

2020 Large Cruise Ship Wastewater Sampling Report

COMMERCIAL PASSENGER VESSEL ENVIRONMENTAL
COMPLIANCE (CPVEC) PROGRAM



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Revision 0



Alaska Department of Environmental Conservation

Abbreviations:

AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
AMHS	Alaska Marine Highway System (State Ferry System)
AS	Alaska Statutes
AWTS	Advanced Wastewater Treatment Systems
BMP	Best Management Practices
BOD	Biological Oxygen Demand (sampled parameter)
CLIA	Cruise Lines International Association
COD	Chemical Oxygen Demand (sampled parameter)
FC	Fecal Coliform (sampled parameter)
GW	Graywater
MSD	Marine Sanitation Device
ND	Non-detect value
QAPP	Quality Assurance Project Plan
SC	Specific Conductance (sampled parameter)
LCPV	Large Commercial Passenger Vessel
TSS	Total Suspended Solids (sampled parameter)
VSSP	Vessel Specific Sampling Plan

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REVISION NOTES

Revision 0 | Revisions not applicable

INTRODUCTION

This wastewater sampling report is prepared annually by the Alaska Department of Environmental Conservation (ADEC or the Department) Division of Water Commercial Passenger Vessel Environmental Compliance Program (CPVEC or the Program). This annual report summarizes wastewater sampling results for large commercial passenger vessels (LCPVs or cruise ships)¹ discharging in Alaska waters² for the 2020 season.

For 2020, forty-two (42) large cruise ships registered to operate in Alaska waters. Of these forty-two (42) LCPVs, thirty (30) LCPVs planned to discharge treated wastewater in Alaska waters. Due to the impacts of COVID-19, and circumstances beyond the control of the State of Alaska or the cruise industry, all LCPV operators cancelled their entire 2020 Alaska itineraries. Accordingly, no LCPVs entered Alaska waters. As a result, ADEC CPVEC did not issued new discharge authorizations under 2013DB0004 (2014 GP) to discharge treated wastewater and no 2020 vessel wastewater discharge sampling data was collected.

Sample result data for cruise ships has been collected by DEC since 2000. Reports for prior years can be found on the CPVEC Program's report webpage at: <https://dec.alaska.gov/water/cruise-ships/cruise-reports/>.

Table 1. includes an overview of the LCPVs that registered in 2020, showing the discharge status and passenger capacity as planned prior to the season. Please note that all LCPVs cancelled their entire itineraries and ***no voyages occurred for the 2020 Alaska cruise ship season.***

¹ LCPVs have overnight accommodations (lower berths) for 250 or more passengers.

² Alaska water extends 3 miles from the coastline and includes the Alexander Archipelago.

Table 1. 2020 Large Cruise Ship Voyage and Passenger Counts

	Vessel Operator	Vessel Name	Passenger Capacity [1]	Crew Capacity	Planned Voyages [2]	Annual Passenger capacity [3]
1	Carnival Cruise Lines	Carnival Miracle ND	2124	930	10	21,240
2	Carnival Cruise Lines	Carnival Spirit ND	2124	961	22	46,728
3	Celebrity Cruises	Celebrity Eclipse ND	3148	1270	20	62,960
4	Celebrity Cruises	Celebrity Millennium ND	2593	930	17	44,081
5	Celebrity Cruises	Celebrity Solstice ND	3148	1250	17	53,516
6	Cunard	Queen Elizabeth	2081	1000	10	20,810
7	Disney	Disney Wonder	2834	920	17	48,178
8	Holland America	Eurodam	2106	929	21	44,226
9	Holland America	Koningsdam	2650	929	21	55,650
10	Holland America	Maasdam	1258	580	11	13,838
11	Holland America	Noordam ND	1916	800	21	40,236
12	Holland America	Oosterdam	1964	800	21	41,244
13	Holland America	Volendam	1432	647	22	31,504
14	Holland America	Westerdam	1964	800	20	39,280
15	Hurtigruten	Roald Amundson ND	530	151	2	1,060
16	Norwegian Cruise Line	Norwegian Bliss	3500	1706	22	77,000
17	Norwegian Cruise Line	Norwegian Jewel	2376	1100	18	42,768
18	Norwegian Cruise Line	Norwegian Joy	3500	1706	23	80,500
19	Norwegian Cruise Line	Norwegian Sun	1936	906	14	27,104
20	Oceania	Insignia	777	373	1	777
21	Oceania	Regatta	777	373	15	11,655
22	Ponant	L' Austral ND	264	136	1	264
23	Ponant	Le Boreal ND	264	136	2	528
24	Ponant	Le Soleal	264	136	8	2,112
25	Princess Cruise Line	Coral Princess	1970	900	19	37,430
26	Princess Cruise Line	Emerald Princess	3114	1200	19	59,166
27	Princess Cruise Line	Golden Princess	2600	1060	8	20,800
28	Princess Cruise Line	Grand Princess	2590	1100	19	49,210
29	Princess Cruise Line	Pacific Princess	670	375	17	11,390
30	Princess Cruise Line	Royal Princess	3600	1378	19	68,400
31	Princess Cruise Line	Ruby Princess	3080	1201	20	61,600
32	Princess Cruise Line	Star Princess	3100	1150	14	43,400
33	Princess Cruise Line	Sun Princess ND	2010	924	1	2,010
34	Royal Caribbean Cruises	Ovation of the Seas	4180	1551	17	71,060
35	Royal Caribbean Cruises	Radiance of the Seas ND	2502	859	17	42,534
36	Royal Caribbean Cruises	Serenade of the Seas ND	2702	891	15	40,530
37	Seabourn	Sojourn	450	338	16	7,200
38	Seven Seas Cruises	Seven Seas Mariner	769	431	16	12,304
39	Silver Seas	Silver Cloud	254	222	3	762
40	Silver Seas	Silver Muse	596	417	18	10,728
41	Viking	Viking Orion	954	499	10	9,540
42	Windstar	Star Breeze	312	164	6	1,872
				Totals [2]	610	1,357,195

