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Residuals Disposal

DeWRS Residuals can be disposed of by any of the following methods with residuals production tuned to a range of 10 to 20% solids by mass which can pass the paint filter test.

1. Landfill Sludge

DeWRS residuals, when classified as a Sludge, are treated as a liquid waste when landfilled at a cost in the range of \$180/ton.

2. Landfill Solids

DeWRS residuals, when classified as Solids, are landfilled at a cost in the range of \$65/ton.

3. Land Applied

DeWRS residuals can also be land applied.

Characterization of the residuals from a surface water plant confirmed that the residual solids can meet Codes of Practice for Soil Amendments Standards and could be used for land application. Recovery of the solids for land application makes the residuals a value-added product.

The residual solids help immobilize excess phosphorus in the soil which is beneficial for:

- agricultural amendment
- co-applied with manure/biosolids for nutrient management.

The detailed analysis and recommendation are available in the following report.

BIM (2018) Pilot Plant Study Ceramic Ultrafiltration. <https://bowenisland.civicweb.net/document/152264>

Residuals Characterization

Moisture, Average	88.9 %
Organic Content	35.5 %
Wet Bulk Density, (as-is)	1.03 – 1.15 kg/L
Dry Bulk Density	0.10 – 0.15 kg/L
Size Distribution	Consistent
Sample Classification	Sandy Loam
pH	5.5 – 6.3





Fine Tuning

When the residuals are deposited into a dumpster and allowed to accumulate over time, additional fluid may accumulate as indicated by the red arrows in the picture. This residual moisture is easily resolved by one of the methods below:

1. Circulating or blowing air over the dumpster. For example, by using a fan.
2. Exposing the Dumpster to direct sunlight and with protection from rain fall. For example, locating the dumpster under a transparent roof.
3. Alternately, water can be drained off back to the DeWRS
4. Fine tune operating parameters



Watch **DeWRS** Operating: <https://www.youtube.com/watch?v=3CiBB3s7IEs>





Sludge Handling – Pit Disposal

