

Appendix A

Proposed Regulation Order

Proposed Amendments to the
Commercial Harbor Craft Regulation

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Proposed Amendments to the Commercial Harbor Craft Regulation

[Note: The amendments to existing regulatory language are shown in ~~strike through~~ to indicate deletions and underline to indicate additions.]

Amend section 2299.5, title 13, division 3, chapter 5.1 of the California Code of Regulations (CCR) and section 93118.5, title 17, chapter 1, subchapter 7.5, CCR, to read as follows:

Section 2299.5. ~~Low Sulfur Fuel Requirements~~, Emission Limits and Other Requirements for Commercial Harbor Craft.

~~Prior to January 1, 2023, A~~any person who sells, supplies, offers for sale, purchases, owns, operates, leases, charters, or rents any new or in-use diesel fueled Harbor Craft, as defined in section 93118.5(d)(39), title 17, California Code of Regulations (CCR), must comply with the low sulfur fuel use requirement in section 93118.5(e)(1) and other requirements in section 93118.5, title 17, CCR when operating the craft within Regulated California Waters, as defined in section 93118.5(d)(68), title 17, CCR, except as provided in sections 93118.5(b), (c), and (e)(1)(F), title 17, CCR. Notwithstanding the definition of Harborcraft in section 2299(b)(4), title 13, CCR, and in section 93117(b)(4), title 17, CCR, the low sulfur fuel requirement in section 93118.5(e)(1), title 17, CCR applies to an ocean-going tugboat or towboat that has a "registry" (foreign trade) endorsement on its United States Coast Guard certificate of documentation or that is registered under the flag of a country other than the United States, except when on voyages comprised of "continuous and expeditious navigation" through Regulated California Waters, as provided in section 93118.5(c)(1), title 17, CCR. This section shall not be construed as expanding or limiting either the application or requirements of section 93118.5, title 17, CCR, but is intended to alert affected persons of the Harbor Craft fuel use requirement and other provisions in that section.

On and after January 1, 2023, any person who sells, supplies, offers for sale, purchases, owns, operates, leases, charters, or rents any new or in-use Harbor Craft, as defined in subsection 93118.5(d), title 17, California Code of Regulations (CCR), must comply with the renewable diesel fuel requirement in subsection 93118.5(e)(7) and other requirements in section 93118.5, title 17, CCR when operating the craft within Regulated California Waters, as defined in subsection 93118.5(d), title 17, CCR, except as provided in subsections 93118.5(b), (c), and (e)(7)(B), title 17, CCR. Notwithstanding the definition of Harborcraft in section 2299(b)(4), title 13, CCR, and in section 93117(b)(4), title 17, CCR, the renewable diesel fuel requirement in subsection 93118.5(e)(7), title 17, CCR applies to all dredges, articulated tug barges, and petrochemical tank barges, and an ocean-going tugboat or towboat that has a

“registry” (foreign trade) endorsement on its United States Coast Guard certificate of documentation or that is registered under the flag of a country other than the United States, except when on voyages comprised of “continuous and expeditious navigation” through Regulated California Waters, as provided in subsection 93118.5(c)(1), title 17, CCR. This section shall not be construed as expanding or limiting either the application or requirements of section 93118.5, title 17, CCR, but is intended to alert affected persons of the Harbor Craft fuel use requirement and other provisions in that section.

Note: Authority cited: Sections 38505, 38510, 38560, 38566, 38580, 39600, 39601, 41511, 43013, and 43018, and 43019.1 Health and Safety Code. Reference: Sections 38505, 38510, 38560, 38566, 38580, 39000, 39001, 39515, 39516, 41510, 41511, 43013, 43016, and 43018, and 43019.1, Health and Safety Code; and *Western Oil and Gas Ass'n v. Orange County Air Pollution Control District*, 14 Cal.3rd 411, 121 Cal.Rptr. 249 (1975).

Section 93118.5. Airborne Toxic Control Measure for Commercial Harbor Craft.

On January 1, 2023, subsections (e)(1), (e)(3) through (e)(6), and subsection (n) of title 13 of the California Code of Regulations shall be superseded by subsections (e)(7) through (e)(14), and subsection (o) of title 17 of the California Code of Regulations, as specified in section 93118.5. However, if subsections (e)(7) through (e)(14), and subsection (o) of this section 93118.5 of title 17 of the California Code of Regulations collectively are repealed or deemed invalid in their entirety by a final court decision, the requirements of subsections (e)(1), (e)(3) through (e)(6), and subsection (n) of this section 93118.5 of title 17 of the California Code of Regulations shall again become operative. This section shall not be construed as expanding or limiting either the application or requirements subsections (e)(1), (e)(3) through (e)(6), and subsection (n), title 17, California Code of Regulations, but is intended to alert affected persons of the state's requirements regarding commercial harbor craft, ports, terminals, berths, and emission control strategies for commercial harbor craft.

(a) Purpose and Intent.

The purpose and intent of this section is to reduce diesel particulate matter (PM), oxides of sulfur (SO_x), ~~and~~ oxides of nitrogen (NO_x), and greenhouse gas (GHG) emissions from diesel propulsion and auxiliary engines on harbor craft that operate in any of the waters subject to this section ("Regulated California Waters"). This section implements provisions of the Goods Movement Emission Reduction Plan, adopted by the California Air Resources Board (ARB or CARB) in April 2006, to reduce emissions and health risk from ports and the movement of goods in California. This Control Measure also ensures that commercial harbor craft do not create excess visible emissions. California's commercial harbor craft operations are largely situated in the vicinity of at-risk communities that directly benefit from localized reductions of NO_x and PM emissions. This contributes to meeting community health goals as set forth in Assembly Bill 617 (Garcia, Stats. 2017, ch. 136). Furthermore, NO_x and PM emission reductions contribute to meeting California's State Implementation Plan obligations for attainment, and further CARB's obligations under sections 39660 et seq. and 43013 et seq. of the Health & Safety Code. Additionally, use of shore power has a benefit of simultaneously reducing toxic, criteria pollutant, and GHG emissions. This contributes to meeting California's GHG emission reduction targets established in Assembly Bill 32 (Nunez, Stats. 2006, ch. 488) and Senate Bill 32 (Pavley, Stats. 2016, ch. 249).

For purposes of this regulation, "this section" refers to "Section 93118.5" in its entirety.

(b) Applicability.

- (1) Except as provided in subsections (b)(6) and (c), this section applies to any person who sells, supplies, offers for sale, purchases, owns, operates, leases, charters, or rents any new or in-use diesel fueled harbor craft that is operated in any of the Regulated California Waters, and commencing January 1, 2023, to any new or in-use harbor craft, regardless of fuel type.
- (2) *Engine Subject to Multiple CARB Regulations.* In the event an engine that is permanently affixed to a harbor craft and is subject to the regulations in either subsection (A) or (B) below, the requirements of this section shall supersede the requirements of either of the regulations cited below in section 93118.5(b)(2)(A) or section 93118.5(b)(2)(B): ~~is subject to the requirements of this section, and either:~~
 - (A) the regulation for portable compression ignition (CI) engines and equipment units (sections 93116-93116.5, title 17, California Code of Regulations (CCR)); ~~or~~
 - (B) the regulation for in-use off-road diesel vehicles (sections 2420-2427, title 13, CCR); ~~the requirements of this section shall supersede the requirements of either of the regulations cited in 93118.5(b)(2)(A) or 93118.5(b)(2)(B) above.~~
- (3) This section applies to towboats and tugboats engaged in or intending to engage in the service of pulling, pushing, or hauling alongside tank vessels or tank barges.
- (4) Notwithstanding the provisions of title 13, CCR, sections 2299.42, 2299.3, and title 17, CCR, sections 93118.2, and 93130 through 93130.20, this section shall apply to any ocean-going tugboats and towboats and shall supersede the requirements of 13 CCR 2299.42, 13 CCR 2299.3, and 17 CCR 93118.2 and 93130 through 93130.20 in their entirety for ocean-going tugboats and towboats. Commencing January 1, 2023, this section also applies to ATB tug-barge combinations, and petrochemical tank barges. For purposes of this paragraph, "ocean-going tugboats and towboats" shall mean tugboats and towboats with a "registry" (foreign trade) endorsement on its United States (U.S.) Coast Guard certificates of documentation, or tugboats and towboats that are registered under the flag of a country other than the United States.
- (5) Nothing in this section shall be construed to amend, repeal, modify, or change in any way any other applicable State, U.S. Coast Guard, or other federal requirements. Any person subject to this section shall be responsible for

ensuring compliance with both U.S. Coast Guard regulations and the requirements of this section and any other applicable State and federal requirements, including but not limited to, obtaining any necessary approvals, exemptions, or orders from the U.S. Coast Guard.

