# SUMMARY OF KEY REGULATIONS GOVERNING OUR OPERATIONS

This table summarizes some of the principal 2018 international, national, state and local laws, acts, codes, directives, legislation, treaties, protocols, statutes, rules, regulations and voluntary guidelines that govern the operation of our ships as related to environmental, maritime safety and security, and labor requirements in the jurisdictions in which our ships operate. Carnival Corporation & plc complies with these various requirements and we update our practices and procedures, as well as our management systems, based on changes to these requirements, as appropriate.

## INTERNATIONAL CONVENTIONS:

### INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA (“SOLAS”)

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<th>Regulation Description &amp; Summary of Requirements</th>
<th>How We Meet or Exceed Regulation</th>
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<tbody>
<tr>
<td>SOLAS contains safety requirements for design, construction, equipment, operations, safety management, and security, set forth in numerous chapters, including the following which apply to Carnival Corporation &amp; plc’s operations:</td>
<td>Carnival complies with SOLAS.</td>
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<tr>
<td>• Chapter I – General Provisions</td>
<td>We have also developed and implemented standardized policies and procedures that go beyond SOLAS requirements to further ensure the safety of our guests, ship personnel and ships, and cover a number of subjects including:</td>
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<tr>
<td>• Chapter II-1 – Construction – Subdivision and stability, machinery and electrical installations</td>
<td>✓ bridge team management;</td>
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<tr>
<td>• Chapter II-2 – Fire protection, fire detection and fire extinction</td>
<td>✓ training;</td>
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<tr>
<td>• Chapter III – Life-saving appliances and arrangements</td>
<td>✓ fire protection, detection and suppression;</td>
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<tr>
<td>• Chapter IV – Radio-communications</td>
<td>✓ ship stability;</td>
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<td>• Chapter V – Safety of navigation</td>
<td>✓ life-saving equipment and systems.</td>
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<td>• Chapter IX – Management for the safe operation of ships</td>
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<tr>
<td>• Chapter XI-1 – Special measures to enhance maritime safety</td>
<td>✓ Carnival Corporation &amp; plc exceeds regulations</td>
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<tr>
<td>• Chapter XI-2 – Special measures to enhance maritime security</td>
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<td>• Chapter XIII – Verification of Compliance</td>
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<tr>
<td>• Chapter XIV – Safety Measures for Ship Operating in Polar Waters</td>
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Compliance with SOLAS is verified by inspections and surveys conducted by the Flag State, or by its delegated representative (usually a classification society), and certificates are issued that confirm compliance. Port States also verify compliance with these requirements. In addition, cruise ships are subject to surveys that examine the ship’s structure (subdivision and stability), machinery and equipment, including life-saving appliances, fire protection and fire-safety systems, navigational equipment, radio installations, and other equipment to confirm compliance with the requirements of SOLAS. These surveys are conducted before the ship is put into service, annually thereafter, and as necessary. The Flag State issues a Passenger Ship Safety Certificate as evidence of compliance with SOLAS requirements.

On January 1, 2017, the International Code for Ships Operating in Polar Waters (“Polar Code”), adopted by the IMO in May 2015, entered into force and is mandatory under SOLAS and MARPOL. The Polar Code establishes a chapter of SOLAS, Chapter XIV, which provides additional safety measures for vessels in polar waters.
### INTERNATIONAL SAFETY MANAGEMENT CODE ("ISM CODE"), CONTAINED IN CHAPTER IX OF SOLAS

#### Regulation Description & Summary of Requirements

The ISM Code is an international standard for the safe management and operation of ships and for pollution prevention. It requires all ship operating companies and ships to develop, implement and obtain certification of their Safety Management System ("SMS"). The SMS covers both shipboard and shore-based activities and must include:

- a company safety and environmental protection policy;
- instructions and procedures to ensure the safe operation of ships and protection of the environment;
- procedures for preparing for and responding to emergencies;
- defined levels of authority and lines of communication between shore and shipboard personnel, and identification of a designated person ashore responsible for ISM Code compliance;
- procedures for reporting accidents and ISM Code non-conformities; and
- procedures for internal and external audits and management reviews.

The 2018 edition of the ISM Code included new guidance on Maritime Cyber Risk Management and vessel owners will be required to update SMSs with plans for cyber safety management by the first annual verification of the company's Document of Compliance after January 1, 2021.

#### How We Meet or Exceed Regulation

Compliance with ISM code is verified by inspections and surveys conducted by the Flag State, or by its delegated representative (usually a classification society), and certificates are issued that confirm compliance. Carnival Corporation & plc complies with ISM Code and has also obtained additional certifications that go beyond the requirements of the ISM Code, including:

- ISO 14001 Environmental Management System certification Carnival Corporation (all Brands),
- ISO 9001 Quality Management System certification (some Brands), and
- HSAS 18001 Occupational Health and Safety Management System certification (some Brands).

