



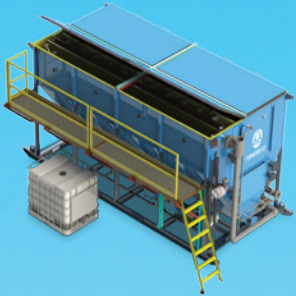
Modular TSS Removal For Mining Operations

Cost-Effective Treatment Systems For Dewatering, Storm & Surface Water



Why newterra

- Compact footprint
- Fast on-site set-up
- Redeployable
- Reliable, effective, automated operation



Customer Need

At mining sites, stormwater, surface water and water from dewatering operations are required to consistently meet low total suspended solids (TSS) limits for compliant discharge or reuse. These water streams can experience seasonal variations that make it difficult to meet and maintain TSS discharge limits during high flow seasons. Reliance on settling or storage ponds can be problematic, as they require significant space, are costly to increase capacity, and struggle to meet limits reliably during peak flow events. Alternatively, circular clarifiers and large scale treatment plants are prohibitively expensive to construct and fabricate in remote areas.

The newterra Solution

newterra designs and manufactures compact, modular TSS Treatment Systems that effectively reduce levels to below discharge requirements. These cost-effective systems combine our advanced **LongBox**[®] clarifier with an automated flocculation system and are available in a wide range of treatment capacities. They offer quick set up with minimal on-site requirements. Fully insulated models can be ordered for use in cold weather climates.

Differentiation

Unlike settling/storage ponds and clarifiers constructed on-site, **newterra's** TSS Removal Systems:

- Achieve compliant effluent discharge by providing effective, reliable removal of Total Suspended Solids to levels below 15 mg/L - even in high flow periods
- Package our proven **LongBox**[®] Clarifier and Pipe Flocculator into a modular, cost-effective treatment solution that is extremely compact and uses a fraction of the space of other approaches
- Arrives fully assembled, pre-tested and require virtually no site preparation – field adjustable effluent skimmers allow quick set-up and levelling on uneven ground
- Are easily transported to remote sites and relocated at the mine as needs change – and can later be redeployed to serve other projects
- Minimize operator involvement through advanced automation, and can be configured with optional SiteLink technology for data logging and the convenience of remote monitoring and system control
- Feature an integrated sludge extraction system in the **LongBox**[®] Clarifier for automated pumping to a settling pond or sludge drying bed
- Includes an insulated lid on the **LongBox**[®]

1.800.420.4056
newterra.com



newterra[®]
clean water. modular solutions. *simple.*[™]



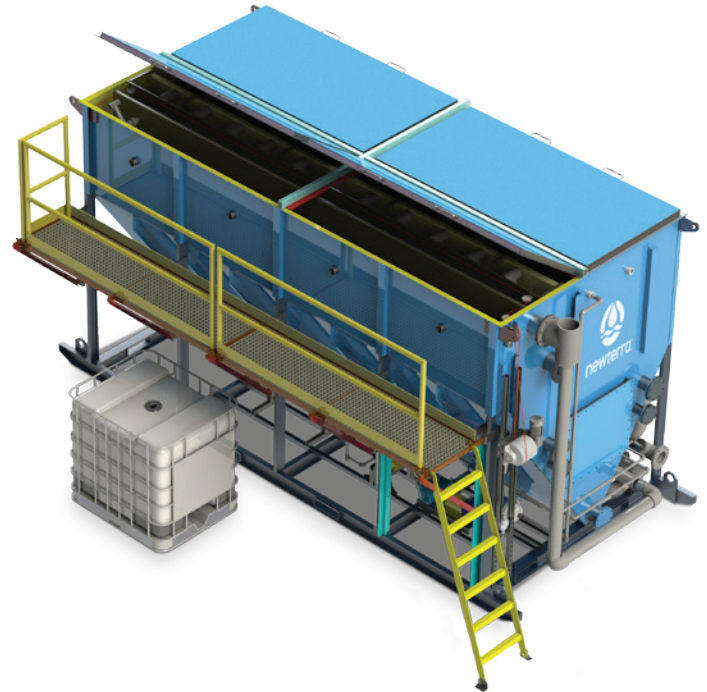
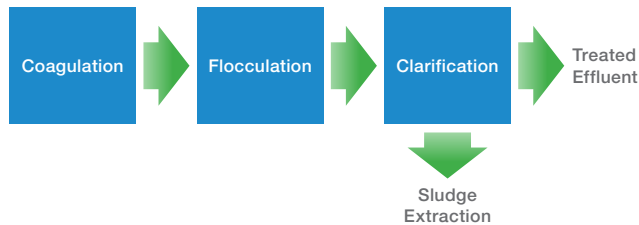
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Specifications

Process

- A coagulant is used to strip fine particulate of charges and collect them into larger coagulated particles
- A flocculent is added and mixed in the pipe flocculator before entering the clarifier
- A slow mixing flocculation zone in the clarifier settles the bulk of large solids
- Finer flocculated solids settle out in a tube settling section of the clarifier
- Supernatant from the clarifier is discharged by gravity
- Sludge accumulated in the bottom of the clarifier is automatically pumped to a settling pond or sludge drying bed



Inputs & Outputs

Target Compounds	
	Effluent Limits*
Settleable Solids (Settleable TSS)	<15 ppm

*Can be jar tested for better performance.

Capacity	
Design Flow Rate	Max Flow Rate
50-1250 gpm (272-6,813 m ³ /d)	2,000 gpm (10,900 m ³ /d)

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