclamation fill

Reviewer: Heather Kuoppamaki

Date: 12/22/2015

Tier:  One  Two  Three

## Beneficial Use of Solid Waste

Beneficial use of solid waste is a sustainability practice that may involve using an industrial waste in a manufacturing process to make another product or using a waste as a substitute for construction materials.

The environmental benefits of substituting industrial waste materials for virgin materials includes conserving energy, reducing the need to extract natural resources and reducing demand for disposal facilities.

Oregon Administrative Rules (OAR) 340-093-0280 - 0290 establish standing beneficial uses and a process for DEQ review of case-specific beneficial use proposals. Under these rules, DEQ may issue a beneficial use determination as an alternative to a disposal permit for proposals that meet the rule criteria. If approved, once a beneficial use determination is issued, DEQ no longer regulates the waste as a solid waste as long as the waste is used in accordance with the approved beneficial use determination.

## Beneficial Use Determination Evaluation Summary

- Yes, the Beneficial Use of this solid waste meets all the case-specific performance criteria listed below and is approved.
- No, the Beneficial Use of this solid waste does not meet all the case-specific performance criteria listed below and is not approved.

Notes: The street sweeping fines have an existing BUD (20130829) for non-residential construction fill and utility fill. This 2015 BUD application is to use the same material as mine reclamation fill at the Westside Quarry. DEQ evaluated the application and associated analytical results from the 2013 BUD application and 2014 analytical results and determined that screened street sweeping fines meet the case-specific performance criteria in the checklist below for mine reclamation fill at the Westside Quarry. DOGAMI has concurred with this determination.

---

## Case-Specific Beneficial Use Performance Criteria:

DEQ may approve an application for a case-specific beneficial use of solid waste only if all the following performance criteria are addressed: 1) Characterization of the Solid Waste; 2) Productive Beneficial Use of the Solid Waste; and, 3) The affect of the Proposed Beneficial Use on Public Health, Safety, Welfare and/or the Environment.

### 1) Characterization of the Solid Waste

Did the applicant characterize the solid waste and proposed beneficial use sufficiently to demonstrate compliance with the rules for case-specific beneficial use determinations (OAR 340-093-0280) by submitting required information for the appropriate tier? (See tier sections below for detailed characterization information.)

- Yes  No

Notes: This material has an existing BUD for non-residential construction and utility trench fill and soil amendment. The proposed added use is for mine reclamation fill at Westside Quarry.

## Beneficial Use of Solid Waste Determination Evaluation Form

Applicant: Clean Water Services  
 BUD #: 20151217  
 Solid Waste: Municipal street sweeping fines  
 Date: 12/22/2015

Was the following information submitted for DEQ review and how adequate was it?

**Tier 1**       Applicable     Not applicable

- Did the applicant provide an adequate description of the material proposed for beneficial use, the manner of generation and the estimated quantity to be used beneficially each year?       Yes     No

Notes: The material is fines from municipal street sweeping operations. The material is dewatered and screened at the Forest Grove Wastewater Treatment Plant. Materials that do not pass a one-inch screen are removed and sent to the landfill. CWS estimates they will produce 8,000 to 9,000 cubic yards per year of the street sweeping fine material.

- Did the applicant provide an adequate description of the proposed beneficial use and justify how the proposed use is beneficial?       Yes     No

Notes: The proposed beneficial use is as mine reclamation fill and would replace clean fill.

- Did the applicant provide a sufficient comparison of the chemical and physical characteristics of the material proposed for beneficial use with the material it will replace?

Yes     No

Notes: Chemical and physical characteristics were provided during previous BUD application for this material. This analysis compared the material to clean fill. Samples of the street sweeping fines showed concentrations of benzo[a]pyrene, antimony, dieldrin, methylene chloride, zinc and selenium above the DEQ Cleanfill screening levels.

For a number of constituents, although the constituents were not detected, the laboratory detection limits for the constituents exceeded the cleanfill screening levels. Therefore, for these constituents, it cannot be determined if the concentrations were below the cleanfill screening level. However, DEQ does not consider these constituents to present a potential human health or ecological health hazard. These constituents are shown in Table 1.

