

# 2024 Small Commercial Passenger Vessel Report

COMMERCIAL PASSENGER VESSEL ENVIRONMENTAL COMPLIANCE (CPVEC) PROGRAM



December 2024



*Cover photo: Uncruise's Wilderness Discoverer at Seadrome Dock in Juneau, Alaska on August 8, 2024*

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### INTRODUCTION

This report summarizes wastewater sampling and compliance information for all small commercial passenger vessels (CPVs) that operated in Alaska in 2024. CPVs are split into two categories, small (50 to 249 passengers) and large (over 250 passengers). Small CPVs are defined in Alaska Statute (AS 46.03.490(2) and (7)) as vessels that carry passengers for hire and that have overnight accommodations for 50 to 249 passengers (excluding crew).

In 2024, 15 small CPVs (12 cruise ship vessels and three AMHS ferries), registered with the Alaska Department of Environmental Conservation (DEC or Department). While Alaska Marine Highway System (AMHS) vessels fall into the category of small commercial passenger vessels, this report focuses mostly on small cruise ships. The AMHS registered three vessels in Alaska this year: MV Kennicott, MV Columbia, and MV Matanuska. Of those vessels, MV Kennicott was the only vessel to regularly operate in Alaska waters in 2024.

There were 12 small cruise ships registered with DEC in 2024 and of those vessels nine registered as discharging vessels. DEC staff performed a total of 13 in-port inspections during the summer of 2024; with at least one inspection on all vessels that operated within the State. Table 1 lists the small cruise ship vessels and their passenger counts, these vessels accounted for only 1.1% of the total cruise ship passengers to Alaska aboard all vessels in 2024.

**Table 1. Small cruise ship voyages and passenger counts**

Vessel Name	Vessel Operator	Passenger Capacity	Planned Voyages	Completed Voyages**	2024 Passenger Capacity*
American Constellation	American Cruise Lines	173	17	17	2,941
Chichagof Dream	Alaska Dream Cruises	80	14	14	1,120
Hanseatic Spirit	Hapaq Lloyd Cruises	230	4	4	920
NG Quest	Lindblad Expeditions	100	18	18	1,800
NG Resolution	Lindblad Expeditions	136	2	2	272
NG Sea Bird	Lindblad Expeditions	62	24	24	1,488
NG Sea Lion	Lindblad Expeditions	62	29	27	1,674
NG Venture	Lindblad Expeditions	100	21	21	2,100
Safari Endeavour	UnCruise Adventures	86	21	21	1,806
Sylvia Earle	Aurora Expeditions	144	1	1	144
Wilderness (SS) Legacy	UnCruise Adventures	88	23	23	2,024
Wilderness Discoverer	UnCruise Adventures	76	24	24	1,824
				<b>Total Passengers 2024</b>	<b>18,113</b>

\*These passenger capacity counts are assuming full passenger capacity on every voyage.

\*\* "Voyage" is defined at Alaska Statute 46.03.490(17) to mean "a vessel trip to or from one or more ports of call in the state with the majority of the passengers for hire completing the entire vessel trip; a vessel trip involving stops at more than one port of call is considered a single voyage so long as the majority of the passengers for hire complete the entire trip."

Highlighted cells in Table 1 represent deviations from pre-season anticipated voyage counts and non-discharging vessels.

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Small discharging CPVs are required to conduct wastewater sampling according to the 2024 sampling regime schedule. The AMHS vessels sample every three months of operation (four samples total, assuming year-round operation). Sampling is a requirement to:

- Verify that marine sanitation devices (MSD) onboard are achieving good effluent quality in accordance with each vessel's approved Best Management Practices (BMP) plan,
- Document treatment system performance for future BMP plan development; and
- Gather information on potential environmental impacts from small CPVs operating in Alaska waters.

