

# Operating and Reclamation Plan

For sites in sensitive locations, additional information may be required.  
If more space is needed, attach additional sheets or use the blank sheet provided at the end of this form.

**Oregon Department of Geology and Mineral Industries**  
**Mined Land Reclamation Program**  
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**MUCH OF THE INFORMATION REQUESTED  
AN BEEEXPLAINED ON THE MINE PLAN MAP.**  
See enclosure Map or Aerial Photo Requirements.

**1. PRE-MINE CONDITIONS**

- a) Current land use and zoning Agricultural
- b) Average depth of topsoil 18 inches
- c) Type and density of vegetation  
Primarily agricultural surrounded by trees/shrubs
- d) Are there any springs, seeps, intermittent or perennial streams on or near the site?.....X yes  no  
If yes, list here and *locate on mine plan map.*  
Willamette River, Unnamed Slough

- e) Has a wetland delineation been completed?.....X yes  no  
If yes, attach report.
- f) Has a landslide investigation been completed on this property?..... yes X no  
If yes, attach report.

**2. POST-MINING LAND USE**

- a) What is the planned post-mining beneficial use of the permit area?  
X Agriculture

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- Range/Open Space

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- Forestry

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- Housing/Construction

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- X Wildlife/Wetland

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- X Recreation

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- Other

*The post-mining use must be compatible with the local comprehensive plan or have specific land-use approval. For significant aggregate sites, which are zoned for mining, local government must determine the post-mining land use.*

**3. RECLAMATION TIMING**

- a) How many days after mining is completed will reclamation begin?

**OR**

- b) If reclamation will be concurrent with mining, explain the procedure for concurrent reclamation.

See attached Goal 5 Resource Evaluation and DOGAMI Reclamation Permit Report for reclamation sequence

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**4. OPERATING PLAN**

- a) Mining method(s) to be employed (mark all that apply):  
 single bench  multiple bench X pond excavation  
 placer mine  side hill cut  hill top removal  
 other: \_\_\_\_\_
- b) Equipment to be used for mining: Excavator and truck

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- c) Will there be on-site processing? .....X yes  no  
If yes, check type of processing:  
X wash water contained in a closed system source of water:  
Mine Pond  
 wash water discharged off site  
 dry processing  
 other: \_\_\_\_\_

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- d) Will blasting be employed? ..... yes X no
- e) Distance to closest structure not owned by permittee.  
400 feet northwest portion of site
- f) Disposition of removed vegetation.  
Limited crop residue will be encountered, mixed with topsoil

- g) Soil types which will be disturbed by mining, processing, or reclamation.  
Newberg Silt Loam, Newberg Fine Sandy Loam, Cloquinto Silt Loam
- h) Average soil salvage depth 18 inches
- i) Overburden removal depth 5 feet
- j) Will soil, overburden, rock waste or crusher reject dumps or stockpiles be created during mining? ..... yes X no  
If yes, list the estimated volume of each at the end of this form and *locate on a mine plan map.*

*Additional information may be required for large dumps or those located on steep terrain.*

- k) Will this plan require excavating across any property lines? ..... yes X no
- l) How and where will soil or subsoils be stored for reclamation? Locate storage areas on mine plan map.  
Reclamation will be concurrent, all topsoil and overburden will be placed in the fall each year.

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- m) What measures will be taken to reduce compaction and prevent water and wind erosion of the topsoil stockpiles and when will they be implemented?  
Topsoil to be placed on reclamation areas each fall and seeded with cover crop.
- n) What will be the minimum property line setback:  
for the excavation 50 feet  
for processing or storage 350 feet

**5. WATER RESOURCE PROTECTION**

- a) Will mining occur below groundwater level? .....X yes  no
- b) Will mine site dewatering be necessary? .....X yes  no

If yes, explain procedure and estimated depth to which water will be drawn down inside of the mine and where water will be discharged.

See attached Goal 5 Resource Evaluation and DOGAMI Reclamation Permit Report, for mine operation details

**WRD** A permit may be required from the Water Resources Department for dewatering activity.

- c) Will process water be contained on site? .....X yes  no
  - d) Will storm water be contained on site? ..... X yes  no
  - e) Will a pond(s) be used to contain water? .....X yes  no
- Explain containment procedures.

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If the answer to c) or d) is no, please explain discharge procedures.

**DEQ** A permit from the Department of Environmental Quality may be required for off-site discharges and is required for any discharge into public waters, wetlands, streams or lakes. Contact DOGAMI for these permits.