- (6) This section shall not apply to any engine and equipment that fall within the scope of the preemption of Section 209(e)(1)(A) of the Federal Clean Air Act (42 United States Code (U.S.C.) 7543(e)(1)(A)) and as defined by regulation of the U.S. Environmental Protection Agency (U.S. EPA).

(c) Exemptions.

All or portions of this section do not apply to the following, as provided below, but vessels that are partly or wholly exempt from this section may be subject to other State or federal regulations and requirements. A person subject to such other State or federal regulations and requirements is solely responsible for ensuring the vessel complies with those regulations and requirements. All other portions of this section shall apply unless otherwise specified:

- (1) The requirements of this section do not apply to harbor craft voyages that are comprised of continuous and expeditious navigation through any of the Regulated California Waters for the purpose of traversing such bodies of water without entering California internal or estuarine waters or calling at a port, roadstead, or terminal facility. "Continuous and expeditious navigation" includes stopping and anchoring only to the extent such stopping and anchoring are required by the U.S. Coast Guard; rendered necessary by force majeure or distress; or made for the purpose of rendering assistance to persons, ships, or aircraft in danger or distress. This exemption does not apply to the passage of a harbor craft that engages in any of the prejudicial activities specified in United Nations Convention on the Law of the Seas (UNCLOS) 1982, Article 19, subpart 2. Further, notwithstanding any U.S. Coast Guard mandated stops or stops due to force majeure or the rendering of assistance, this exemption does not apply to a vessel that was otherwise scheduled or intended to enter California internal or estuarine waters or call at a port, roadstead or terminal facility;
- (2) ~~Except as provided in Paragraph (3) below,~~Except as provided in subsection (c)(3) below during the time period prior to January 1, 2023, a temporary replacement vessel is exempt only from the requirements set forth in subsections (e)(10) and (e)(12) and only upon written approval by the CARB's Executive Officer (E.O.). All other provisions in this section shall apply to a temporary replacement vessel subject to this paragraph. An owner or operator,

who has or will have a vessel taken out of service, may apply in writing to the E.O. to operate a temporary replacement vessel pursuant to the following:

- (A) The E.O. shall approve or disapprove such a request within ~~30~~15 days of receipt. The E.O. shall not unreasonably withhold approval of the request to operate the temporary replacement vessel;
 - (B) If the approval is granted, the temporary replacement vessel's operating time will be specified in the approval by the E.O., along with any other terms, conditions, or requirements the E.O. deems necessary, but in no case shall the approved operating time in Regulated California Waters for a specific temporary replacement vessel exceed one year total for any single vessel that is temporarily replaced; ~~and~~
 - (C) No temporary replacement vessel exemptions shall be approved for a vessel that is taken out of service more than 12 months in any 24-month period or if the E.O. cannot determine the length of time a vessel has been taken out of service within any 24-month period; and
 - (D) On and after January 1, 2023, both main and auxiliary engines on temporary replacement vessels must meet Tier 2 or newer marine or off-road emission standards, and cannot be used to replace vessels with non-compliant engines after compliance dates as set forth in subsections (e)(10) and (e)(12).
- (3) This subsection is only applicable until December 31, 2022. A temporary replacement vessel used to replace a vessel that has its homeport in the South Coast Air Quality Management District (SCAQMD) is exempt only from the compliance dates set forth in Table 8 of subsection (e)(6) and only upon written approval from the E.O. All other provisions in this section, including but not limited to, the compliance dates specified in Table 7, Table 9, and Table 10 of subsection (e)(6), shall apply to a temporary replacement vessel subject to this paragraph. An owner or operator, who has or will have a vessel taken out of service, may apply in writing to the E.O. to operate a temporary replacement vessel pursuant to the following:
- (A) The E.O. shall approve or disapprove such a request within 15 days of receipt. The E.O. shall not unreasonably withhold approval of the request to operate the temporary replacement vessel;
 - (B) If the approval is granted, the temporary replacement vessel's operating time will be specified in the approval by the E.O., along with any other terms, conditions, or requirements the E.O. deems necessary, but in no case shall the approved operating time in Regulated California Waters for a specific temporary replacement vessel exceed one year total for any single vessel that is temporarily replaced; and

- (C) No temporary replacement vessel exemptions shall be approved for a vessel that is taken out of service more than 12 months in any 24-month period or if the E.O. cannot determine the length of time a vessel has been taken out of service within any 24-month period;
- (4) A temporary emergency rescue/recovery vessel is exempt from this section in its entirety;
- (5) A recreational vessel is exempt from this section in its entirety;
- (6) An ocean-going vessel, except for ocean-going tugboats and towboats as ~~provided~~ defined in subsection ~~(b)(4)(d)~~, is exempt from this section in its entirety; on and after January 1, 2023, dredges, petrochemical tank barges and articulated tug barges are not exempt from this section;
- (7) A registered historic vessel is exempt only from subsection (e)(6) and (e)(12);
- (8) A U.S. Coast Guard vessel is exempt from this section in its entirety;
- (9) A military tactical support vessel is exempt from this section in its entirety;
- (10) An engine rated less than 50 horsepower (hp) is exempt only from subsection (e)(6); on and after January 1, 2023, engines of all power ratings on regulated in-use vessels including those rated less than 50 hp are subject to this section including the requirements in subsection (e)(12);
- (11) This subsection is only applicable until December 31, 2022. Near-Retirement Vessels. A harbor craft is exempt from the requirements of subsection (e)(6)(C) and (e)(6)(D) if all of the following criteria have been met:
- (A) the vessel is scheduled to be taken out of service and retired permanently;
 - (B) the vessel is actually taken out of service and retired on or before the retirement date scheduled under (A) above; ~~and~~
 - (C) the vessel has an engine with a compliance date, as set forth in subsection (e)(6)(D), that is within one year of the vessel's scheduled retirement date under (A) above; and
 - (D) the owner/operator reports the vessel and engine information along with its scheduled retirement date to CARB prior to removing the vessel from service.

Operation of a vessel subject to this provision after the scheduled retirement date or the engine's compliance date, whichever occurs later, is a separate violation of this section for each and every engine and each and every day of operation during which an engine on the vessel does not meet the requirements of subsection (e)(6)(C) or other parts of this section;

- ~~(12)~~ On and after January 1, 2023, a dedicated emergency use vessel is exempt only from performance standards requirements in subsection (e)(12), opacity testing requirements in subsection (k), and compliance fee requirements in subsection (l);
- ~~(13)~~ On and after January 1, 2023, a commercial fishing vessel is exempt only from performance standards requirements set forth in subsection (e)(12) and compliance fee requirements in subsection (l); and
- ~~(14)~~ On and after January 1, 2023, vessel and facility owners and operators are not liable for failing to comply with the requirements of this section if they can demonstrate that failure to comply is due to a force majeure event, and the regulated entity has used best efforts to anticipate and mitigate impacts of non-compliance, including but not limited to excess emissions.

(d) Definitions.

For purposes of this section, the definitions of Health and Safety Code (H&S) sections 39010 through 39060 shall apply except as otherwise specified in this section:

~~(4)~~ "Air District" means one of the local air pollution control districts (APCDs) or air quality management districts (AQMDs) established under H&S section 40000 et seq.

"Air Basin" means a land area with generally similar meteorological and geographic conditions throughout. California is currently divided geographically into 15 air basins for the purpose of managing the air resources of the State on a regional basis.

