

Howard Canyon Reconciliation Report

Appendix H County Staff Recommendation

April 2004

On May 3, 2004, the Planning Commission held a public hearing in Corbett to review the proposed revisions to this report. The County staff recommendation was to protect the resource and limit mining to current levels under the Grant of Total Exemption (5,000 cubic yards per year) with mitigation measures. After lengthy public testimony, the Planning Commission deliberated and reached a tentative decision to recommend not to protect the resource and prohibit mining on the site. The HCRR has been revised to reflect that recommendation. This appendix archives the County staff recommendation.

Program To Achieve Goal Recommendations

The Howard Canyon site is to be protected under the provisions of OAR 660-16-010(3), Limit Conflicting Uses (also referred to a 3C designation) and will continue to be included on Multnomah County's list of *Protected Sites*.

Determination of Significance

The Howard Canyon site is a significant Goal 5 mineral and aggregate resource, based on the following findings:

- Quantity - The resource site represents a large quantity of basalt material, in excess of 5 million tons.
- Quality - Laboratory testing confirms the basalt meets ODOT standards for air degradation and abrasion and is suitable for aggregate use. In addition, the columnar basalt formations in Howard Canyon are suitable for riprap in road construction as well as decorative rock in landscaping and building construction.
- Location – There are a limited number of mineral and aggregate resource sites in east Multnomah County and adjacent portions of Clackamas County. There are no other basalt quarries in the region that actively mine columnar basalt.

Level of Protection

The recommendation for the Howard Canyon site is protection under the provisions of OAR 660-16-010(3), Limit Conflicting Uses (also referred to a 3C designation).

The Howard Canyon site will continue to be included on Multnomah County's list of *Protected Sites*.

Protected Site

The Protected Site is limited to the proposed quarry (extraction area) as identified in Figure 8. In order to limit conflicts identified in the ESEE analysis, the hogback ridge and the areas east of the existing haul road are not protected under this Goal 5 decision and are prohibited from future mining activities. The reasons for limiting the protected area include:

- The hogback ridge has social and environmental impacts that are difficult to mitigate, and which outweigh the small economic benefits (that would result from mining).
- The area east of the existing haul road has steep, south facing slopes. Noise impacts from mining on Loudon Road residents would be difficult to mitigate, and the potential for soil erosion on steep slopes would be severe. The economic benefit resulting from mining in the East Area is outweighed by potential adverse social and environmental impacts.

Protected Aggregate and Mineral Resources (PAM) Overlay Subdistrict

Based on the ESEE analysis, the PAM Overlay will apply to land within 1,500 feet of the protected resource as shown on Figure 8. Within this impact area, conflicting uses allowed by underlying are likely to have the greatest adverse impact on mining. The PAM overlay will not be applied to the entire resource site impact area (as shown on Figure 5), so that restrictions to neighboring property owners are limited to the minimum necessary to protect the Goal 5 resource. Thus, the smaller PAM Overlay will not impose undue restrictions on parcels that lie farther away from the proposed quarry, such as the Loudon Road rural residential area, for which it is already possible to comply with applicable DEQ noise control standards.

Primary Uses, Uses Permitted Outright, Uses Permitted Under Prescribed Conditions, and Conditional Uses allowed in the underlying district may be permitted subject to the underlying district provisions and criteria of approval, except that the use must meet the following criteria:

- (1) The proposed use will not interfere with or cause an adverse impact on lawfully established and lawfully operating mining operations;
- (2) The proposed use will not cause or threaten to cause the mining operation to violate any applicable standards of this chapter, or the terms of a state agency permit. The applicant for a new noise sensitive use shall submit an analysis prepared by an engineer or other qualified person, showing that applicable DEQ noise control standards are met or can be met by a specified date by the nearby mining operation; and

- (3) Along the truck route, any new habitable structures shall be setback 50 feet from the edge of the roadway pavement.

The proposed use shall be conditioned upon execution of a restrictive covenant in favor of the mining operator. The restrictive covenant shall incorporate all approval conditions, and an agreement not to object to the conduct of lawful operations conducted at the Howard Canyon quarry.