- f) Will any drainages/streams be relocated?..... yes X no  
If yes, complete Section 11.
- g) What will be the minimum undisturbed setback(s) of the operation from all stream(s) or drainage(s)? 300 feet

List the name of stream(s) or drainage(s) and setback from each at the end of this form and locate on a mine plan map.

- h) How will the buffer(s) be identified and protected during mining and reclamation?

Marker posts will be set along wetland and channels and identified with No Disturbance

- i) Describe methods employed to control erosion in the permit area. Be specific, i.e., seeding and mulching, sediment basins or ponds, contour ditching, waterbars, etc.

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- j) Will settling ponds/dams be constructed?..... yes X no  
State the number and size of the impoundment(s) and how they will be built. Will the pond be excavated or will berms be constructed? *Locate on a mine plan map.*

The mine pond will be used for containment of runoff.

- k) If dams will be constructed, how high will they be and what is the maximum amount of water (in acre feet) to be impounded behind each dam?

No dams to be used for the mine pond.

**WRD** If a dam is higher than 10 feet, and stores more than 9.2 acre feet of water, approval from the Water Resources Dept. is required prior to construction.

- l) If berms or a dam will be constructed, describe construction details and attach a sketch showing construction methods.

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- m) How deep will impoundment(s) be? NA
- n) If the impoundment(s) are to be removed upon completion of mining, how will they be drained and/or filled?

- o) Will settling ponds, wetlands, or a water impoundment be left upon final reclamation?.....X yes  no

### 6. GROUNDWATER INFORMATION

- a) Proposed mine depth 55-60 feet
- b) Groundwater depth 81-87 feet AMSL  
(Under static (pre-mine) conditions)
- c) What is groundwater depth estimate based on?  
April 2007 water levels from boreholes drilled on site

- d) Flow direction of groundwater, if known. E -> W
- e) Distance to closest well outside the permit boundary. 80 feet

Wells within permit area must be shown on mine plan map. Attach a copy of the well log(s).

### 7. VISUAL AND NOISE SCREENING

Screening can be very effectively employed to isolate sites from public notice and to minimize noise from operations.

- a) Does a natural landform or vegetative screen currently exist along the permit boundary? .....X yes  no  
If yes, what screen width will be maintained during mining?

No trees removed (except for fish channel)

- b) Will a berm and/or vegetation be established to develop a visual screen for the operation? .....X yes  no

If yes, describe the height and width of the berms and/or the type and density of vegetation; show location on mine map. Crushed rock stockpiles, although not permanent, can also be used to reduce noise from the operation.)

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**8. EQUIPMENT AND STRUCTURES REMOVED**

a) Upon final reclamation, will all structures, visual berms, equipment, and refuse be removed? .....X yes  no  
If no, explain what will be left.

**9. RECLAMATION TECHNIQUES**

a) What will be done with oversized rock not used during mining?  
Minimal volume anticipated, used for reclamation.

b) What will be the average depth of soil replaced on the area to be reclaimed? 18 inches

*If less than 12" of topsoil is available, a substitute material may be required.*

c) Will additional material be utilized as a soil substitute to complete the revegetation? ..... yes X no  
If yes, specify type(s), amount(s), and source(s).

d) Will any waste products, such as tailings, crusher rejects, etc., be generated during mining? .....X yes  no  
If yes, what will be done with them?  
Used for building reclamation benches

e) How will processing and stockpile sites be reclaimed? If they are to be revegetated, explain procedures which will be employed to decompact areas prior to topsoiling/seeding.  
Stockpiles will be removed prior to winter flooding each season

**10. REVEGETATION TECHNIQUES**

a) Species to be seeded/planted by type and amount.  
See attached Goal 5 Resource Evaluation and DOGAMI Reclamation Permit Report, for mine operation details

b) Describe method and time of year for planned planting.  
See attached Goal 5 Resource Evaluation and DOGAMI Reclamation Permit Report, for mine operation details

c) List fertilizers and lime to be used (include amount).  
NA

d) List type and amount of mulch or other erosion control techniques such as erosion netting.

This is the full seeding to be done and may include hydromulch

*Vegetative survival comparable to the density of original ground cover will normally be considered acceptable.*

**11. RECLAMATION PROCEDURES - POST-MINE DRAINAGE CONTROL AND RECONSTRUCTION**

a) During reclamation, will stream channel and/or bank stabilization and rehabilitation be necessary? ... yes X no  
If yes, attach plans.  n/a

*DSL* A Division of State Lands' permit is required for relocation of all perennial and some intermittent water courses.

b) How will surface water runoff and erosion be controlled upon completion of mining? Describe and list structures that will be used.