**Table 1: Non-detected constituents with detection limits above the cleanfill screening limit.**

Chemical constituent (not detected above reporting limit)	Method Detection Limit (mg/kg)	Screening Limit (mg/kg)	Notes
Dibenzo[a,h]anthracene	0.052 - 0.072	0.015	Screening limit from DEQ Risk-Based Concentrations table for residential soil. DEQ Risk-Based Concentration for occupational soil is 0.29 mg/kg.  Screening limit from DEQ Ecological Screening Level Values for mammals.  Screening limit for leaching to groundwater pathway using chemical-specific parameters as detailed in the Clean Fill Internal Management Directive.
Dibenzofuran	0.023 - 0.032	0.002	
Dibromo-3-chloropropane, 1,2-	0.0200 - 0.0265	0.0054	
EDB (1,2-dibromoethane)	0.0100 - 0.0133	0.0095	
MCPA ((4-chloro-2-methylphenoxy) acetic acid)	66 - 69	31	
MCPP	66 - 69	61	

## Beneficial Use of Solid Waste Determination Evaluation Form

Applicant: Clean Water Services  
 BUD #: 20151217  
 Solid Waste: Municipal street sweeping fines  
 Date: 12/22/2015

Chemical constituent (not detected above reporting limit)	Method Detection Limit (mg/kg)	Screening Limit (mg/kg)	Notes
Nitrosodimethylamine, N-	0.048 - 0.067	0.0023	Screening limit from EPA Regional Screening Levels for residential soil. EPA Regional Screening level for Industrial soil is .034 mg/kg.

- Did the applicant successfully demonstrate compliance of the proposed beneficial use with the performance criteria in OAR 340-093-0280 based on knowledge of the process that generated the material, properties of the finished product, or testing?  Yes  No

Notes: 1) the materials has been characterized. 2) the proposed use is for mine-reclamation fill and would be used in place of clean fill material. 3) the material is not a hazardous waste, prior to use the material is stored at the District's material processing facility where waters from dewatering can be collected and pumped to the wastewater treatment plant, the material is not used in sensitive environments, the material does not create dust, odors, unsightliness, fire, or other nuisance conditions.

- If required, did the applicant provide any other DEQ required information to evaluate the proposal?  Yes  No

Notes: Not required, DEQ already has information on the material from an existing BUD.

**Tier 2**      Applicable      Not applicable

- Did the applicant submit all the information required for a Tier 1 application?  Yes  No
- Did the applicant submit adequate sampling and analysis to make a determination of suitability for beneficial use? (Note: The analysis must provide chemical, physical, and biological characterization of the material proposed for beneficial use and identify potential contaminants in the material or the end product, as applicable.)  Yes  No

Notes: See BUD20130829.

- When applicable, did the applicant provide a risk screening comparing the concentration of hazardous substances in the material to existing, DEQ approved, risk-based screening level values, and demonstrate compliance with acceptable risk levels?  Yes  No

Notes: See BUD20130829.

- When applicable, did the applicant supply the location or type of land use where the material will be applied, consistent with the risk scenarios used to evaluate risk?  Yes  No

Notes: Approved quarries as mine-reclamation fill. Occupational risk scenarios are suitable. Westside Rock reclamation is included as a proposed site in the BUD application.

- When applicable, did the applicant supply contact information of property owner(s) if this is a site-specific land application proposal, including name, address, phone number, e-mail, site address and site coordinates (latitude and longitude)?  Yes  No

Notes: Westside Rock

- Did the applicant supply an adequate description of how the material will be managed to minimize potential adverse impacts to public health, safety, welfare, or the environment?  Yes  No

Notes:

**Beneficial Use of Solid Waste Determination  
Evaluation Form**

Applicant: Clean Water Services  
BUD #: 20151217  
Solid Waste: Municipal street sweeping fines  
Date: 12/22/2015

Tier 3     Applicable     Not applicable

2) Productive Beneficial Use of the Solid Waste

Has the applicant demonstrated that the proposed beneficial use is a productive use of the material by providing information substantiating the criteria listed below?     Yes     No

- Did the applicant successfully identify or demonstrate a reasonably likely proposed beneficial use for the material that is not speculative?     Yes     No
- The applicant is a port district and has demonstrated the proposed use is upland placement of dredged material in accordance with Senate Bill 412.     Yes     No

This criterion consists of three parts.

