

2012 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	
North West & Canada Cruise Association Vessels										
Carnival Cruise Lines	CARNIVAL SPIRIT	3434	19	Traditional MSD - Triton	None	NO	NO	NO	NO	Traditional MSD - aeration, settling, chlorination
Celebrity Cruises	CENTURY	2651	1	unknown ⁶	unknown	NO	NO	NO	NO	unknown
Celebrity Cruises	INFINITY	3379	20	Zenon	Mixed with BW	NO	NO	NO	NO	AWTS: Zenon is a biological reactor and ultrafiltration system (defective)
Disney	DISNEY WONDER	3754	15	unknown	unknown	NO	NO	NO	NO	unknown
Holland America	AMSTERDAM	2027	12	Traditional MSD	None	NO	NO	NO	NO	Traditional MSD - aeration, settling, chlorination
Holland America	OOSTERDAM	2716	22	Rochem Bio-filtration	None	NO	NO	NO	NO	AWTS: Rochem is a reverse osmosis or ultrafiltration system.
Holland America	WESTERDAM	2716	21	Rochem Bio-filtration	none	NO	NO	NO	NO	AWTS: Rochem is a reverse osmosis or ultrafiltration system.
Norwegian Cruise Lines	NORWEGIAN JEWEL	3476	17	unknown	unknown	NO	NO	NO	NO	unknown
Norwegian Cruise Lines	NORWEGIAN PEARL	3494	19	Scanship	Mixed with BW	NO	NO	NO	NO	AWTS: Scanship is a biological reactor flocculation/flotation & UV disinfection system
Princess Cruise Line	GOLDEN PRINCESS	3658	18	Hamworthy Bioreactor	Accommodations mixed with BW	NO	NO	NO	NO	AWTS: Hamworthy is a biological reactor and ultrafiltration system
Princess Cruise Line	SAPPHIRE PRINCESS	3916	1	Hamworthy Bioreactor	Accommodations mixed with BW	NO	NO	NO	NO	AWTS: Hamworthy is a biological reactor and ultrafiltration system
Princess Cruise Line	STAR PRINCESS	3658	19	Hamworthy Bioreactor	Accommodations mixed with BW	NO	NO	NO	NO	AWTS: Hamworthy is a biological reactor and ultrafiltration system
Royal Caribbean	RHAPSODY OF THE SEAS	3381	17	Hamman/NAVALIS	NAVALIS (under-going start-up)	NO	NO	NO	NO	Traditional MSD - aeration, settling, chlorination + NAVALIS AWTS under-going start-up; biological, ultrafiltration with oxidation
NON North West & Canada Cruise Association Vessels⁵										
Resindensea	THE WORLD	500	1	unknown	unknown	NO	NO	NO	NO	unknown

Total Calls: 202

¹Numbers come from the Alaska Discharge Status Report and information gathered from the cruise industry. 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 2012

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 the Alaska Discharge Status Report and information from the cruise industry.

⁵Non Northwest CruiseShip Association 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.