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This document is a portion of the *Cruise Ship Discharge Assessment Report (Assessment Report)*, published on December 29, 2008. The reference number is EPA 842-R-07-005.

The entire Assessment Report can be accessed at
http://www.epa.gov/owow/oceans/cruise_ships/disch_assess.html.

Cruise Ship Discharge Assessment Report

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Appendix A. *List of Acronyms*

ACSI	Alaska Cruise Ship Initiative
ADEC	Alaska Department of Environmental Conservation
ALBD	Available Lower Berth Day
APPS	Act to Prevent Pollution from Ships
AWT	Advanced Wastewater Treatment
AWTs	Advanced Wastewater Treatment systems
BOD	biological oxygen demand
Cal/EPA	California Environmental Protection Agency
CCC	criterion continuous concentration
CELB	Center for Environmental Leadership in Business
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESQG	conditionally exempt small quantity generator
CFR	Code of Federal Regulations
C.L.	Confidence Limit
CLIA	Cruise Lines International Association
CMC	criteria maximum concentration
COA	Certificate of Adequacy
COTP	Captain of the Port
CWA	Clean Water Act
CRS	Congressional Research Service
DAF	dissolved air flotation

DOC	Document of Compliance
EPA	U.S. Environmental Protection Agency
EEZ	U.S. Exclusive Economic Zone
FR	Federal Register
gal/day/pers	gallons per day per person
GAO	U.S. General Accounting Office (now the U.S. Government Accountability Office)
HEM	hexane extractable material
ICCL	International Council of Cruise Lines
IFO	intermediate fuel oil
IMO	International Maritime Organization
ISM	International Safety Management
ISPPC	International Sewage Pollution Prevention Certificate
LQG	large quantity generator
MARPOL	International Convention for the Prevention of Pollution from Ships (MARPOL 73/78)
MBR	Membrane Bioreactor
MEPC	Marine Environment Protection Committee
MPN	most probable number
MPRSA	Marine Protection, Research, and Sanctuaries Act
MSD	marine sanitation device
NC	not collected
ND	not detected
NDZ	no-discharge zone

NH₃	unionized ammonia
NH₄⁺	ionized ammonia
nm	nautical mile
NMSA	National Marine Sanctuaries Act
NOAA	National Oceanic and Atmospheric Administration
NO_x	nitrous oxide
NPS	National Park Service
NPDES	National Pollutant Discharge Elimination System
NR	not recorded
NRC	National Research Council
NRWQC	National Recommended Water Quality Criteria
OECD	Organization for Economic Co-operation and Development
OPA	Oil Pollution Act of 1990
OWS	Oily Water Separator
PAH	polycyclic aromatic hydrocarbon
POTWs	publicly owned treatment works
ppm	parts per million
Pub. L.	Public Law
RCRA	Resource Conservation and Recovery Act
RCCL	Royal Caribbean Cruises Ltd.
SMS	Safety Management System
SOLAS	International Convention for the Safety of Life at Sea
SQG	small quantity generator

TOC total organic carbon

U.S. United States

USCG United States Coast Guard

UV ultraviolet

U.S.C. United States Code

VGP Vessel General Permit

WHO World Health Organization

Appendix B. State Efforts to Address Discharges from Cruise Ships

The Cruise Ship Discharge Assessment Report (Assessment Report) presents on-going actions by the federal government to address five primary waste streams from cruise ships (sewage, graywater, oily bilge water, solid waste, and hazardous waste). Based on the public comments received on the draft of the report, as well as other information gathered, a wide range of options and alternatives is listed for each abovementioned waste stream. Identification of any particular option does not imply EPA recommendation or preference for future action, or that EPA has determined that any of these options are necessary or feasible, or that EPA believes a change to the status quo is warranted, or that EPA or any other entity has the legal authority to implement that option. Nevertheless, the range of options and alternatives presented in this Assessment Report may be useful to government entities such as state, local, and tribal entities that are interested in addressing cruise ship waste streams.

There are a number of states (Alaska, California, Florida, Hawaii, Maine, and Washington), as well as Native American Tribes, that have on-going efforts to address the frequency of cruise ship traffic and the range of issues associated with discharges from these vessels. Some states have taken action independent of federal requirements by passing legislation controlling cruise ship discharges, creating industry partnership programs under which cruise lines voluntarily adopt certain environmental practices, and/or establishing No Discharge Zones where the discharge of sewage from vessels (whether treated or not) is prohibited. Listed below are some links to access current state efforts.

State	General Information Regarding Cruise Ship Efforts
Connecticut	http://www.ctcruiseship.com/
Florida	http://www.dep.state.fl.us/secretary/news/2000/00-MOUcruise.htm http://www.dep.state.fl.us/water/wastewater/vessel.htm
Hawaii	http://www.co.maui.hi.us/index.asp?NID=631 http://healthuser.hawaii.gov/health/about/pr/2003/03-94epo.html http://www.epa.gov/owow/oceans/cruise_ships/hawaiiimou.pdf
Maine	http://www.state.me.us/dep/blwq/topic/vessel/cruiseship/rule/history.htm http://www.state.me.us/dep/blwq/topic/vessel/LCPV/index.htm http://www.barharbormaine.gov/xhtml/171/Permalink/363/
Washington	http://www.ecy.wa.gov/programs/wq/wastewater/cruise_mou/index.html

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