*Carnival Corporation & plc exceeds regulations*  

### INTERNATIONAL SHIP AND PORT FACILITY SECURITY CODE ("ISPS" CODE), CONTAINED IN CHAPTER XI-2 OF SOLAS

#### Regulation Description & Summary of Requirements

The ISPS Code:

- defines security standards, requirements, arrangements and procedures for ships, ports, and governments; and
- prescribes responsibilities for governments, shipping companies, shipboard personnel, and port/facility personnel, among others, to develop security plans, detect security threats and take preventative measures against potential security incidents affecting ships or port facilities.

Compliance is verified by inspections and surveys conducted by the Flag State, or by its delegated representative (usually a classification society), and certificates are issued that confirm compliance.

#### How We Meet or Exceed Regulation

Carnival Corporation & plc complies with the ISPS Code.

*Carnival Corporation & plc meets regulations*
Regulation Description & Summary of Requirements

MARPOL is the principal international convention governing marine pollution prevention and response.

Compliance with MARPOL is verified by inspections and surveys conducted by the Flag State, or by its delegated representative (usually a classification society), and certificates are issued that confirm compliance. Port States also verify compliance with these requirements.

MARPOL has six Annexes, four of which are applicable to Carnival Corporation & plc’s ships and are described in the following:

How We Meet or Exceed Regulation

Carnival Corporation & plc complies with the requirements of MARPOL. We have also developed and implemented procedures that go beyond MARPOL and other regulations to further ensure environmental protection. They cover a number of subjects including:

✓ control of refrigerants and other ozone depleting substances,
✓ refrigerant personnel training,
✓ wastewater management,
✓ oily waste management,
✓ hazardous waste management,
✓ hazardous materials management,
✓ Environmental Management Systems,
✓ environmental organization,
✓ environmental training,
✓ environmental performance monitoring and reporting,
✓ underwater paint coating,
✓ environmental accountability and reporting.

Carnival Corporation & plc exceeds regulations

INTERNATIONAL CONVENTIONS:

INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS (“MARPOL”)

Regulation Description & Summary of Requirements

Annex I, Regulations for the Prevention of Pollution by Oil, establishes requirements that minimize pollution from oil. Annex I sets forth a comprehensive list of requirements that include:

• vessel equipment and design specifications to reduce the occurrence of oil discharge;
• fitting vessels with oil discharge monitoring and control systems, oily water separating equipment, oil content meters (bilge alarms) and a filtering system, slop tanks, sludge tanks, piping and pumping arrangements;
• recordkeeping requirements for such equipment; and
• having an approved shipboard oil pollution emergency plan (SOPEP).

On January 1, 2017, IMO amended regulation 12 of MARPOL Annex I, concerning tanks for oil residues (sludge). The amendments update and revise the regulation, expanding on the requirements for discharge connections and piping to ensure oil residues are properly disposed.

How We Meet or Exceed Regulation

Carnival Corporation & plc exceeds the requirements of Annex I in areas that include, but are not limited to:

✓ requiring that Carnival Corporation & plc’s Brands install “bilge control discharge boxes” which are redundant systems that monitor treated bilge water.
✓ Carnival Corporation & plc’s Brands discharge treated bilge water outside 12 NM from the nearest land, whereas Annex I has no distance restrictions provided the ship is “en route” (sailing).

Carnival Corporation & plc exceeds regulations
INTERNATIONAL CONVENTIONS:

INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS (“MARPOL”) continued

Regulation Description & Summary of Requirements

Annex IV, Regulations for the Prevention of Pollution by Sewage from Ships:
- establishes regulations for the discharge of sewage into the sea from ships, regulations regarding the ships’ equipment and systems for the control of sewage discharge, the provision of facilities at ports and terminals for the reception of sewage, and requirements for survey and certification;
- requires ships to be equipped with either an approved sewage treatment plant, or an approved sewage comminuting and disinfecting system, or a sewage holding tank;
- prohibits the discharge of sewage into the sea, except when the ship has in operation an approved sewage treatment plant, or when the ship is discharging comminuted and disinfected sewage using an approved system at a distance of more than 3-4 NM from the baseline, unless local requirements permit otherwise;
- limits discharges of sewage that is not comminuted or disinfected to specific rates and at a distance of more than 12 NM from the nearest land; and
- establishes stricter discharge requirements in designated Special Areas, including the Baltic Sea.

September 1, 2017 amendments to MARPOL Annex IV create the first MARPOL Special Area for sewage in the Baltic Sea. The amendments set implementation dates for new and existing passenger vessels and outlines compliance options and treatment plant approval standards.

How We Meet or Exceed Regulation

Carnival Corporation & plc exceeds the requirements of Annex IV by:
- installing Advanced Waste Water Purification Systems (AWWPS) for the treatment of sewage and gray water in some ships. AWWPS utilize technologies designed to produce a higher effluent quality that is above MARPOL sewage treatment standards, and meets or surpasses standards for secondary and tertiary effluents and reclaimed water. Annex IV does not regulate gray water management or treatment.