Small CPVs are subject to 33 CFR 159.53, which requires vessels to produce effluent with a fecal coliform (fc) bacteria count not greater than 200 per 100 milliliters and total suspended solids (TSS) not greater than 150 milligrams per liter. If an exceedance of fc or TSS occurs, the vessel's BMP Plan directs the operator to take corrective action, report the exceedance to the Department, and resample to confirm compliance. To ensure quality data is obtained, each vessel must have a Vessel Specific Sampling Plan (VSSP) and a Quality Assurance Project Plan (QAPP), both of which must be approved by the Department. The QAPP can be based on the current year Cruise Lines International Association (CLIA) QAPP, or vessel operators can create and submit their own individual sampling QAPP.

Reports and summaries for prior years can be found on the cruise program's report webpage

[\(https://dec.alaska.gov/water/cruise-ships/cruise-reports/\)](https://dec.alaska.gov/water/cruise-ships/cruise-reports/)

### **BACKGROUND**

CPVs produce two types of wastewater: blackwater and graywater. Blackwater is wastewater from ship's toilets and medical facilities. Graywater is wastewater from accommodations (showers/sinks), galley areas, and laundry. Any combination of blackwater and graywater is considered blackwater. These wastewaters must be treated before discharge to Alaska waters.

Large CPVs have more technically advanced and costly advanced wastewater treatment systems (AWTS) that are capable of consistently producing high quality treated wastewater. These systems are significantly larger and more costly to operate and maintain than the less advanced marine sanitation device (MSD) systems utilized by most small vessels. The MSD systems on small CPVs must be properly operated and maintained (AS 46.03.463) and must meet performance requirements for the U.S. Coast Guard (USCG) approval of Type II MSD systems for vessels operating in U.S. waters (33 CFR 159).

To obtain an authorization to discharge, the Department developed and issued a general permit specifically for large CPV vessels (2013DB004 Large Commercial Passenger Vessel Wastewater Discharge Permit). Small CPVs, including the AMHS ferries, are required to meet standard terms and conditions in the general permit, or seek alternative terms and conditions with a BMP plan

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approval, in order to discharge treated wastewater in Alaska marine waters (within 3 miles of shore and the entirety of the Alexander Archipelago).

Standard terms and conditions for treated blackwater, graywater, and other wastewater (AS 46.03.463, Prohibited discharges; limitations on discharges) align with the USCG limits for approved Type II MSDs, 33 CFR 159.53(b). Ships with separate graywater discharges are required to sample graywater for conventional parameters in accordance with the sampling regime schedule and VSSP.

The Department ensures the compliance with these wastewater standards by requiring sampling of discharging vessels and performing scheduled or unscheduled inspections of all small CPVs.

Throughout the season, CPV inspectors performed inspections of small CPV's, reviewed paperwork, discharge logs, and inspected machinery spaces to ensure vessel compliance. These inspection reports are public documents and can be viewed at:

<https://dec.alaska.gov/Applications/Water/EDMS/ncore/external/home>

### **METHODS**

Wastewater sampling consists of grab samples taken from the MSD overboard discharge pipe while the vessel is discharging. The VSSP describes appropriate sampling event times and sample port locations to ensure samples are representative of wastewater discharges into Alaska waters. Additionally, the VSSP ensures that samples are collected in a consistent manner during the season and year over year, regardless of vessel staff changes.

Sampling is conducted in accordance with the requirements in the approved QAPP for each vessel. In 2024, all four cruise lines operators (representing the nine discharging vessels) and the Alaska Marine Highway System ferries developed and used their own Department-approved QAPPs. The QAPP specifies the requirements for sample collection, field test handling, and analysis of wastewater samples in the laboratory. It also includes a list of approved methods and data quality objectives.

### **SAMPLE RESULTS**

All samples referred to in this report were taken in Southeast Alaska in 2024, with most samples obtained in or near Juneau to meet sample holding time requirements.

Table 2 shows the breakdown of which vessels are registered as discharging vessels and the type of system used for wastewater treatment. As outlined in the Department's 2024 small vessel sampling regime (<https://dec.alaska.gov/water/cruise-ships/cruise-operator>) all discharging vessels are subject to two Convention I samples during the season, one within ten days of arrival to Alaska, and one mid-season. If a vessel has an exceedance on either event, it must resample until it is in compliance with the small vessel wastewater parameters.