~~(2)~~ "Alternative Diesel Fuel" means any fuel used in a diesel engine that is not commonly or commercially known, sold, or represented by the supplier as diesel fuel No. 1-D or No. 2-D, pursuant to the specifications in American Society for Testing and Materials (ASTM) D975-81, "Standard Specification for Diesel Fuel Oils," as modified in May 1982, which is incorporated herein by reference, and does not require engine or fuel system modifications for the

engine to operate, although minor modifications (e.g., recalibration of the engine fuel control) may enhance performance. Examples of alternative diesel fuels include, but are not limited to, biodiesel and biodiesel blends not meeting the definition of CARB diesel fuel; Fischer-Tropsch fuels; emulsions of water in diesel fuel; and fuels with a fuel additive, unless:

- (A) the additive is supplied to the engine fuel by an on-board dosing mechanism; or
 - (B) the additive is directly mixed into the base fuel inside the fuel tank of the engine; or
 - (C) the additive and base fuel are not mixed until engine fueling commences, and no more additive plus base fuel combination is mixed than required for a single fueling of a single engine.
- (3) "Alternative Fuel" means natural gas, propane, ethanol, methanol, gasoline, hydrogen, electricity, or other technologies that do not meet the definition of CARB diesel or alternative diesel fuel. "Alternative fuel" also means any mixture that only contains these fuels.
- (4) "Annual Hours of Operation" means the total number of hours, rounded to the nearest whole hour, a vessel engine is used for all commercial purposes in Regulated California Waters in the calendar year (January 1 to December 31) immediately prior to the engine's applicable compliance date set forth in subsection (e)(6)(D). For example, if a vessel is used for commercial fishing and commercial non-fishing purposes, the total number of hours combined for both uses shall be the total annual hours of operation for that vessel. On and after January 1, 2023, any use of a commercial vessel for non-commercial purposes must be documented based on recordkeeping requirements in subsection (m)(4), otherwise the annual hours of operation for commercial purposes will be based on records from the non-resettable hour meter.
- "Articulated Tug Barge (ATB)" means a petrochemical tank barge that is mechanically linked with a paired tug that functions as a tug-barge combination.
- (5) "Auxiliary Engine" means an engine designed primarily to provide power for uses other than propulsion.
- (6) "Averaging" means an exchange of excess reduced regulated emissions among engines on vessels in the same owner's or operator's fleet.
- "Battery Plug-in Hybrid Propulsion System" means a harbor craft main propulsion system utilizing energy from two or more different energy sources,

one of which includes a battery energy storage system that is designed to periodically be swapped or charged by an external energy source.

- (7) "Baseline" means the emissions level of a diesel engine using CARB diesel fuel as configured upon initial marine installation.
- (8) "Barge" means a vessel having a single or double flat-bottomed rectangular hull with sloping ends that is typically flat-bottomed, but may have a rounded hull form and built with or without a propulsion engine. Barges include but are not limited to deck barges, derrick or crane barges, dredging scow barges, autonomous drone barges, towed or pushed petrochemical tank barges, or barges operating as part of an ATB combination.

"Based Outside of Regulated California Waters (RCW)" means operating more than 50 percent of the time outside of RCW in the previous calendar year.

"Berth" means a vessel's allocated place at a wharf, pier, or dock. For the purpose of this section, berth and slip can be used interchangeably.

- (9) "California Air Resources Board (CARB) Diesel Fuel" means any diesel fuel that meets the specifications of vehicular diesel fuel, as defined in title 13 CCR, sections 2281, 2282, 2284, 2299, and title 17 CCR section 93116.
- (10) "California Baseline" means the mean lower low water line along the California coast, as shown on the following National Oceanic and Atmospheric Administration (NOAA) Nautical Charts as authored by the NOAA Office of Coast Survey, which are incorporated herein by reference:
- (A) Chart 18600, Trinidad Head to Cape Blanco (January 2002);
 - (B) Chart 18620, Point Arena to Trinidad Head (June 2002);
 - (C) Chart 18640, San Francisco to Point Arena (August 2005);
 - (D) Chart 18680, Point Sur to San Francisco (June 2005);
 - (E) Chart 18700, Point Conception to Point Sur (July 2003);
 - (F) Chart 18720, Point Dume to Purisima Point (January 2005); and
 - (G) Chart 18740, San Diego to Santa Rosa Island (March 2007).

"California Department of Motor Vehicles (DMV) CF number" is a permanent registration number (CF number) assigned upon registration of undocumented vessels in California. In accordance with the national vessel registration system, the registration number consists of the letters CF, four numbers, and a two-letter suffix (for example, CF 1234 AB).

"California Fish and Wildlife License Number" means an identification number assigned by the California Department of Fish and Wildlife, which is displayed on vessels on contrasting background in a format of FG 12345.

"Call Sign Number" means a unique identifier to a vessel containing both characters and numbers most often used in radio transmissions.

(11) "CARB" means the California Air Resources Board. CARB may also be referred to as "ARB."

"CARB Approved Emission Control System (CAECS)" means a method of reducing emissions to a satisfactory level for compliance with Title 17, CCR 93130 through 93130.20, which is approved by CARB in this section as providing the same or greater reductions as applied to harbor craft.

"CARB Diesel Fuel" means any diesel fuel that meets the specifications of vehicular diesel fuel, as defined in Title 13 CCR, Sections 2281 and 2282.

(12) "Carbon Monoxide (CO)" is a colorless, odorless gas resulting from the incomplete combustion of hydrocarbon fuels.

(13) "Category 1 Engine" means any marine engine with a displacement of less than 5.0 liters per cylinder and with a maximum horsepower (hp) rating of 50 hp or greater.

(14) "Category 2 Engine" means any marine engine with a displacement of 5.0 to less than 30 liters per cylinder.

(15) "Category 3 Engine" means any marine engine with a displacement of greater than 30 liters per cylinder.

(16) "Certified Marine Engine" means an engine that is certified by U.S. EPA as meeting the requirements of title 40, Code of Federal Regulations (CFR), Part 94 or Part 1042.

(17) "Certified Nonroad Engine" means an engine that is certified by U.S. EPA as meeting the requirements of title 40, CFR, Part 89 or Part 1039.

"Charter" means an agreement or contract where one person or company rents, leases, hires, or uses commercial harbor craft vessels from another person or company to convey or transport goods or passengers.

"CHC Reporting System" is a reporting system that utilizes a web-based portal, fillable forms or other approved means of meeting reporting requirements of this section.

- (18) "Coast Guard Vessel" means any vessel or boat owned or operated by the U.S. Coast Guard, including, but not limited to, U.S. Coast Guard cutters and patrol boats that are used for law enforcement, defense operations, marine science, search and rescue missions, training missions, coastal surveillance, servicing aids to navigation, and marine environmental response.

"Commercial Harbor Craft" means the same as "Harbor Craft."

"Commercial Passenger Fishing" (also called "Charter Fishing" or "Sportfishing") means any coastal or offshore vessel used for sport fishing, charter fishing, or any other type of fishing activity where individuals other than the owners or operators of the vessel are on board the vessel to perform fishing activities in exchange for payment to the vessel owner/operator. Commercial passenger fishing vessels include but are not limited to operations that provide both day and overnight trips, including those that may voyage periodically in and out of Regulated California Waters.

- (19) "Compliance Date" means the date by which time a vessel engine must meet the requirements set forth in subsection (e)(6)(C). The "compliance date" prior to January 1, 2023 for a vessel engine is set forth in Table 7, Table 8, Table 9, or Table 10 in subsection (e)(6)(D), whichever is applicable. The "compliance date" on and after January 1, 2023 is set forth in Table 14, Table 16, Table 17, Table 18, Table 19, or Table 21 in subsection (e), or the extension is set forth in (e)(12)(E), whichever is applicable.

- (20) "Crew and Supply Vessel" means a self-propelled vessel used for carrying personnel and/or supplies to and from off-shore and in-harbor locations (including, but not limited to, off-shore work platforms, construction sites, islands, and other vessels).

- (21) "Date of Acquisition" means, for a vessel or engine subject to this regulation, the date of purchase as defined by the date shown on the front of the cashed check, the date of the financial transaction, or the date on the vessel or engine purchasing agreement, whichever is earliest of the three dates.

"Dedicated Emergency Use Vessel" means a vessel that is used to perform fire suppression, police response or activities to protect public safety, or emergency rescue as its only specified vocation reported to CARB. Vessels performing

training or certification for, or actual operations in oil spill response, are not dedicated emergency use vessels. Vessels operated by the California Department of Fish and Wildlife to enforce provisions of the California Fish and Game Code or California Fish and Game regulations are not dedicated emergency use vessels, even if they may be called upon to enforce other California laws.