Mitigation Measures

The following mitigation measures are adopted as part of this Goal 5 process as conditions of approval for any Conditional Use Permit to authorize the quarry activities.

Limits on Extraction Volumes and Truck Traffic

The recommendation is to limit the amount of material and associated truck traffic to the current DOGAMI GTE levels or 5,000 cubic yards per year. When DOGAMI determines that the quarry has exceeded the total area limits, then the quarry owner and operator will be required to apply for a Conditional Use Permit demonstrating compliance with the mitigation measures described below. Table 12 outlines the restrictions on extraction volumes and truck traffic.

Table 12. Limits on Extraction Volumes and Truck Traffic

	Baseline (Is this the current status or the proposed limit/ GTE)
Rate of Extraction	5,000cy/yr
Avg. No. of Trucks Per Day	2* (4 trips)
Max. No. of Trucks Per Day	4* (8 trips)
Max. No. of Trucks Per Hour	2* (4 trips)
Number of Blasts per Year L = Low Yield H= High Yield	1H

Each truck represents two trips – one inbound (empty) and one outbound (full).

- Average Number of Trucks Per Day – this standard is based on 250 operating days per year (5 days per week, 50 weeks per year).
- Maximum Number of Trucks Per Day – this standard recognized the quarry will not operate at full capacity, all year round. The maximum number of trucks is designed to ensure the local area is not overwhelmed by a large increase in truck traffic in order for the quarry to fully utilize its annual volume allocation.
- Maximum Number of Trucks Per Hour – this standard is designed to ensure the local area is not overwhelmed by a concentrated flow of truck traffic.

The haul road entrance onto Howard Road shall have a permanent truck counter that will track the time of each truck entering and leaving the site. Operator shall submit quarterly

compliance reports to the County. More frequent reports may be required by the County in response to complaints filed by neighbors.

Noise

The stricter DEQ standard for New Sources on Previously Unused Sites (Ambient plus 10dBA) will be the baseline standard. The noise impacts will include all noises generated or attributable to the quarry, including the off-site impacts of truck traffic.

The Duple Noise Study recommends several modifications to normal quarry operations to lower noise levels.¹ These mitigation measures have been modified in response to comments submitted on behalf of the quarry owner and operator.² The noise mitigation measures include:

- Rock drilling shall be conducted with a hydraulic rock drill (or quieter substitute). Rock drilling shall not have a direct line of sight to any surrounding residential uses. A noise barrier shall be erected between the rock drill and the residential uses. The noise barrier can be a rock wall, a vinyl plastic 1-psf noise barrier, or a straw bale barrier around the rock drill to achieve an insertion loss of 10dB at the residential site.
- One week advance notice of blast events shall be sent to the County and all property owners and residents of the quarry impact area. A qualified registered acoustical engineer shall monitor noise at least six sites during the first blast event. Adjustments to blasting parameters, such as total charge weight, number of holes and stemming, shall be made as necessary to meet the DEQ blast noise standard or reduce annoyance.
- A 25 to 30 foot rock wall shall be maintained to enclose the processing area on at least three sides. The excavation depth should be maximized as much as possible.
- Overburden shall be used to establish a 10 foot high berm at the crest of the ridge at each new excavation location.
- Excavation vehicles, such as front loaders and bulldozers, shall be fitted with “residential” quality mufflers. This type of muffler shall yield an 8dBA reduction for the low frequency exhaust.
- Internal haul roads used to convey excavated rock to the processing area shall be constructed with a noise barrier to screen residential sites to the south and southeast.
- Use of engine “jake” brakes shall be prohibited along the truck route, except in case of emergency to avoid accidents. If these brakes must be used due the

¹ Page 12, Duple Noise Study (Appendix D)

² Letter submitted by Joseph Begin, Daly-Standlee Associates, dated December 30, 2002.

extreme down grade of the haul road, the installation of special mufflers to reduce “jake” brake noise will be required.

