



# The Handy Bucket: On-site product separation made easy



Darcy Moshenko photo



Jim Furlong photo

by Darcy W. Moshenko, RPF,  
FPInnovations/FORREX Extension  
Specialist

**D**uring times of economic restraint in the forest industry, infrastructure projects are still needed to ensure forest operations remain efficient. Forest practitioners are always looking for new ways of doing business that will save capital and allow them to

complete projects without sacrificing quality. Recently, an innovation in excavation caught the eyes of some road construction managers in the Okanagan. Appropriately, the name of the equipment reflects its usefulness—the Handy Bucket.

Designed and built by **Lea Sirr** of Kelowna, BC, the Handy Bucket is attached to a Cat 320 excavator. A multi-purpose (4-in-1 style) attachment, the Handy Bucket can grab, doze, screen/load, and grade, giving machine operators the option to either transform or move material. It has been used to resurface logging roads, screen mill yard wood waste and top soil, generate landscape cobble stone, remove rock from fields, screen fine material for pipe backfill, make gravel products, and site-clear logs, stumps, and brush.

The opportunity to view the Handy Bucket in action came on a gravel resource road resurfacing project near Kelowna, BC. Here, we watched the bucket transform on-site, raw material into a surfacing product, thereby eliminating the need to transport the surfacing material from off-site.

This versatile attachment is designed to work above or below grade. It can rear load (at grade or below) by scooping towards the excavator or front load (at grade or above) by shovelling away from the excavator. The Handy Bucket is also designed to screen material to a size of two-inch minus; however, the screens in the bucket can be changed to any desired size.

For the purpose of road resurfacing, the bucket scoops or shovels a bucket full of material from the roadside or ditch (it would work very well in gravel areas) and can scrape down old road grade with teeth located on the bucket's scooping edge. When the bucket is full, the operator then positions it over the desired resurfacing location, shaking it to screen out the product onto the road surface.

Once the two-inch-minus material has been emptied from the bucket, the operator then turns the excavator towards the roadside where the remaining oversized material is either discarded or piled as a secondary product for other uses (e.g., the larger material can be used for stream-crossing projects). The bucket then spreads the two-inch-minus material on an existing roadbed to fill potholes and cover rock outcrops. Depending on the condition of the existing road surface, a lift of two to six inches will be required. The attachment can also dig out boulders from the road grade if necessary. The excavator can compact the material with the bucket or by travelling over it with its tracks.

Production during initial projects has been about 0.5 km per 10-hour day at a cost of \$1700/day (\$3400/km). When compared to other methods of road surfacing or product separation, the Handy Bucket is a viable option if used in the right application. 🌲

For more information, email [sirrlea@gmail.com](mailto:sirrlea@gmail.com) or view video at [www.youtube.com/user/HandyBucket](http://www.youtube.com/user/HandyBucket)

**Top:** The Handy Bucket attached to a Cat 320 excavator.

**Bottom:** On-site material that has been screened by the Handy Bucket.