



**COUNTY OR MUNICIPALITY
APPROVAL FOR
SURFACE MINING
(Form SM-6)**

NAME OF COMPANY OR INDIVIDUAL APPLICANT(S) <i>Same as name of the exploration permit holder. (Type or print in ink.)</i> <p style="text-align: center;">Black Lake Quarry, LLC Attn. Dylan Parsons</p>	TOTAL ACREAGE AND DEPTH OF PERMIT AREA <i>(Include all acreage to be disturbed by mining, setbacks, and buffers, and associated activities during the life of the mine.) (See SM-8A.)</i> Total area permitted will be <u>244</u> acres Maximum vertical depth below pre-mining topographic grade is <u>135</u> feet Maximum depth of excavated mine floor is <u>100</u> feet relative to mean sea level																									
MAILING ADDRESS <p style="text-align: center;">2840 Black Lake Boulevard SW, Ste. C Tumwater WA, 98512</p>	COUNTY <u>Thurston</u> No attachments will be accepted. Legal description of permit area: <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width:10%;">14</td> <td style="width:10%;">14</td> <td style="width:10%;">Section</td> <td style="width:10%;">Township</td> <td style="width:10%;">Range</td> </tr> <tr> <td></td> <td>SW</td> <td>18</td> <td>17N</td> <td>2W</td> </tr> <tr> <td></td> <td>SE</td> <td>13</td> <td>17N</td> <td>3W</td> </tr> <tr> <td></td> <td>NW</td> <td>24</td> <td>17N</td> <td>3W</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	14	14	Section	Township	Range		SW	18	17N	2W		SE	13	17N	3W		NW	24	17N	3W					
14	14	Section	Township	Range																						
	SW	18	17N	2W																						
	SE	13	17N	3W																						
	NW	24	17N	3W																						
Telephone <u>360-915-6121</u>																										
Proposed subsequent use of site upon completion of reclamation <p style="text-align: center;">Create a 23.9 acre lake and return to Rural Residential 1/20 acre zoning.</p>																										
Signature of company representative or individual applicant(s) 	Name and title of company representative <i>(please print)</i> <p style="text-align: center;">Dylan Parsons, President</p>	Date signed <p style="text-align: center;">8/7/18</p>																								
TO BE COMPLETED BY THE APPROPRIATE COUNTY OR MUNICIPALITY:																										
Please answer the following questions 'yes' or 'no'.																										
1. Has the proposed surface mine been approved under local zoning and land-use regulations?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																								
2. Is the proposed subsequent use of the land after reclamation consistent with the local land-use plan/designation?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																								
When complete, return this form to the Department of Natural Resources.																										
Name of planning director or administrative official <i>(please print)</i> <p style="text-align: center;">Tony Kumbas</p>	Address																									
Signature 																										
Title <i>(please print)</i> <p style="text-align: center;">Senior Planner</p>																										
Telephone <p style="text-align: center;">360-951-8769</p>	Date <p style="text-align: center;">8/9/18</p>	DNR Reclamation Permit No. <div style="background-color: black; color: white; text-align: center; padding: 2px;">FOR DEPARTMENT USE ONLY:</div>																								



WASHINGTON STATE DEPT OF
**NATURAL
RESOURCES**

WASHINGTON GEOLOGICAL SURVEY
1111 WASHINGTON ST SE
MAIL STOP 47007
OLYMPIA, WA 98504-7007

February 22, 2019

BLACK LAKE QUARRY LLC
2840 BLACK LAKE BLVD SW STE C
TUMWATER, WA 98512

RE: Surface Mining Reclamation Permit #70-011988 (LITTLEROCK PIT)

Dear Permit Holder:

Enclosed is Surface Mine Reclamation Permit #70-011988, which combines permits #70-011988 and #70-012633 and authorizes surface mine reclamation within a 244-acre permitted area in a portion of Section 18, Township 17 North, Range 02 West, and Sections 13 and 24, Township 17 North, Range 3 West, Willamette Meridian, Thurston County. Please refer to the permit number listed above when submitting inquiries or reports.

The Department acknowledges approval of Performance Security No. 504 for \$431,000.00 issued by Security State Bank.

RCW 78.44 requires that reclamation of each segment of the permitted area shall be completed within two years of cessation of mining in that segment. We strongly recommend, however, that reclamation of each segment occur concurrent with the removal of the minerals.

You are required to mail a Permit Fee Invoice and Reclamation Report (Form SM7) annually to Washington Department of Natural Resources. The form must be completed and returned to the Department with the appropriate annual permit fee prior to the anniversary date of the permit.

If you have any questions please feel free to contact me by calling 360-902-1433.

Sincerely,

A handwritten signature in blue ink, appearing to read "Rian Skov".

Rian Skov

Surface Mine Reclamation Program

Washington Geological Survey

Enclosures (SM-9, Exhibit A, SM-8A, SM-6, Narrative, Map Set, Clean Soil Acceptance Policy)

c: File #70-011988

Thurston County CPED

Security State Bank



SURFACE MINING RECLAMATION PERMIT (Form SM-9)

new expansion revision name change transfer

Permit Holder: Black Lake Quarry, LLC
Mailing Address: 2840 Black Lake Blvd. SE Ste. C. Tumwater, WA 98512

Pursuant to RCW 78.44, a Reclamation Permit hereby granted to the above-named permit holder to engage in surface mining on the property described in the application and material on file under this permit.

TERM OF PERMIT

This permit shall be in effect from the date of issuance and shall remain in effect so long thereafter as the permit holder pays the annual basic fee for each site, complies with the Surface Mining Act and the rules promulgated thereunder, complies with the reclamation plan, and maintains a performance security as required by the Act.

CHANGE OR MODIFICATION OF RECLAMATION PLAN

The permit holder shall obtain written approval from the Department prior to any change or departure from the approved reclamation plan.

PERFORMANCE SECURITY

A performance security shall be submitted to and approved by the Department prior to commencement of surface mining. The permit holder may submit a cash deposit, assignment of a savings account or certificate of deposit, bank letter of credit, negotiable securities, or a corporate surety bond in the amount specified.

TRANSFER OF PERMIT

The transfer of this permit to another permit holder shall not be made unless approved in writing by the Department. A transfer shall not be approved unless the successor permit holder assumes all duties of the former permit holder to complete the reclamation of the land and the Department approves the successor permit holder's performance security.

PENALTIES

The Department may suspend surface mining or impose civil penalties if the permit holder conducts surface mining in any manner not authorized by RCW 78.44, the rules adopted thereunder, the approved reclamation plan, or this permit.

Permitted issued on April 1, 1980 Permit revised on February 22, 2019

Table with 4 rows (Signature, Name, Title, Washington Geological Survey) and 8 columns (SW, 1/4, S, 18, T, 17, N, R, 02 W, WM)

TOTAL ACREAGE AND DEPTH OF PERMIT AREA (Include all acreage to be disturbed by mining, setbacks, buffers, and associated activities during the life of the mine. See SM-8A)

Total permit acreage 244
Maximum vertical depth below pre-mining topographic grade is 110 feet
Maximum depth of excavated mine floor is 100 feet relative to mean sea level

DNR Surface Mining Reclamation Permit No. 70-011988

EXHIBIT A
Conditions of the Permit
Surface Mining Reclamation Permit # 70-011988
February 22, 2019

1. This surface mining reclamation permit applies to the following permit area: a 244-acre permitted area in a portion of the SW quarter of Section 18, Township 17 North, Range 2 West and the SE quarter of Section 13 and the NW quarter of Section 24, Township 17 North, Range 3 West, Willamette Meridian, Thurston County.
2. All mining and reclamation shall comply with the rules and regulations pursuant to Chapter 78.44 RCW and Chapter 332-18 WAC.
3. All mining and reclamation shall comply with the reclamation plan dated August 1, 2018 by the permittee, and approved by the Department of Natural Resources on February 22, 2019. Any amendment or change to the plan must be submitted to and approved in writing by the Department. The Reclamation Plan consists of the following documents:
 - Permit Letter, dated February 22, 2019
 - Surface Mining Reclamation Permit (Form SM-9) dated February 22, 2019
 - Exhibit A, listing **13** conditions of the permit
 - Standard Reclamation Plan
 - Application for Reclamation Permit (Form SM-8A) dated by the permittee on August 1, 2018, date stamped Received by Washington Geological Survey on August 9, 2018.
 - County or Municipality Approval for Surface Mining (Form SM-6) dated by the permittee on August 7, 2018, and approved by Thurston County Planning on August 9, 2018, date stamped Received by Washington Geological Survey on August 9, 2018.
 - Narrative, date stamped Received by Washington Geological Survey on May 3, 2018.
 - Black Lake Resources Clean Soils Acceptance Policy, date stamped Received by Washington Geological Survey on August 9, 2018.
 - Reclamation Plan Maps: Sheets 1 thru 8, each sheet date stamped Received by Washington Geological Survey on August 9, 2018.
4. If there is any conflict between the conditions in Exhibit A and any other language of the approved reclamation permit (which includes the reclamation plan, maps, and supporting documents), the language in Exhibit A will prevail.
5. The permit holder shall mark the perimeter of the 244-acre permitted area with highly visible permanent marker posts. The markers will be used to delineate the permit boundary enabling the operator, permittee, and the Department of Natural Resources (DNR) to monitor the progress of mining and reclamation. Permanent boundary markers shall be

August 3, 2018

Ms. Carrie Gillum
Surface Mine Reclamation Program
Division of Geology and Earth Resources
1111 Washington St. SE
MS47007
Olympia, WA 98504

Subject: Re-Submittal for Surface Mining Permit #70-011988; Littlerock Sand and Gravel Mine.

Dear Ms. Gillum,

Enclosed are 2 copies of a revised application for the above referenced Surface Mining Permit. Since you issued your review to the Eucon Corporation May 2, 2018 submittal, Black Lake Quarry, LLC has purchased the property, mining rights, and mining operation. With this change in ownership and operational control, the enclosed application not only responds to your previous comments, but updates the application narrative, clean soil acceptance plan, and the required forms and figures.

The enclosed application is specifically requesting the combining of Permits 70-011988 and 70-012633 and the expansion of the DNR permit boundary to accommodate the newly approved Thurston County extraction areas and the reclamation of previously disturbed areas.

We look forward to your review. Please feel free to contact me with any questions or concerns. You may also contact Dylan Parsons at 360.789.1503.

Regards,

PERMIT SUBMITTAL – Rev. 1

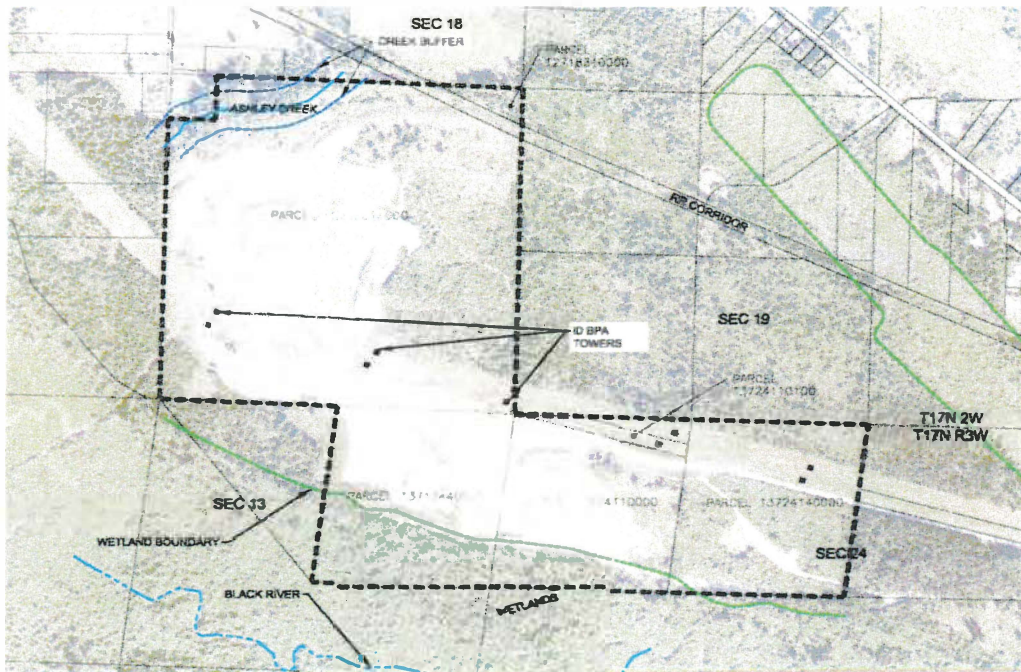
WASHINGTON DEPARTMENT OF NATURAL RESOURCES
SURFACE MINING RECLAMATION PERMIT

#70-011988

LITTLEROCK SAND AND GRAVEL MINE

10201 Littlerock Road SW, Olympia, WA

Prepared by: Peter Battuello, LG, LHG
Gardner Bay Consulting, LLC
July 31, 2018



Reclamation Permit Application #70-011988

Mining Operations and Reclamation Narrative

Littlerock Sand and Gravel Mine

May 1, 2018

Prepared by:

Peter Battuello, LG, LHG
Gardner Bay Consulting LLC

1.0 INTRODUCTION

Black Lake Quarry, LLC (applicant) has prepared this surface mine application (SM8A and associated documents) for continued and expanded mining at the Littlerock Mine at 10200 Littlerock Road SW, near Tumwater, WA. This reclamation permit application is for:

1. Combining of the Littlerock I mine (formerly the Fairview Pit, DNR #70-11988) and the Littlerock II mine (formerly the Hard Rock Pit, DNR #70-12633) under a single reclamation permit with WADNR.
2. Expanding the extraction area to 160 acres, as approved by Thurston County.
3. Increasing the WADNR Reclamation Permit area to 242 acres to accommodate the reclamation of un-mined, but previously disturbed areas.
4. Extending sand and gravel extraction below the water table over an approximately 24 acre area.
5. Implementing a phased extraction and reclamation plan.
6. Reclaiming areas of Littlerock I that were previously disturbed under DNR #70-11988.

