



OREGON DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

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June 25, 2015

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Mined Land Reclamation Awards recipients announced

Outstanding reclamation, mine operation, habitat protection honored

REDMOND, Ore. – The Oregon Department of Geology and Mineral Industries (DOGAMI) today announced the recipients of its annual Mined Land Reclamation Awards.

An active mine site where wildlife abounds, an urban mining operation that minimizes impacts to the surrounding community, and a quarry where an archeological area was protected are among those recognized for their outstanding efforts during the 2014 calendar year. Honorees were:

Outstanding Reclamation: **Canby Sand & Gravel Company**, for a multi-decade track record of ongoing reclamation that provides valuable wildlife habitat, including efforts to guarantee the osprey who return yearly to the Canby site have nesting areas and available food.

Outstanding Operator: **Baker Rock Resources** of Beaverton for the company's long record of voluntary reclamation, well-planned and well-implemented operation, and for their compliance record with the DOGAMI and Department of Environmental Quality permits issued for the Farmington Quarry in Washington County.

Outstanding Operator, Division II: **Graves Trinity LLC** of Molalla for control of stormwater, minimization of off-site impacts, and reclamation of exempt acres at Graves Quarry in Clackamas County.

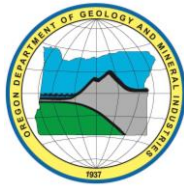
Good Neighbor: **Knife River Corporation NW** of Tangent is recognized for their efforts at the Vance Pit in Gresham, including work to reduce potential on-site impacts with a vigorous backfill program, protect adjacent public areas, reduce noise and visual impacts to the surrounding community, and eliminate impacts to Division Street from this mine operation in an urban setting.

Outstanding Reclamation by a Government Agency: **The Oregon Department of Transportation** for extra efforts at Drews Reservoir Quarry in Lake County to salvage soil materials prior to mining and set aside crusher reject material with soil stockpiles for final reclamation, as well as identification of an archeological site prior to mining and ensuring protection of that cultural resource.

Each year, DOGAMI's Mineral Land Regulation & Reclamation program and an independent panel of experts select mine sites and operators to receive awards for excellence in reclamation, mine operation, and habitat protection. The awards were presented June 25, 2015 during the Oregon Concrete and Aggregate Producers Association (OCAPA) Annual Meeting at the Eagle Crest Resort in Redmond.

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Editorial Note: Photos are available on the Oregon Geology Flickr at www.flickr.com/photos/oregongeology.



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2014 MINED LAND RECLAMATION AWARDS

Award Recipient Narratives

OUTSTANDING RECLAMATION

Canby Sand & Gravel Company

Canby Sand & Gravel site, Clackamas County

Canby Sand & Gravel Company is being recognized for a multi-decade track record of ongoing reclamation that provides valuable wildlife habitat, including efforts to guarantee the osprey who return yearly to the Canby site have nesting areas and available food.

Canby Sand & Gravel Company (CS&G) has owned and operated the site located south of Canby since 1978. Mining at this site adjacent to the Molalla River began in the 1950s. Early operators did not use best management practices in the initial development of the site. From day one, CS&G realized a stable riparian buffer between the mine area and the river was essential to protect the river; previous operators had not created any buffer. CS&G has expanded the buffer to more than 200 feet along a 1,500 foot stretch of the river. This work included backfilling and re-vegetation with riparian species. Work continues to expand the buffer through the length of the entire property.

In the early 1990s, CS&G voluntarily researched, designed, obtained permits for and constructed an environmentally sound on-site material conveyance system. The \$900,000, 5500-lineal-foot conveyor system moves pit material from the excavation area to the processing area. The highlight of this system is a free-span structure and enclosed conveyor system that crosses the Molalla River, eliminating the need for a temporary bridge.

An extensive hydraulic plan was compiled to provide fish passage out of the excavated ponds for fish that are entrained in the overflow channel during high water events; provide a stable overflow channel on the upstream end to allow the passage of flood flows; armor the overflow spillway to reduce the potential of the Molalla River permanently avulsing into the overflow channel; and provide a seasonal backwater condition to provide for seasonal flushing of the ponds that increase habitat diversity.

Though the property is zoned light industrial, CS&G has performed outstanding reclamation to wildlife habitat. Twenty-five acres have been backfilled to near original elevation. Wetland areas have been constructed. More than 1400 trees and shrubs were planted in 2013-2014. Local native plants including hawthorn, cedar, alder, big leaf maple, snowberry, and gooseberry were planted.

Wildlife abounds at the 300-acre mine site. Eagles, ospreys, water fowl, and deer call this area home.

OUTSTANDING OPERATOR

Baker Rock Resources

Farmington and Koehler Quarries, Washington County

Baker Rock Resources of Beaverton is being recognized for the company's long record of voluntary reclamation, well planned and implemented operation, and for their compliance record with the DOGAMI and Department of Environmental Quality permits issued for the Farmington Quarry in Washington County.

Mining began in this area in 1958. The Koehler Quarry was originally opened and operated by Cobb Rock and the Farmington Quarry by Baker Rock. In 2010, Baker Rock acquired the Koehler Quarry and combined the two sites.

Though the site has no statutory reclamation requirements, the 1974 first DOGAMI inspection report states an excellent long-term development plan was in effect, that all soil material was being salvaged in vegetated stockpiles for reclamation, and trees were planted along the property line for visual screening. A report dated 1980 again noted that the site had been developed in a logical manner and concurrent reclamation was being practiced on mined-out areas, and that the operator had constructed an effective stormwater control system for the 80-acre site.

