



NextGen Zero Liquid Discharge System

With Septigen™ Technology

HOW IT WORKS

The septic system that treats residential wastewater and turns it into a clean mist.

1. Simultaneous biological aerobic and anoxic treatment of the organic material breaks down solids and treats nitrogen and phosphorous using biomedica and high-capacity aeration technology.
2. The membrane separation phase treats water for nitrogen and phosphorous.
3. Ozone disinfection technology is used to ensure treated water meets surface discharge and reuse standards.
4. Treated water is flowed into the zero discharge holding tank, then pumped through a high pressure nozzle, creating a water mist with average drop diameter of <10 microns.
5. The mist is injected in a flow of ambient air, amplified by a factor of 10. The water mist flows out of the zero liquid discharge unit at high velocity, ejecting the mist and air to a height of 30-50', allowing the mist to evaporate into the air.

SYSTEM ADVANTAGES

Provides septic options for:

- Land with poor percolation rates
- Lots with insufficient drain field space
- Situations where surface discharge is not allowable or available
- Land located near bodies of water resulting in sandy soil

Small footprint

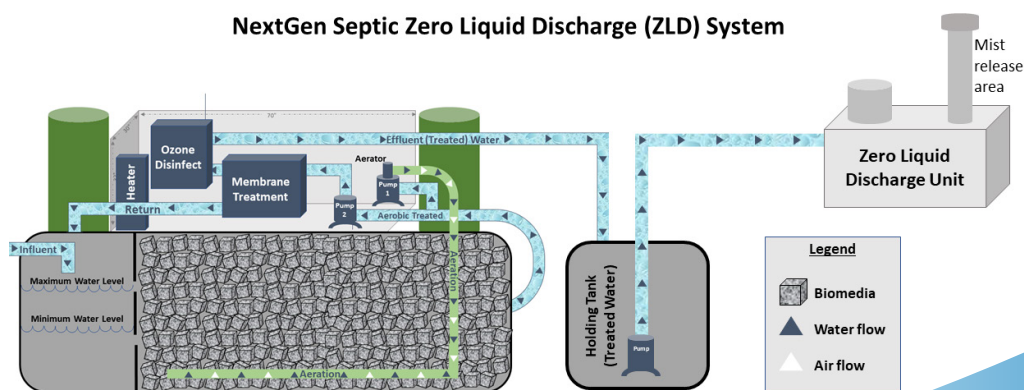
- No new drain field required
- Primary treatment unit installs within tank footprint.
- Compact Zero Liquid Discharge Unit roughly same size as typical HVAC unit.

Easy to install and maintain

- Ships fully assembled
- Estimated electrical usage is <4kW-h/day (less than \$200/year)
- Self-cleaning membrane
- No-hassle ozone treatment
- Quiet operation

Eco-friendly

- Removes nitrates and phosphorous
- Protects local groundwater





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FEATURES AND BENEFITS

- Treated water exceeds standards of a wastewater treatment plant (national certification pending).
- Removes up to 99% of nitrogen and phosphorous.
- Works with most residential septic tanks
- No complicated tank installation, backfill or water filling procedures required—can be installed with 6" to 48" of cover.
- Technology operated by three 110V, single phase, submersible pumps (1.0 HP AND 0.5 HP), which are operated intermittently, based on demand.
- Self-cleaning membrane filters out solids, viruses, bacteria and other organic contaminants.
- Ozone gas unit disinfects water and, unlike UV disinfection, does not require bulb replacement or other routine maintenance.
- Zero liquid discharge misting system creates water droplets with average diameter of <10 microns, thereby allowing for effective water evaporation.

CLEAN WATER OUTPUT

Treated water meets or exceeds water quality standards for graywater treatment.

Parameter		Influent	Effluent: Standard Septic	Effluent: NextGen Septic	Graywater Standard
cBOD ₅	mg/L	220	100-350	<9	130-180
Turbidity	NTU	68	47	0.02	50-100
Total Organic Carbon	mg/L	178	123	3.7	50-100
Total Nitrogen	mg/L	32	25	<4.5	3-5
Total Phosphorous	mg/L	10-27	13	<1	1-3
TSS	mg/L	69	28	Undetectable	80-160
Fecal Coliform	CFU/100 mL	7.4×10^6	3.7×10^6	<10	<10,000

NEXTGEN ZERO LIQUID DISCHARGE SYSTEM INCLUDES:

- Septigen Treatment Unit (70" x 30" x 32") installs between risers of tank or above ground;
- ZLD Treatment Unit installs above ground;
- Submersible pump (installs into holding tank);
- Holding tank: Infiltrator Technologies IM-540, polypropelene, injection-molded tank.

CONTACT US TODAY
nextgenseptic.com



NextGen Septic, LLC
1776 Mentor Avenue, STE 400E
Cincinnati, OH 45212