This reclamation application, including this narrative, WADNR forms, maps, and figures are being submitted to reflect the April 30, 2018 decision by the Thurston County Hearings Examiner to approve the mine expansion plan under the Thurston County Mineral Code. Maps and WADNR forms are in Attachments 1 and 2, respectively. The Thurston County Hearing Examiner's decision is provided as Attachment 3 to this narrative. The corresponding SEPA determination is provided at Attachment 4.

2.0 SITE DESCRIPTION

2.1 Site Location

The Littlerock mine will expand into Section 18 T17N R2W and Sections 13 and 24 of T17NR3W, approximately 1 mile west of Littlerock Road SW. The address is 10201 Littlerock Road SW. A map of the mine location is included in the permit drawings.

2.2 Background

Two mines were established on the property in the late 1980s. Littlerock I (LRI), formerly the Fairview pit has a reclamation permit #70-11988 to disturb 55 acres. Thurston County had previously permitted the extraction sand and gravel from a 26-acre area within the reclamation permit boundary. Littlerock II (LRII), formerly the Hard Rock Pit located several hundred yards south and west from the Littlerock I site operates under reclamation permit #70-12633. Of the 80 acres identified in the permit, 19 acres are jurisdictional wetlands and 39 acres have been previously disturbed. Both mines have operated under Special Use Permits with Thurston County for mineral extraction.

In 2002, the two mines were brought under single ownership and new wash plant was established on LRI. By 2003, the LRI resources were almost depleted. Extraction continued on LRII with the material being processed at the LRI wash plant. In 2011, due to economic factors, mining activities were greatly reduced and the mine only sold material from existing stockpiles of processed aggregate. Operations started again in 2017. In 2018 the applicant purchased the property and mining operations.

In 2009, the mine owner submitted a request to Thurston County to expand the mine to 160 acres and extend mining to 40 feet below the water table in a 24-acre area. Between 2009 and 2018, several technical studies were prepared to address County requirements and public comment. In 2014, the Department of Ecology issued a 50 acre-foot per day water right for the property. In 2017, the County issued a Mitigated Determination of Non-Significance for the SEPA Application to expand the mine. A public hearing was conducted on March 27, 2018, and the County Hearing Examiner Decision approving the expansion permit was issued on April 30, 2018. Hearing documentation is listed in Attachment 3. Copies of the hearing documents are provided electronically on the USB storage contained in the cover sleeve.

3.0 GEOLOGY and HYDROGEOLOGY

A series of hydrogeologic studies were conducted between 2012 and 2017 as part of a Thurston County review of the expansion permit application. These documents include:

- Pacific Groundwater Group “Documentation of Groundwater Model, Quality Rock Products Littlerock Mine” prepared for Black Lake Quarry, LLC August 30, 2017.
- Gardner Bay Consulting, LLC “Conceptual Geologic and Hydrogeologic Model Summary, Revision 1.0” prepared for Quality Rock Products, August 23, 2017.
- Gardner Bay Consulting, LLC “Groundwater Monitoring Program Plan - Revision 1” prepared for Quality Rock Products, Inc., June 26, 2017.
- Innovex Environmental Management, Inc. “Groundwater Monitoring Report for February 2014, Littlerock Resource Recovery Site” dated April 25, 2014.
- AECOM “Groundwater Monitoring Report for September 2014, Littlerock Resource Recovery Site - Special Use Permit No. 2009100282” dated February 3, 2015.

- AECOM "Groundwater Monitoring Report for February 2015 Littlerock Resource Recovery Site - Special Use Permit No. 2009100282" dated June 19, 2015.
- AECOM "Groundwater Monitoring Report for September 2015 Littlerock Resource Recovery Site - Special Use Permit No. 2009100282" dated December 17, 2015.
- Gardner Bay Consulting, LLC "Groundwater Monitoring Report for April 2016 Littlerock Resource Recovery Site - Special Use Permit No. 2009100282" dated November 15, 2016.
- Gardner Bay Consulting, LLC "Groundwater Monitoring Report for September 2016 Littlerock Resource Recovery Site - Special Use Permit No. 2009100282" dated December 30, 2016.
- Gardner Bay Consulting, LLC "Groundwater Monitoring Report for March 2017 Littlerock Resource Recovery Site - Special Use Permit No. 2009100282" dated June 23, 2017.

These documents provide an assessment of water well information near the Mine, recent and past water quality findings, and hydrogeologic cross sections. Copies of the report are provided electronically on the USB storage contained in the cover sleeve (USB Exhibits SS1, SS2, and SS3). These studies concluded that the unconfined aquifer beneath the mines flows from east to west and discharges to the Black River wetland system. Numerical groundwater modeling predicted that impacts to groundwater flow and discharge resulting from the below water mining were not significant or adverse and could be mitigated through on-site water management strategies and by controlling the thickness of lake bed sediment. Sampling and analysis of groundwater at and near the Mine show that past mining has not impacted groundwater quality or quantity in the unconfined aquifer.

With the County's approval of the expansion permit includes conditions that the sampling and monitoring program be expanded and new groundwater monitoring points and protocols be established for on-going hydrogeologic monitoring. The expanded points and protocols are presented in the attached Groundwater Monitoring Program Plan.

4.0 MINING AND RECLAMATION

4.1 Mine Operations and Reclamation

The expanded mine area will be developed in seven (7) individual phases as described below and as shown on Sheet 4 of 8 of the attached drawing set. Each phase will be reclaimed to final grade and planted coincident with the start of the subsequent phase. All mining will occur above seasonal high groundwater with pit floor elevations ranging from 160 to 135 feet above sea level, except during Phase 7, when mining will extend to the base of the unconfined aquifer, which is expected to occur at 100 feet above mean sea level. The areas of each phase and the volume of material remaining to be removed is summarized in Table 1.

Mined sand and aggregate will be transported via truck or conveyor to the portable wash plant located in un-reclaimed operating areas. Reclamation described below will be performed using existing on-site soils, supplemented with clean material imported from off-site locations. A clean fill plan is provided as Attachment 5. Native trees will be planted on slopes and a

mixture of trees and grasses will be planted in flatter areas along the pit floor. Existing areas disturbed during the mining of LRI that are no longer required for mine access or operations will be reclaimed with trees and grasses this reclamation permit.

PHASE 1 - Phase 1 will commence in the southeast quadrant of Parcel 12718310000. Phase 1 will begin with the removal of top soil that will be stockpiled on Phase 2 areas. Mining will proceed from

TABLE 1 - SUMMARY OF EXTRACTION BY PHASE

Phase	Area	Acres	CY (in place)
1	1,457,518	33.46	1,824,010
2	1,027,145	23.58	1,675,775
3	875,992	20.11	792,245
4	568,022	13.04	837,930
5	1,423,976	32.69	713,405
6	417,740	9.59	539,720
Lake	1,041,084	23.90	1,156,760
TOTAL	6,811,477	156	7,539,845

north to south with all mining occurring above the water table. The final pit floor elevation will be between 160 and 150 feet.

Coincident with Phase 1, some of the area disturbed during the operation and mining of LRI will be reclaimed. This includes removing the former wash plant, all stockpiles, and equipment located outside the Thurston County approved extraction area. An approximately 12-acre area north of the scale house and west of Ashley Creek will be reclaimed with stockpiled top soil and new plantings. The original LRI mine foot print will remain un-reclaimed until completion of Phase 7. This area will continue to serve as an operations area with scales and stockpiled materials. A small area of previously disturbed slope at the southwestern most corner of the parcel (south end of Phase 6 area) will also be reclaimed during Phase 1.

At completion of extraction in the Phase I area, the area will be reclaimed by establishing and plowing final grades, spreading top soil, and installing plants as shown on the plans. The western boundary will not be planted so it can be used for stockpiling Phase 2 top soil. This area will be planted once the top soil is harvested for reclamation of other areas.

PHASE 2 - Phase 2 will extend westward from the Phase 1 area. Top soil removed from the Phase 2 area will be stockpiled along the Phase 1 boundary. Phase 2 mining will occur entirely above the water table, with the final pit floor elevation between 150 and 145 foot.

The Phase 2 area will remain active until after completion of Phase 7 as most of the area will be reclaimed by the lake and the remnant area is needed for lake dredging.

PHASE 3 - Phase 3 will extend westward from the Phase 2 area and to the south into the former LR11 mine. Phase 3 is parallel to the BPA easement and will remove sand and gravel to an elevation between 145 and 140 feet. Most of the top soil has been removed from Phase 3 and stockpiled as a berm along the western boundary of Phase 5. This berm will remain in place as to not impact wetlands adjacent to the west side of the berm. Remaining Phase 3 top soil will be stockpiled in the Phase 5 area. All Phase 3 mining will occur above the water table.

The northern portion of Phase 3 will remain active until the completion of Phase 7 when it will be reclaimed as part of the pit lake. The southern portion of Phase 3 will be reclaimed coincident with the start of Phase 4 by establishing 2h:1v side slopes along the eastern boundary and a gentle slope (1%-2% slope) across the western portion. Final grades will be plowed, top soil applied and plantings installed.

PHASE 4 - Phase 4 will extend to the south through Parcel 13724140000. Phase 4 will begin with the removal of top soil that will be used to reclaim the southern portion of Phase 3. Excess top soil will be combined with Phase 3 soils in the Phase 5 area and used to create a perimeter berm on the south and east sides of Phase 4. All Phase 4 mining will occur above the water table with final pit floor elevations between 140 and 145 feet.

Phase 4 will be reclaimed after reaching permitted mine elevations. Reclamation will involve creating 2h:1v side slopes on the east and south boundary and matching elevations on the north and west. Top soil will be retrieved from existing stockpiled sources to provide for planting.

PHASE 5 - Phase 5 will extend from south to north across the western portion of the former LR11 mine (parcels 13713440000 and -13724110000). This phase will involve some mining of residual sources above the water table, which is expected to occur between 135 and 140 feet. This area was previously cleared of top soil, which is stock piled adjacent to the wetland boundary on the western perimeter of this area.

Phase 5 will be reclaimed as the mining moves from south to north. Reclamation will involve the placement of top soil and native plantings. The existing perimeter berm along the west side of the Phase 5 mining area will remain in place so top soil will be derived from other on-site sources (the parts of Phases 2 and 3 that are reclaimed as pit lake) and supplemented as needed with on-site amendments (silt, clay, mulch) and/or imported top soil. Final reclamation will establish 2h:1v slopes between the berm crest and the mine floor. Phase 5 will be finished to allow surface run-off from the reclaimed area to infiltrate along the western perimeter of the reclaimed mine.

PHASE 6 - Phase 6 will extend westward from the operating area to western boundary of Parcel 12712831000. Top soil will be used to complete Phase 5 reclamation. All mining will occur above the water table with the pit floor reaching an elevation of 135 feet.

Phase 6 will be reclaimed by establishing 2h:1v slopes along the mine perimeter, sloping into the mine. The pit floor will then be raised between 5 and 10 feet to accommodate changes to the groundwater table that are expected as a result of constructing Phase 7. At final grade, top soil will be retrieved from the stored top soil pile on the eastern edge of Phase 1.

PHASE 7 Phase 7 will extend between the mine floor and elevation 100 feet. Phase 7 is expected to encounter the groundwater table at approximately 140 feet along its western extents. Mining is proposed to start in the southwest corner of the proposed pit lake. A drag line would be established on the southern shore and by dragging from east to west, establish the lake bottom and 1.5h:1v inward slopes along the southern and western lake boundaries. The drag line would then move to the north part of Phase 7 and begin dragging from west to east until reaching the eastern lake boundary. Final Phase 7 mining will be performed on the northern lake to extend the lake into the operating area and establish final slopes on the north shore. During mining, surface water runoff will be directed to the pit lake.

Phase 7 will be reclaimed as a pond consistent with the Washington Division of Geology and Earth Resources Open File Report 96-2 or the equivalent guidance document in place at the time of the final reclamation permit. Shoreline vegetation and habitat functions will be installed and monitored until established. Top soil will be retrieved from remaining stockpiles developed during the mining of LRI.

Coincident with Phase 7 reclamation, the remaining un-reclaimed areas of Phase 1, Phase 2, Phase 3, and the former LRI area will be reclaimed by establishing final grades, spreading top soil and planting.

In addition to the recovery of sand and gravel, the mine will operate several accessory uses, that have been approved in permits for current mining. These include:

- Concrete crushing and recycling
- Asphalt recycling
- Gravel crushing and washing
- Minor equipment maintenance

4.2 Top Soil Management

Top soil and sub soil that were removed during mining activities on LRI are currently stockpiled in berms on the LRI area. This material should be sufficient to re-cover the LRI disturbed areas and the Phase 6 area. With the completion of the pit lake, which will not require top soil, the stock piled top soil from LRI and retained topsoil from Phases 1 and 2 will be sufficient to supplement topsoil needs to reclaim Phases 3 and 5. Should supplemental top soil be required to complete reclamation of any area, it will be imported from a local source per the clean fill plan or manufactured on site using fine-grained soils and mulch.

5.0 Erosion Control

The mining plan is for all on-site water to infiltrate to the ground within the mine perimeter. Run-off will be directed either to the pit lake, or during operations, to the west side of Phase 5 where it currently is routed and infiltrates. Final grading will include swales and small topography controls that will direct run off to the infiltration areas. Slopes will be softened with planting mounds and clustered plantings to reduce on-site erosion. The closed depression created on the western side of Phase 5 allows water to infiltrate on site and recharge the wetlands to the west. The future pit lake will also serve as a run-off collection area for Phases 1, 2, parts of 3, and 6. The two collection areas will provide sufficient storage to contain rainfall events.

