

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	<i>CARNIVAL LEGEND</i>	3054	17	Triton-Format	None	NO	NO	NO	NO	Traditional MSD - Triton-Format - aeration, settling, chlorination
Celebrity Cruises	<i>CELEBRITY INFINITY</i>	3169	2	Zenon	Mixed with BW	NO	NO	NO	NO	AWTS: Zenon is a biological reactor and ultrafiltration system.
Celebrity Cruises	<i>CELEBRITY SOLSTICE</i>	4102	18	Kruger/Wabaag	Mixed with BW	NO	NO	NO	NO	AWTS: Kruger/Wabag is a biological reactor and ultrafiltration system
Crystal Cruises	<i>CRYSTAL SYMPHONY</i>	1550	1	Triton-Format	None	NO	NO	NO	NO	Traditional MSD - Triton-Format - aeration, settling, chlorination
Holland America	<i>AMSTERDAM</i>	2027	18	Traditional MSD	None	NO	NO	NO	NO	Traditional MSD - aeration, settling, chlorination
Holland America	<i>EURODAM</i>	3033	22	Hamworthy Bioreactor	Most Mixed with BW	NO	NO	NO	NO	AWTS: Hamworthy is a biological reactor and ultrafiltration system
Holland America	<i>NIEUW AMSTERDAM</i>	3045	1			NO	NO	NO	NO	
Holland America	<i>ZAANDAM</i>	2047	11	Zenon	Mixed with BW	NO	NO	NO	NO	AWTS: Zenon is a biological reactor and ultrafiltration system.
Norwegian Cruise Lines	<i>NORWEGIAN BLISS</i>	6698	19	Scanship	Mixed with BW	NO	NO	NO	NO	AWTS: Scanship is a biological reactor flocculation/flotation & UV disinfection system
Norwegian Cruise Lines	<i>NORWEGIAN JEWEL</i>	3476	1	Scanship	Mixed with BW	NO	NO	NO	NO	AWTS: Scanship is a biological reactor flocculation/flotation & UV disinfection system
Norwegian Cruise Lines	<i>NORWEGIAN PEARL</i>	3493	24	Scanship	Mixed with BW	NO	NO	NO	NO	AWTS: Scanship is a biological reactor flocculation/flotation & UV disinfection system
Norwegian Cruise Lines	<i>NORWEGIAN SUN</i>	2842	1	Scanship	Mixed with BW	NO	NO	NO	NO	AWTS: Scanship is a biological reactor flocculation/flotation & UV disinfection system
Oceania	<i>REGATTA</i>	1210	10	Triton	Triton (some)	NO	NO	NO	NO	AWTS: Triton Water MBR is a biological reactor and ultrafiltration system
Princess Cruise Line	<i>EMERALD PRINCESS</i>	4314	19	Traditional MSD	None	NO	NO	NO	NO	Traditional MSD - aeration, settling, chlorination
Princess Cruise Line	<i>GRAND PRINCESS</i>	4200	2	Hamworthy Bioreactor		NO	NO	NO	NO	AWTS: Hamworthy is a biological reactor and ultrafiltration system
Princess Cruise Line	<i>RUBY PRINCESS</i>	4280	23	Hamworthy Bioreactor	Accomodations mixed with BW	NO	NO	NO	NO	AWTS: Hamworthy is a biological reactor and ultrafiltration system
Royal Caribbean	<i>EXPLORER OF THE SEAS</i>	5209	23	Scanship	Mixed with BW	NO	NO	NO	NO	AWTS: Scanship is a biological reactor flocculation/flotation & UV disinfection system
Seabourn Cruise Line	<i>SEABOURN SOJOURN</i>	800	1	Hamworthy Bioreactor	Mixed with BW	NO	NO	NO	NO	AWTS: Hamworthy is a biological reactor and ultrafiltration system
Windstar	<i>STAR LEGEND</i>	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	<i>OCEAN DREAM</i>		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.