[1] Based on the number of lower berths. Actual number of passengers aboard varies.

[2] AK Season cancelled due to COVID-19 and **no** voyages completed. Table shows voyage count in 2020 Registration.

[3] Assumes full capacity on every voyage.

Vessels highlighted in gray (and indicated by 'ND') registered as non-discharge vessels for the 2020 Season.

METHODS

Wastewater sampling consists of grab samples taken from a sample port prior to discharge. The 2014 General Permit and the most recent ADEC approved Cruise Line International Association Alaska Quality Assurance Project Plan for Sampling and Analysis of Treated Sewage and Graywater from Commercial Passenger Vessels (QAPP) detail the number of required samples and what parameters are required to be analyzed. Sampling is required of all vessels discharging to Alaska waters, and may be conducted either underway or while the cruise ship is stationary (e.g., docked in port).

Samples must be taken according to the requirements in the most recent ADEC approved QAPP. The QAPP specifies minimum requirements for sampling and analysis of wastewater. It includes a list of approved methods, sample collection requirements, and laboratory analysis requirements. Samplers must follow the QAPP and the Vessel Specific Sampling Plan (VSSP) for each cruise ship when collecting a sample.

RESULTS

Due to the fleetwide cancellations of LCPVs and no sailings in AK waters, there were no wastewater samples collected in 2020.

CONCLUSION

Due to the inability to sample in 2020, no conclusions are warranted.