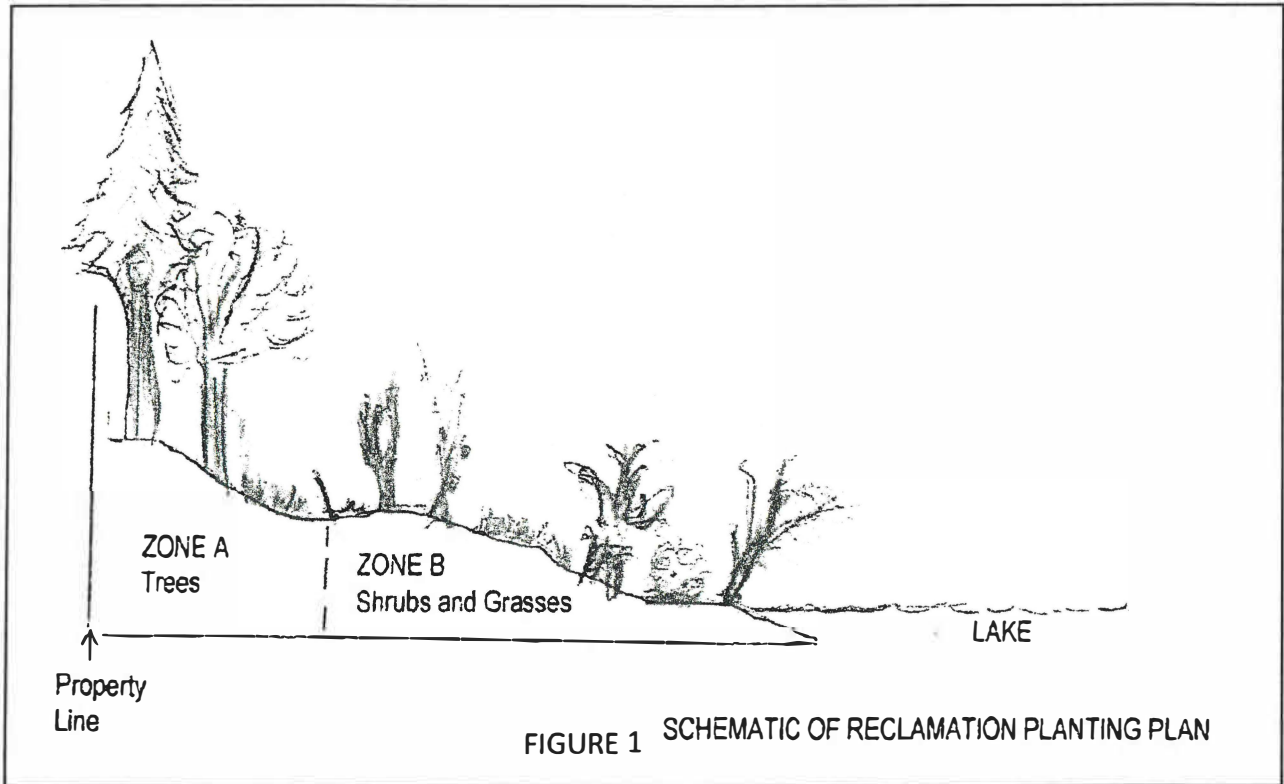
6.0 Revegetation

All disturbed areas, including areas disturbed during the mining of LRI will be replanted with 2 planting zones. Zone A consists of trees and tall shrubs. Zone B includes smaller shrubs and grasses. Sheet 8 of 8 shows the approximate location of zones. The planting schedule is shown in Table 2. A schematic of zone planting around the pit lake is shown in Figure 1.

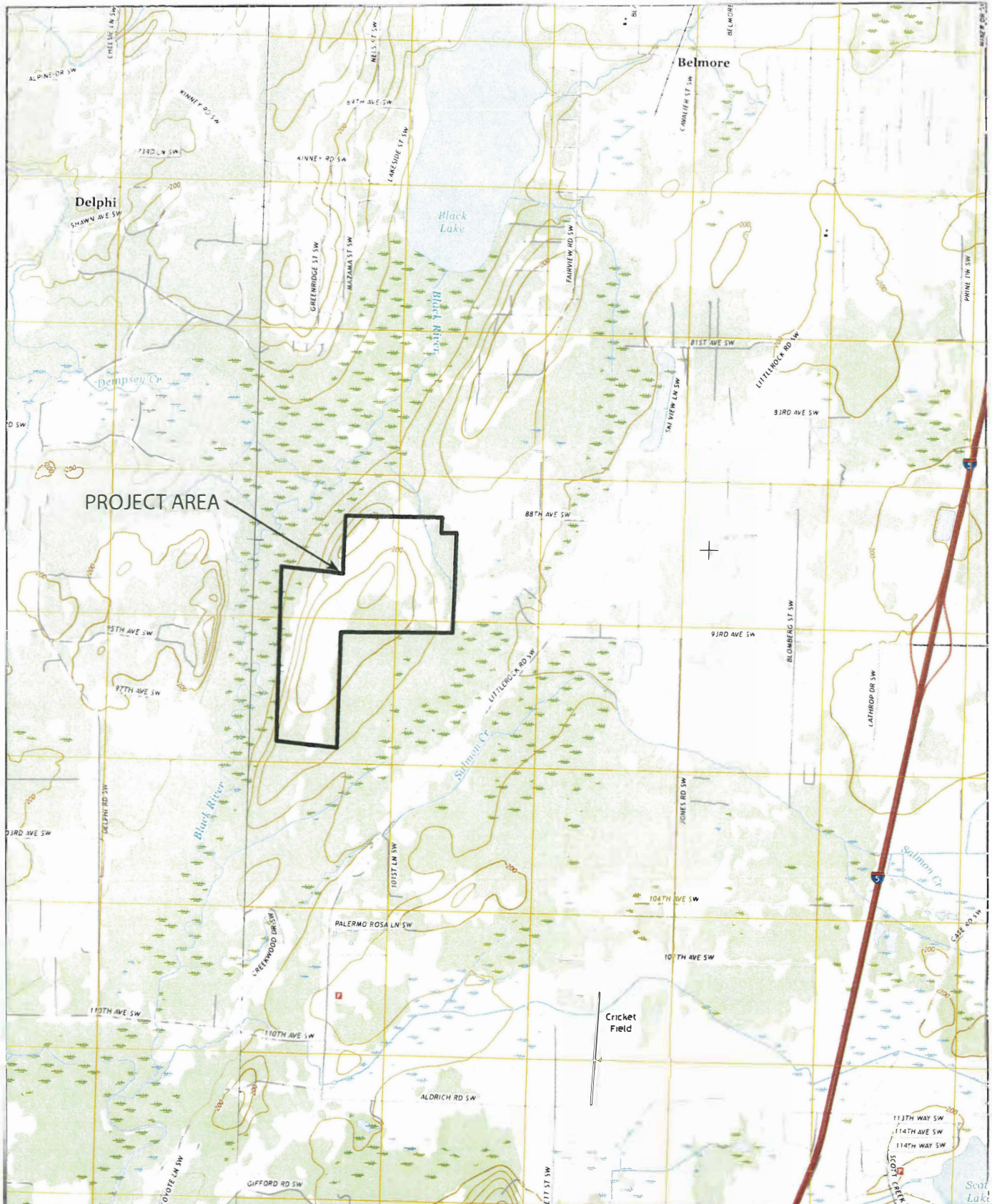
Table 2 Restoration Planting Plan			
Common Name	Scientific Name	Location, Size & Spacings	Totals
TREES AND TALL SHRUBS (300 plants per acre)			
Big-leaf maple	<i>Acer macrophyllum</i>	1-Gallon container minimum/ 18" height/ 10' on center spacing	150
Douglas fir	<i>Pseudotsuga menziesii</i>		200
Western red cedar	<i>Thuja plicata</i>		100
Western hemlock	<i>Tusga heterophylla</i>		100
Vine maple	<i>Acer circinatum</i>		125
Sitka willow	<i>Salix stichensis</i>		100
Pacific willow	<i>Salix lucida ssp. lasiandra</i>		50
Red elderberry	<i>Sambucus racemose</i>		75
MEDIUM SIZED SHRUBS (400 shrubs per acre)			
Red-osier dogwood	<i>Cornus stolonifera</i>	1-Gallon container minimum/ 18" height/ 8' on center spacing	100
Salal	<i>Gaultheria shallon</i>		250
Black twinberry	<i>Lonicera involucrata</i>		50
Oregon grape	<i>Mahonia aquifolium</i>		100
Nootka or wild cluster rose	<i>Rosa nutkana, R. pisocarpus</i>		100
Thimbleberry	<i>Rubus parviflorus</i>		50
Western salmonberry	<i>Rubus spectabilis</i>		100
Sword fern	<i>Polystichum munitum</i>		200
Common snowberry	<i>Symphoricarpos albus</i>		250
GRASSES (Orchard Grass, red fescue, bluegrass) 20#/acre. Fertilizer 200#/acre.			

Planting inside the perimeter berm will not occur until all mining activities are complete and final perimeter grades are achieved. This will allow top soil stored in the perimeter berm to be placed on reclaimed surfaces and used to support revegetation plans. All

transferable plants growing on the berm will be transplanted during final reclamation. Trees and shrubs may be clustered to create variation in the revegetation of the lake shore, and industrial vs. residential land uses. Below is a schematic depicting the variable slope and planting scheme.