“Diesel Emission Control Strategy (DECS)” refers to a technology that reduces air pollution from diesel engine exhaust before it is emitted into the air.

- (22) “Diesel Engine” means an internal combustion, compression-ignition (CI) engine, or pilot ignition engine with operating characteristics significantly similar to the theoretical diesel combustion cycle. The regulation of power by controlling fuel supply in lieu of a throttle is indicative of a compression ignition engine.

“Diesel Engine System” means a system, including diesel engines and diesel particulate filters, used to meet CARB’s performance standards as set forth in subsection (e)(9).

“Diesel Exhaust Fluid (DEF)” means a liquid reducing agent (other than engine fuel) used in conjunction with selective catalytic reduction to reduce NO_x emissions. Diesel exhaust fluid is an aqueous solution of urea conforming to the specifications of International Organization for Standardization (ISO) 22241, which is incorporated by reference herein.

- (23) “Diesel Fuel” means any fuel that is commonly or commercially known, sold, or represented by the supplier as diesel fuel, including any mixture of primarily liquid hydrocarbons (HC) - organic compounds consisting exclusively of the elements carbon and hydrogen - that is sold or represented by the supplier as suitable for use in an internal combustion, compression-ignition engine.

- (24) “Diesel-Fueled” means a diesel engine fueled in whole or part by diesel fuel.

- (25) “Diesel Oxidation Catalyst (DOC)” means an emission control technology that employs a catalyst to promote oxidation processes in diesel exhaust gases, usually designed to reduce emissions of the organic fraction of diesel particulates, gas-phase HC, and CO.

- (26) “Diesel Particulate Filter (DPF)” means an emission control technology that reduces diesel PM emissions in engine exhaust gases by trapping the particles in a flow filter substrate and periodically removes the collected particles by

either physical action or by oxidizing (burning off) the particles in a process called regeneration. On and after January 1, 2023, DPF means a CARB Level 3 Verified Diesel Emission Control Strategy (VDECS).

(27) “Diesel Particulate Matter (Diesel PM)” means the particles found in the exhaust of diesel engines, which may agglomerate and adsorb other species to form structures of complex physical and chemical properties.

(28) “Direct Control” means owning, operating, having a contract, lease, or other arrangement to operate a harbor craft. For facilities, “Direct Control” means to control the affairs of facility operations, which includes but is not limited to collecting payment from independent operators for use of dock space, using facility property to moor, dock, service, or maintain a person’s own vessels, and being responsible for the majority of commercial activity at a given location.

“Disadvantaged Communities (DACs)” are census tracts or applicable tribal data designated by the California Environmental Protection Agency for the purposes of SB 535 (Health and Safety Code Section 39711) using the most current version of CalEnviroScreen by the Office of Environmental Health Hazard Assessment (OEHHA). DACs include all wharfs, docks, berths, and slips within a port, marina, harbor or other terminal facility if any portion of the facility is located within a DAC. Additional requirements apply for vessels with a homebase or any regularly scheduled stop within 2 miles of a DAC.

“Distributed Generation” means electrical power generation technologies and equipment (including but not limited to on-shore combustion engines at a dock or barge-mounted combustion engines moored to a dock), or other methods that produce electricity at or near the place of use. Stationary generators meeting definition of an emergency standby generator as set forth by 17 CCR 93115 et seq. that are used for emergency operations for harbor craft are not subject to distribution generation requirements. The electricity generated must meet the following emissions standards:

- (A) NO_x emissions no greater than 0.03 gram per kilowatt-hour (g/kW-hr);
- (B) PM emissions equivalent to the combustion of natural gas with a fuel sulfur content of no more than 1 grain per 100 standard cubic foot;
- (C) Distributed generation greenhouse gas (GHG) emissions must be grid-neutral; and
- (D) Ammonia emissions no greater than five parts per million on a dry volume basis (ppmdv), if selective catalytic reduction (SCR) is used.

“Dock” means the state of being secured to a facility (to dock), or the permanent structure to which a vessel can be secured.

- (29) “Dredge” means a vessel designed to remove earth from the bottom of waterways, by means of including, but not limited to, a scoop, a series of buckets, or a suction pipe. Dredges include, but are not limited to, hopper dredges, clamshell dredges, or pipeline dredges. On and after January 1, 2023, dredges also include, but are not limited to, suction hopper dredges, barge mounted dredges, and dredges with engines having a per cylinder displacement above 30 liters.

“Emergency Operation” means performing emergency response duties such as responding to a stricken vessel, participating in activities as required by a Vessel Mutual Assistance Plan (VMAP), transporting displaced persons and first responders in response to a regional emergency, unannounced drills that are part of California Department of Fish and Wildlife (CDFW) Office of Spill Prevention and Response (OSPR) validation of Oil Spill Contingency Plans (C Plans) or U.S. Coast Guard requirements, providing response effort to an oil or petrochemical spill event, or use of combustion engines onboard vessels meeting zero-emission and advanced technology (ZEAT) requirements in the event of an electrical utility power outage. The operating hours within Regulated California Waters during emergency operation can be excluded from performance requirements for ZEAT in subsection (e)(10), and annual limits as set forth in subsection (e)(14) and (e)(12)(E)(4) if documented according to recordkeeping requirements in subsection (m) and reported according to subsection (o).

- (30) “Emission Control Strategy” means any device, system, or strategy employed to reduce emissions from an engine, including, but not limited to, diesel oxidation catalysts, selective catalytic reduction systems, diesel particulate filters, alternative diesel fuels, water emulsified fuels, and any combination of the above.

“Engine Family” means an identifier assigned by the United States Environmental Protection Agency (U.S. EPA) or CARB to every engine certified to Tier 1 emission standards or higher. Engine family names generally contain 11 to 12 digits for off-road or marine certified engines.

“Escort Tugboats” means a tugboat with a primary vocation involving intercepting and escorting ATBs, or any ocean-going vessel entering or departing Regulated California Waters with the purpose of providing maneuvering or stopping assistance in case of loss of propulsion or steering

power while in-route to or from docks and terminals. Escort tugs will typically work with ship-assist harbor tugs to dock or undock their escorted ATBs or ocean-going vessels. Escort tugs may also stay with ATBs or ocean-going tanker vessels while they are offloading or loading petrochemical product for fire suppression assistance or emergency undocking.

- (31) "Estuarine Waters" means an arm of the sea or ocean that extends inland to meet the mouth of a river.
- (32) "Excursion Vessel" means a self-propelled vessel that transports passengers for purposes including, but not limited to, dinner cruises; harbor, lake, or river tours; scuba diving expeditions, lessons, or training; sailing expeditions; parasailing expeditions; any type of for-hire charters for pleasure purposes; and whale watching tours. "Excursion Vessel" does not include crew and supply vessels, ferries, and recreational vessels.
- (33) "Executive Officer" means the Executive Officer (E.O.) of the California Air Resources Board or his/her designee.

"Facility" means, but is not limited to, any port, marine terminal, oil terminal, marina, harbor, and land with docks for allowing a commercial harbor craft to dock, moor, or otherwise conduct commerce.

"Facility Operator" means any person or company in direct control of daily facility operations and if applicable, responsible for the collection of commercial harbor craft vessel operators' compensation to dock, moor, or otherwise conduct commerce. For purposes of this section, "Facility Operator" is interchangeable with the "Tenant" or "Facility Tenant".

"Facility Owner" means any person, company, municipality, or port authority that owns the property of the facility. "Facility Owner" is interchangeable with "Land Owner" and "Property Owner". In some cases, including but not limited to port authorities, "facility owner" may also be the "facility operator".

