

2018 Commercial Passenger Vessels Discharge Status and Wastewater Treatment

Vessel Operator	Vessel Name	Total Persons on Board ¹	Number of Port Calls ²	Blackwater (BW) Treatment System Manufacturer	Graywater (GW) Treatment System Manufacturer	Approved for Discharge in Washington ³ ≥ 1nm from berth and ≥ 6 knots		Approved for Discharge in Washington ³ continuously		Type of Treatment System ⁴
						BW	GW	BW	GW	
CLIA - North West & Canada Cruise Association Vessels										
Carnival Cruise Lines	CARNIVAL LEGEND	3054	17	Triton-Format	None	NO	NO	NO	NO	Traditional MSD - Triton-Format - aeration, settling, chlorination
Celebrity Cruises	CELEBRITY INFINITY	3169	2	Zenon	Mixed with BW	NO	NO	NO	NO	AWTS: Zenon is a biological reactor and ultrafiltration system.
Celebrity Cruises	CELEBRITY SOLSTICE	4102	18	Kruger/Wabaag	Mixed with BW	NO	NO	NO	NO	AWTS: Kruger/Wabag is a biological reactor and ultrafiltration system
Crystal Cruises	CRYSTAL SYMPHONY	1550	1	Triton-Format	None	NO	NO	NO	NO	Traditional MSD - Triton-Format - aeration, settling, chlorination
Holland America	AMSTERDAM	2027	18	Traditional MSD	None	NO	NO	NO	NO	Traditional MSD - aeration, settling, chlorination
Holland America	EURODAM	3033	22	Hamworthy Bioreactor	Most Mixed with BW	NO	NO	NO	NO	AWTS: Hamworthy is a biological reactor and ultrafiltration system
Holland America	NIEUW AMSTERDAM	3045	1			NO	NO	NO	NO	
Holland America	ZAANDAM	2047	11	Zenon	Mixed with BW	NO	NO	NO	NO	AWTS: Zenon is a biological reactor and ultrafiltration system.
Norwegian Cruise Lines	NORWEGIAN BLISS	6698	19	Scanship	Mixed with BW	NO	NO	NO	NO	AWTS: Scanship is a biological reactor flocculation/flotation & UV disinfection system
Norwegian Cruise Lines	NORWEGIAN JEWEL	3476	1	Scanship	Mixed with BW	NO	NO	NO	NO	AWTS: Scanship is a biological reactor flocculation/flotation & UV disinfection system
Norwegian Cruise Lines	NORWEGIAN PEARL	3493	24	Scanship	Mixed with BW	NO	NO	NO	NO	AWTS: Scanship is a biological reactor flocculation/flotation & UV disinfection system
Norwegian Cruise Lines	NORWEGIAN SUN	2842	1	Scanship	Mixed with BW	NO	NO	NO	NO	AWTS: Scanship is a biological reactor flocculation/flotation & UV disinfection system
Oceania	REGATTA	1210	10	Triton	Triton (some)	NO	NO	NO	NO	AWTS: Triton Water MBR is a biological reactor and ultrafiltration system
Princess Cruise Line	EMERALD PRINCESS	4314	19	Traditional MSD	None	NO	NO	NO	NO	Traditional MSD - aeration, settling, chlorination
Princess Cruise Line	GRAND PRINCESS	4200	2	Hamworthy Bioreactor		NO	NO	NO	NO	AWTS: Hamworthy is a biological reactor and ultrafiltration system
Princess Cruise Line	RUBY PRINCESS	4280	23	Hamworthy Bioreactor	Accommodations mixed with BW	NO	NO	NO	NO	AWTS: Hamworthy is a biological reactor and ultrafiltration system
Royal Caribbean	EXPLORER OF THE SEAS	5209	23	Scanship	Mixed with BW	NO	NO	NO	NO	AWTS: Scanship is a biological reactor flocculation/flotation & UV disinfection system
Seabourn Cruise Line	SEABOURN SOJOURN	800	1	Hamworthy Bioreactor	Mixed with BW	NO	NO	NO	NO	AWTS: Hamworthy is a biological reactor and ultrafiltration system
Windstar	STAR LEGEND	372	1	Rochem UF WWTS	Mixed with BW	NO	NO	NO	NO	WWTS: Rochem UF is a biological reactor and ultrafiltration system
NON CLIA - North West & Canada Cruise Association Vessels⁵										
Japan Grace	OCEAN DREAM		1	Unknown	Unknown	NO	NO	NO	NO	Unknown

Total Calls: 215

¹Numbers come from the Alaska Discharge Status Report and information gathered from the cruise industry and research. Most values include both passengers and crew. Actual number of passenger aboard varies dependent upon sales.

²Number of Port calls comes for Port of Seattle Cruise Schedule for 2018

³Washington waters refers to the "waters subject to this Memorandum of Understanding (MOU)" as defined in the MOU

⁴Information on the types of treatment systems comes from inspections, the Alaska Discharge Status Report and information from the cruise industry updated to the best of our knowledge.

⁵Non Cruise Lines International Association North West & Canada vessels are not party to the MOU and the requirements of the MOU.

⁶Unknown refers to the fact that the type of treatment system has not been confirmed during an inspection or verified.