ATTACHMENT 1
MAPS



GARDNER BAY CONSULTING, LLC
 Environmental and Development Solutions

PERTEET

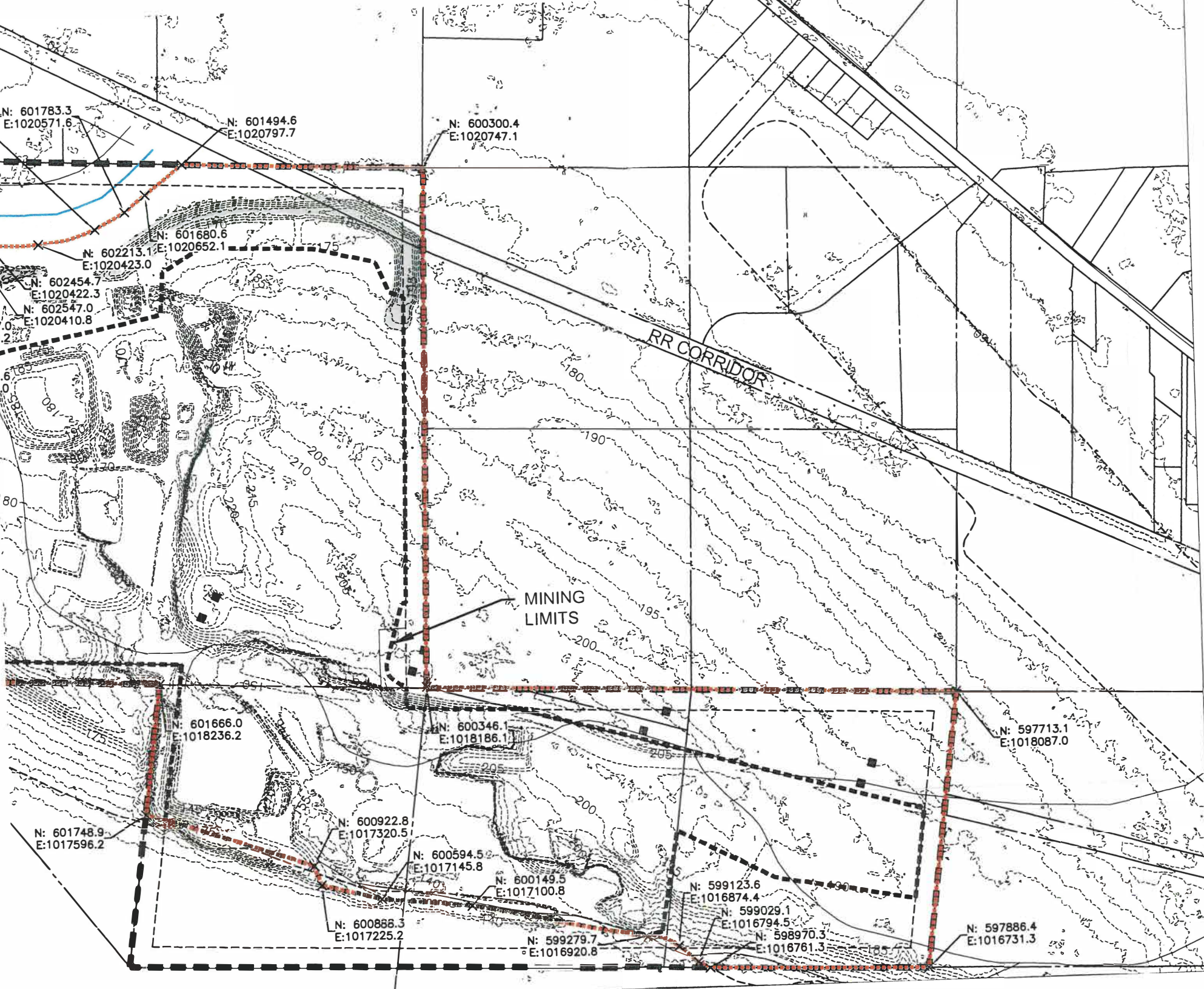
APPLICATION #70-11988 LITTLEROCK RESOURCE RECOVERY SITE

VICINITY MAP SHEET NO 1 OF 8

BLACK LAKE QUARY LLC 2840 BLACK LAKE BLVD SE STE. C TUMWATER WA, 98512

SCALE 1" = 3000' DATE JULY 31 2018

SIGNATURE _____ DATE _____



LEGEND

- +—+—+— (Thick red dashed line)
- (Black dashed line)
- (Thin dashed line)
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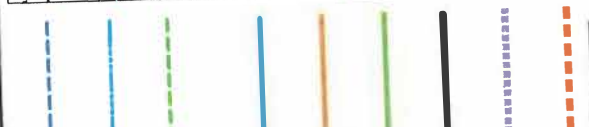
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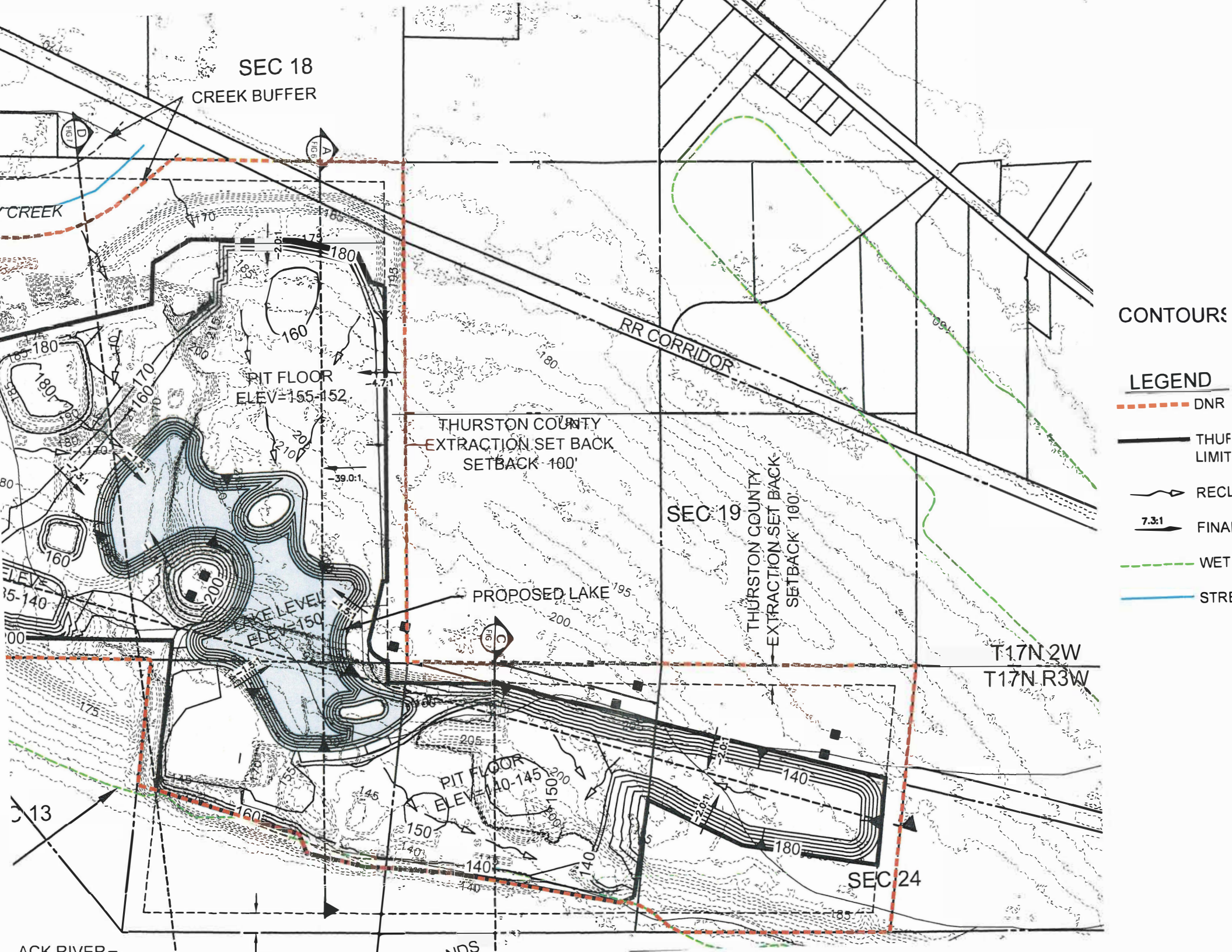
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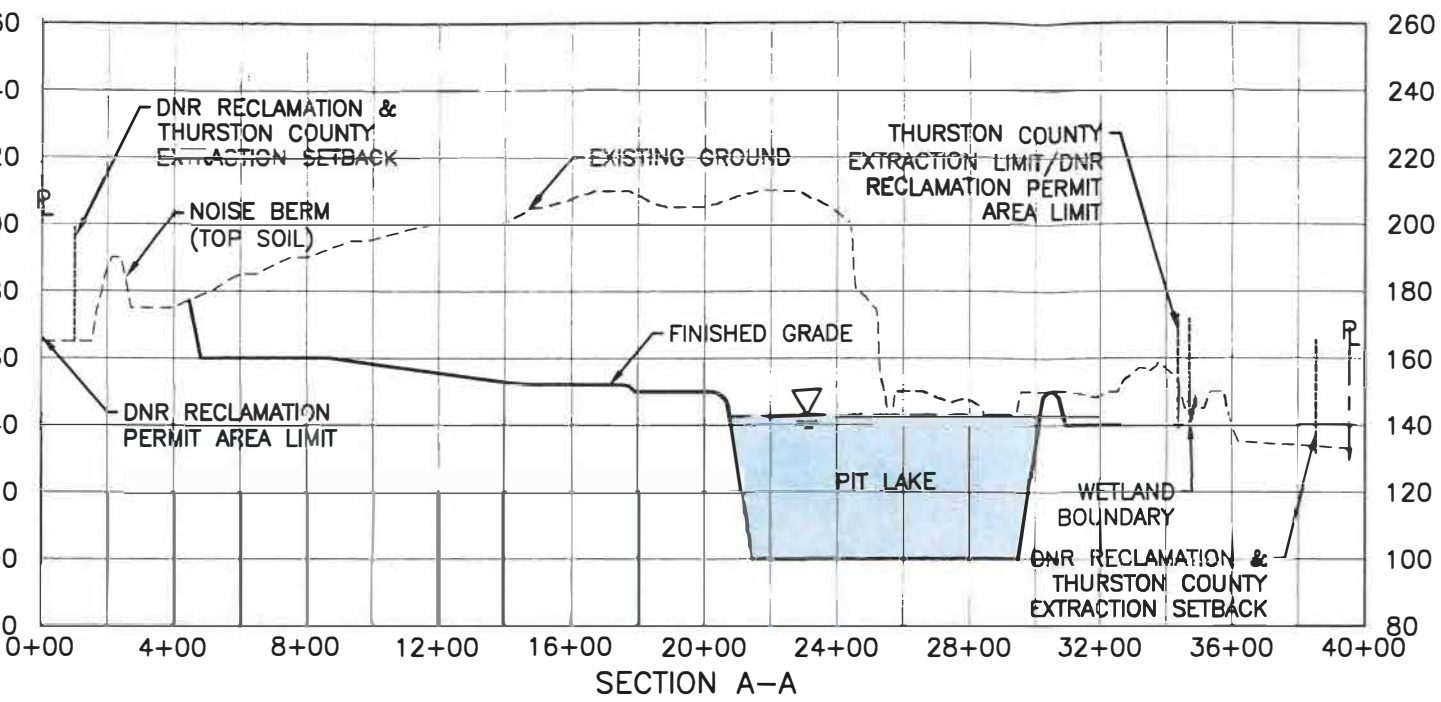




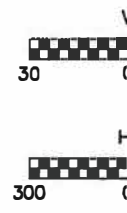
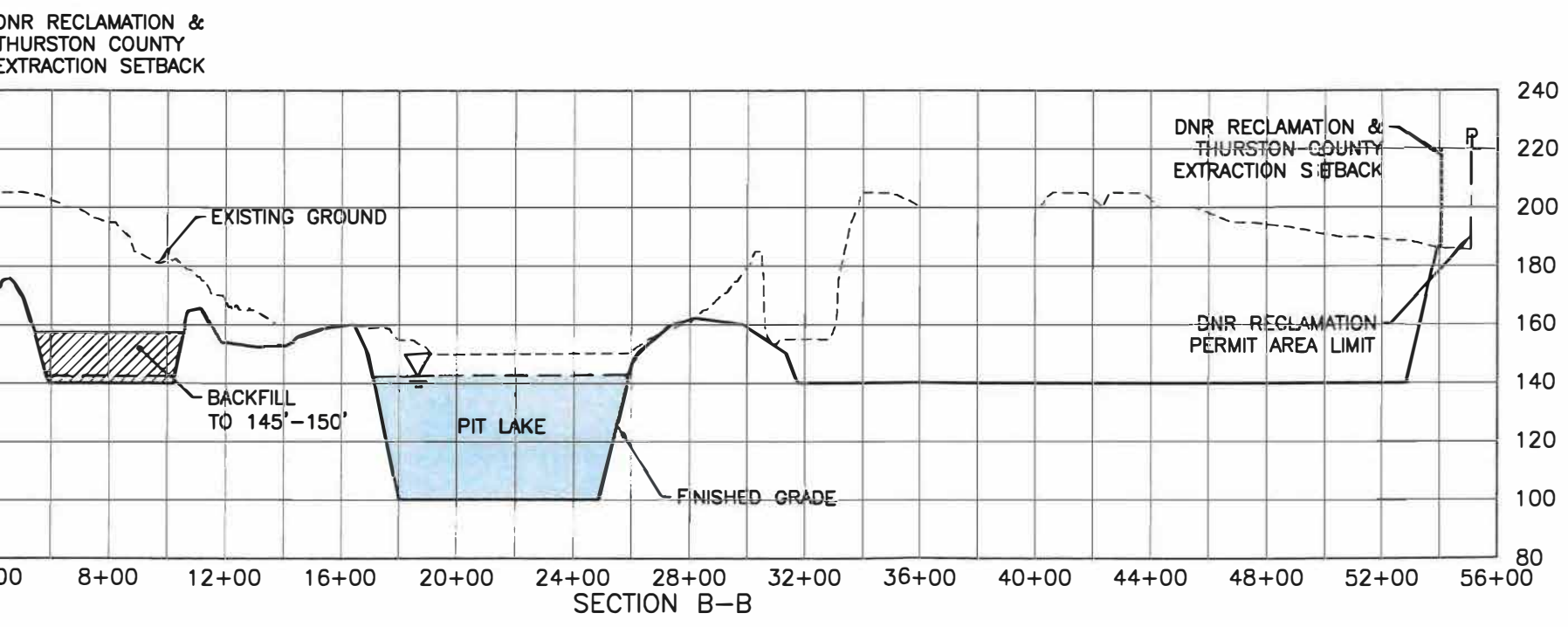
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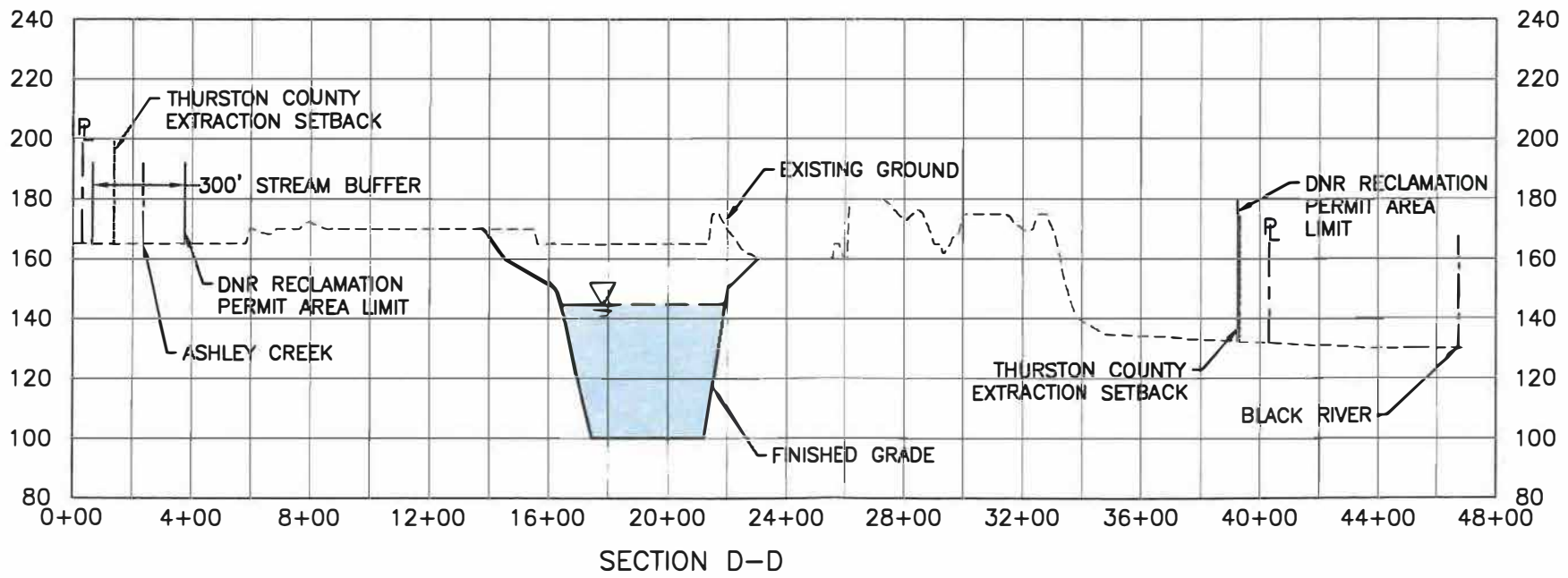
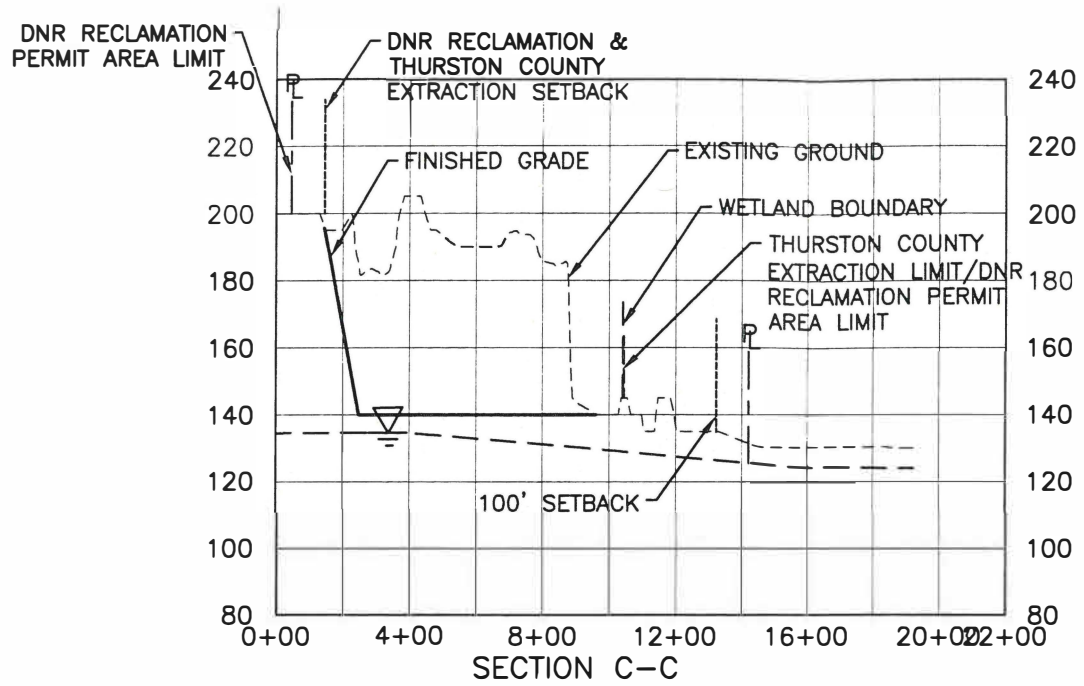
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-  THURSTON COUNTY LIMIT
-  RECLAMATION
-  FINAL
-  WETLAND
-  STREET



