



# Discover The Benefits of Zero Liquid Discharge Technologies



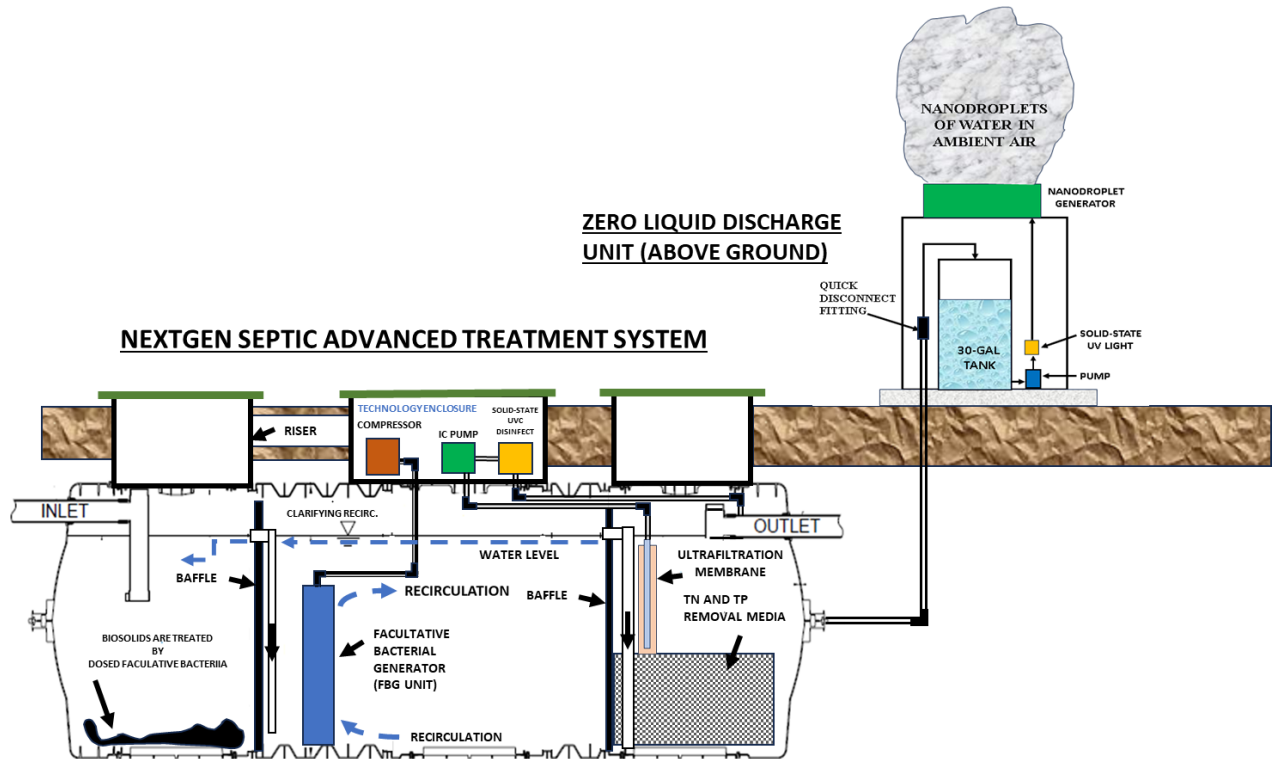
## NextGen Septic Zero Liquid Discharge (ZLD)



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# NextGen Zero Liquid Discharge System



NOTE: For parameters of the ATS-350 treatment system refer to the ATS-350 Reference Guide.

Site Image of the ZLD in Action  
System Installed in Cave Creek, AZ



## System Parameters

Parameter	Value
Tank Volume	100 gallons
Footprint of System	548 in x 48 in
Blower Capacity	400 cfm
Total Power	2.5 HP



## NEXTGEN SEPTIC

# HOW IT WORKS

The septic system treats residential wastewater and produces an exhaust of ambient air with 10-30 micron-sized treated water droplets that rapidly evaporate, forming water vapor.

1. Wastewater from a single-family house is first treated using NextGen Septic's Advanced Treatment System (ATS-350). (Refer to the ATS-350 Reference Guide)
2. The treated effluent from the ATS-350 is further purified using an additional ultrafiltration and UVC disinfection stage. The liquid is vaporized to 10-30 micron-sized water droplets
3. The water droplets have a very high surface area and rapidly evaporate in the atmosphere at ambient humidity levels up to 90%
4. The water droplets and ambient airflow exhaust through a short stack at a high velocity, enabling the droplets to evaporate before they reach ground level surface or freeze at sub-zero ambient temperatures
5. The Zero Liquid Discharge Treatment System does not discharge water and does not require costly soil drain fields or land use not suited to accommodate a suitable drain field



## NEXTGEN SEPTIC

# NextGen Zero Liquid Discharge System

## SYSTEM ADVANTAGES

### Provides Wastewater Treatment for:

- Site conditions that have insufficient land, soils that don't percolate, have a restricted groundwater separation requirement, located near a well and/or sensitive water body that does not accept any treated wastewater discharge.
- Homeowners and developers looking for an eco-friendly septic solution.
- Compact design with an above-ground footprint of 48 in x 48 in.

### Easy to install and Operate

- The Advanced Treatment System is installed below ground, but the Zero Liquid Discharge system is installed above ground on a concrete pad
- Wireless transmission of faults and water quality in water to a phone or website

### Cost Effective

- Cost of the system is reasonable when compared to installation of a traditional treatment system that requires a soil drain field, with subsequent clogging of the soil due to the growth of biomat
- Zero Liquid Discharge System has operated in Northern Kentucky for over 5 year with the homeowner submitting a testimonial for the system
- Other successful installations, inspected and field-tested in Arizona and North Carolina



## NEXTGEN SEPTIC

# NextGen Zero Liquid Discharge System

## FIELD TESTED PERFORMANCE DATA

EFFLUENT PARAMETERS FOR TREATED WATER DISCHARGE FROM SINGLE FAMILY HOUSES (NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM)			TREATED WATER PARAMETERS BEFORE BEING EVAPORATED IN THE ZERO LIQUID DISCHARGE PROCESS
Parameter	Monthly Average	Daily Maximum	
Biological Oxygen Demand (BOD) – 5 day, 20°C	30.0 mg/L	45.0 mg/L	< 1 mg/L
Total Suspended Solids (TSS)	30.0 mg/L	45.0 mg/L	Non-Detect
Fecal Coliform	200/100 mL	400/100 mL	Non-Detect
Total Residual Chlorine			No chlorine is used. Disinfection using solid-state UV light

- The above table shows the average effluent water quality testing results utilizing unaltered raw wastewater from multiple residences as an influent to the ATS-350 and ZLD (Zero Liquid Discharge) option at multiple installations with dates ranging from 2018 through 2022. Effluent samples were taken at different times of the year.
- The field-tests were conducted by ELAP-accredited water quality testing organizations with designations for NPW and PFAS testing in the State of California, collected and analyzed the chain of custody-controlled samples.
- The average daily flow for these households ranged from 400 to 700 GPD. Detailed reports, along with AQMD input on the permitting of the ZLD option are available in our compliance data.