Concurrent reclamation continues to be practiced with overburden from new areas spread over mined out areas and revegetated, thereby limiting the overall area of disturbance. Over the years the stormwater control system has been improved and refined.

In 2004, an agreement was reached between Baker Rock Resources and operators of the adjacent Cobb Rock Quarry to mine the setback between the two quarries rather than leaving an 'island' of rock between the two sites. By March 2009, the island of rock had been mined through, leaving a relatively level quarry floor across both sites. Removing this setback improves the post-mine land use by eliminating two steep highwalls, and increases the overall stability of both sites after mining is complete.

Active mining occurs within the Koehler Quarry with processing in the Farmington Quarry. The overall depth of the excavation from original ground elevation is more than 300 feet. The highwalls have been benched to provide long term stability and worker safety, and is one of the best examples of highwall benching in Oregon.

OUTSTANDING OPERATOR - DIVISION II

Graves Trinity LLC

Graves Quarry, Clackamas County

Graves Trinity LLC of Molalla is being recognized for control of stormwater, minimization of off-site impacts, and reclamation of exempt acres at Graves Quarry in Clackamas County.

The Graves Quarry is a limited exemption status quarry, and exempt from reclamation regulations for operations within the original 1972 site footprint. Though reclamation is not required, the operator has retained all available soil material on-site in berms for post mine reclamation. These berms remain well vegetated and stable. Clean fill material has also been imported to this quarry to provide backfill to reduce the overall slope of the highwalls.

Hancock Creek flows through the property, but the operator has maintained a minimum 50-foot undisturbed setback from the quarry and both sides of the creek. No impacts to the creek have been documented.

Potential impacts to the community have been considered as well. This site is well screened from Dhooge Road by vegetation. The operator has carefully preserved existing vegetation and has actively planted additional trees over the years. The processing plant is located below the original ground surface which reduces noise impacts to the surrounding area.

In 2009, the operator obtained county land use approval to expand the quarry beyond the exempt boundary. DOGAMI issued an operating permit for 4 tax lots totaling 81 acres, which is the property boundary.

This quarry has a long record of meeting and exceeding the state requirements to protect adjacent natural resources and minimize impacts to the surrounding community. On-going efforts to reclaim the exempt acres within the quarry go well beyond what is required.

GOOD NEIGHBOR

*Knife River Corporation NW
Gresham Sand & Gravel site, Multnomah County*

Knife River Corporation NW is being recognized for their efforts at the Vance Pit in Gresham, including work to reduce potential on-site impacts with a vigorous backfill program, protect adjacent public areas, reduce noise and visual impacts to the surrounding community, and eliminate impacts to Division Street from this mine operation in an urban setting.

Mining began at the Vance Pit, located within the city limits of Gresham, in 1948 and continues today. In May 2000, the operation was purchased by Knife River Corporation NW (KRC NW).

The 52-acre pit mined before 1972 left near-vertical walls of over 200 feet in height, adjacent to a busy city street, SE 190th Ave. Stability of the pit walls had become a concern. KRC NW began a geotechnical monitoring program in an attempt to discover any potential problems before they occurred.

KRC NW has also undertaken an ambitious program to backfill the pit where it has been mined out to increase pit wall stability. Along the pit boundary adjacent to SE 190th Ave. backfilled material has been compacted and now matches the original ground surface. KRC NW has committed to eventually backfill the entire pit to match the level of adjacent properties.

KRC NW created visual and sound buffer berms along the boundary of a new expansion area. The berms have been vegetated in native trees and grasses.

To eliminate mud and dirt being tracked onto city streets by trucks leaving this site, a state-of-the-art wheel wash station was installed. High pressure nozzles remove mud and dirt from wheels and the undercarriage of all loaded trucks leaving the site. All wash water is contained on site and recycled.

Working with the City of Gresham, KRC has also installed and maintained filter fabric inverts on storm sewer inlets along SE Division Street to capture sediment during the winter season and during periodic washing of SE Division Street.

OUTSTANDING RECLAMATION BY A GOVERNMENT AGENCY

*Oregon Department of Transportation
Drews Reservoir Quarry, Lake County*

The Oregon Department of Transportation is being recognized for extra efforts at Drews Reservoir Quarry in Lake County to salvage soil materials prior to mining and set aside crusher reject material with soil stockpiles for final reclamation, as well as identification of an archeological site prior to mining and ensuring protection of that cultural resource.

Mine operations at this ODOT property located west of Lakeview began prior to 1972. A DOGAMI inspection report from February 1993 noted that final reclamation of this site would likely be difficult due to the lack of soil material in this area even before mining. All soil material had to be salvaged and stockpiled on site for reclamation. Supplementing salvaged soil material with crusher rejects made it possible to obtain a 12-inch cover of growth medium at final reclamation.

The quarry is located on a ridge directly above Drews Creek. During a significant expansion of the excavation in 1995, a cultural resource survey by Oregon State University identified an archaeological site. The site was clearly marked in the field and completely avoided. Since 1995, ODOT has assembled an archaeological crew that performs surveys at all sites where earth disturbing activity could impact cultural or historic artifacts.

In 2013, ODOT exhausted the available material stockpiled on site and completed reclamation. Salvaged soil and crusher reject material was spread and the site seeded in a native grass mixture. Even with drought conditions in this area of Oregon over last several years, a stable vegetative cover has been established. The DOGAMI file on Drews Reservoir Quarry was closed in November 2014.