ONLINE RESOURCES

Alaska Department of Environmental Conservation (ADEC) Cruise Ship Program

<https://dec.alaska.gov/water/cruise-ships/>

2014 Large Cruise Ship General Permit

<http://dec.alaska.gov/water/cruise-ships/cruise-general-permit/>

Quality Assurance Project Plans

<https://dec.alaska.gov/water/cruise-ships/cruise-operator>

Alaska Cruise Ship Laws and Regulations

<http://dec.alaska.gov/water/cruise-ships/laws-regs/>

Sample reports from prior years

<http://dec.alaska.gov/water/cruise-ships/cruise-reports/>

APPENDIX A: Large Cruise Ship Treatment Systems

2020 Large ¹ Commercial Passenger Vessel Wastewater Treatment Systems			
Vessel Operator	Vessel Name	Wastewater Treatment System ²	2020 Discharge in AK waters ^{5, 6}
Carnival Cruise Lines	<i>Carnival Miracle</i> ND		AK Season Cancelled
Carnival Cruise Lines	<i>Carnival Spirit</i> ND	Rochem	AK Season Cancelled
Celebrity Cruises	<i>Celebrity Eclipse</i> ND	Kruger/WABAG	AK Season Cancelled
Celebrity Cruises	<i>Celebrity Millennium</i> ND	Hydroxyl	AK Season Cancelled
Celebrity Cruises	<i>Celebrity Solstice</i> ND	Kruger/WABAG	AK Season Cancelled
Cunard	<i>Queen Elizabeth</i>	Hamworthy (2 units)	AK Season Cancelled
Disney	<i>Disney Wonder</i>	Hamworthy (2 units)	AK Season Cancelled
Holland America	<i>Eurodam</i>	Hamworthy (2 units)	AK Season Cancelled
Holland America	<i>Koningsdam</i>	Unknown, New Vessel to AK	AK Season Cancelled
Holland America	<i>Maasdam</i>	Zenon	AK Season Cancelled
Holland America	<i>Noordam</i> ND	Rochem	AK Season Cancelled
Holland America	<i>Oosterdam</i>	Unknown, New installation	AK Season Cancelled
Holland America	<i>Volendam</i>	Zenon	AK Season Cancelled
Holland America	<i>Westerdam</i>	Rochem	AK Season Cancelled
Hurtigruten	<i>Roald Amundson</i> ND		AK Season Cancelled
Norwegian Cruise Line	<i>Norwegian Bliss</i>	Scanship	AK Season Cancelled
Norwegian Cruise Line	<i>Norwegian Jewel</i>	Scanship	AK Season Cancelled
Norwegian Cruise Line	<i>Norwegian Joy</i>	Scanship	AK Season Cancelled
Norwegian Cruise Line	<i>Norwegian Sun</i>	Scanship	AK Season Cancelled
Oceania	<i>Insignia</i>	Scanship	AK Season Cancelled **
Oceania	<i>Regatta</i>	Triton (2 units)	AK Season Cancelled
Ponant	<i>L' Austral</i> ND	Rochem	AK Season Cancelled
Ponant	<i>Le Boreal</i> ND		AK Season Cancelled
Ponant	<i>Le Soleal</i>	Rochem	AK Season Cancelled
Princess Cruise Line	<i>Coral Princess</i>	Hamworthy (2 units)	AK Season Cancelled
Princess Cruise Line	<i>Emerald Princess</i>	De Nora Ozone (per 2017 NOI)	AK Season Cancelled
Princess Cruise Line	<i>Golden Princess</i>	Hamworthy (3 units)	AK Season Cancelled
Princess Cruise Line	<i>Grand Princess</i>	Hamworthy (3 units)	AK Season Cancelled
Princess Cruise Line	<i>Pacific Princess</i>	Hamworthy (2 units)	AK Season Cancelled
Princess Cruise Line	<i>Royal Princess</i>	Hamworthy (2 units)	AK Season Cancelled
Princess Cruise Line	<i>Ruby Princess</i>	Hamworthy (3 units)	AK Season Cancelled
Princess Cruise Line	<i>Star Princess</i>	Hamworthy (3 units)	AK Season Cancelled
Princess Cruise Line	<i>Sun Princess</i> ND	Hamworthy (3 units)	AK Season Cancelled
Royal Caribbean Cruises	<i>Ovation of the Seas</i>	Scanship	AK Season Cancelled
Royal Caribbean Cruises	<i>Radiance of the Seas</i> ND	Hamann	AK Season Cancelled
Royal Caribbean Cruises	<i>Serenade of the Seas</i> ND		AK Season Cancelled
Seabourn	<i>Sojourn</i>	Hamworthy (2 units)	AK Season Cancelled
Seven Seas Cruises	<i>Seven Seas Mariner</i>	Hamworthy	AK Season Cancelled
Silver Seas	<i>Silver Cloud</i>	Unknown, New Vessel to AK	AK Season Cancelled
Silver Seas	<i>Silver Muse</i>	Scanship	AK Season Cancelled
Viking	<i>Viking Orion</i>	Scanship	AK Season Cancelled
Windstar	<i>Star Breeze</i>	Unknown, New installation	AK Season Cancelled

¹ A large commercial passenger vessel has overnight accommodations for 250 or more passengers.

² Nondischarging vessels are not required to provide treatment system information. MBR=Membrane Bioreactor.

³ Based lower berths, from Registration or Notice of Intent submitted to ADEC. Actual number of passengers aboard varies.

⁴ Assumes full capacity on every voyage.

⁵ Alaska water extends 3 nautical miles from coast and includes the Alexander Archipelago.

⁶ AK Season cancelled due to COVID-19 and **no** voyages completed. ** Itinerary change unrelated to COVID.

Vessels highlighted in gray (indicated by 'ND') registered as non-discharge vessels for the 2020. No sampling is required.