- Noise studies shall be conducted by a qualified registered acoustical engineer at the expense of the quarry owner and/or operator. The noise studies shall be conducted at three of the closest sites to current quarry operations. Noise studies shall be conducted two times during the first year of operation. After the first year, annual measurements at the same three sites.
- If a crusher is used, then measures (berms, rock walls, vinyl walls) shall be undertaken to achieve a noise reduction equivalent to adding a close-in barrier that extends at least 2 feet over the highest point of the crusher.
- The quarry operating hours shall be limited to 9 a.m. to 4 p.m. Trucks and employee vehicles may arrive or depart between 8 a.m. and 5 p.m.
- The quarry shall not operate on Saturdays or Sundays.

Stream Protection Measures

A more effective approach to mitigating potential adverse water quality impacts is required to ensure that quarry activities do not increase the sediment load in the surrounding creeks. The largest source of sediment could originate from haul roads, processing areas, and overburden stockpiles.

An erosion control plan shall include measures designed to keep turbidity below ambient plus 10 percent conditions, 100 feet downstream from the quarry during a 10-year storm event. An erosion control plan shall include the following measures:

- Weed-free straw bales and silt fences at the bottom of newly constructed slopes. Whenever straw bales are used, they should be staked and dug into the ground at least 12 cm (5 in);
- Construction of sediment settling basins, where appropriate. Berms shall be constructed where appropriate, to divert runoff into these basins;
- Temporary plastic sheeting for immediate protection of open areas (where seeding/ mulching are not appropriate);
- Erosion control blankets or heavy duty matting (e.g., jute) can be used on steep unstable slopes;
- Sills or barriers may be placed in drainage ditches along cut slopes and on steep grades to trap sediment and prevent scouring of the ditches. The barriers should be constructed from rock and straw bales and be regularly maintained. Sills or barriers

will be necessary in roadside ditches if water bars or cross-ditches are constructed within the haul roads to intercept and direct runoff from a road;

- On the pit or quarry floor, establish a slope that directs turbid water to flow to a low point where it can be collected in a detention pond;
- Biobags, weed-free straw bales and loose straw may be used for temporary erosion control. Temporary erosion and sediment controls should be used on all exposed slopes that could potentially create sediment-laden runoff into the creeks;
- On cut slopes steeper than 1:2 (v:h) where runoff may impact the creeks, a tackified seed mulch should be used so that the seed does not wash away before germination and rooting occurs. In steep locations, a hydro-mulch will be applied at 1.5 times the rate;
- No clearing within 100-feet of Howard Canyon Creek shall be allowed.
- No clearing within 100-feet of drainage channels into Howard Canyon Creek shall be allowed, unless mitigation is provided.
- Total disturbance area of the quarry not exceed 5 acres at any time. Concurrent or segmental reclamation is required to limit disturbed areas within the quarry.
- Material removed during excavation shall only be placed in locations where it cannot enter the surrounding creeks or their riparian areas;
- Stockpiles of overburden shall be completely protected to ensure that sediment-laden runoff does not enter the adjacent creeks;
- Coir mats and coir logs or filter berms built of porous materials, such as sand and gravel that contains no 200-mesh or smaller material, should be used where appropriate to control erosion;
- Haul roads shall have impervious surfaces with adequate erosion control best management practices to prevent sedimentation into adjacent creeks;
- All creek crossings and culvert improvements shall be fish passage friendly and constructed with open bottomed arched culverts or bridges with sufficient water passage capacity to withstand 100-year flood events;
- Erosion control devices that are failing shall be immediately repaired to ensure that sediment-laden water does not leave the project site and discharge into the surrounding creeks;
- A permanent truck or wheel wash facility shall be constructed to ensure that excess dirt and mud is washed off of all truck tires. All water used to clean the trucks should be treated to remove sediment;

- The County shall be allowed to make regular inspections of all erosion control devices. The inspection shall identify needed repairs and/or replacement of erosion control devices. Follow-up field inspections shall be made to ensure repairs and/or replacement of devices has occurred within specific timelines.
- From October to April, the quarry operator shall submit monthly monitoring reports to the County, which shall include water quality samples from Howard Canyon Creek taken 100-feet downstream from the quarry.