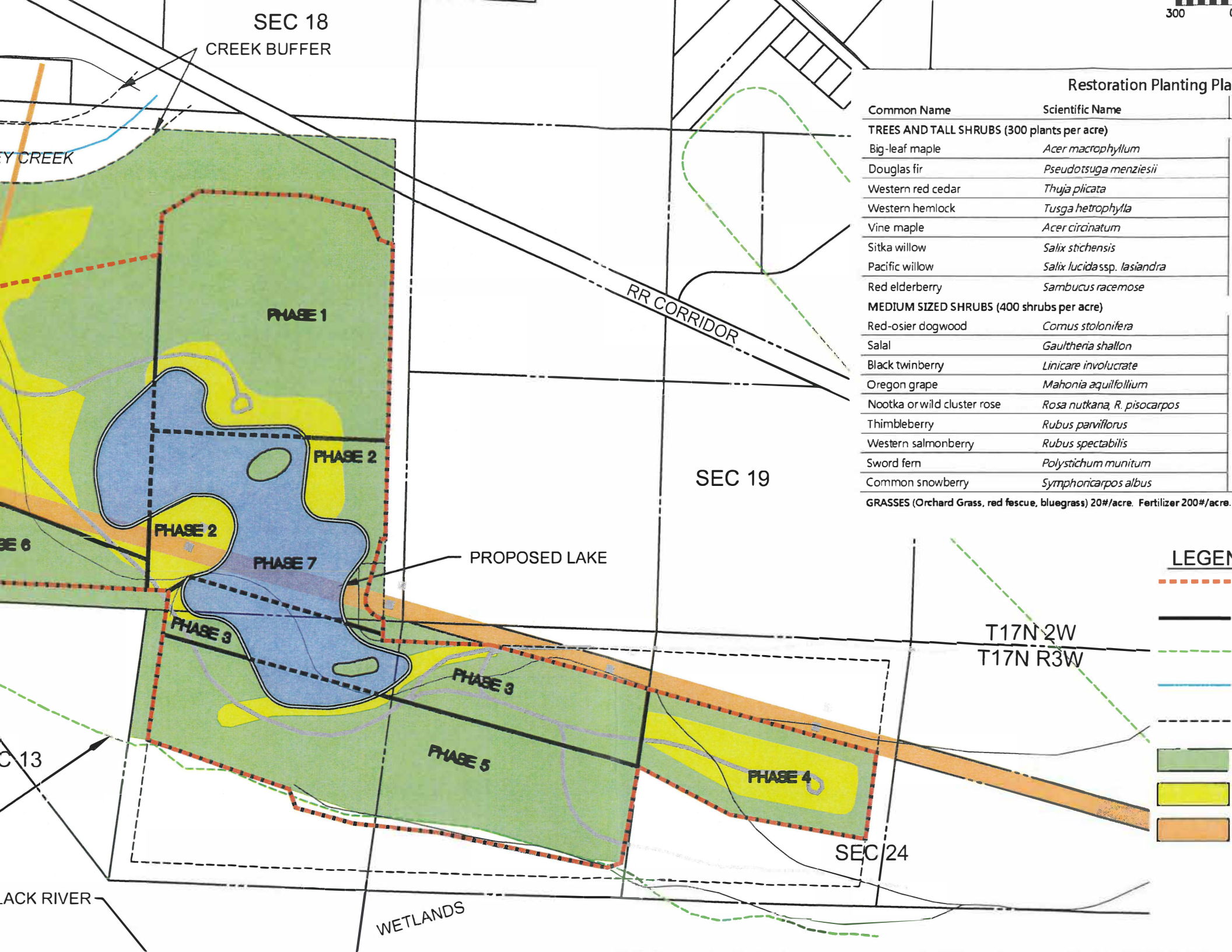
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SEC 19

PROPOSED LAKE

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ACK RIVER

WETLANDS

SEC 24

Restoration Planting Plan

Common Name	Scientific Name
TREES AND TALL SHRUBS (300 plants per acre)	
Big-leaf maple	<i>Acer macrophyllum</i>
Douglas fir	<i>Pseudotsuga menziesii</i>
Western red cedar	<i>Thuja plicata</i>
Western hemlock	<i>Tusga hetrophylla</i>
Vine maple	<i>Acer circinatum</i>
Sitka willow	<i>Salix stichensis</i>
Pacific willow	<i>Salix lucidasp. lasiandra</i>
Red elderberry	<i>Sambucus racemose</i>
MEDIUM SIZED SHRUBS (400 shrubs per acre)	
Red-osier dogwood	<i>Cornus stolonifera</i>
Salal	<i>Gaultheria shallon</i>
Black twinberry	<i>Lonicare involucrate</i>
Oregon grape	<i>Mahonia aquifolium</i>
Nootka or wild cluster rose	<i>Rosa nutkana, R. pisocarpos</i>
Thimbleberry	<i>Rubus parviflorus</i>
Western salmonberry	<i>Rubus spectabilis</i>
Sword fern	<i>Polystichum munitum</i>
Common snowberry	<i>Symphoricarpos albus</i>
GRASSES (Orchard Grass, red fescue, bluegrass) 20#/acre. Fertilizer 200#/acre.	

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ATTACHMENT 2
WADNR FORMS



WASHINGTON STATE DEPT OF
**NATURAL
RESOURCES**

**APPLICATION FOR
RECLAMATION PERMIT
(Form SM-8A)**

Check appropriate box(es): new permit revision of existing permit transfer of permit expansion and combination of 70-011988 and 70-012633

NOTE: Do not attempt to complete this form until you have carefully read "Instructions for Form SM-8A".

1. NAME OF APPLICANT PERMIT HOLDER(S) Black Lake Quarry, LLC			
2. MAILING ADDRESS 2840 Black Lake Blvd SE, Ste C Tumwater, WA 98512			
3. Telephone 360.789.1503 Email parsonsdm@comcast.net			
4. NAME OF MINE Littlerock			
5. Street address and milepost of surface mine 10201 Littlerock Road, Olympia WA 98512			
6. Distance (miles) 4.5	7. Direction from SSW	8. Nearest community Tumwater	
9. COUNTY Thruston No attachments will be accepted. Legal Description of permit area:			
1 4	Section	Township	Range
SW	18	T17N	R2W
SE	13	T17N	R3W
NW	24	T17N	R3W
10. Do you or any person, partnership, or corporation associated with you now hold, or have you held, a surface mining operating or reclamation permit? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no If you answered yes to the above, please list:			
11. Are all of these mines now in compliance with RCW 78.44, WAC 332-18, and conditions of the permits? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no Have you ever had a surface mine operating or reclamation permit revoked? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no Have you ever had a reclamation security forfeited? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no If you answered yes to either of the above, give permit number(s):			

12. TOTAL ACREAGE OF PERMIT AREA APPLIED FOR (Include all acreage to be permitted. See Form SM-6.) 244 acres	
13. Total disturbed acreage (Include all acreage to be disturbed by mining and reclamation during the life of the mine.) Total area to be disturbed: 172 acres. Area to be disturbed in next 36 months: 104 acres are currently disturbed. 35 additional acres to be disturbed in next 36 mo. acres.	
14. Maximum vertical depth (thickness) mined below pre-mining topographic grade will be 110 feet.	
15. Lowest elevation of excavated mine will be 100 feet relative to mean sea level. Highest elevation of excavated mine will be 210 feet relative to mean sea level.	
16. Type of proposed or existing mine: <input checked="" type="checkbox"/> pit <input type="checkbox"/> quarry	
17. Material(s) to be mined: <input checked="" type="checkbox"/> sand and gravel <input type="checkbox"/> rock or stone <input type="checkbox"/> clay <input type="checkbox"/> metal <input type="checkbox"/> limestone <input type="checkbox"/> silica <input type="checkbox"/> other _____	
18. Deposit type: <input checked="" type="checkbox"/> glacial <input type="checkbox"/> river floodplain (alluvial) <input type="checkbox"/> river channel deposits <input type="checkbox"/> talus <input type="checkbox"/> bedrock <input type="checkbox"/> lode <input type="checkbox"/> other _____	
19. Expected start date of mining: June 1, 2018	20. Estimated number of years. 20
21. Total quantity to be mined over life of mine (estimated): 7,700,000 <input type="checkbox"/> tons or <input checked="" type="checkbox"/> cu yds	22. Estimated annual production: 400,000 <input type="checkbox"/> tons or <input checked="" type="checkbox"/> cu yds
23. Subsequent land use: <input type="checkbox"/> industrial <input type="checkbox"/> commercial <input checked="" type="checkbox"/> residential <input type="checkbox"/> agricultural <input type="checkbox"/> forestry <input checked="" type="checkbox"/> wetlands and lakes <input checked="" type="checkbox"/> other Conservation County or Municipality Approval for Surface Mining (Form SM-6) attached? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	
24. Reclaimed elevation of floor of mine: 108 (Lake bottom) feet relative to mean sea level Reclaimed elevation is shown on cross sections? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	
25. SEPA Checklist required? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no	
26. Application fee for a new reclamation permit is herewith attached? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	

APPLICATION FOR RECLAMATION PERMIT

22. SEGMENTAL RECLAMATION	
Permit area has been divided into segments for mining and a mining schedule has been developed?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If no, explain:	
Permit area has been divided into segments for reclamation and a reclamation schedule has been developed?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If no, explain:	
23. SITE PREPARATION	
23A. Saving Topsoil, Subsoil, and Overburden for Reclamation	
Thickness of topsoil is <u>< 0.5</u> feet Thickness of subsoil is <u>1.0</u> feet Depth to bedrock is <u>>250</u> feet	
Total volume of topsoil is <u>70,000</u> cubic yards (undisturbed) Total volume of subsoil is <u>140,000</u> cubic yards (undisturbed)	
Volume of stored topsoil/subsoil is <u>125,000</u> cubic yards and will require <u>is stored on 6.2</u> acres for storage.	
Storage areas are shown on maps and will be marked on the ground with permanent boundary markers?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Topsoil will be salvaged?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If no, explain:	
Topsoil and overburden will be moved to reclaim an adjacent depleted segment?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If no, explain:	
Before materials are moved, vegetation will be cleared and drainage planned for soil storage areas?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If no, explain:	
Soil storage areas will be stabilized with vegetation to prevent erosion if materials will be stored for more than one season?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If no, explain:	
23B. Permit and Disturbed Area Boundaries	
Boundary of the permit area will be marked on the ground with permanent boundary markers?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Explain boundary markers White PVC Posts on 200 foot centers	
23C. Setbacks Screens and Buffers	
Are Screens required and are shown on maps? Screens currently exist on North and East boundary of Section 18.	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
The reclamation setback for this site will be between 0 feet and 600 feet wide as shown on Sheet 4 of 8. A 100 foot minimum setback is established between the approved extraction area and the property line.	
Is a permanent, undisturbed buffer planned for this site?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If no, explain:	
Setbacks and buffers are shown on maps and have been marked on the ground with permanent boundary markers?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If no, explain:	
23D. Buffers to Protect Streams and Flood Plains	
Will the site include a stream or flood plain?	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
If yes, see "Additional Requirements for Mines in Flood Plains" in "Instructions for SM-8A".	
If no, skip to 23E.	
A stream buffer of at least 200 feet has been marked on the ground with permanent boundary markers?	<input type="checkbox"/> yes <input type="checkbox"/> no
A buffer of at least 200 feet from the 100-year flood plain has been marked on the ground with permanent boundary markers?	<input type="checkbox"/> yes <input type="checkbox"/> no
If no, explain:	
Copy of Shoreline Permit from local government or the Department of Ecology is attached?	<input type="checkbox"/> yes <input type="checkbox"/> no
Hydraulic Project Approval from the Department of Fish and Wildlife is attached?	<input type="checkbox"/> yes <input type="checkbox"/> no