- (34) "Family Emission Limit (FEL)" means an emission level that is declared by the manufacturer to serve in lieu of an emission standard for certification purposes and for the averaging, banking, and trading program, as defined in title 13, California Code of Regulations, section 2423 or 40 CFR Parts 89.112(d), or 1039.101, as they existed on April 27, 2010.
- (35) "Ferry" means a harbor craft having provisions only for deck passengers or vehicles, operating on a short run, on a frequent schedule between two points

over the most direct water route, and offering a public service of a type normally attributed to a bridge or tunnel. On and after January 1, 2023, "Ferry" means a harbor craft having provisions only for deck passengers or vehicles, operating between two points over the most direct water route, and offering a public service of a type normally attributed to a bridge or tunnel. "Ferry" also includes vessels operated by a public or private company to transport passengers commercially, on a regularly scheduled or on-demand basis, which is not for pleasure. Ferry vessels include, but are not limited to, water taxis and any vessel subject to Vessel Common Carrier requirements as set forth by the California Public Utilities Commission.

- (36) "Fishing Vessel" means a self-propelled vessel that is either:
- (A) a commercial vessel dedicated to the search for, and collection of, fish for the purpose of sale at market or directly to a purchaser(s); or
 - (B) a charter vessel used for hire by the general public and dedicated to the search for and collection of, fish for the purpose of general consumption.

On and after January 1, 2023, subsection (B) above is no longer in effect. For the purpose of this section, "fishing vessel" and "commercial fishing vessel" are used interchangeably, and are separate from "commercial passenger fishing vessels."

- (37) "Fleet" means the total number of harbor craft owned, rented, or leased by an owner or operator in an air district or distinct locale within Regulated California Waters; or, the statewide population of a specific vessel type. On and after January 1, 2023, "fleet" also includes chartered harbor craft and extends to harbor craft in an air basin.

"Force Majeure" means a sudden and unforeseeable event involving a clear danger, demanding action to prevent or mitigate the loss of, or damage to, life, health, property, or essential public services, arising from causes beyond the control of the vessel or facility owner/operator, which delays or prevents the performance of any obligation under this section, despite best efforts to fulfill the obligation. This includes events where the local government, State of California, or federal government issues a declaration of emergency, which can include war, wildfires, floods, hurricanes, tornadoes, earthquakes, volcanic eruptions, and pandemics. This does not include negligent acts or the owner/operator's financial inability to perform which is unrelated to a force majeure event.

- (38) "Fuel Additive" means any substance designed to be added to fuel or fuel systems or other engine-related engine systems such that it is present in-cylinder during combustion.

"Grid-Neutral" means emitting no more GHG emissions than if equipment were powered by the California grid as represented in the most recent eGRID Summary Table for State Output Emission Rates as the California carbon dioxide equivalent (CO₂e) emissions rate.

- (39) "Harbor Craft" (also called "Commercial Harbor Craft") means any private, commercial, government, or military marine vessel including, but not limited to, passenger ferries, excursion vessels, tugboats, ocean-going tugboats, towboats, push boats, crew and supply vessels, work-boats, pilot vessels, supply boats, fishing vessels, research vessels, barge and dredge vessels, commercial passenger fishing vessels, oil spill response vessels, U.S. Coast Guard vessels, hovercraft, emergency response harbor craft, and barge vessels that do not otherwise meet the definition of ocean-going vessels or recreational vessels.

"Homebase" means the facility located in Regulated California Waters where a vessel is anchored, docked, or moored the majority of the time within a calendar year.

- (40) "Homeport" means the port in which a vessel is registered or permanently based.

"Hydrocarbon (HC)" means the hydrocarbon group on which the emission standards are based for each fuel type, as described in 40 Code of Federal Regulations (CFR) §1042.101(d) and §1042.104(a), which are incorporated by reference herein.

"Hydrogen Fueling Infrastructure" means the necessary infrastructure required to safely transfer compressed or liquid hydrogen directly from a truck or on-site storage facility to a commercial harbor craft.

"Idling" means operating main propulsion or auxiliary engines when the net torque generated by the engine is at the operational minimum for the configuration of an engine connected to propulsion or other auxiliary vessel systems. Idling typically occurs when the vessel is at dock.

"International Maritime Organization (IMO) Number" means an identification number made up of the three letters "IMO" followed by a unique seven-digit

number assigned to all ships by IHS Markit (formerly known as Lloyd's Register-Fairplay) when constructed.

- (41) "In-Use Harbor Craft" means a harbor craft that is not a new harbor craft.
- (42) "In-Use Marine Engine" means a marine engine that is not a new marine engine.
- (43) "Lease" means a contract by which the owner (lessor) of a property, such as a vessel or engine, grants the right to use or occupy the property to another person (lessee) for a specified term and for a specified rent.
- (44) "Level" means, unless the context requires otherwise, one of three categories of CARB-verified diesel emission control strategies as set forth in title 13, CCR, section 2700 et seq.: Level 1 means the strategy reduces engine diesel PM emissions by between 25 and 49 percent; Level 2 means the strategy reduces engine diesel PM emissions by between 50 and 84 percent; and Level 3 means the strategy reduces engine diesel PM emissions by 85 percent or greater, or reduces engine diesel PM emissions to less than or equal to 0.01 grams per brake horsepower-hour (g/bhp-hr).
- "Line Towing" means towing another ocean-going vessel, barge, or harbor craft with a trailing towline as opposed to hauling alongside.
- (45) "Low-Use" means the operation of any compression-ignition engine associated with a harbor craft vessel for less than the total annual hours of operation in Regulated California Waters, based on the immediately preceding calendar year, that the E.O. deems ~~it~~ the engine is subject to the in-use requirements in subsection (e). Prior to January 1, 2023, low-use hour limit is 80 hours for barge and dredge vessels, and 300 hours for the regulated in-use vessels except barge and dredge vessels; On and after January 1, 2023, low-use hour limit is set forth in subsection (e)(14) Table 22.
- (46) "Military Tactical Support" means a vessel that meets military specifications, is owned by the U.S. Department of Defense, the U.S. Coast Guard, the U.S. Military services or its allies, and is used in combat, combat support, combat services support, tactical or relief operations or training for such operations. This category does not include contractors working for the military.
- (47) "Model Year" means the diesel engine manufacturer's annual production period, which includes January 1st of a calendar year, or if the manufacturer has no annual production period, the calendar year.

"Moor" means any permanent structure to which a vessel may be secured or the act of securing to a permanent structure or facility.

- (48) "New Harbor Craft" means a harbor craft for which both of the following criteria are true:
- (A) it is built, or its keel is laid, on or after January 1, 2009, and
 - (B) the equitable or legal title to the harbor craft has never been transferred to an ultimate purchaser.

Where the equitable or legal title to the harbor craft is not transferred to an ultimate purchaser prior to the harbor craft being placed into service, the harbor craft ceases to be new when it is placed into service. A harbor craft is placed into service when it is used for its functional purposes.

- (49) "New Marine Engine" means a marine engine for which both of the following criteria are true:
- (A) it is manufactured or imported on or after January 1, 2009, and
 - (B) the equitable or legal title to the engine has never been transferred to an ultimate purchaser.

Where the equitable or legal title to the engine is not transferred to an ultimate purchaser prior to the engine being placed into service, the engine ceases to be new when it is placed into service. An engine is placed into service when it is used for its functional purposes.

"Newly Acquired Harbor Craft" means a harbor craft that a person did not own or operate as of January 1, 2023.

- (50) "Nitrogen Oxides or Oxides of Nitrogen (NO_x)" means compounds of nitric oxide (NO), nitrogen dioxide (NO₂), and other oxides of nitrogen, which are typically created during combustion processes and are major contributors to smog formation and acid deposition.

- (51) "Non-Methane Hydrocarbons (NMHC)" means the sum of all hydrocarbon (HC) air pollutants except methane.

- (52) "Ocean-going Vessel" means a self-propelled commercial, government, or military vessel meeting any one of the following criteria:

- (A) a vessel greater than or equal to 400 feet in length overall (LOA) as defined in 50 CFR § 679.2, as adopted June 19, 1996;
- (B) a vessel greater than or equal to 10,000 gross tons (GT ITC) per the convention measurement (international system) as defined in 46 CFR 69.51-.61, as adopted September 12, 1989; or
- (C) a vessel propelled by a marine compression-ignition engine with a per-cylinder displacement of greater than or equal to 30 liters.

“Ocean-going Tugboats and Towboats” shall mean tugboats and towboats with a “registry” (foreign trade) endorsement on their United States (U.S.) Coast Guard certificates of documentation, or tugboats and towboats that are registered under the flag of a country other than U.S.