Regulation Description & Summary of Requirements

Annex V, Regulations for the Prevention of Pollution by Garbage from Ships:
- establishes rules and guidelines to eliminate the amount of garbage disposed of into the sea from ships;
- provides a general prohibition on the disposal of garbage from ships into the sea, with limited exceptions, for food wastes and operational wastes not harmful to the marine environment;
- defines garbage as all kinds of food, domestic and operational waste, including plastics and cooking oil, and excluding fresh fish, generated during the normal operation of the vessel and liable to be disposed of continuously or periodically;
- prohibits the disposal of plastics anywhere into the sea;
- restricts discharges to only food from ships into “Special Areas;” and
- requires vessels to implement a Garbage Management Plan and record all disposal and incineration operations in a Garbage Record Book.

On March 1, 2018, amendments to Annex V went into effect which created a new category of garbage for e-waste, including all electronic equipment, components and consumables when disposed of as waste, and requiring use of an updated Garbage Record Book.

How We Meet or Exceed Regulation

Carnival Corporation & plc complies with Annex V.

Carnival Corporation & plc meets regulations

Carnival Corporation & plc exceeds regulations
Annex VI, Regulations for the Prevention of Air Pollution from Ships:

- establishes reduction requirements for sulfur oxides (“SOx”), nitrogen oxides (“NOx”) and particulate matter, ODS; and incineration;
- sets limits on the sulfur content of fuel oil used by ships;
- requires that, in special Sulfur Emission Control Areas (“SECA”), the sulfur content of fuel burned cannot exceed 0.10 percent as of January 2015;
- establishes stricter controls on emissions of SOx and NOx in the North American Emission Control Area (ECA), which encompasses most of the United States and Canada’s coastal waters out to 200 nautical miles from the coastline, and requires that vessels use fuel with a maximum 0.10 percent sulfur content as of January 1, 2015;
- similar to the North American ECA, the U.S. Caribbean ECA, which includes the waters adjacent to the Commonwealth of Puerto Rico and the U.S. Virgin Islands out to approximately 50 nautical miles from the coastline and requires that vessels use fuel with a maximum 0.10 percent sulfur content as of January 1, 2015;
- requires that, in non-SECA areas, the sulfur content of fuel burned cannot exceed 3.5 percent, though this will be decreased worldwide to 0.50 percent in 2020;
- establishes stricter controls on emissions of NOx in the North Sea and Baltic Sea ECAs starting January 1, 2021;
- requires ships to carry an International Air Pollution Prevention (“IAPP”) Certificate;
- restricts the use of Ozone Depleting Substances (“ODS”), by requiring the recording of ODS, usage of rechargeable equipment, emissions and disposal of equipment containing ODS;
- requires the Energy Efficiency Design Index (“EEDI”) Phase 1 for certain new ships, including certain cruise ship with non-conventional propulsion passenger vessels as of September 2015, and the Ship Energy Efficiency Management Plan (“SEEMP”) for all ships; and
- establishes new requirements for survey and certification for the International Energy Efficiency Certificate (“IEEC”), which is in addition to the IAPP Certificate. The IEEC is issued by the Flags States upon completion of required survey to demonstrate compliance with SEEMP and EEDI.

Pursuant to Polar Code, which entered into force on January 1, 2017, amendments to MARPOL Annexes I, II, IV and V were adopted mandating additional provisions for the protection of the polar environment for vessels operating in the polar waters.

By December 31, 2018 all vessels must have implemented SEEMP part II which provides how the ship collects and submit data on fuel consumption.

Carnival Corporation & plc complies with Annex VI by using fuel oil that is at or below the Annex VI limits for sulfur content. In addition, the following programs have been implemented:

- Carnival Corporation & plc has installed Advanced Air Quality Systems (Exhaust Gas Cleaning Systems) that are capable of reducing sulfur compounds on many of our ships.
- Use of recovery units certified to meet refrigerant recycling and recovery requirements.
- Programs to reduce ODS releases.
- Carnival Corporation & plc ships are certified to SEEMP energy efficiency management for reducing GHG emissions.
- Carnival Corporation & plc actively participates in the working groups at the IMO that are developing efficiencies and standards that could affect the cruise industry.
**INTERNATIONAL CONVENTIONS:**

**INTERNATIONAL CONVENTION FOR THE CONTROL AND MANAGEMENT OF SHIPS’ BALLAST WATER AND SEDIMENTS (IMO “BALLAST WATER CONVENTION”)**

### Regulation Description & Summary of Requirements


- aims to prevent the spread of harmful aquatic organisms from one region to another;
- establishes standards and procedures for the management and control of ships’ ballast water and sediments;
- requires all ships to implement a Ballast Water and Sediments Management Plan and carry a Ballast Water Record Book;
- require ships to implement ballast water management procedures to a given standard;
- phases-out ballast water exchange as the primary control mechanism; and
- phases-in ballast water discharge standards.

Compliance with the Ballast Water Convention is verified by inspections and surveys conducted by the Flag State or by its delegated representative (usually a classification society). Port States also verify compliance.

**How We Meet or Exceed Regulation**

Carnival Corporation & plc complies with the IMO’s Ballast Water Management Convention.