APPLICATION FOR RECLAMATION PERMIT

23E. Conservation Buffers	
Are there any conservation buffers?	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
If no, skip to 23F	
Conservation buffers will be established for the following purpose(s) (<i>Check all that apply</i>) <input type="checkbox"/> unstable slopes <input type="checkbox"/> wildlife habitat <input type="checkbox"/> water quality <input type="checkbox"/> other Describe the nature and configuration of the conservation buffer(s)	
Conservation buffers are shown on maps and have been marked on the ground with permanent boundary markers?	<input type="checkbox"/> yes <input type="checkbox"/> no
23F. Ground Water	
High water table depth is 135 - 160 feet <input checked="" type="checkbox"/> relative to mean sea level, <input type="checkbox"/> below original surface, or <input type="checkbox"/> unknown Low water table depth is 130-155 feet <input checked="" type="checkbox"/> relative to mean sea level, <input type="checkbox"/> below original surface, or <input type="checkbox"/> unknown. Annual fluctuation of water table is from 135 feet on February to 130 feet on September .	
Are well logs attached?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
The shallowest aquifer is <input type="checkbox"/> confined <input checked="" type="checkbox"/> unconfined	
The site will be mined <input type="checkbox"/> wet <input type="checkbox"/> dry <input checked="" type="checkbox"/> both	
Describe mining method Excavator and Scraper to mine dry; Excavator and dragline to mine 23 acre area below water table	
The site is in a <input type="checkbox"/> critical aquifer recharge area <input type="checkbox"/> sole source aquifer <input type="checkbox"/> public water supply watershed <input type="checkbox"/> wellhead protection area <input type="checkbox"/> special protection area <input type="checkbox"/> designated aquifer protection area If checked above, see "Additional Requirements for Mines in Hydrologically Sensitive Areas" in "Instructions for SM-8A".	
Ground water study attached?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If no, explain:	
23G. Archeology	
Are archeological/cultural resource sites present?	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
If yes, describe how you will protect these resources:	
24. MINING PRACTICES TO FACILITATE RECLAMATION	
24A. Soil Replacement	
Topsoil and (or) subsoil will be restored?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If "no", explain:	
Subsoil will be replaced to an approximate depth of 1.0 feet on the pit floor and a depth of 1.0 feet on slopes. Topsoil will be replaced to an approximate depth of 0.5 feet on the pit floor and a depth of 0.5 feet on slopes	
If topsoil is in short supply, it will be strategically placed in depressions and low areas in adequate thickness to conserve moisture and promote revegetation?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If no, explain:	
Topsoil will be moved when conditions are not overly wet or dry?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If no, explain:	
Topsoil will be restored to promote effective revegetation and to stabilize slopes and mine floor?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If "no", explain:	
Topsoil will be replaced with equipment that will minimize compaction, or it will be plowed, disked, or ripped following placement?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If no, explain:	
Topsoil will be immediately stabilized with grasses and legumes to prevent loss by erosion, slumping, or crusting?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If no, explain:	

APPLICATION FOR RECLAMATION PERMIT

Segmental topsoil removal and replacement is shown on maps? If no, explain:	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Topsoil will be imported? If yes, describe source: Manufactured soil provider Estimated volume is <u>2,500</u> cubic yards	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Synthetic topsoil made from compost, biosolids, or other amendments will be used and (or) made on site to supplement existing topsoil?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Materials such as till, loess, and (or) silt are available on site that could be used to supplement topsoil for reclamation. If yes, explain: Silt and scalp from wash plant operations may be added to organic material to supplement compost	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Silt from settling ponds or a filter press will be used for reclamation?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Settling pond clay slurries will be pumped or hauled to other segments for reclamation? If yes, explain:	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
24B. Removal of Vegetation	
Vegetation will be removed sequentially from areas to be mined to prevent unnecessary erosion? If no, explain:	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Small trees and other transplantable vegetation will be salvaged for use in revegetating other segments? If yes, give details. If no, explain: Mature forested areas will be harvested. Slash will be mulched for re-use.	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
Wood and other organic debris will be <input type="checkbox"/> recycled <input checked="" type="checkbox"/> removed from site <input checked="" type="checkbox"/> chipped <input type="checkbox"/> burned <input type="checkbox"/> buried <input checked="" type="checkbox"/> used to synthesize topsoil or mulch <input type="checkbox"/> other (<i>explain</i>)	
Solid waste disposal, burning, and land use permits are attached?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Some coarse wood (logs, stumps) and other large debris will be salvaged for fish and wildlife habitats? If yes, give details. If no, explain: The period from clearing to habitat improvements is est >15 years. New habitat features will be procured at time of wet mine reclamation.	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
24C. Stormwater and Erosion control for Reclamation	
Pit floor will slope at gentle angles toward highwall, sediment retention pond, or proper drainage? If yes, give details. If no, explain: Pit floor grading will direct surface run-off to pit lake or storm water infiltration ponds. Armored swales and low berms will be used to direct run-off and reduce slope erosion. See sheet 5 of 8.	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Revegetation, sheeting, and (or) matting will be used to protect areas susceptible to erosion? If yes, give details. If no, explain: Slopes will be reclaimed to 2h:1v and planted to reduce erosion concerns. Phased reclamation will allow for repair or replanting of areas that may display adverse erosion. Surface roughening will be used to assist instablization.	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Water control systems used during segmental reclamation will:	
Divert clean water around pit?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Trap sediment-laden runoff before it enters a stream?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Be established to prevent erosion of setbacks and neighboring properties?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Be removed or reclaimed?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If any answers are no, explain:	

APPLICATION FOR RECLAMATION PERMIT

Stormwater system design will be capable of carrying the peak flow of the 25-year, 24-hour precipitation event? (Data are available at the National Oceanic And Atmospheric Administration (NOAA)) If yes, are calculations attached? If yes, give details. If no, explain Per the Sand and Gravel Permit with Ecology, all stormwater is infiltrated on site and allowed to recharge the unconfined aquifer. Infiltration occurs throughout the site with runoff infiltrating through closed depressions in Phase 5 area. The levels of surrounding ground will be maintained, thereby creating a 15 acre area for storm infiltration. This area has successfully infiltrated stormwater at the mine since 1990 and with regular maintenance will continue to provide sufficient stormwater treatment.	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> yes <input checked="" type="checkbox"/> no
Natural and other drainage channels will be kept free of equipment, wastes, stockpiles, and overburden? If no, explain: There are no natural channels within the permitted area.	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
25. RECLAMATION TOPOGRAPHY	
25A. Final Slopes	
Final slopes will be created using the cut-and-fill method? Explain procedure to be used: Slopes will be created with excavator and dozer. In some cases some short slopes (less than 15 feet tall) will be created and/or backfilled to establish be set to 2h:1v or flatter using on site soil and aggregate compacted by equipment track-in.	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Slopes will be created by mining to the final slope using the cut method? Explain procedure to be used: Taller slopes will be cut to 2h:1v as part of mining then covered with top soil and planted with trees.	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Slopes will vary in steepness? If no, explain	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Slopes will have a sinuous appearance in both profile and plan view? If no, explain	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Large rectilinear (that is, right angle, or straight, planar) areas will be eliminated? If no, explain	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Where reasonable, tracks of the final equipment pass will be preserved and oriented to trap moisture, soil, and seeds, and to inhibit erosion? If no, explain	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
25B. Slope Requirements for Pits and Overburden/Waste Rock Dumps (non-saleable products)	
<i>If the mine is a quarry or in hard rock, skip to Quarry section (25C).</i>	
Slopes will vary between 2 and 3 feet horizontal to 1 foot vertical or flatter, except in limited areas where steeper slopes are necessary to create sinuous topography and control drainage? If no, explain	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
For pits, slopes will not exceed 2 feet horizontal to 1 foot vertical except as necessary to blend with adjacent natural slopes? Give details Slope details are provided on Sheet 6 of 7.	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
<i>Review "Additional Requirements for Mines with Steep or Potentially Unstable Slopes" in "Instructions for SM-8A".</i>	
Slope stability analysis required? If yes, attach analysis	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no

APPLICATION FOR RECLAMATION PERMIT

25C. Slope Requirements for Quarries and Hardrock Metal Mines

If mine is a pit in unconsolidated materials covered by Section 25B, go to Section 25D

Check the appropriate box(es)

- Slopes will not exceed 2 feet horizontal to 1 foot vertical.
- Slopes steeper than 1 foot horizontal to 1 foot vertical are an acceptable subsequent land use as confirmed on Form SM-6
- Hazardous slopes or cliffs are indigenous to the immediate area and already present a potential threat to human life
Photo and maps attached to document presence of cliffs.
- Geologic or topographic characteristics of the site preclude slopes being reclaimed at a flatter angle and are an acceptable subsequent land use as confirmed on Form SM-6

Review "Additional Requirements for Mines with Steep or Potentially Unstable Slopes" in "Instructions for SM-8A".

Slope stability analysis required? yes no

If yes, attach analysis.

Measures will be taken to limit access to the top and bottom of hazardous slopes? yes no

Describe measures, or if no, explain.

Selective blasting will be used to remove benches and walls and to create chutes, buttresses, spurs, scree slopes, and rough cliff faces that appear natural? yes no

Blasting plan attached? yes no

If no, explain:

Reclamation blasting will be used to reduce the entire highwall to a scree or rubble slope less than 2 feet horizontal to 1 foot vertical? yes no

Blasting plan is attached? yes no

If no, explain:

Access to benches will be maintained for reclamation blasting? yes no

If no, explain:

Small portions of benches will be left to provide habitat for raptors and other cliff-dwelling birds? yes no

25D. Backfilling

The site will require backfilling? **Phase 6 is proposed to be backfilled with on-site materials to bring final grade to above groundwater levels generated by Phase 7. The pit lake (Phase 7) will receive up to 8 feet of fine grained fill material as part of mitigation to address groundwater effects. This material will be obtained from mud generated from current and past gravel washing. Some other areas may be filled from 1 to 10 feet to provide topography for final reclamation.** yes no

If no, skip to 25E.

Maximum depth of backfilling is 15 feet.

Backfill will be onsite materials imported materials both yes no

If importing soil for reclamation, is a clean soil policy attached?

Backfilling plan is attached? yes no

If no, explain:

Backfill stockpiles will be marked on the ground with markers? yes no

All grading/backfilling will be done with non-noxious, non-combustible, and relatively incompactible solids? yes no

If yes, give details If no, explain **Imported backfill will be per clean soil plan.**

Backfill will require compaction? yes no

If yes, give details If no, explain **Backfill will be compacted by in accordance with WSDOT Standard Specification 2-03.3(14)C, Method A (WSDOT M41-10). This involves the use of haul equipment to compact embankments in 2 foot lifts.**

APPLICATION FOR RECLAMATION PERMIT

Will you be backfilling to create slopes?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If yes, is slope stability analysis attached?	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
If no, explain Topographic mounds and shallow (<15 foot high) slopes will be created with backfill to provide topographic diversity to the pit floor and to direct stormwater. These mounds will be between 2:1 and 7:1 slopes and compacted in accordance with WSDOT M41-11 2-03.03(14)C.	
25E. Mine Floors	
Flat areas will be formed into gently rolling mounds?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If yes, give details. If no, explain: Finish floors will be enhanced with gently rolling mounds that will be formed using onsite materials.	
Mine floor will be gently graded into sinuplantingous drainage channels to preclude sheetwash erosion during intense precipitation?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If yes, give details. If no, explain: Surface drainage will be directed to swales formed in the final grades.	
Mine floor and other compacted areas will be bulldozed, plowed, ripped, or blasted to foster revegetation?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If yes, give details. If no, explain: The mine floor will be plowed prior to top soil placement to foster revegetation.	
25F. Lakes, Ponds, and Wetlands	
Is water currently present in the area or will the mining penetrate the water table?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If no, go to Section 25G.	
Reclaimed areas below the permanent low water table in soil, sand, gravel, and other unconsolidated material will have a slope no steeper than 1.5 feet horizontal to 1 foot vertical?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If yes, give details. If no, explain: The pit lake will have variable slopes no steeper than 1.5h:1v. All 1.5h:1v slopes will be below the lowest annual lake level.	
If not already present, soils, silts, and clay-bearing material will be placed below water level to enhance revegetation?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If yes, give details. If no, explain: The pit lake will be filled with between 5 and 8 feet of silt and clay bearing material. Top soil will be placed along the shore and nearshore zone to promote plant growth.	
Some parts of pond and lake banks will be shaped so that a person can escape from the water?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Armored spillways or other measures to prevent undesirable overflow or seepage will be provided to stabilize bodies of water and adjacent slopes?	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
If yes, give details. If no, explain: The pit lake will be below surrounding finish grades, so a spill way is not required.	
Wildlife habitat will be developed, incorporating such measures as:	
Sinuous and irregular shorelines?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Varied water depths?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Shallow areas less than 18 inches deep?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Islands and peninsulas?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Give details: See details on Sheet 6 of 7. The lake has an irregular shape and provides shallow water areas and islands to promote habitat development.	
Ponds or basins will:	
Be located in stable areas?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Have sufficient volume for expected runoff?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Have an emergency overflow spillway?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Spillways and outfalls will be protected (for example, rock armor) to prevent failure and erosion?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If any answers are no, explain:	
Proper measures will be taken to prevent seepage from water impoundments that could cause flooding outside the permitted area or adversely affect the stability of impoundment dams or adjacent slopes?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If yes, give details. If no, explain: Detailed hydrogeologic analyses (see groundwater reports) have identified changes in flow. Groundwater discharge is to the Black River. No slopes will be affected.	

APPLICATION FOR RECLAMATION PERMIT

Written approval from other agencies with jurisdiction to regulate impoundment of water is attached? yes no
 If no, explain: **Water is not impounded. Closed depressions will serve as pit lake and stormwater facilities.**

25G. Final Drainage Configuration

Drainages will be constructed on each reclaimed segment to control surface water, erosion, and siltation? yes no
 Result in essentially natural conditions of volume, velocity, and turbidity? yes no
 Clean runoff is directed to a safe outlet? yes no
 If yes, give details. If no, explain: **Drainages will be constructed on reclaimed surfaces in a manner that controls erosion and siltation. All storm water will be infiltrated on site.**

Are these shown on maps? yes no

26. SITE CLEANUP AND PREPARATION FOR REVEGETATION

26A. Dealing with Hazardous Materials

Hazardous materials are present at the mine site? yes no
If no, go to Section 26B

The final ground surface drains away from any hazardous natural materials? yes no
 If yes, give details. If no, explain:

Plan for handling hazardous mineral wastes indigenous to the site is attached? yes no
 If no, written approval from all appropriate solid waste regulatory agencies attached? yes no

26B. Removal of Debris

All debris (garbage, 'bone piles', treated wood, old mining equipment, etc.) will be removed from the mine site? yes no
 yes no

All sheds, scale houses, and other structures will be removed from the site?
 If either answer is yes, give details. If no, explain: **All debris piles, equipment, and scales will be removed. The pump house for the 50 acre water right well and a caretaker structure will remain following reclamation.**

27. REVEGETATION

The mine site is in: eastern Washington western Washington
 Revegetation area is: wet dry both

The average precipitation is **38 inches** per year.

