



CASE STUDY

Newterra Helps A Company "Clean Up" Their Environmental Efforts

Newterra's custom stormwater treatment system enhances pollution reduction at this busy metal recycling facility.

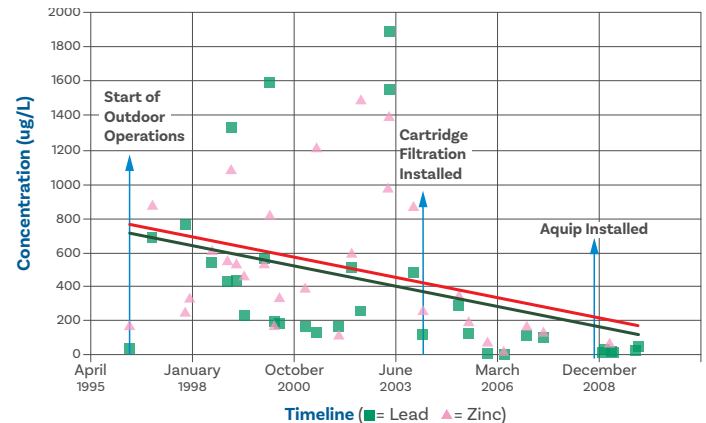
Market Served: Metal Recycling Facility
Application: Industrial Stormwater Treatment
Treatment Location: Portland, Oregon
Challenge: Stormwater Treatment
Solution: Clara & Aquip Filtration Systems

The Challenge

Calbag Metals Co. is a 4-acre non-ferrous metal recycling facility located in Portland, Oregon. The metal recycling facility had been using catch basin inserts along with an oil/water separator and a cartridge filter with compost media, to treat the site's stormwater prior to discharge. Though the cartridge filter noticeably reduced contaminants in Calbag's stormwater discharge, it was not able to achieve adequate copper or zinc removal to meet the site's stormwater permit requirements.

The Solution

Newterra supplied Calbag Metals with a Clara® 25C, Backwashing Sand Filter and Aquip® 160SBE system; the Aquip enhanced stormwater filtration system was specifically designed for Calbag Metals using historic stormwater sampling data from the site as well as the known pollutants commonly found in scrap yard stormwater runoff. Aquip is an industrial stormwater filtration system containing both inert and sorptive media to remove total suspended solids and metals. Also specifically designed into the Aquip is its ability to easily integrate into existing facilities with minimal construction cost. This is due to its relatively small footprint, above-ground configuration, and passive (gravity operated) flow-through design.



▲ Historical copper data over time.

Prior to Aquip is an oil/water separator to reduce oil and grease and Retenu basic stormwater filtration system to reduce particulates. With the treatment train approach, the stormwater runoff first passes through the oil/water separator for oil reduction then through Retenu for additional filtration of particulates prior to discharge into the enhanced portion of the treatment train (Aquip). The result is more efficient and effective pollutant reduction.

Newterra, manufactures industrial stormwater treatment Best Management Practices (BMPs) for customers throughout North America. Products include the Clara settling system, Aquip stormwater filtration system, and Purus™ stormwater polishing system.



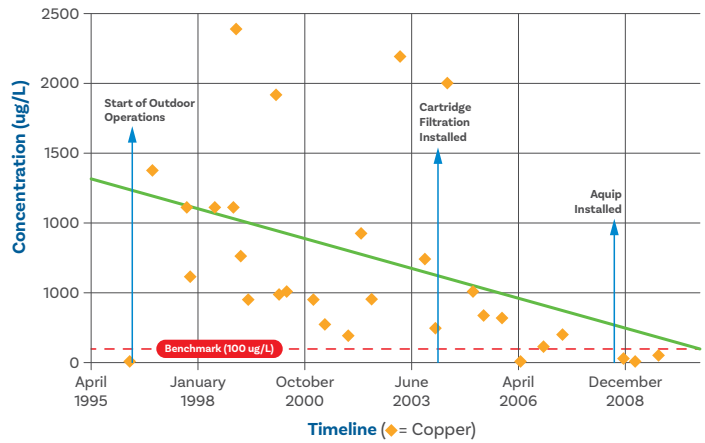


Case Study: Metal Recycling Facility

Parameter	Units	Ave Aqip Inlet	Ave Aqip Outlet	Benchmark	Aqip RE
Oil and Grease	mg/L	15	3.5	10	76%
Copper	mg/L	1.3	0.11	0.1	90%
Lead	mg/L	0.61	0.09	0.4	85%
Zinc	mg/L	0.74	0.09	0.6	82%
TSS	mg/L	180	20	130	78%
pH (std units)	std units	7.5	7.6	5.5 - 9.0	-

RE = Removal Efficiency

▲ Data for stormwater sampling results from the facility's Aqip 160SBE with Clara 25C.



▲ The above plot shows sampling data over time for lead and zinc. Results for other pollutant parameters such as copper and TSS show a similar decline over time.

“After years of struggling to stay below permit benchmarks, despite consistent effort and all the right BMPs, we didn’t quite believe Newterra was going to get us there – until we saw our first sampling results. The Aqip filter has vastly outperformed our previous filter system, and brought us into full compliance. We’re now anticipating installation of an Aqip system at our Tacoma yard.”

Management, Calbag Metals Co., Portland, Oregon

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