1. Identified Use:

Has the applicant clearly stated what the waste is going to be used for, that the waste is compatible with that use and the proposed quantity is necessary?     Yes     No

2. Reasonably Likely Use:

Has the applicant identified, with supporting documentation, the timeframe within which this use is likely to occur (e.g., zoning info, master plan for development, letters from local jurisdictions, etc)?

Yes     No

3. Not Speculative:

For Land application - has this material been used at other sites for the same purpose, is the material feasible for use at this site for this purpose, or has the applicant identified a known potential for this use at this site?     Yes     No     N/A

For uses other than land application - has the material been used in a product before, is the material feasible for use in a product, or has the applicant identified a known potential for use in this product?     Yes     No     N/A

Notes: The proposed use as mine reclamation fill at the Westside Rock quarry is productive.

- Is the use a valuable part of a manufacturing process, an effective substitute for a valuable raw material or commercial product, or otherwise authorized by the Department and does not constitute disposal?

Yes     No

Notes:

- Is the use in accordance with applicable engineering standards, commercial standards, and agricultural or horticultural practices?     Yes     No

Notes: The mine reclamation must meet the requirements of the DOGAMI mining permit and fill/reclamation plan and operating plan.

3) Effect of Proposed Beneficial Use on Public Health, Safety, Welfare and/or the Environment

Has the applicant demonstrated the proposed beneficial use will **not** create an adverse impact to public health, safety, welfare, or the environment, by providing information substantiating compliance with the criteria listed in the bullet list below?     Yes     No

Notes: The use of this material in wetland mitigation areas is prohibited.

**Beneficial Use of Solid Waste Determination  
Evaluation Form**

Applicant: Clean Water Services  
BUD #: 20151217  
Solid Waste: Municipal street sweeping fines  
Date: 12/22/2015

- Has the applicant demonstrated that the material is not a hazardous waste under ORS 466.00?  
 Yes  No

Notes: Yes, through knowledge of process and analytical testing.

- Has the applicant demonstrated that until the time this material is used according to a beneficial use determination, the material will be managed, including any storage, transportation, or processing, to prevent releases to the environment or nuisance conditions?  Yes  No

Notes: Yes, the material is stored at the material recovery facility. Water that has contacted the material is collected and put into the wastewater treatment plant.

- Has the applicant demonstrated that hazardous substances in the material, if any, meet one of the criteria in the bulleted list below?  Yes  No
  - Hazardous substances do not significantly exceed the concentration in a comparable raw material or commercial product;
  - Hazardous substances do not exceed naturally occurring background concentrations; or
  - Hazardous substances will not exceed acceptable risk levels, including persistence and potential bioaccumulation, when the material is managed according to a beneficial use determination.

Notes: CWS tested the material and the some contaminant concentrations are higher than background values but lower than risk based screening criteria and can be used for reclamation fill at the Westside Quarry.

- Has the applicant demonstrated that the proposed beneficial use will not result in the increase of a hazardous substance in a sensitive environment, such as a park, wildlife refuge or wetland?

Yes  No

Notes: A mine reclamation site is not a sensitive environment such as a park, wildlife refuge, or wetland. If wetlands had existed previously, DOGAMI may require wetland mitigation as a part of the mine reclamation. The material should not be used in any wetland mitigation required as part of mine reclamation.

- Has the applicant demonstrated that the proposed beneficial use will not create objectionable odors, dust, unsightliness, fire, or other nuisance conditions?  Yes  No

Notes: The material is odor free, and will not be likely to generate dust during transport due to the moisture content of the material following screening and rinsing the material.

- Has the applicant indicated that the proposed beneficial use will comply with any other applicable federal, state, and local regulations?  Yes  No

Notes: CWS will be taking the material to Westside Quarry. The operator must comply with the conditions of the DOGAMI permit and fill/reclamation plan and operating plan.

4) Public Involvement Evaluation (Note: this is not a Beneficial Use evaluation criterion)

Determine a public involvement recommendation using the current, **Guidance to DEQ Solid Waste Program Staff and Managers on Public Notice & Participation**.

- Is public notice and participation being recommended for this application?  Yes  No

Notes: A public notice was sent out for the original BUD for this material (BUD 20130829). No public comments were received. Since this additional use for the material will be for mine reclamation fill, an additional public notice is not required.