Revegetation will start during the first proper growing season (fall for grasses and legumes, fall or late winter for trees and shrubs) following restoration of mine segments? yes no
 If yes, give details. If no, explain: **Reclamation of some existing disturbed areas will be performed coincident with the mining of Phase I. Reclamation will commence for each "finished" phase coincident with the start of the subsequent phase.**

The site will not be revegetated because
 It is a rural area with a rainfall exceeding 30 inches annually and erosion will not be a problem (requires approval of DNR)
 Revegetation is inappropriate for the approved subsequent use of this surface mine
 Explain:

27A. Recommended Pioneer Species

In the Sections below, check the species that will be planted at your mine site
** indicates nitrogen-fixing species*

Western Washington Dry Areas

<input type="checkbox"/> alfalfa*	<input type="checkbox"/> lupine*	<input type="checkbox"/> clover*	<input checked="" type="checkbox"/> orchard grass
<input type="checkbox"/> cereal rye	<input type="checkbox"/> perennial rye	<input type="checkbox"/> colonial bent grass	<input type="checkbox"/> ponderosa pine
<input checked="" type="checkbox"/> creeping red fescue	<input type="checkbox"/> red alder*	<input checked="" type="checkbox"/> Douglas fir	<input type="checkbox"/> shore pine
<input type="checkbox"/> ground cover	<input checked="" type="checkbox"/> shrubs	<input checked="" type="checkbox"/> other	

Refer to planting schedule in the Narrative and on Sheet 8 of 8.

APPLICATION FOR RECLAMATION PERMIT

Western Washington Wet Areas - In and around wet lake areas.

- | | | | |
|--|---|---|--|
| <input type="checkbox"/> birdsfoot trefoil | <input type="checkbox"/> sedges | <input checked="" type="checkbox"/> cedar | <input type="checkbox"/> tubers |
| <input type="checkbox"/> cottonwood | <input checked="" type="checkbox"/> wetland grasses | <input type="checkbox"/> creeping red fescue | <input checked="" type="checkbox"/> willow |
| <input type="checkbox"/> red alder* | <input checked="" type="checkbox"/> other | Refer to planting schedule in the Narrative and on Sheet 8 of 8. | |

Eastern Washington Dry Areas

- | | | | |
|---|---|-----------------------------------|---|
| <input type="checkbox"/> alder* | <input type="checkbox"/> grasses | <input type="checkbox"/> alfalfa* | <input type="checkbox"/> juniper |
| <input type="checkbox"/> black locust | <input type="checkbox"/> lodgepole pine | <input type="checkbox"/> clover | <input type="checkbox"/> lupine* |
| <input type="checkbox"/> deciduous trees | <input type="checkbox"/> ponderosa pine | <input type="checkbox"/> shrubs | <input type="checkbox"/> deep-rooted ground cover |
| <input type="checkbox"/> diverse evergreens | <input type="checkbox"/> other | | |

Eastern Washington Wet Areas

- | | | | |
|---------------------------------------|-------------------------------------|---------------------------------|---------------------------------|
| <input type="checkbox"/> alder* | <input type="checkbox"/> cottonwood | <input type="checkbox"/> poplar | <input type="checkbox"/> sedges |
| <input type="checkbox"/> serviceberry | <input type="checkbox"/> tubers | <input type="checkbox"/> willow | |
| <input type="checkbox"/> other | | | |

Give planting details (stems/acres of trees and shrubs, see Forest Practices manual; lbs/acre of grass, legume, or forb mixture)

Tree and shrubs @ 440 stems per acre; Grasses (bluegrass, red fescue, clover) planted at 20#/acre. Fertilizer @ 200# per acre.

Describe weed control plan:

Weeds will be controlled with herbicides on an annual basis

27B. Planting Techniques

Revegetation at this site will require:

- | | | |
|--|---|--|
| Ripping and tilling? | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no |
| Blasting to create permeability? | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| Mulching? | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no |
| Irrigation? Temporary irrigation with existing system to establish plantings. | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no |
| Fertilization? 16-8-8 applied at 200# per acre in first three years. | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no |
| Importation of clay- or humus-bearing soils? | <input type="checkbox"/> yes | <input checked="" type="checkbox"/> no |
| Other soil conditioners or amendments? | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no |

Give details **On-site organic materials to be mixed with stockpiled top soil.**

Trees and shrubs will be planted in topsoil or in subsoil amended with generous amounts of organic matter? yes no

If yes, give details. If no, explain **On-site top soil, supplemented with on-site organic materials and mulch.**

- | | | |
|---|---|-----------------------------|
| Mulch will be piled around the base of trees and shrubs? | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no |
| High quality stock will be used? | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no |
| Trees and shrubs will be planted while they are dormant? | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no |
| Stock will be properly handled, kept cool and moist, and planted as soon as possible? | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no |
| Seeds will be covered with topsoil or mulch no deeper than one-half inch? | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no |

If any answers are no, explain:

28. FINAL CHECKLIST

- | | | |
|---|---|-----------------------------|
| All required maps are attached? (<i>See "Instructions for SM-8A" for detailed requirements.</i>) | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no |
| All required cross sections are attached? (<i>See "Instructions for SM-8A" for detailed requirements.</i>) | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no |
| Geologic map attached (if required)? Refer to attachments (<i>See "Instructions for SM-8A" for detailed requirements.</i>) | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no |
| All documents submitted have the date, the name and address of the permit holder, and the application number? | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no |
| Have you completed the SM-6 and has it been signed by the local jurisdiction? | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no |

APPLICATION FOR RECLAMATION PERMIT

Have you provided the SEPA checklist?	<input checked="" type="checkbox"/> yes	<input type="checkbox"/> no	
Have you provided a copy of the SEPA determination (DNS, MDNS, or DS)?	<input checked="" type="checkbox"/> yes	<input type="checkbox"/> no	
Have you attached photographs (as needed)?	<input type="checkbox"/> yes	<input checked="" type="checkbox"/> no	
Are additional supplemental studies included?	<input type="checkbox"/> yes	<input type="checkbox"/> no	
If yes, check the appropriate box(es) below			
<input type="checkbox"/> Archeological	<input checked="" type="checkbox"/> Geohydrologic	<input type="checkbox"/> Backfill	<input type="checkbox"/> Slope stability
<input type="checkbox"/> Topsoil	<input type="checkbox"/> Flood plain	<input type="checkbox"/> Conservational	<input type="checkbox"/> Vegetation
<input type="checkbox"/> Other			
Other permits required?	<input checked="" type="checkbox"/> yes	<input type="checkbox"/> no	
If yes, check the appropriate box(es) below:			
<input type="checkbox"/> Shoreline Permit	<input type="checkbox"/> Water Discharge Permit	<input checked="" type="checkbox"/> Solid Waste Permit	
<input type="checkbox"/> Air Quality Permit	<input checked="" type="checkbox"/> NPDS or General Discharge Permit	<input type="checkbox"/> Hydraulic Project Approval	
<input checked="" type="checkbox"/> Special or Conditional Use Permit	<input type="checkbox"/> Other		



Permit No. WAG501449
 Coverage Effective Date: April 1, 2021
 Permit Issuance Date: February 17, 2021
 Expiration Date: March 31, 2026

**THE SAND AND GRAVEL GENERAL PERMIT
 COVERAGE PAGE - FIXED SITE OPERATIONS**

Name & Mailing Address

Dylan Parsons
 Black Lake Quarry LLC
 2840 Black Lake Blvd SW
 suite c
 Tumwater, WA 98512-5107

Facility/Site Name & Location

QUALITY ROCK PRODUCTS
 TUMWATER
 4741 88TH AVE SW
 OLYMPIA, WA 98512

Site Contact

John Peters

Site Contact Phone Number

3607908570

NAICS Codes Representing Activities

212321, ECY001, ECY002

Monitoring Point Information

<u>Monitoring Point Identifier</u>	<u>Monitoring Point Name</u>	<u>Latitude/ Longitude</u>	<u>NAICS Code(s)</u>	<u>Type of Discharge</u>	<u>Outfall Type</u>	<u>Name of Surface Waterbody</u>
PW1	West Pond	46.958878 / -122.985069	212321	Type 3 Stormwater	Ground	
PW1	West Pond	46.958878 / -122.985069	ECY001	Type 3 Stormwater	Ground	
PW1	West Pond	46.958878 / -122.985069	ECY002	Type 3 Stormwater	Ground	
SW2	West Ditch Along Berm	46.958878 / -122.985069	212321	Type 3 Stormwater	Ground	
SW2	West Ditch Along Berm	46.958878 / -122.985069	ECY001	Type 3 Stormwater	Ground	
SW2	West Ditch Along Berm	46.958878 / -122.985069	ECY002	Type 3 Stormwater	Ground	

Jeff Killelea Acting Manager
 Program Development Services
 Section
 Water Quality Program

46100000-000213-02-00000000



ORDER OF APPROVAL NOTICE OF CONSTRUCTION 17NOC1233

ISSUED TO Black Lake Resources, Inc. JAN 30 2018

This Order of Approval ("Order") is issued in accordance with Olympic Region Clean Air Agency ("ORCAA") Regulations and Chapter 173-400 of the Washington Administrative Code.

Conditional approval to install and operate a general rock crushing plant ("Approved Equipment") at 4741 88th AVE SW, Tumwater, WA 98512 ("Approved Location") for operation solely as described in the associated Notice of Construction ("NOC") application No. 17NOC1233, is hereby GRANTED to Black Lake Resources, Inc. ("Applicant"), subject to the Conditions of Approval listed below.

This Order and the Conditions of Approval herein remain in effect for the life of the Approved Equipment as used at the Approved Location and shall be binding on Applicant, current owners and operators of the equipment, and Applicant's heirs, successors and assigns unless amended or superseded by a subsequent Order issued by ORCAA or unless the equipment is permanently shut down. The Applicant must notify any subsequent owner, operator, heirs, successor or assigns of this Order and the Conditions of Approval herein. Conditions of Approval established in this Order shall be enforceable in addition to any applicable state, local and federal regulations or standards in existence now or in the future. Compliance with the conditions of this Order do not relieve the Applicant or any owner or operator from compliance with ORCAA Regulations, Chapter 70.94 Revised Code of Washington (RCW), or any other emissions control requirements, nor from any penalties for failure to comply with the same. Applicant may appeal this Order to the Pollution Control Hearings Board ("PCHB") by filing a written appeal with the PCHB and serving a copy upon ORCAA within thirty (30) days of receipt of this Order.

This Order is GRANTED, subject to the following Conditions of Approval:

- 1. Rock Crushing Plant:** Black Lake Resources, Inc. is approved to operate a rock crushing plant consisting of equipment listed in the following table, in accordance with this Order of Approval (Order), at qualifying locations within the jurisdiction of Olympic Region Clean Air Agency (ORCAA), which includes Clallam, Grays Harbor, Jefferson, Mason, Pacific and Thurston counties. This Order approves operation of the rock crushing plant at any single qualifying site at any given time and allows the plant to be relocated to qualifying locations provided a record of operating locations is maintained per condition #12. This Order imposes requirements for equipment comprising the rock crushing plant only: Not equipment or operations associated with aggregate mining.

EQUIPMENT	TYPE	AIR POLLUTION CONTROL	CAPACITY & PRODUCTION LIMITS
Crushers	Any	Water spray applied throughout plant at locations where fugitive dust generated remains airborne.	Plant-site production limited to no more than: <ul style="list-style-type: none"> • 5,400 tons of material processed per day (annual average) • 1,000,000 tons per year.
Ancillary Equipment	Screens Scalpers Grizzlies Conveyors		
Stationary Nonroad Engines ¹	Diesel	Ultra-low-sulfur diesel	Cumulative capacity of stationary and stationary nonroad engines not exceeding 2000 brake horsepower (bhp)
Stationary Engine Powering the Generator approved for operation at 4741 88 th AVE SW Tumwater, WA 98512 location	Diesel	EPA Certified Tier IV Interim or better Ultra-low-sulfur diesel	Counts as part of the cumulative 2000 bhp capacity limit

[Regulatory Basis: ORCAA 6.1.2(l)]

2. **Annual Registration:** The owner shall register the rock crushing plant with ORCAA annually and pay annual registration fees.
[Regulatory Basis: ORCAA 4.1]

3. **Approved Locations:** The rock crushing plant may be sited and operated at any of the following qualifying locations, provided the location is not part of an existing major stationary source² of emissions, plant-site daily production does not exceed 5,400 tons per day (annual average), and minimum distance buffers prescribed in Condition 4 are met:
- Registered surface mining sites with a current Sand and Gravel permit issued by the Washington Department of Ecology;
 - Sites located in proximity to and in support of government road construction projects;
 - Landfills; and,
 - Any site with current approval, by the city or county agency with jurisdiction, to conduct aggregate crushing operations.

¹ Stationary nonroad engines include engines powering generators, screens, conveyors, grinders and any other equipment that remain stationary when operating. Nonroad engines powering mobile equipment such as haul trucks loaders, excavators and other equipment that move when operating are not regulated by ORCAA.

² Major stationary sources of emissions are existing facilities that emit major quantities of air pollution. Inquire with ORCAA for a listing of existing major stationary sources.

[Regulatory Basis: ORCAA 6.1.4]

4. **Minimum Distance Buffers:** The rock crusher must be located a minimum of 150 feet from any property line and 500 feet from any residence, occupied commercial building, school, hospital, nursing home or other sensitive receptor. Exceptions may be granted by ORCAA, following a site-specific review of air impacts prior to relocating the rock crusher to any location that does not conform to the stated buffers. **In addition**, the stationary engine powering the generator at the 4741 88th AVE SW, Tumwater, WA 98512 facility must be located a minimum of 1600 feet from any residence.

[Regulatory Basis: ORCAA 6.1.4]

5. **Prohibited Material:** The following feedstocks shall not be processed through either crushing, grinding or screening:
 - a. Presumed Asbestos Containing Material (PACM) or any feedstock contaminated with any percentage of PACM as follows:
 - i. For purposes of this condition, "Presumed Asbestos Containing Material (PACM)" means any soft concrete, roofing material, thermal system insulation and surfacing material found in a building;
 - ii. PACM may be rebutted provided it is tested and determined not to be Asbestos Containing Material (ACM);
 - iii. "Asbestos Containing Material (ACM)" means any material containing at least one percent (1%) asbestos as determined by polarized light microscopy using the Interim Method of the Determination of Asbestos in Bulk Samples contained in Appendix A of Subpart E in 40 CFR Part 763.]; and,
 - b. Feedstock containing regulated petroleum contaminated soils exceeding Model Toxics Control Act (MTCA) Method A cleanup levels.