**Table 2. Small cruise ship wastewater treatment systems and 2024 discharge status**

Vessel Name	Wastewater Treatment System	BMP Plan Number	Registered Discharger
American Constellation	Innovative Treatment miniMBR	C0-038-2023	Yes
Chichagof Dream	Orca II A-500	00-018A2-2023	Yes
Hanseatic Spirit			No
NG Quest	G&O Bioreactor BR-37000 BG-V	C0-039-2023	Yes
NG Resolution			No
NG Sea Bird	Omnipure 12M	C0-025-2021	Yes
NG Sea Lion	Omnipure 12M	C0-026-2021	Yes
NG Venture	G&O Bioreactor BR-37000 BG-V	C0-040-2023	Yes
Safari Endeavour	Omnipure 12M 5508	C0-036B-2021	Yes
Sylvia Earle			No
Wilderness (SS) Legacy	Red Fox RF-2000-FP	C0-036A-2021	Yes
Wilderness Discoverer	Headhunter TW-HMX-6004LP	C0-036D-2021	Yes

Out of the 12 registered small vessels in 2024, three (Hanseatic Spirit, National Geographic Resolution, and Sylvia Earle) registered as non-discharging vessels. National Geographic Resolution and Sylvia Earle both had very limited stays in Alaska and only called in Western Alaska. Hanseatic Nature operated for approximately two months in Alaska waters in 2024 but spent limited time in the Inside Passage. Typically, small passenger vessels don't have the capability to store wastewater and act as non-discharging vessels, however all three of these are newer Expedition class vessels with more wastewater holding capacity.

Table 3 shows the percentage of vessels with exceedances this season. While the percentages seem higher than in some previous years, there were also fewer small vessels operating this season. Of the four small CPV operators of small discharging vessels, two (Alaska Dream Cruises and UnCruise Adventures) routinely struggled to meet sampling parameters. Table 4 outlines vessel sampling exceedances. Vessels with sampling exceedances during Summer 2024 also had similar difficulties operating in compliance in previous years.

**Table 3. Total number of vessels with exceedances**

Type of Exceedance	2024	2023	2022
Fecal coliform (>200 fc/100 ml limit)	6	7	8
Resample fc exceedance (>200 fc/100ml limit)	3	2	6
Total suspended solids (>150 mg/L limit)	3	3	3
Total number of vessels discharging per season	9	12	15

**Table 4. Sampling and exceedance summary**

Vessel Name	Sample Type	Total Samples	Type of Exceedance		
			Fecal Coliform	Total Suspended Solids	Total Residual Chlorine
American Constellation	Blackwater	2	0	0	0
Chichagof Dream	Blackwater	5	4	3	0
NG Quest	Blackwater	2	0	0	0
NG Sea Bird	Blackwater	4	1	1	0
NG Sea Lion	Blackwater	2	0	0	0
NG Venture	Blackwater	2	0	0	0
Safari Endeavour	Blackwater	6	5	0	1
Wilderness (SS) Legacy	Blackwater	4	1	0	1
Wilderness Discoverer	Blackwater	7	2	4	5
Chichagof Dream	Graywater	4	2	2	0
NG Sea Bird	Graywater	1	0	0	0
Safari Endeavour	Graywater	3	2	0	1
Wilderness (SS) Legacy	Graywater	1	0	0	0
<b>Totals</b>		<b>43</b>	<b>17</b>	<b>10</b>	<b>8</b>

Table 5 shows the summary of small vessel sample data from this season which is also consistent with sample data from previous seasons. Since many of the vessels in this category use marine sanitation devices, which are not as efficient as AWTs systems utilized on large CPVs, the magnitude of the exceedances tends to be greater among small vessels than with large vessels, although the volumes of effluent are far less than that of large CPVs.