In addition:

- Carnival Corporation & plc aims to minimize any discharges of ballast water by monitoring the levels of fuel, potable water, gray water and black water, and uses those tanks when possible to stabilize the vessel as opposed to taking on or discharging ballast water.
- Carnival Corporation & plc’s fuel and potable water bunkering is often managed to reduce the need for ballast water.
- Some Operating Lines have worked with ballast water technology manufacturers to advance the development of treatment technologies and testing requirements.

**INTERNATIONAL CONVENTION ON STANDARDS OF TRAINING, CERTIFICATION AND WATCHKEEPING FOR SEAFARERS (“STCW”)**

### Regulation Description & Summary of Requirements

STCW requirements include:

- standards for the training, qualification and certification of seafarers;
- specific standards of competency of crew members; and
- methods for demonstrating competency. All eight chapters of STCW apply to Carnival Corporation & plc’s operations:
  - Chapter I: General provisions
  - Chapter II: Master and Deck Department
  - Chapter III: Engine Department
  - Chapter IV: Radio-communication and radio personnel
  - Chapter V: Special training requirements for personnel on certain types of ships
  - Chapter VI: Emergency, occupational safety, medical care and survival functions
  - Chapter VII: Alternative certification
  - Chapter VIII: Watchkeeping

Training requirements apply to all levels of crew members and are tailored to their specific onboard responsibilities. Compliance is verified by inspections and surveys conducted by the Flag State, or by its delegated representative (usually a classification society), and certificates are issued to crew members that confirm compliance. Port States also verify compliance with these requirements.

Amendments to STCW went into effect on July 1, 2018 to implement provisions of the Polar Code. The amendments address training requirements for personnel working on vessels that operate in polar waters.

**How We Meet or Exceed Regulation**

Carnival Corporation & plc complies with the requirements of STCW.
REGULATION DESCRIPTION & SUMMARY OF REQUIREMENTS

**POLAR CODE**

**Regulation Description & Summary of Requirements**

The International Code for Ships Operating in Polar Waters (“Polar Code”) entered into force on January 1, 2017. The Polar Code applies to ships operating in Arctic and Antarctic waters and establishes mandatory construction, equipment, operational, safety, training and environmental protection standards. Pursuant to various related amendments, the Polar Code is mandatory under both SOLAS and MARPOL, and applies to new ships constructed after January 1, 2017. Ships constructed before January 1, 2017 will be required to meet relevant requirements of the Polar Code by the first intermediate or renewal survey, whichever occurs first, after January 1, 2018. Polar Code amendments to STCW were also adopted.

Relevant provisions of the Polar Code are discussed above in the SOLAS, MARPOL, and STCW sections.

**How We Meet or Exceed Regulation**

- Carnival Corporation & plc meets regulations

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**MARITIME LABOR CONVENTION (“MLC”), 2006**

**Regulation Description & Summary of Requirements**

MLC 2006 entered into force August 2013 and consolidates and updates the International Labor Organization standards into a single document. It:

- provides comprehensive rights and protection at work for seafarers on a global basis;
- aims to be globally applicable, easily understandable, readily updatable and uniformly enforced; and
- was designed to become the “fourth pillar” of the international regulatory regime for quality shipping (SOLAS, MARPOL and STCW).

The MLC establishes standards regarding the working conditions of seafarers including:

- minimum requirements for seafarers to work on a ship;
- conditions of employment;
- accommodation, recreational facilities, food and catering;
- health protection, medical care, welfare; and
- social security protection.

Compliance will be verified by inspections and surveys conducted by the Flag State, or by its delegated representative (usually a classification society), and certificates will be issued that confirm compliance. Port States will also verify and enforce compliance with these requirements.

Amendments to the MLC entered into force on January 18, 2017 that address the protection of seafarers from abandonment and mandate compensation in case of death or disability. The amendments require vessels to have a financial security and compensation system and carry documentation demonstrating financial security.

April 27, 2018 amendments will also protect seafarers in the event of being held captive on or off the ship as a result of piracy or armed robbery against the ship.

**How We Meet or Exceed Regulation**

- Carnival Corporation & plc complies with the MLC 2006 requirements.
### Limits on Sulfur Content in Fuel in the European Union (EU)

#### Regulation Description & Summary of Requirements

In January 2010, a 0.1 percent sulfur limit on all marine fuels used by ships at berth in EU ports, with limited exceptions, entered into force, requiring the use of distillate fuels. On May 11, 2016 the European Parliament issued a revised directive, EU Directive 2016/802, and repealed the Directive 1999/32/. The revised directive provides a consolidate requirements of the type of fuel and sulfur contain and the use of EGCS.

**Regulation (EU) 2015/757**

On July 1, 2015, the EU Monitoring, Reporting, Verification (MRV) regulation entered into force. The EU MRV requires ship owners and operators of vessels larger than 5,000 gross tonnage (GT) calling at any EU and EFTA (Norway and Republic of Iceland) port to annually monitor, report and verify CO2 emissions, during the voyage, at berth and anchor. Data collection requirements under the EU MRV began on January 1, 2018.

