

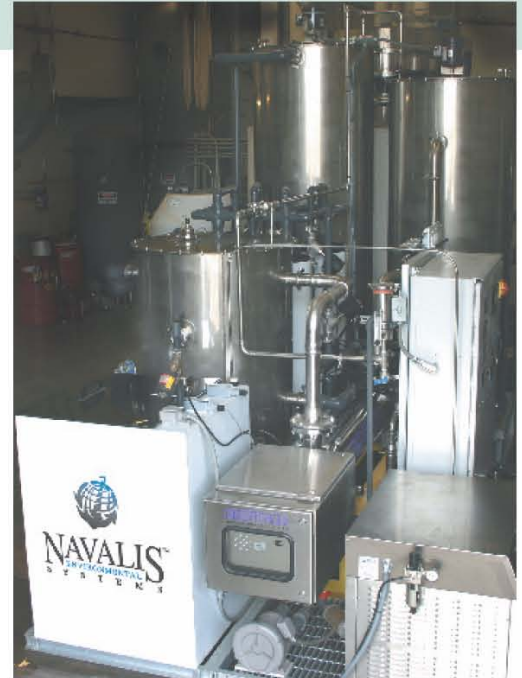


Navalis Optimum Wastewater Treatment Systems GRAY WATER

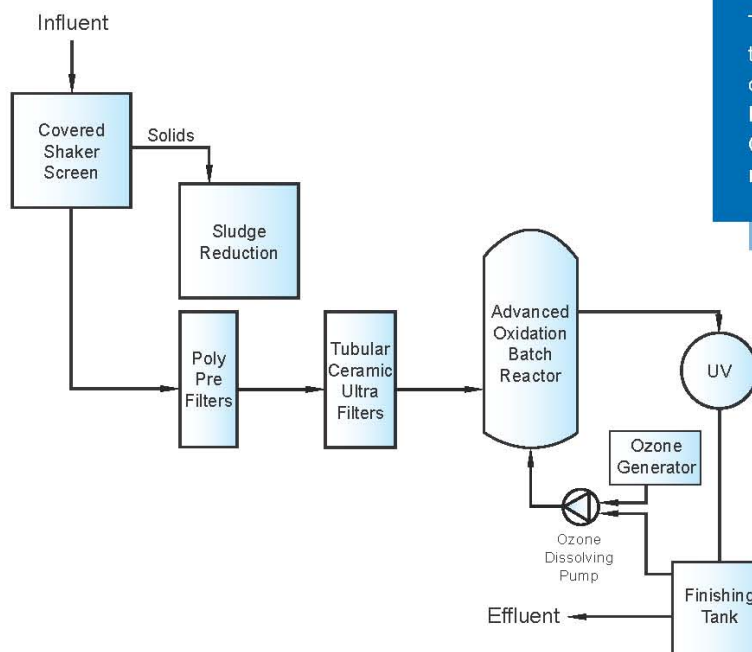
The Navalis Design and Philosophy

The patent pending **Navalis Poseidon® Graywater Treatment System** incorporates design features based on a patented commercially successful land based ultra-filtration treatment system enhanced with the advantages of advanced oxidation using ozone and disinfection through the use of ultra violet light. **Navalis Poseidon® Graywater Systems** are designed to enable reuse of up to 85% of graywater treated. Navalis optimum wastewater treatment systems:

- Are small in footprint
- Produce dischargeable effluent minutes after startup
- Require virtually no chemical additions
- Are simple to operate
- No biological sludge produced
- Are constructed of the most durable components
- Produce a high quality effluent exceeding most stringent effluent requirements day-after-day



The Navalis Poseidon® Graywater System (front view)



This diagram traces the path of the input/output through the Navalis Poseidon® Graywater Treatment System*

*Designed and built in the U.S.A. in conformance with requirements of ASTM F2363-04, Standard Specification for United States Coast Guard Type II or IMO MARPOL 73/78 Annex IV Marine Sanitation Devices (Flow Through Treatment).

Authorised Distributor:-

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What Are Advantages to Reusing Graywater?

- Reduced fresh water making requirement/consumption
- Reduced Diesel NO_x Emissions when used to emulsify fuel
- Reduced plant operating costs
 - Auxiliary Plant - reduced Freshwater Production required
- Reduced tankage requirement
 - Propulsion Plant reduced costs – reduced displacement
- Public relations advantage with regard to protection of the oceans and environment



The Navalys Poseidon® Graywater System (back view)

Point	BOD ₅ (mg/l)	COD (mg/l)	TSS (mg/l)	Turbidity (NTU)	Coliform (CFU/100 ml)	pH
Influent	439	583	54	75	>1,600	10.5
Effluent	8	26	BD	<1	BD	7.5

BD = Below Detect

This chart provides nominal constituent strength values as tested from the Navalys Poseidon® Graywater System. Ask your Navalys representative for current values and details.



Navalis Graywater Systems Will Meet or Exceed Industry Standards

- Exceeds Alaska Requirements (33CFR159 Subpart E)
- Exceeds California Title 22 Water Reuse Standards
- Designed to reclaim up to 85% of ships generated Graywater

Capacity	Footprint	Dry Weight	Wet Weight	Power (kW)	Annual O&S ^t (US \$)
10 gpm (55 m ³ /day)	46 ft ² (4.3 m ²)	3,560 lbs (1,620 kg)	8,910 lbs (4,040 kg)	12.9	~ \$7,500
25 gpm (137 m ³ /day)	54 ft ² (5.0 m ²)	4,900 lbs (2,230 kg)	12,250 lbs (5,560 kg)	13.9	~ \$14,000
100 gpm (545 m ³ /day)	125 ft ² (11.6 m ²)	11,300 lbs (5,130 kg)	26,500 lbs (12,100 kg)	46.9	~ \$23,400
150 gpm (818 m ³ /day)	138 ft ² (12.8 m ²)	14,600 lbs (6,600 kg)	35,200 lbs (16,100 kg)	59.5	~ \$33,300
225 gpm (1,227 m ³ /day)	180 ft ² (16.7 m ²)	17,300 lbs (7,850 kg)	45,900 lbs (20,900 kg)	80.0	~ \$50,600

O&S^t (Operating & Support) = Net Present Value (estimated using 20-year Service Life at 5% Discount Rate) of all prescribed maintenance, parts, component replacement and consumables.

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