“Oil Spill Response Vessel” is a type of workboat that is dedicated to providing oil or fuel spill response cleanup. For the purpose of this section, oil spill response vessels are not dedicated emergency use vessels.

“Opacity” means the fraction of a beam of light, expressed in percent, which fails to penetrate a plume of smoke as measured over a 5-inch path length in accordance with SAE J1667, which is incorporated by reference herein.

- (53) “Operate” means steering or otherwise running the vessel or its functions while the vessel is working, underway, moored, anchored, or at dock.

“Operator” means a person who operates a vessel under a contract agreement.

- (54) “Own” means having all the incidents of ownership, including the legal title, whether or not that person lends, rents, or pledges the vessel; having or being entitled to the possession of a vessel as the purchaser under a conditional sale contract; or being the mortgagor of a vessel.

- (55) “Particulate Matter (PM)” means any airborne finely divided material, except uncombined water, which exists as a liquid or solid at standard conditions (e.g., dust, smoke, mist fumes, or smog).

“Performance Standards” means PM and NOx emission standards defined by CARB, set forth in Table 11, Table 12 and Table 13 in subsection 93118.5(e)(9), that must be met to comply with the in-use requirements of the CHC regulation.

- (56) “Permanently affixed to a harbor craft” means the engine, its fueling system, or its exhaust system is welded or otherwise physically connected to the vessel or

other vessel system in such a way that the engine cannot be easily removed for use in a land-based application without modifications.

(57) "Person" includes all of the following:

- (A) any person, firm, association, organization, partnership, business trust, corporation, limited liability company, or company;
- (B) any state or local governmental agency or public district, or any officer or employee thereof; and
- (C) the United States or its agencies, to the extent permitted by federal law.

"Petrochemical Tank Barge" means a non-self-propelled double-hull tank barge constructed to transport petrochemicals, fuels, or other combustible or noxious liquid substances and designed to either be pushed by a designated tug utilizing a proprietary retractable pin connection system forming a temporary articulated tug barge combination or towed on a wire by tugboat.

"Physical Constraint" means an unavoidable barrier at a terminal to provide a service due to the layout of a terminal or waterway where a state or federal public agency with jurisdiction over the resources effected by this section has made a safety determination that prevents the use of shore power.

(58) "Pilot Vessel" means a vessel designed for, but not limited to, the transfer and transport of maritime pilots to and from ocean-going vessels while such vessels are underway, at anchor, or at dock.

(59) "Port" means any facility used for water-borne commerce. "Port" includes, but is not limited to, facilities also known as "marine terminals" and "roadsteads."

(60) "Portable CI Engine" means a compression-ignition (CI) engine designed and capable of being carried or moved from one location to another. Indicators of portability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform. Portable engines are not self-propelled.

(64) "Portable Equipment Registration Program (PERP)" means the statewide program designed to promote the use of clean portable engines and equipment units in California, as provided for in title 13, CCR, sections 2450 through 2465. Once registered in the program, portable engines and equipment units can operate throughout the State without being required to obtain individual permits from each air pollution control or air quality management district in which they operate.

~~(62)~~ "Pre-Tier 1 Engine" means an engine that was built before the effective date of U.S. EPA's Tier 1 marine engine emission standards (Tier 1 marine standards), as set forth in 40 CFR 94, or U.S. EPA's Tier 1 emission standards for nonroad compression ignition engines, as set forth in 40 CFR 89.

~~(63)~~ "Propulsion Engine" means an engine that provides power to move a vessel through the water or directs the movement of a vessel. For purposes of this section, "Propulsion engine" is interchangeable with "Main" engine.

~~(64)~~ "Purchase Date" means the date shown on the front of the cashed check; the date of the financial transaction; or the date on the engine or harbor craft purchase, rental, or lease agreement, whichever is earliest.

~~(65)~~ "Push Boat" means any self-propelled vessel engaged in or intending to engage in the service of pulling, pushing, or hauling along side barges or other vessels, or any combination of pulling, pushing, or hauling along side barges or other vessels. "Push boats" is interchangeable with "towboats."

"Rebuild" means an overhaul to an engine using both new and re-conditioned parts while following repair procedures that have been approved by the manufacturer. When engine repairs require replacement of the engine block, the engine is considered to be repowered, not rebuilt.

~~(66)~~ "Recreational Vessel" means a vessel that is intended by the vessel manufacturer to be operated primarily for pleasure or leased, rented, or chartered to another for the latter's pleasure, excluding the following vessels: (1) vessels of less than 100 gross tons that carry more than 6 passengers, (2) vessels of 100 gross tons or more that carry one or more passengers, and (3) vessels used solely for competition. On and after January 1, 2023, "Recreational Vessel" means a vessel that is used solely for personal use, which excludes diesel-powered vessels that are operated as a charter or hired to carry any number of passengers.

~~(67)~~ "Registered Historic Vessel" means a vessel listed in the National Register of Historic Places pursuant to the National Historic Preservation Act of 1966 (16 U.S.C. §470).

"Regularly Scheduled" means any vessel activity planned to occur repeatedly on an on-going basis with constant or defined time intervals.

~~(68)~~ "Regulated California Waters", or "RCW", means all of the following:

- (A) all California internal waters;
- (B) all California estuarine waters;
- (C) all California ports, roadsteads, and terminal facilities (collectively "ports");
- (D) all waters within 3 nautical miles of the California baseline, starting at the California-Oregon border and ending at the California-Mexico border at the Pacific Ocean, inclusive;
- (E) all waters within 12 nautical miles of the California baseline, starting at the California-Oregon border and ending at the California-Mexico border at the Pacific Ocean, inclusive;
- (F) all waters within 24 nautical miles of the California baseline, starting at the California-Oregon border to 34.434 degrees North, 121.120 degrees West; inclusive; and
- (G) all waters within the area, not including any islands, between the California baseline and a line starting at 34.434 degrees North, 121.120 degrees West; thence to 33.50 degrees North, 118.58 degrees West; thence to 32.6533.38 degrees North, 117.81-118.62 degrees West; thence to 32.65 degrees North, 117.73 degrees West; and ending at the California-Mexico border at the Pacific Ocean, inclusive.

(69) "Regulated In-Use Vessel" means a vessel that operates as one of the vessel categories subject to in-use engine standards in subsection (e)(6). On and after January 1, 2023, this applies to vessels subject to performance standards requirements in subsection (e)(12).

"Renewable Diesel, R100, or R99" means a diesel fuel substitute produced from non-petroleum renewable sources, including vegetable oils and animal fats. Renewable diesel meets the federal registration requirements for fuels and fuel additives and American Society for Testing Materials (ASTM) specification D975, which are incorporated by reference herein.

(70) "Rent" means payment for the use of harbor craft or diesel engine for a specified term.

"Repower" means replacing a used engine with a brand new or reconditioned engine meeting current emission standards in effect at the time of repower, including but not limited to major engine repairs on a damaged engine requiring a new engine block.

"Research Vessel" means all vessels subject to requirements of 46 CFR Subchapter U, which are incorporated by reference herein, plus any others that have highly advanced mobile research stations, and vessels that provide

dedicated platforms from which explorers can deploy equipment, divers, or submersibles.

- (71) "Retirement" means the act of taking an engine or harbor craft out of service (i.e., to "retire") so that it subsequently never again operates in any of the Regulated California Waters. "Retirement" does not include an engine or harbor craft that is sold for use outside California then subsequently operated in any of the Regulated California Waters.

"Retrofit" means to install new or modified parts or equipment in or onto a vessel or engine.

- (72) "SCAQMD" means the South Coast Air Quality Management District, as defined in Health and Safety Code section 40410 et seq. and described in section 60104, title 17, California Code of Regulations, and shall include all waters subject to the jurisdiction of the SCAQMD.

"Selective Catalytic Reduction (SCR)" means emission control system that reduces NOx emissions through the catalytic reduction of NOx in diesel exhaust by injecting nitrogen-containing compounds into the exhaust stream, such as ammonia or urea.

"Ship-Assist Tugboat" means a harbor tug having a primary vocation of assisting ATBs and ocean-going vessels while docking and undocking.