Carnival Corporation & plc complies with EU requirements.

### Canadian Ballast Water Control and Management Regulations – Transport Canada (TP 13617 E)

#### Regulation Description & Summary of Requirements

The purpose of the Regulations is to protect waters under Canadian jurisdiction from non-indigenous aquatic organisms and pathogens that can be harmful to ecosystems and introduced by ships. The Regulations are intended to minimize the probability of future introductions of harmful aquatic organisms and pathogens from ships’ ballast water, while protecting the safety of ships. In 2010, Canada ratified the International Convention for the Control and Management of Ships’ Ballast Water and Sediments, which entered into force in September 2017, and Canada will implement the Convention. Canada’s ballast water control requirements exceed the IMO Ballast Water Convention with regard to exchange limits: “Discharge prohibited unless it has been exchanged at least 200NM from shore and in waters at least 2000m in depth for international voyages or >50NM from shore and in waters at least 500m in depth for coastal voyages, or the ballast water is treated with an IMO-approved BWTS that meets the D-2 standard. A BWTS can alternatively be used.

Carnival Corporation & plc complies with the Canadian ballast water requirements.


#### Regulation Description & Summary of Requirements

In November 2000, EU adopted Directive 2000/59/EC1 on port reception facilities for ship-generated waste and cargo residues (“the PRF Directive”). This directive defines requirements intended to reduce the discharges of ship generated waste and cargo residues to sea, especially illegal discharges, from ships using ports in the European Union by improving the availability and use of port reception facilities. Annex II of this directive was amended on December 13, 2007 and 8 November 8, 2015.

Carnival Corporation & plc complies with this directive.

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(1) Port State Requirements include those rules and regulations from the countries and other geographic areas where Carnival Corporation & plc’s ships operate that may differ from those already summarized in this table. Carnival Corporation & plc complies with Port State requirements of those countries in which its ships call.
### NATIONAL MARINE SANCTUARIES ACT (“NMSA”)

**Regulation Description & Summary of Requirements**

Under the National Marine Sanctuaries Act (NMSA), certain marine environment areas are designated as national marine sanctuaries and are protected due to their national significance, recreational, ecological, historical, scientific, cultural, archaeological, educational or aesthetic values. The NMSA requires permits for certain commercial operations and includes more stringent discharge restrictions.

**How We Meet or Exceed Regulation**

Carnival Corporation & plc complies with the NMSA.


**Regulation Description & Summary of Requirements**

OPA 90 amended the Clean Water Act, and created a comprehensive prevention, response, liability and compensation regime regarding oil pollution in U.S. waters caused by vessels and facilities. OPA 90 increased federal oversight of maritime oil transportation and increased environmental safeguards by:

- establishing new requirements for vessel construction and crew licensing and Manning;
- mandating contingency planning;
- enhancing federal response capability;
- expanding the scope of enforcement authority;
- increasing penalties and liabilities; and
- increasing the scope of financial responsibility requirements.

OPA 90 requires owners and operators of nontank vessels to have Nontank Vessel Response Plans (“NTVRPs”) in that include oil spill response planning standards for vessels operating on the navigable waterways of the United States.

**How We Meet or Exceed Regulation**

Carnival Corporation & plc complies with OPA 90.
Port State Control Requirements: United States

### U.S. Environmental Protection Agency’s Vessel General Permit (“VGP”)

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<tr>
<td>The VGP, issued pursuant to the Clean Water Act, regulates discharges incidental to the normal operation of vessels. Each vessel is required to apply for an authorization to discharge in accordance with VGP requirements. The VGP regulates 27 specific discharge streams and contains inspection, monitoring, recordkeeping and reporting requirements. The VGP requires vessel owners and operators to adhere to “best management practices” and, in some cases, technology, to manage the covered discharges, including but not limited to ballast water, grey water and bilge water. The 2013 VGP, which replaced the 2008 VGP, went into effect in December 2013 and was intended to remain in effect until December 19, 2018. The 2013 VGP, which contains more stringent requirements than the 2008 VGP, implements numeric technology-based ballast water effluent limitations that replace the non-numeric based best management practice requirements in the 2008 VGP to reduce the number of living organisms discharged via ballast water into regulated waters. The current VGP also contains more stringent effluent limits for oil-to-sea interfaces and exhaust gas scrubber washwater, which seeks to improve environmental protection of U.S. waters. EPA was expected to publish for review and comment a draft VGP to replace the 2013 VGP, but announced that it was administratively extending the 2013 VGP until implementation of the Vessel Incidental Discharge Act (VIDA), signed into law on December 4, 2018. VIDA will replace the 2013 VGP once implemented, which is likely several years away.</td>
<td>Carnival Corporation &amp; plc complies with the 2013 VGP. Carnival Corporation &amp; plc’s procedure exceeds the VGP’s 3 NM restriction on discharges of gray water by requiring that discharges of gray water be outside 4 NM from the nearest land. Carnival Corporation &amp; plc’s Brands exceed the VGP’s 1 NM restriction on discharges of treated bilge water by requiring that treated bilge water discharges be outside 12 NM from the nearest land. Carnival Corporation &amp; plc takes all reasonably available and appropriate measures to minimize the extent and effects of ballast water discharges and comply with the 2013 VGP.</td>
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### U.S. Resource Conservation and Recovery Act (“RCRA”)