**Table 5. Wastewater data summary**

<b>Blackwater Effluent</b>	<b>Number of Times Measured</b>	<b>Lowest Measured Value</b>	<b>Highest Measured Value</b>
Analyte			
pH (SU)	38	5.4	9.24
Free Chlorine (mg/L)	38	<0.1	45
Total Chlorine (mg/L)	38	<0.1	54
Fecal Coliform Bacteria (fc/100ml)	38	<2.0	1,700,000
Total Suspended Solids (mg/L)	38	<4.0	364

<b>Graywater Effluent</b>	<b>Number of Times Measured</b>	<b>Lowest Measured Value</b>	<b>Highest Measured Value</b>
Analyte			
pH (SU)	9	4.97	8.12
Free Chlorine (mg/L)	9	<0.1	0.5
Total Chlorine (mg/L)	9	<0.1	6.8
Fecal Coliform Bacteria (fc/100ml)	9	<10	57,000
Total Suspended Solids (mg/L)	9	<4.0	1,320

*(Priority/ nutrients sampling results are not provided in this report but are available upon request)*

**SAMPLING VIOLATIONS**

Table 6 below provides details on vessel exceedances and compliance measures taken by the Department. In 2024, Notices of Violations (NOVs) were issued for all sampling exceedances, resulting in the issuance of seven NOVs for small CPVs.

During the 2024 season there were nine small CPVs discharging under approved BMP plans, and of those, 55% had sample exceedances. Two of the operators, American Cruise Lines and Lindblad Expeditions, had vessels that performed satisfactorily. National Geographic Sea Bird, operated by Lindblad Expeditions, had only one relatively modest exceedance. However, this vessel’s resample event was compliant in all parameters and the vessel was in compliance on all subsequent sampling events. The AMHS vessel Kennicott also had a minor exceedance this season but was also able to perform corrective measures and come back into compliance.

The other two operators of small vessels, Alaska Dream Cruises and UnCruise Adventures, struggled to achieve acceptable sample results. The Chichagof Dream, operated by Alaska Dream Cruises, was sampled five times and was only able to meet all parameters on one sample event. This vessel was issued a NOV on May 31, 2024, and was required to retest as a result. The vessel was



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compliant on their next sample event and the NOV was closed out. On the vessel’s next regularly scheduled mid-season sample event the vessel was issued another NOV for a fecal coliform result of 1,700,000 fc/100ml (limit is 200 fc/100ml). The vessel performed two more resample events and was unable to meet parameters by the end of the season. The operator of this vessel, Alaska Dream Cruises, currently has an active enforcement case due to years of poor sampling performance and non-compliance issues.

UnCruise Adventures’ vessels also demonstrated poor sampling performance this year. The Wilderness (SS) Legacy demonstrated satisfactory results on its early season sample but was then issued a NOV for exceedances on its mid-season sample. This vessel was able to perform corrective actions and eventually met BMP limits after two more attempts to close out their NOV. The Safari Endeavor was sampled six times this season and was never able to meet all parameters. The Wilderness Discoverer was sampled seven times this season and was also never able to meet effluent requirements. UnCruise Adventures also has an ongoing enforcement case with the Department for years of poor sampling performance and non-compliance issues across its fleet of vessels.

**Table 6. Exceedance results and compliance actions**

Vessel Name	Sample Date	Sample ID	Parameter Exceeded	Measured Value	Parameter Limit	Compliance Action
Chichagof Dream	5/31/24	AE 35005	Total Suspended Solids	364 mg/L	150 mg/L	NOV
			Fecal Coliform	900 fc/100 ml	200 fc/100 ml	
	5/31/24	AE 35005GW1	pH	5.51 SU	6-9 SU	
			Fecal Coliform	11,000 fc/100 ml	200 fc/100 ml	
	5/31/24	AE 35005GW2	Total Suspended Solids	305 mg/L	150 mg/L	
	6/14/24	AE 35320GW1	Fecal Coliform	31,000 fc/ 100 ml	200 fc/100 ml	
			pH	5.35 SU	6-9 SU	
	6/14/24	AE 35320GW2	Total Suspended Solids	1,320 mg/L	150 mg/L	
			Total Suspended Solids	352 mg/L	150 mg/L	
	7/26/24	AE 35643	Fecal Coliform	1,700,000 fc/100 ml	200 fc/100 ml	
8/9/24	AE 35821	Fecal Coliform	400 fc/100 ml	200 fc/100 ml		
8/23/24	AE 36113	Total Suspended Solids	164 mg/L	150 mg/L		
		Fecal Coliform	51,000 fc/100 ml	200 fc/100 ml		
MV Kennicott	7/2/24	AE 35381	Fecal Coliform	920 fc/100 ml	200 fc/100 ml	NOV
	7/30/24	AE 35656	Fecal Coliform	270 fc/100 ml	200 fc/100 ml	
NG Sea Bird	5/21/24	AE 34791	Total Suspended Solids	216 mg/L	150 mg/L	NOV
			Fecal Coliform	2,100 fc/100 ml	200 fc/100 ml	