See attached Goal 5 Resource Evaluation and DOGAMI Reclamation Permit Report, for mine operation details

**12. RECLAMATION PROCEDURES - IMPOUNDMENTS & POND DECOMMISSIONING**

a) Will dewatering be required? .....X yes  no  
b) Will it be necessary to backfill a water filled excavation pit or pond? ..... yes X no  
c) How will settling ponds be stabilized and revegetated?  
Included in main mine area reclamation

d) How will quality of imported backfill be monitored to protect groundwater quality?  
Unsuitable materials will be placed above the water level

*Monitoring may be required to ensure groundwater protection.*

**13. RECLAMATION PROCEDURES - LAND SHAPING**

Long continuous slopes should be avoided or broken up with surface contours, ditches, or complex slope shape.

a) What will be the:  
i) -steepest above-water *excavated* slopes left after mining? (1½:1 is generally maximum) 3:1  
ii) -steepest above-water *fill* slopes left after mining? (2:1 is generally maximum) 3:1

b) What will be done to ensure the stability of excavated slopes?

See attached Goal 5 Resource Evaluation and DOGAMI Reclamation Permit Report, for mine operation details

c) What will be done to ensure the stability of fill slopes?

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d) Will this site be shaped or backfilled to blend in with surrounding topography?.....yes no

**14. POST-MINING WATER IMPOUNDMENT(S)**

- a) Number of impoundment(s) 1
- b) Use of impoundment(s) \_\_\_\_\_
- c) Total surface area in acres 140
- d) Average depth 50
- e) How much is the water level expected to fluctuate annually? 8 feet
- f) What will be the steepest and flattest in-water slopes left after mining? 3:1 to 10:1

*Generally 3:1 in-water slopes are the steepest allowable, except off islands. To increase potential for wetland habitat establishment, 5:1 to 20:1 slopes are needed.*

g) Will shallow ponds, shorelines, or other areas conducive to wetland plant development be left? ..... yes no

h) What will be the impoundment water source?  
Ground water

**WRD** A water right for the water resource may be needed from the Water Resource Department.

i) What will be done for wildlife & fish enhancement, e.g. fish structures, islands, peninsulas, and irregular shorelines?

See attached Goal 5 Resource Evaluation and DOGAMI Reclamation Permit Report, for reclamation plan details

j) If wetlands are to be constructed, explain the methods and final configuration.

Configuration details are provided in the Goal 5 Resource Evaluation and DOGAMI Reclamation Permit

**15. OTHER PERMITS**

In order to assist other agencies in the review of this plan and their ability to ascertain compliance with their laws, list all permits by type and number that are held (or applications filed) for this mine site or processing equipment (such as fill/removal permits, water rights, air quality and stormwater or waste water permits).

Agency/Permit Type	Permit Number

**16. LANDOWNER CONSENT**

As surface or mineral rights owner, I concur with the proposed subsequent use for any mining operation and with the operating and reclamation plan as submitted. I also agree to allow access to the State Department of Geology and Mineral Industries or their contractor for reclamation of the mine site if it is declared abandoned by the Department of Geology and Mineral Industries. By my signature below, I certify that I have a legal right to sign this document.

*Appropriate signatures are needed for EACH land parcel.*

**I CONCUR (Surface Rights)**

Name (Please Print or Type) \_\_\_\_\_  
Signature \_\_\_\_\_  
Title \_\_\_\_\_  
Date \_\_\_\_\_

**I CONCUR (Mineral Rights):**

Name (Please Print or Type) \_\_\_\_\_  
Signature \_\_\_\_\_  
Title \_\_\_\_\_  
Date \_\_\_\_\_

**17. APPLICANT'S ACCEPTANCE**

Name (Please Print or Type) \_\_\_\_\_  
Signature \_\_\_\_\_  
Title \_\_\_\_\_  
Date \_\_\_\_\_

**18. PREPARED BY (IF OTHER THAN APPLICANT)**

Name (Please Print or Type) \_\_\_\_\_  
Signature \_\_\_\_\_  
Title \_\_\_\_\_  
Date \_\_\_\_\_

**ID No.** \_\_\_\_\_

Use this page for additional space if necessary.  
Number responses to correspond with question.

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