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<td>RCRA requires hazardous waste management from “cradle-to-grave.” This includes the generation, transportation, treatment, storage, and disposal of hazardous wastes. RCRA also sets forth a framework for the management of non-hazardous solid wastes. For vessels, RCRA applies once hazardous waste is offloaded in a U.S. Port.</td>
<td>Carnival Corporation &amp; plc complies with RCRA and its implementing regulations once waste is landed ashore, including transportation requirements, such as packaging, labeling, manifesting, and recordkeeping and reporting. Carnival Corporation &amp; plc voluntarily follows the intent of the RCRA as it pertains to the generation and storage of hazardous waste while the waste is onboard the vessel.</td>
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</table>
### U.S. COAST GUARD BALLAST WATER REGULATIONS

#### Regulation Description & Summary of Requirements

Ballast Water Management reduces the threat to the world’s oceans, and resultant environmental, economic and public health impacts from invasive aquatic species by addressing the transfer of harmful aquatic organisms and pathogens in ships’ ballast water. These requirements include ballast water management, exchange, reporting and recordkeeping. The United States is not party to the IMO’s Ballast Water Management Convention, so it imposes its own regulatory regime regarding ballast water management.

The U.S. Coast Guard’s ballast water regulations establish a standard for the allowable concentration of living organisms in ships’ ballast water discharged in U.S. waters. Vessel owners/operators are required to comply with the U.S. ballast water regulations provided in Title 33 Code of Federal Regulations (CFR) Part 151.

The U.S. Coast Guard’s ballast water regulations apply to new ships constructed on or after December 2013 upon delivery of the ship, as well as to existing ships from January 1, 2014 or January 1, 2016 onwards, based on a phase-in schedule determined by the dry dock schedule and ballast water capacity of the ship as specified in 33 CFR 151.2035(b). Existing vessels with a ballast water capacity between 1500 and 5000 cubic meters, which include some of Carnival Corporation & plc’s vessels, must comply by their first scheduled drydocking after January 1, 2014. Those vessels that have a ballast water capacity greater than 5000 cubic meters, must comply by their first scheduled drydocking after January 1, 2016.

Upon a vessel’s compliance date, the U.S. Coast Guard’s ballast water regulations require use of one of the approved ballast water management methods: 1) Install and operate a U.S. Coast Guard type-approved ballast water management system (BWMS) (since December 2016, the U.S. Coast Guard has type-approved fifteen ballast water management systems); 2) Use only water from a U.S. public water system; 3) Use an Alternate Management System (AMS) for up to five years from the vessel’s compliance date; 4) Do not discharge ballast water into waters of the United States, or 5) Discharge to an onshore facility or to another vessel for purposes of treatment.

In addition, the U.S. Coast Guard may grant an extension to a respective vessel’s compliance date if an owner/operator documents that, despite all efforts, compliance with one of the approved ballast water management methods is not possible. Vessels with a valid extension can continue to exchange ballast water in accordance with U.S. Coast Guard regulations. Some of Carnival Corporation & plc Brands have obtained extensions to their compliance dates from the U.S. Coast Guard.

Vessels which have not yet reached their original compliance date for installing a USCG approved BWMS can continue to exchange ballast water in accordance with U.S. Coast Guard regulations.

#### How We Meet or Exceed Regulation

Carnival Corporation & plc complies with international, federal, and state ballast water-management requirements and aims to minimize any discharges of ballast water.

- Carnival Corporation & plc monitors the levels of fuel, potable water, gray water and black water, and uses those tanks when possible to stabilize the vessel as opposed to taking on or discharging ballast water.
- Carnival Corporation & plc coordinates fuel and potable water bunkering in such a way as to reduce the need for ballast water.

### THE MARITIME TRANSPORTATION SECURITY ACT OF 2002 (“MTSA”)

#### Regulation Description & Summary of Requirements

The MTSA is U.S. legislation implementing the International Ship and Port Facility Security Code (“ISPS”) described above. The MTSA:

- establishes a maritime security framework including U.S. vessel and port facility security requirements and standards; and
- provides for U.S. Coast Guard enforcement of such provisions, including security assessments, security plans, training and drills. MTSA regulations provide that foreign-flag vessels with a valid ISPS certificate will normally be deemed in compliance with U.S. Coast Guard regulations.

#### How We Meet or Exceed Regulation

Carnival Corporation & plc’s ships, which all have valid International Ship Security Certificates confirming compliance with the ISPS Code, also comply with the requirements of MTSA.
PORT STATE CONTROL REQUIREMENTS: UNITED STATES

INTELLIGENCE REFORM AND TERRORISM PREVENTION ACT OF 2004

Regulation Description & Summary of Requirements
This Act, enacted in response to the terror attacks of September 11, 2001, requires cruise ship operators to provide certain passenger and crew information to the U.S. Department of Homeland Security (“DHS”) to enable DHS to compare this information to watch lists to prevent suspected or known terrorists and their associates from boarding, or to subject them to additional security scrutiny.