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Safari Endeavour	5/11/24	AE 34768	Fecal Coliform	1,300,000 fc/100 ml	200 fc/100 ml	NOV
	5/11/24	AE 34768GW	Fecal Coliform	480 fc/100 ml	200 fc/100 ml	
	6/8/24	AE 35162	Fecal Coliform	5,400 fc/100 ml	200 fc/100 ml	
	6/8/24	AE 35162GW	pH	4.97 SU	6-9 SU	
			Fecal Coliform	57,000 fc/100 ml	200 fc/100 ml	
	7/6/24	AE 35368BW	Fecal Coliform	100,000 fc/100 ml	200 fc/100 ml	
	7/6/24	AE 35368GW	Total Chlorine	6.8 mg/L	5.0 mg/L	
	8/3/24	AE 35722	Fecal Coliform	32,000 fc/100 ml	200 fc/100 ml	
	8/31/24	AE 36044	Fecal Coliform	270 fc/100 ml	200 fc/100 ml	
9/28/24	AE 36367	Total Chlorine	5.1 mg/L	5.0 mg/L		
Wilderness (SS) Legacy	7/20/24	AE 35544	Fecal Coliform	460,000 fc/100 ml	200 fc/100 ml	NOV
	8/31/24	AE 36045	pH	9.24 SU	6-9 SU	
			Total Chlorine	7.3 mg/L	5.0 mg/L	
Wilderness Discoverer	4/27/24	AE 34664	Total Chlorine	34 mg/L	5.0 mg/L	NOV
			Total Suspended Solids	260 mg/L	150 mg/L	
	5/12/24	AE 34829	Total Suspended Solids	238 mg/L	150 mg/L	
	6/2/24	AE 35161	Total Suspended Solids	195 mg/L	150 mg/L	
			Fecal Coliform	86,000 fc/100 ml	200 fc/100 ml	
	6/23/24	AE 35363	pH	5.4 SU	6-9 SU	
			Total Chlorine	6.8 mg/L	5.0 mg/L	
			Total Suspended Solids	154 mg/L	150 mg/L	
	7/21/24	AE 35618	Fecal Coliform	30,000 fc/100 ml	200 fc/100 ml	
9/1/24	AE 36046	Total Chlorine	12.9 mg/L	5.0 mg/L		
9/22/24	AE 36360	Total Chlorine	5.8 mg/L	5.0 mg/L		

### COMPLIANCE SUMMARY

DEC staff performed a total of 13 in-port inspections on small CPVs in 2024 and inspected all of the small vessels that operated in Alaska.

In addition to the sampling violations described in the section above, there was one additional Notice of Violation issued. The Wilderness Discoverer was issued a Notice of Violation for improperly maintaining its sewage and greywater discharge record book. An inspection of the vessel on August 18, 2024, revealed that the vessel had not been logging recreational water discharges (chlorinated hot tub water) and these discharges had been taking place very close to the three nautical mile limit. The vessel had been issued a warning and the Department provided compliance assistance regarding this same matter in 2023, however this issue was not resolved by the vessel. This Notice of Violation was also forwarded to the USCG for enforcement as this is also a violation of the EPA's Vessel General Permit.

If there are any questions or concerns regarding this report, please contact the Cruise Ship Program Manager, Ben Eisenstein, at [ben.eisenstein@alaska.gov](mailto:ben.eisenstein@alaska.gov) or 907-465-5161.