"Shore Power" (also called "Harbor Craft Shore Power") refers to electrical power provided by either the electric utility or distributed generation to a vessel at dock that can be used to provide house load or any other onboard auxiliary power normally provided by onboard diesel generators.

"Short-Run Ferry" means a vessel dedicated to provide regularly scheduled round-trip ferry service between two points that are less than 3 nautical miles apart. Vessels that make multiple stops in a single round-trip, where half or more of the single trip lengths are less than 3 nautical miles, and the longest single trip length is less than 6 nautical miles, are considered short-run ferries. Vessels that provide ferry round-trip service between two points that are less than 3 nautical miles apart, but account for less than 20 percent of the service trips from one fleet or operator between those two points during a given calendar year, are not considered short-run ferries.

"Slip" means the same as berth.

- (73) "Supply Vessel" means a self-propelled vessel used for carrying crew and supplies to and from off-shore and in-harbor locations including, but not limited to, off-shore work platforms, construction sites, islands, and other vessels.
- (74) "Swing Engine" means an engine maintained at a dockside location for use in a vessel or fleet of vessels which can be installed as a replacement for an engine that has been removed from a vessel for repair or routine maintenance. The removed engine may then become the swing engine once repair or maintenance has been completed.
- (75) "Take Out of Service" means the act of dry-docking, mooring, anchoring, or otherwise tying up a harbor craft at dock to conduct maintenance, repairs, replacements, or upgrades such that the vessel cannot be operated in Regulated California Waters while such acts are conducted on the vessel.
- (76) "Tank Barge" means a non-self-propelled vessel constructed or adapted primarily to carry, or that carries, oil, petrochemicals, sewage, or other noxious liquid substances ~~hazardous material in bulk as cargo or cargo residue.~~ Tank barges also include both petrochemical tank barges and barges carrying gaseous or liquid fuels, such as those performing fuel bunkering services.
- (77) "Tank Vessel" or "Tanker" means a self-propelled vessel constructed or adapted primarily to carry, or that carries, oil or hazardous material in bulk as cargo or cargo residue.
- (78) "Temporary ~~E~~mergency ~~R~~escue/~~R~~ecovery ~~V~~vessel" means a self-propelled vessel that performs duties including, but not limited to, policing harbor areas, firefighting, rescue operations, oil spill prevention, and on-water oil removal ~~whose homeport that is not within California and is brought into California for the immediate use of emergency rescue or recovery and leaves returns to its homeport outside of California at the conclusion of its emergency rescue/recovery mission.~~
- (79) "Temporary ~~R~~eplacement ~~V~~vessel" means a self-propelled vessel that is brought into service to temporarily replace a California vessel that has been temporarily taken out of service. Prior to January 1, 2023, For purposes of this section, "temporary replacement vessel" includes only the following:
- (A) vessels that are used in the SCAQMD but have a homeport in California outside of the SCAQMD; and
 - (B) vessels that are used anywhere in California, including the SCAQMD, but have a homeport outside of California.

(80) "Tier 1 Marine Engine Emission Standards (Tier 1 marine standards)" means the U.S. EPA marine engine Tier 1 emission standards, as promulgated by U.S. EPA and set forth in "Control of Emissions of Air Pollution from New Marine Compression-Ignition Engines at or Above 37 kW" (64 Federal Register (FR) 73299-73373, December 29, 1999)(40 CFR Part 94), both of which are incorporated herein by reference. The standards from 40 CFR Part 94 are summarized in Table 1. In the event of a conflict between a Tier 1 marine standard in this section and its corresponding standard in 40 CFR Part 94, the standard in 40 CFR Part 94 controls.

Table 1: U.S. EPA Tier 1 Marine Engine Emission Standards

Category	Power (kilowatt (kW)) & Displacement (liters/cylinder (l/cyl))	Engine Speed (Revolutions per minute (rpm))	Tier 1 Model Year	PM (g/bhp-hr)	NO _x (g/bhp-hr)*	CO (g/bhp-hr)
1, 2, 3, including Recreational	≥ 37 kW & ≥ 2.5 l/cyl	rpm ≥ 2000	2004	-	7.3	-
1, 2, 3, including Recreational	≥ 37 kW & ≥ 2.5 l/cyl	130 ≤ rpm < 2000	2004	-	33.57 x rpm ^{-0.2}	-
1, 2, 3, including Recreational	≥ 37 kW & ≥ 2.5 l/cyl	rpm < 130	2004	-	12.7	-

(40 CFR Part 94)

*converted emission standards from 40 CFR 94, which are expressed in grams per kilowatt-hour (g/kW-hr) to g/hp-hr by the following: g/kW-hr * (0.746) = g/hp-hr.

(81) "Tier 2 Marine Engine Emission Standards (Tier 2 marine standards)" means the U.S. EPA marine engine Tier 2 emission standards, as promulgated by U.S. EPA and set forth in "Control of Emissions of Air Pollution from New Marine Compression-Ignition Engines at or Above 37 kW" (64 FR 73299-73373, December 29, 1999)(40 CFR Part 94), both of which are incorporated herein by reference. In the event of a conflict between a Tier 2 marine standard in this section and its corresponding standard in 40 CFR Part 94, the standard in 40 CFR Part 94 controls.

**Table 2: U.S. EPA Tier 2 Marine Engine Emission Standards for
NO_x + HC, PM, and CO**

Category	Displacement (Disp.) (liters/cylinder)	Date	NO _x +HC (g/bhp-hr)*	PM (g/bhp-hr)*	CO (g/bhp-hr)*
1	Disp. < 0.9 and power ≥ 50 hp*	2005	5.6	0.30	3.7
1	0.9 ≤ Disp. < 1.2	2004	5.4	0.22	3.7
1	1.2 ≤ Disp. < 2.5	2004	5.4	0.15	3.7
1	2.5 ≤ Disp. < 5.0	2007	5.4	0.15	3.7
2	5.0 ≤ Disp. < 15	2007	5.8	0.20	3.7
2	15 ≤ Disp. < 20 (power < 4424 hp*)	2007	6.5	0.37	3.7
2	15 ≤ Disp. < 20 (power ≥ 4424 hp*)	2007	7.3	0.37	3.7
2	20 ≤ Disp. < 25	2007	7.3	0.37	3.7
2	25 ≤ Disp. < 30	2007	8.2	0.37	3.7

(40 CFR Part 94)

*converted emission standards and maximum power rating from 40 CFR 94, which are expressed in g/kW-hr and kW to g/hp-hr and hp, respectively, by the following: g/kW-hr (0.746) = g/hp-hr or kW (1.34) = hp.

(82) “Tier 3 Marine Engine Emission Standards (Tier 3 marine standards)” means the U.S. EPA marine engine Tier 3 emission standards, as promulgated by U.S. EPA and set forth in “Final Rule: Control of Emissions of Air Pollution from Locomotive and Marine Compression-Ignition Engines Less Than 30 Liters Per Cylinder” (73 FR 25245 et seq., May 6, 2008) (40 CFR Part 1042), both of which are incorporated herein by reference. The standards from 40 CFR Part 1042 are summarized in Table 3, Table 4, and Table 5. In the event of a conflict between a Tier 3 marine standard in this section and its corresponding standard in 40 CFR Part 1042, the standard in 40 CFR Part 1042 controls. [Note: No Tier 3 marine standards apply for commercial Category 1 engines at or above 3700 kW. See “Tier 4 Marine Engine Emission Standards” for the standards that apply to these engines.]

**Table 3: U.S. EPA Tier 3 Marine Standards for Marine Diesel
Category 1 Commercial Standard Power Density Engines below 3700 kW**

Rated kW	L/Cylinder	PM g/bhp-hr ^e	NO _x + HC ^d g/bhp- hr ^e	Model Year
19 to < 75 kW	<0.9 ^a	0.22	5.6	2009
19 to < 75 kW	<0.9 ^a	0.22 ^b	3.5 ^b	2014
75 to <3700 kW	<0.9	0.10	4.0	2012
75 to <3700 kW	0.9 - <1.2	0.09	4.0	2013
75 to <3700 kW	1.2 - <2.5	0.08 ^c	4.2	2014
75 to <3700 kW	2.5 - <3.5	0.08 ^c	4.2	2013
75 to <3700 kW	3.5 - <7.0	0.08 ^c	4.3	2012

- (a) <75 kW engines at or above 0.9 L/cylinder are subject to the corresponding 75-3700 kW standards.
- (b) Option: 0.15 g/bhp-hr PM / 4.3 g/bhp-hr NO_x+HC in 2014.
- (c) This standard level drops to 0.07 g/bhp-hr in 2018 for <600 kW engines.
- (d) Tier 3 NO_x+HC standards do not apply to 2000-3700 kW engines.
- (e) Converted emission standards from 40 CFR part 1042, which are expressed in g/kW-hr to g/hp-hr by the following: g/kW-hr (0.746) = g/hp-hr.