How We Meet or Exceed Regulation
Carnival Corporation & plc complies with the requirements of this Act.

CRUISE VESSEL SECURITY AND SAFETY ACT (“CVSSA”) OF 2010

Regulation Description & Summary of Requirements
The CVSSA applies to passenger vessels that are authorized to carry at least 250 passengers and have onboard sleeping facilities. The CVSSA:

• promotes the safety and security of cruise vessel passengers and crew;
• requires cruise vessels to adopt basic reporting, safety and security measures; and
• mandates that cruise vessels adopt several other basic security measures, including:
  – updated ship design;
  – providing public access to information regarding crime onboard cruise ships;
  – improved precautions, response and medical care and support for victims of sexual assault; and
  – preservation of evidence necessary to prosecute criminals.

How We Meet or Exceed Regulation
Carnival Corporation & plc complies with the requirements of this Act.

ALASKA CRUISE SHIP LEGISLATION; TITLE XIV — “CERTAIN ALASKAN CRUISE SHIP OPERATIONS”

Regulation Description & Summary of Requirements
Sets federal effluent standards for treated sewage and graywater and allows continuous discharge if treatment standards are met and confirmed via sampling.

How We Meet or Exceed Regulation
Carnival Corporation & plc complies with the Alaska Cruise Ship Legislation.

ENDANGERED SPECIES ACT (“ESA”) AND MARINE MAMMAL PROTECTION ACT (“MMPA”)

Regulation Description & Summary of Requirements
The purpose of the ESA is to protect and recover imperiled species and the ecosystems upon which they depend. It is administered by the U.S. Department of Interior’s Fish and Wildlife Service and the U.S. Department of Commerce’s National Marine Fisheries Service (“NMFS”).

The MMPA prohibits, with certain exceptions, the “take” of marine mammals in U.S. waters and by U.S. citizens on the high seas, and the importation of marine mammals and marine mammal products into the U.S.

Pursuant to the Right Whale Ship Strike Reduction Rule, vessels 65 feet or longer must travel at 10 knots or less in certain locations (“SMAs”) along the east coast of the U.S. Atlantic seaboard at certain times of the year to reduce the threat of ship collisions with critically endangered North Atlantic right whales. These SMAs were expanded in 2016.

How We Meet or Exceed Regulation
Carnival Corporation & plc complies with the ESA and MMPA.

In 2006, Carnival Corporation & plc partnered with the U.S. National Oceanic and Atmospheric Administration (“NOAA”), and the National Park Service to train navigators to identify different whale species and predict their behaviors in order to avoid collisions with ships. This program was licensed to NOAA and is freely distributed to shipping companies around the world to help train their personnel to avoid whale strikes.

Carnival Corporation & plc meets regulations
### Key U.S. State Requirements: 2

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<td>Establishes state visible emissions requirements for marine vessels operating within three miles of the Alaska coastline.</td>
<td>Carnival Corporation &amp; plc complies with AAC 50.070. Some Operating Lines have installed opacity meters as an additional tool for monitoring air quality.</td>
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<td>Alaskan Department of Environmental Conservation (ADEC) program, which became law in 2006, requires U.S. Coast Guard licensed marine engineers, or equivalent, onboard certain cruise vessels to act as independent observers monitoring state environmental and marine discharge requirements. Ocean Rangers also check that passengers and crew are protected from improper sanitation, health and safety practices. This program is managed by ADEC’s Commercial Passenger Vessel Environmental Compliance Program.</td>
<td>Carnival Corporation &amp; plc complies with the Alaska Ocean Ranger Program.</td>
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<td>The Hawaii State Cruise Ship Legislation establishes standards for the discharge of treated sewage and air emissions from cruise ships and commercial passenger vessels. It prohibits the discharge of untreated sewage from commercial passenger vessels, and it includes specific recordkeeping and monitoring requirements.</td>
<td>Carnival Corporation &amp; plc complies with the Hawaii Cruise Ship Legislation and some of our Corporate Standards exceed these requirements.</td>
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<td>Ballast Water Management reduces the threat to the world’s oceans and resultant environmental, economic and public health impacts from invasive aquatic species, by addressing the transfer of harmful aquatic organisms and pathogens in ships’ ballast water.</td>
<td>Carnival Corporation &amp; plc complies with State Ballast Requirements.</td>
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**KEY U.S. STATE REQUIREMENTS**

(2) There are numerous state requirements that apply to Carnival Corporation & plc’s ships; only select State requirements are included here as examples. Certain states, including, but not limited to Washington, Oregon, Alaska and California have more extensive requirements than those under federal regulations.