Also, water quality is susceptible to chemical contamination from pollutants such as vehicle fuels and maintenance or accidental chemical spills. A pollution control plan shall be prepared to prevent point and non-point source pollution, and will include the following measures:

- No pollutants of any kind (petroleum products, fresh concrete, silt, blasting material, etc.) shall come in contact with an active flowing stream or its riparian area;
- Vehicle maintenance, refueling of vehicles and storage of fuel shall be conducted at designated refueling areas located at least 150 feet from drainage channels to Howard Canyon Creek. The refueling areas shall be sufficiently contained and present no possibility for contamination;
- No toxicant (including petroleum products) will be stored within 150 feet of drainage channels to Howard Canyon Creek. Fuel and lubricant storage areas shall be regularly monitored for leakage. A spill control kit shall be maintained onsite at all times, and;
- Flocculants used to clean stormwater discharges or water recycled from rock-washing operations must be non-toxic and not harmful to fish or aquatic organisms. At least two ponds should be used to remove suspended solids. Settling time should be at least eight hours. The ponds should be easily accessible and maintained on a regular basis. Material removed from the ponds should be disposed of in an upland location.

Big Game Wintering Habitat

The Oregon Department of Fish and Wildlife has proposed the following conditions to minimize impact to wintering deer and elk:³

- Crushing and hauling of rock limited to daylight hours only. (Note: this measure has been implemented as part of the quality of life mitigation to restrict quarry activities to 9 a.m. to 4 p.m.)
- No rock crushing from November 1 to March 31.

³ Email from Gregory Hobart, Habitat Biologist, ODFW to Virginia Bowers, Multnomah County, dated March 29, 2001

Transportation

The 1996 HCRR required a traffic management plan as a condition of approval in recognition of the inadequacy of Howard Road, Littlepage Road, and possibly other nearby roads to handle increased levels of heavy truck traffic.⁴ The traffic management plan should identify improvements to address the following issues:

- Bridge Load Capacities – demonstrate the structural strength of bridge crossings are adequate to handle the expected truck traffic or make structural improvements to bridges and culverts or agree to weight limits for trucks crossing certain bridges.
- Roadway Design – all local roads, rural collectors, and intersections along the truck route between the site and Interstate 84 shall be improved to handle the expected quarry truck traffic. These standards include road width (including shoulders), curve radii, and structural integrity.
- Bikeways – designated bikeway routes along Littlepage Road and Hurlburt Road shall be improved by paving and striping an adequate shoulder area to mitigate the impacts of truck traffic on the bikeway routes.
- Historic Columbia River Highway – identify any conflicts with HCRH and propose possible solutions. Any proposals to change the current configuration of the HCRH shall not have adverse effects and shall be reviewed by the HCRH Advisory Committee.⁵

Based on the results of the traffic management plan, the County Engineer will stipulate a schedule for necessary improvements and/or payments for road improvements to ensure adequate public safety and maintenance of public roads.

Monitoring and Enforcement

A monitoring program will be critical to the implementation of the mitigation measures. The monitoring program will be undertaken by the quarry owner and/or operator with regular reports submitted to the County for review. Enforcement of the mitigation measures will be through the Conditional Use Permit, consistent with the provisions set forth in MCC 35.0190. The monitoring program will include:

Noise Studies

Noise studies shall be performed by a qualified registered acoustical engineer. The noise studies shall be conducted at three of the closest sites to current quarry operations. Noise studies shall be conducted two times during the first year of operation for any phase (as identified in Table 10). After the first year, annual measurements at the same three sites.

⁴ Page IV-25, 1996 HCRR

⁵ Letter from Michael Ray, ODOT Region 1, dated September 30, 2002.

Water Quality Studies

From October to April, the quarry operator shall submit monthly monitoring reports, which shall include water quality samples from Howard Canyon Creek taken 100-feet upstream and downstream from the quarry. The County shall be allowed to make regular inspections of all erosion control devices. The inspection shall identify needed repairs and/or replacement of erosion control devices. Follow-up field inspections shall be made to ensure repairs and/or replacement of devices has occurred within specific timelines.

Truck Counter

Truck traffic is a function of the level of quarry activity, which has been limited to reduce quality of life and public safety impacts to the impact area. The quarry owner and/or operator shall install and maintain a permanent truck counter that will track the time of each truck entering and leaving the site at the haul road entrance onto Howard Road. The operator shall submit quarterly compliance reports to the County. More frequent reports may be required by the County in response to complaints filed by neighbors.