



QUICK WASH™

Phosphorus Extraction and Recovery

What is side stream recycling?

Side stream recycling is a standard operating procedure at many waste water treatment plants. The operational side stream of the plant – including the reject stream from membranes, supernatant liquid from digesters, and the centrate/filtrate return stream from dewatering processes – is fed back to the plant's head works, where it is combined with the plant's normal influent.



Breaking the endless loop of side stream recycling

During typical dewatering processes, a high percentage of the phosphorus present in a waste water treatment plant's solid stream is pulled out and redirected back to the plant's head works via the side stream. This endless loop of phosphorus recycling effectively increases the phosphorus loads that the plant must treat, often resulting in increased phosphorus discharges into receiving waters, and placing plants at risk of violating EPA requirements. These requirements are becoming increasingly more stringent.

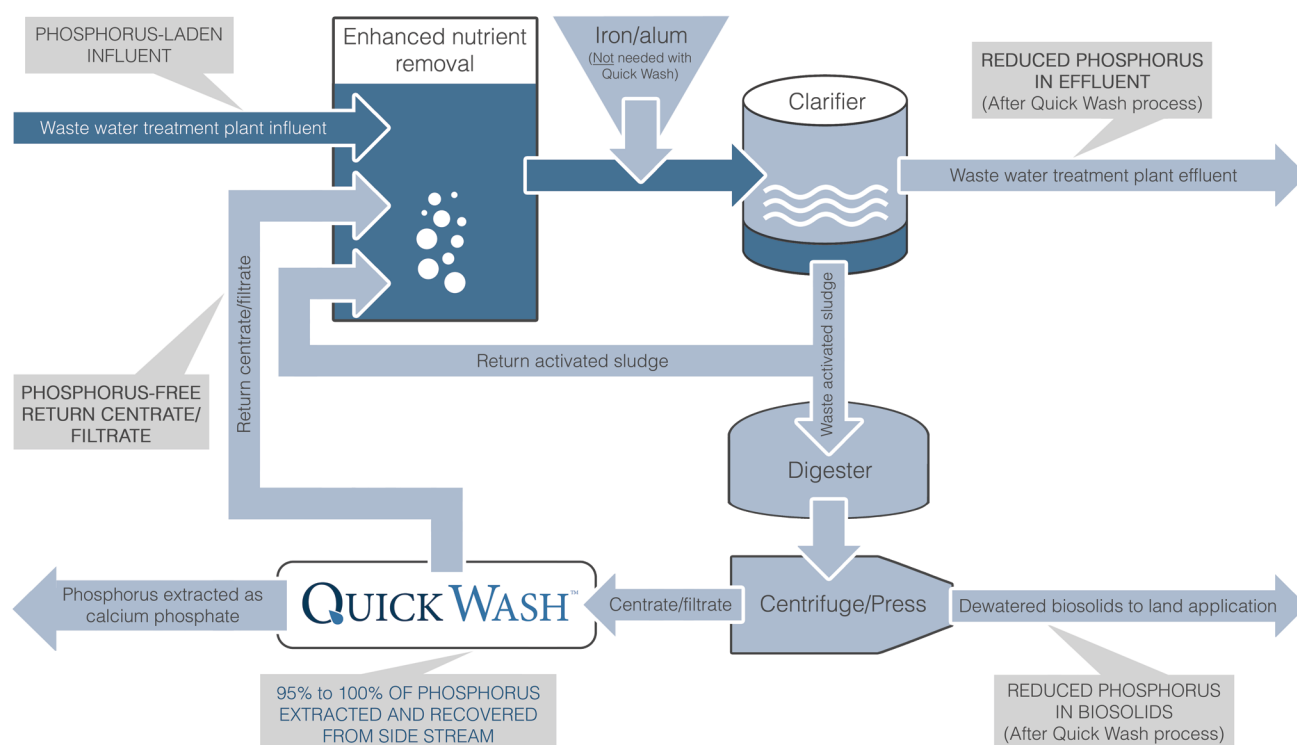
Quick Wash™ breaks the recycling loop by extracting – and recovering – side stream phosphorus.

Benefits of Quick Wash in side streams

- Extracts and recovers more than 95% of the phosphorus found in recycling side streams
- Reduces phosphorus content of liquid and dewatered biosolids, allowing them to be safely land-applied
- Facilitates the ability of treatment plants to meet EPA nutrient TMDL permitting requirements
- Allows for reduction/elimination of metal salts typically used to remove phosphorus from influent streams
- Eliminates struvite scaling in pipes (*pic*)
- Reduces amount of wet and dry biosolids for disposal
- Increases operational efficiency of treatment plants



Quick Wash treatment of side streams



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