**PROTEUS** is a high-rate filtration system. Using proprietary floating media, it effectively removes suspended solids through physical filtration. As a replacement for primary clarifiers, **PROTEUS** can shrink existing process footprints and unlock hidden capacity while increasing carbon capture and digester gas production.

**Unlock Space Inside Your Facility!**

**PROTEUS** shrinks traditional process footprints, making room for new facilities, upgraded treatment, and more.

**REFERENCE:** Jungnang WRRF | Seoul, Korea
250,000 m$^3$/d process train (66 MGD)

**PROTEUS** Primary Filtration reclaimed 80% of primary clarifier footprint.

**PROTEUS** Secondary BNR Biofilter trains added total nitrogen treatment while recovering 50% of aeration basin footprints at the same time.

**Less Aeration, More Biogas!**

CARBON DIVERSION THROUGH PRIMARY TSS CAPTURE

Grab more solids upstream of aeration basins & send them to digestors for maximum energy efficiency.

- 20-30% **INCREASE** in gas production
- 10-25% **INCREASE** in secondary treatment capacity
- 10-25% **REDUCTION** in aeration energy

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**Carbon Diversion Through Primary TSS Capture**

- 20-30% **Increase** in gas production
- 10-25% **Increase** in secondary treatment capacity
- 10-25% **Reduction** in aeration energy
PROTEUS versus primary clarifier for a 100,000 m³/day (26.4 MGD) treatment plant

<table>
<thead>
<tr>
<th></th>
<th>PROTEUS Primary Filtration</th>
<th>Conventional Primary Clarifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Cost (USD)</td>
<td>$10M</td>
<td>$10M-12M</td>
</tr>
<tr>
<td>Per Volume (USD)</td>
<td>$100/m³ ($0.38/gal)</td>
<td>$100-120/m³ ($0.38-0.46/gal)</td>
</tr>
<tr>
<td>Detention Time</td>
<td>10 min</td>
<td>120 min</td>
</tr>
<tr>
<td>Overflow Rate (m³/m²/d)</td>
<td>120</td>
<td>40</td>
</tr>
<tr>
<td>Footprint (m²/m³d)</td>
<td>0.009 [35%]</td>
<td>0.025 [100%]</td>
</tr>
</tbody>
</table>

The information provided in this brochure contains merely general descriptions or characteristics of performance which in actual case of use do not always apply as described or which may change as a result of further development of the products. An obligation to provide the respective characteristics shall only exist if expressly agreed in the terms of contract.

If you’d like to learn more, please contact JL@BKT21.COM or call (714) 578-0676 x112.

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