### CALIFORNIA STATE LIMITS ON SULFUR CONTENT IN FUEL - 13 CCR § 2299.2 AND 17 CCR § 93118.2

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<td>Since August 1, 2012, California regulations required the use of marine gas oil with 1.0 percent sulfur or less or marine diesel oil with 0.5 percent sulfur or less within 24 NM of California’s coast. Effective January 1, 2014, the limit for both was reduced to 0.10 percent.</td>
<td>Carnival Corporation &amp; plc complies with the California requirements. Several of Carnival Corporation &amp; plc’s Brands have installed shore power connections, which operate in the ports of Juneau, Seattle, Long Beach, San Diego, San Francisco, Brooklyn, Halifax and Vancouver. Carnival Corporation &amp; plc ships operating in California participate in the Port of Long Beach’s Voluntary Vessel Speed Reduction Program, which is aimed at reducing vessel speed in an effort to help reduce air pollution.</td>
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### CALIFORNIA SEWAGE DISCHARGE REQUIREMENTS

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<td>In 2012, California established a no-discharge zone (“NDZ”) that prohibits large passenger vessels of 300 gross tons or greater from discharging all sewage, whether treated or not, while in California marine waters. The NDZ extends along the California coast from Oregon to Mexico and applies to Carnival Corporation &amp; plc ships.</td>
<td>Carnival Corporation &amp; plc exceeds the California requirement by requiring that discharges of treated black water be made beyond 12 NM from the nearest land (California only restricts treated black water discharges to outside 3 NM).</td>
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### CALIFORNIA AT-BERTH REQUIREMENTS - 17 CCR § 93118.3

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<td>On January 1, 2014, California’s shore-power requirements became effective, which apply to Carnival Corporation &amp; plc ships, and require the use of shore power or equivalent emissions reductions for vessels at all California ports with target goals of 50% reduction by 2014, 70% by 2017, and 90% by 2020. Fleets can comply through the Reduced Onboard Power Generation Option or the Alternative Equivalent Emissions Reduction Option. Beginning January 1, 2017, at least 70% of a fleet’s visits to a port must limit auxiliary engine operation to no more than three hours during the entire time the vessel is at-berth and the fleet’s total onboard auxiliary engine power generation must be reduced by at least 70% from the fleet’s baseline power generation, or vessels must reduce NOx and PM by 70% or more through use of an approved technology, such as shore power.</td>
<td>Carnival Corporation &amp; plc complies with the California requirements. Several of Carnival Corporation &amp; plc’s Brands have installed shore power connections, which operate in the ports of Juneau, Seattle, Long Beach, San Diego, San Francisco and Vancouver.</td>
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### CALIFORNIA BIOFOULING MANAGEMENT REQUIREMENTS

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<td>On October 1, 2017, California enacted biofouling management regulations in support of California’s Marine Invasive Species Program (MISP). (2 CCR § 2298.1 et seq.). Beginning January 1, 2018, operators must implement a vessel-specific Biofouling Management Plan and Biofouling Record Book. In addition, operators must submit a Marine Invasive Species Program Annual Vessel Reporting Form must be submitted once annually, at least 24 hours in advance of the first arrival at a California port in each calendar year.</td>
<td>Carnival Corporation &amp; plc complies with the California requirements. Several of Carnival Corporation &amp; plc’s Brands have installed shore power connections, which operate in the ports of Juneau, Seattle, Long Beach, San Diego, San Francisco and Vancouver.</td>
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## FLAG STATE REQUIREMENTS:

**Regulation Description & Summary of Requirements**  
Rules and regulations that generally implement international conventions from which Carnival Corporation & plc’s ships are registered: Bahamas, Bermuda, Italy, Malta, the Netherlands, Panama and the United Kingdom.

**How We Meet or Exceed Regulation**  
Carnival Corporation & plc complies with all Flag State requirements.

![Carnival Corporation & plc meets regulations](image)

## STATE, TRADE ASSOCIATION AND OTHER VOLUNTARY GUIDELINES:

### A) MEMORANDUM OF UNDERSTANDING—CRUISE OPERATIONS IN WASHINGTON STATE

**Guideline Description & Summary of Requirements**  
These are voluntary guidelines related to environmentally responsible handling and disposal of various waste streams, including hazardous wastes, agreed upon by specific states and cruise lines to prevent pollution.

**How We Meet or Exceed Guideline**  
Carnival Corporation & plc’s procedures meet or exceed the levels recommended by the Guidelines, for example, by requiring discharge of treated black water outside 12 NM.

![Carnival Corporation & plc meets and exceeds some guidelines](image)

### B) FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION MEMORANDUM OF UNDERSTANDING

### C) CRUISE LINES INTERNATIONAL ASSOCIATION WASTE MANAGEMENT BEST PRACTICES AND PROCEDURES

### D) THE VENICE BLUE FLAG AGREEMENT

**Guideline Description & Summary of Requirements**  
Adopted in 2007 and renewed annually, this encourages ships and ferries that transit from the Lido Port to the Maritime Station to voluntarily use fuel with 0.1 percent or less sulfur prior to entering the Venice lagoon.

**How We Meet or Exceed Guideline**  
Carnival Corporation & plc complies with the voluntary Blue Flag agreement.

![Carnival Corporation & plc meets guidelines](image)