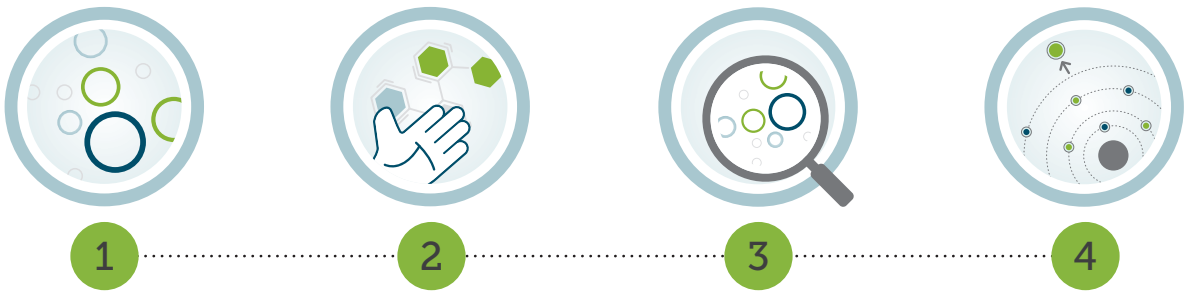
One to Four Step Water Reclamation Method

Reclamation applications requiring use of other physico-chemical processes (precipitation, adsorption, oxidation or disinfection) for address of soluble constituents (salt-complexes, carbohydrates...) or micro-organisms (bacteria, e-coli...) also directly benefit from Baleen micro-screening. Examples include heavy-metal precipitate separation and ion-exchange resin recovery for treatment-plant footprint-savings greater than 95%. **Consequently, the best-available-technology approach to water reclamation can be simply defined by a 'One to Four Step Water Reclamation Method' described herein as follows;**



1. Visible to sub-visible matter recovery by Baleen micro-screening, and/or
2. Physico-chemical treatment, to facilitate
3. Sub-visible to colloidal matter recovery by Baleen micro-screening, followed by
4. Oxidation or disinfection of residual (COD, Bacteria) constituency.

In cases involving high BOD (of both suspended and soluble) constituency, a complete Four Step process is successful for reclamation of even the most troublesome of effluents, more specifically; micro- screening to less than 100-microns (for removal of particulate and non- emulsified grease, to out-perform any primary clarifier) directly followed by flocculation and repeat micro-screening to less than 50-microns (for removal of pin-floc and emulsified grease, to outperform any flotation plant) followed by oxidation (for increasing effluent biodegradability and reducing COD) prior to re-use.

Baleen filtration systems are modular in design, and may be applied for applications as small as 1kL per hour and are equally scalable for the very large beyond 1,000kL per hour.

Pioneering applications include reclamation of conventional filter backwash streams and marine outfall clean-up prior to discharge for improved environmental footprint.