[Regulatory Basis: ORCAA 8.8]

6. **Feedstock Monitoring:** The owner or operator shall implement a written material acceptance policy for imported materials to ensure prohibited materials are not processed through crushing, screening, or grinding. The plan shall be written and available at the crushing site.

[Regulatory Basis: ORCAA 8.8]

7. **Fugitive Emissions Control:** Reasonable precautions shall be taken as necessary to prevent fugitive emissions. Reasonable precautions shall include, but shall not be limited to, the following:

- a. Using water spray systems as needed to prevent visible fugitive emissions from rock crushing equipment. Water spray systems shall be sufficient to prevent visible fugitive emissions outside the operating area of the crushing plant.
- b. Applying water or another ORCAA-approved dust suppressant to non-paved haul roads and access roads to the plant site as needed to prevent visible dust from vehicle haul roads.
- c. Cleaning or sweeping paved roads within the plant site.
- d. Taking appropriate measures to prevent the track out of dirt and debris onto public roadways.
- e. Adopting, posting and enforcing a plant wide speed limit. The speed limit shall be sufficient to prevent visible dust from vehicle haul roads.
[Regulatory Basis: WAC 173-400-040(8)(a); ORCAA 8.3(c)]

8. **Approval of Stationary Engines:** Except for the main facility at 4741 88th AVE SW in Tumwater, all rock crushing equipment planned to remain or remaining at a site (pit, quarry or operating site) longer than 12-months must use line power, or must secure a Notice of Construction (NOC) Approval Order for all stationary engines greater than 50 horse power. Approval to operate stationary engines at any site where rock crushing equipment is planned to remain or has remained longer than 12-months must be secured prior to operating rock crushing equipment at the site, and is contingent on meeting approval criteria in ORCAA Rule 6.1.4. Approval of the Tier IV stationary engine has already been secured for the facility at 4741 88th AVE SW in Tumwater.
[Regulatory Basis: ORCAA 6.1.4]

9. **Opacity - Monitoring (Engines):** Visible emissions from exhaust stacks, vents, exits or openings of stationary nonroad engines greater than 20% opacity in any six-minute average period as determined by EPA Method 9, shall trigger prompt (within a week) action to initiate maintenance and/or repair of the engine to eliminate opacity in excess of this action level. Maintenance and repair actions shall be recorded in the maintenance log for the engine and available for inspection when requested.
[ORCAA 6.1.7(b)(3) and 8.8]

10. **Engine Fuel Requirements:** Stationary nonroad engines shall be powered only by diesel fuel, biodiesel fuel, or a mixture of both. In any case; the liquid fuel used to power the engines shall have a maximum sulfur content of 15 ppm by weight, a minimum cetane number of 40, and a maximum aromatic content of 35 percent by volume. A demonstration of compliance with this permit condition is only necessary if the fuel purchased is marine diesel or fuel imported from another country. It is assumed that all non-marine domestically refined fuels will have met this requirement before leaving the refinery (pursuant to 40 CFR 80.510).
[Regulatory Basis: 6.1.7(b)(1)]

11. Operation and Maintenance Requirements: The following Operations and Maintenance (O&M) measures are required:

- a. Inspect water suppression systems monthly to verify water flows properly to discharge spray nozzles or aggregate is wet enough such that water spray is not needed to control fugitive dust. The result of either determination shall be logged per Condition 12. [Regulatory Basis: 40 CFR 60, §60.674(b)]
- b. Initiate corrective actions within 24 hours and complete corrective action as expediently as practical after finding water is not flowing properly through water spray nozzles. Corrective actions taken shall be logged per Condition 12. [Regulatory Basis: 40 CFR 60, §60.674(b)]
- c. Transport wheel washing/cleaning sufficient to prevent track-out of dirt and debris on to paved road ways. [Regulatory Basis: ORCAA Rules 8.3d&e]
- d. Apply water or ORCAA-approved dust suppressant to unpaved roads at a frequency sufficient to prevent visible dust plumes from haul roads. [Regulatory Basis: ORCAA Rules 8.3d&e]

[General Regulatory Basis: ORCAA Rules 4.3(g) and 8.8]

12. Required Records: The following records shall be maintained by the owner or operator at the crushing operation and made available to ORCAA upon request:

- a. A record of operating locations within ORCAA jurisdiction. [Regulatory Basis: ORCAA Rules 4.3(g) and 8.8]
- b. Record of each inspection of the water spray system, including the date of each inspection and any corrective actions taken. [Regulatory Basis: 40 CFR, §60.676(b)]
- c. A log of engine maintenance activities for each stationary nonroad engine. [Regulatory Basis: ORCAA Rules 4.3(g) and 8.8]
- d. Daily log of the hours the plant operated and amount of material crushed in tons. [Regulatory Basis: ORCAA Rules 4.3(g) and 8.8]
- e. Feedstock monitoring records sufficient to demonstrate compliance with condition #6. [Regulatory Basis: ORCAA Rules 4.3(g) and 8.8]
- f. Make, model and model-year of all stationary nonroad engines.

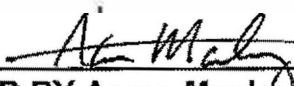
[Regulatory Basis: ORCAA 8.11]

13. Annual Production Report: When requested, the owner or operator shall report to ORCAA the following information:

- a. The total amount of material crushed by the plant in tons, including RAP and recycled concrete; and,
- b. The total amount of diesel consumed by the plant including diesel consumed by stationary nonroad engines, but not diesel consumed by mobile equipment.

This information is used to determine total air emissions by the plant for the calendar year.

[Regulatory Basis: ORCAA Rules 8.11 and 3.1(b)]

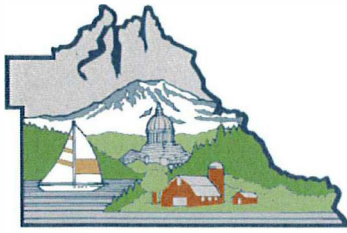

PREPARED BY Aaron Manley, Engineer I

1/29/2018
Date


REVIEWED BY: Mark V. Goodin, PE

1/29/18
Date





THURSTON COUNTY
WASHINGTON
 SINCE 1852

COUNTY COMMISSIONERS

Carolina Mejia
 District One

Gary Edwards
 District Two

Tye Menser
 District Three

**PUBLIC HEALTH AND
 SOCIAL SERVICES DEPARTMENT**

**2023
 SOLID WASTE HANDLING FACILITY PERMIT
 (Permit # RF-103)**

David M. Bayne, MPH
 Director
 Dimyana Abdelmalek, MD, MPH
 Health Officer

Facility Name: Black Lake Quarry – ‘Littlerock Sand and Gravel Pit’

Facility Address: 4741 88th Avenue SW, Olympia WA, 98512

Permittee: Black Lake Quarry, LLC

Facility Type: Recycling - Piles used for storage:
 concrete/asphalt/wood waste

Landowner: Black Lake Quarry, LLC

Operator: Black Lake Quarry, LLC
2840 Black Lake Boulevard SW, Suite C
Tumwater WA, 98512 | Phone: 360-915-6121

The permittee is authorized to operate the facility described above. This authorization is contingent upon compliance with applicable laws and regulations, including but not limited to RCW 70.95, WAC 173-350, and Article V of the Thurston County Sanitary Code, and with the following conditions:

The permittee shall comply with the conditions and stipulations listed on pages two (2) through five (5) of this permit. Failure to comply may result in permit suspension, revocation, or the imposition of other sanctions as provided by law.

 Owner/Operator

7/6/2023
 Date Issued

3/1/2024
 Expiration Date

[Signature]
 Thurston County Health Department

Environmental Health Division – Hazardous & Solid Waste Program
 3000 Pacific Avenue SE, Olympia, Washington 98501-8809
 HOTLINE: (360) 867-2664 ♦ TTY/WA Relay 711 or 1-800-833-6388
www.thurstoncountywa.gov/departments/public-health-and-social-services

**Black Lake Quarry – Littlerock location
2023 Solid Waste Handling Permit – Page 2**

SECTION I. DESCRIPTION

The permittee is authorized to operate and maintain a facility to recycling concrete/asphalt/wood waste at the location described below:

Section: 18 Township: 17N Range: 2W

Tax Parcel Numbers: 12718310000, 13713440000

SECTION II. GENERAL PERMIT CONDITIONS

- 1) In order to maintain this solid waste permit, the solid waste handling facility shall comply with Article V of the Thurston County Sanitary Code, Chapter 173-350 of the Washington Administrative Code, Chapter 70.95 RCW, the Thurston County solid waste management plan, the State Environmental Policy Act, applicable county/city zoning ordinances, and the conditions of this solid waste handling permit.
- 2) The owner or operator shall apply for renewal of the facility's solid waste permit on an annual basis in accordance with Article V of the Thurston County Sanitary Code and WAC 173-350 unless specified otherwise by the Thurston County Health Department. Changes in operating methods or other changes must be noted on the application in order to be authorized by permit. Previous information submitted to the Health Department may be referred to on the application forms. The original application will be reviewed for compliance with this code and all other applicable regulations. Other information from inspections, complaints, or known changes in the operations will also be reviewed.
- 3) Any facility not in complete compliance with Article V of the Thurston County Sanitary Code or any other applicable regulation may be placed on a compliance schedule as part of the issued permit.
- 4) A yearly permit fee shall be charged as specified in Article I of the Thurston County Sanitary Code.
- 5) Facilities which continue to operate past February 15th of the permit year without having paid the yearly permit fees may be ordered closed by the Health Officer.
- 6) Inspections of permitted facilities will be performed by the Health Officer at least once each year. The Health Officer may enter and inspect any property, premises, or place at any reasonable time for the purpose of determining compliance with this permit and applicable regulations. Findings will be noted and kept on file.

Black Lake Quarry – Littlerock location
2023 Solid Waste Handling Permit – Page 3

- 7) A copy of this permit shall be displayed or stored at the facility and in a manner which allows easy access by operating personnel.
- 8) The Health Officer may suspend or revoke this permit if the facility is determined by the Health Officer to be in violation of Article V of the Thurston County Sanitary Code, other applicable laws or regulations or the requirements of this permit. A permit may be suspended by the Health Officer pending revocation.
- 9) Whenever the Health Officer finds that a violation has created or is creating a condition which is unsanitary, dangerous, or constitutes an immediate hazard or threat to public health or the environment, the Health Officer may order the immediate suspension of all permit-related operations.
- 10) Nothing in this permit shall be construed as excusing the permittee from compliance with any applicable federal, state, or local laws or regulations.
- 11) This permit expires March 1, 2024.

SECTION III: OPERATING CONDITIONS

- 1) This facility is permitted to handle and process asphalt, concrete, and wood waste, for the purpose of remanufacturing into a useable and marketable product.
- 2) During the 2019 permit year, this facility must continue to process and remanufacture stockpiled materials that were accepted during previous permit years. All waste materials should be stored and processed in areas of the facility that prevent impacts to storm water, surface water, and ground water resources.
- 3) Facilities storing solid waste materials outside for the purpose of recycling shall be considered to be storing or disposing of solid waste, and operating out of compliance with their solid waste handling permit, if:
 - a). At least fifty (50) percent of the materials has not been shown to have been recycled in the past year and any material has been on-site for more than three (3) years;
 - b). Groundwater, surface water, air, and/or ground contamination has occurred or will likely occur under current conditions of storage, or in case of fire or flood.

Black Lake Quarry – Littlerock location
2023 Solid Waste Handling Permit – Page 4

- 4) The permitted facility shall operate in accordance with an approved Plan of Operations. The permittee must submit an updated Plan of Operations and obtain approval from the Health Department before implementing any operational changes at the facility.
- 5) The permittee shall submit annual reports to the Health Department and Department of Ecology. The reports shall include quantities and types of waste recycled at the permitted facility for the previous year. The reports are to be submitted by April 1.
- 6) Material handling and processing at the solid waste handling facility shall be conducted so as to avoid violations of performance standards as defined in WAC 173-350-040.
- 7) The permittee shall ensure that non-permitted waste (i.e., garbage, litter, nuisance solid waste, etc.) is not accepted at the facility and that any non-permitted waste brought to the facility is collected, handled, and disposed of properly. The operator shall notify the Health Department of any and all materials that are brought to the facility which contain or may be suspected of containing dangerous or hazardous waste. The Health Department can require material testing for determination of type and quantities of contaminants. Suspect materials delivered to the facility shall be handled in a safe and responsible manner. Removal, remediation, and/or disposal of contaminated materials shall be accomplished with the approval of the Health Department and per applicable federal, state, and local regulations.
- 8) The permittee is required to control fugitive dust and noise generated from the recycling facility and shall comply with all applicable air quality and noise regulations.
- 9) All solid waste handling activities occurring at the facility shall take place only on the portion of the site designated and specified for that activity in the plan of operations.
- 10) The permittee shall control public access and unauthorized vehicular traffic to prevent dumping of waste.
- 11) Petroleum spills and equipment fluid spills shall be promptly contained. Spill kit materials shall be readily available for site personnel to use. Used spill kit materials shall be handled and disposed in an appropriate manner. Petroleum contaminated soils shall be removed as soon as possible and contained in appropriate containers.
- 12) Financial Assurance – 2023
The permittee shall continue to pursue securing a financial assurance instrument as part of 2023 operations.

Black Lake Quarry – Littlerock location
2023 Solid Waste Handling Permit – Page 5

Additional Requirements for Wood Waste Handling, Storage, and Recycling

Allowable wood waste includes construction, demolition, and land-clearing material (CDL). Dangerous and hazardous wastes are not allowed. The permittee shall not accept treated, preserved, or painted wood.

Waste wood piles shall be constructed and utilized in a manner that does not present risks to human health and the environment and complies with the performance standards of WAC 173-350-040. Wood waste storage piles shall be designed and constructed so as to prevent fire hazards and air quality violations. The permittee shall comply with all applicable international fire codes and air pollution control regulations.