**Table 4: U.S. EPA Tier 3 Marine Standards for Marine Diesel
Category 1 Recreational and Commercial High Power Density
Engines below 3700 kW**

Rated kW	L/Cylinder	PM g/bhp- hr ^c	NO _x + HC g/bhp- hr ^c	Model Year
19 to <75 kW	<0.9 ^a	0.22	5.6	2009
19 to <75 kW	<0.9 ^a	0.22 ^b	3.5 ^b	2014
75 to <3700 kW	<0.9	0.11	4.3	2012
75 to <3700 kW	0.9 - <1.2	0.10	4.3	2013
75 to <3700 kW	1.2 - <2.5	0.09	4.3	2014
75 to <3700 kW	2.5 - <3.5	0.09	4.3	2013
75 to <3700 kW	3.5 - <7.0	0.08	4.3	2012

- (a) <75 kW engines at or above 0.9 L/cylinder are subject to the corresponding 75-3700 kW standards.
- (b) Option: 0.15 g/bhp-hr PM / 4.3 g/bhp-hr NO_x+HC in 2014.
- (c) Converted emission standards from 40 CFR part 1042, which are expressed in g/kW-hr to g/bhp-hr by the following: g/kW-hr (0.746) = g/bhp-hr.

Table 5: U.S. EPA Tier 3 Marine Standards for Marine Diesel Category 2 Engines below 3700 kW^{a,b}

L/Cylinder	Rated kW	PM g/bhp- hr ^c	NO _x +HC g/bhp- hr ^c	Model Year
7 - <15	<2000	0.10	4.6	2013
7 - <15	≥2000	0.10	5.8	2013
15 - <20 ^a	<2000	0.25	5.2	2014
20 - <25 ^a	<2000	0.20	7.3	2014
25 - <30 ^a	<2000	0.20	8.2	2014

- (a) No Tier 3 marine standards apply for Category 2 engines with per-cylinder displacement above 15.0 liters if maximum engine power is at or above 2000 kW. See “Tier 4 Marine Engine Emission Standards” for the standards that apply for these engines.
- (b) For Category 2 engines at or above 1400 kW, optional Tier 3 and Tier 4 standards are available with some manufacturer restrictions, PM / NO_x+HC at 0.10 / 5.8 g/bhp-hr in 2012, with Tier 4 standards in 2015.
- (c) Converted emission standards from 40 CFR part 1042, which are expressed in g/kW-hr to g/bhp-hr by the following: $g/kW-hr * (0.746) = g/bhp-hr$.

(83) “Tier 4 Marine Engine Emission Standards (Tier 4 marine standards)” means the U.S. EPA marine engine Tier 4 emission standards, as promulgated by U.S. EPA and set forth in “Final Rule: Control of Emissions of Air Pollution from Locomotive and Marine Compression-Ignition Engines Less Than 30 Liters Per Cylinder” (73 FR 25245 et seq., May 6, 2008) (40 CFR Part 1042), both of which are incorporated herein by reference. Table 6 summarizes the Tier 4 marine standards from 40 CFR Part 1042. In the event of a conflict between a Tier 4 marine standard in this section and its corresponding standard in 40 CFR Part 1042, the marine standard in 40 CFR Part 1042 controls.

Table 6: U.S. EPA Tier 4 Marine Standards for Marine Diesel Category 1 and Category 2 Engines above 600 kW

Rated kW	L/Cylinder	PM g/bhp- hr ^a	NO _x g/bhp- hr ^a	HC g/bhp- hr ^a	Model Year
At or above 3700 kW	<15.0	0.09	1.3	0.14	2014 ^b
At or above 3700 kW	15.0 to <30.0	0.19	1.3	0.14	2014 ^b
At or above 3700 kW	all	0.04	1.3	0.14	2016 ^b
2000 to <3700 kW	all	0.03 ^d	1.3	0.14	2016 ^{b,c,d}

1400 to <2000 kW	all	0.03	1.3	0.14	2016 ^{b,c}
600 to <1400 kW	all	0.03	1.3	0.14	2017

- (a) Converted emission standards from 40 CFR part 1042, which are expressed in g/kW-hr to g/bhp-hr by the following: $\text{g/KW-hr} (0.746) = \text{g/bhp-hr}$.
- (b) Optional compliance start dates may be used within these model years; see 40 CFR part 1042.
- (c) For Category 2 engines at or above 1400 kW, optional Tier 3 and Tier 4 marine standards are available with some manufacturer restrictions, PM / NO_x+HC at 0.10 / 5.8 g/bhp-hr in 2012, with Tier 4 marine standards in 2015.
- (d) The Tier 3 PM standards continue to apply for Category 1 and Category 2 engines with per-cylinder displacements below 15.0 liters in model years 2014 and 2015 only. For Category 2 engines with per-cylinder displacement at or above 15.0 liters, the PM standard is 0.25 g/bhp-hr for engines at or above 2000 kW and below 3300 kW, and 0.20 g/bhp-hr for engines at or above 3300 kW and below 3700 kW, in model years 2014 and 2015 only.

- (84) "Tier 1 Off-Road or Nonroad Emission Standards (Tier 1 off-road standards)" means an engine subject to the Tier 1 new engine emission standards in Title 13, CCR, Section 2423(b)(1)(A) or Title 40, CFR, Part 89.112(a) as they existed on April 27, 2010, both of which are incorporated herein by reference. This also includes engines certified under the averaging, banking, and trading program with respect to the Tier 1 Family Emission Limits (FEL) listed in Title 13, CCR, 2423(b)(2)(A) or Title 40, CFR, Part 89.112(d), as they existed on April 27, 2010, both of which are incorporated herein by reference.
- (85) "Tier 2 Off-Road or Nonroad Emission Standards (Tier 2 off-road standards)" means an engine subject to the Tier 2 new engine emission standards in Title 13, CCR, Section 2423(b)(1)(A) or Title 40, CFR, Part 89.112(a) as they existed on April 27, 2010, both of which are incorporated herein by reference. This also includes engines certified under the averaging, banking, and trading program with respect to the Tier 2 FEL listed in Title 13, CCR, 2423(b)(2)(A) or Title 40, CFR, Part 89.112(d), as they existed on April 27, 2010, both of which are incorporated herein by reference.
- (86) "Tier 3 Off-Road or Nonroad Emission Standards (Tier 3 off-road standards)" means an engine subject to the Tier 3 new engine emission standards in title 13, CCR, Section 2423(b)(1)(A) or Title 40, CFR, Part 89.112(a), as they existed on April 27, 2010, both of which are incorporated herein by reference. This also includes engines certified under the averaging, banking, and trading program with respect to the Tier 3 FEL listed in Title 13, CCR, 2423(b)(2)(A) or Title 40, CFR, Part 89.112(d), as they existed on April 27, 2010, both of which are incorporated herein by reference.

- (87) "~~Final~~ Tier 4 Final Off-Road or Nonroad Emission Standards" means an engine subject to the final after-treatment-based Tier 4 emission standards in Title 13, CCR, Section 2423(b)(1)(B) or Title 40, CFR, Part 1039.101, as they existed on April 27, 2010, both of which are incorporated herein by reference. This also includes engines certified under the averaging, banking, and trading program with respect to the Tier 4 FEL listed in Title 13, CCR, 2423(b)(2)(B) or Title 40, CFR, Part 1039.101, as they existed on April 27, 2010, both of which are incorporated herein by reference.
- (88) "~~Interim~~ Tier 4 Interim Off-Road or Nonroad Emission Standards" means an engine subject to the interim Tier 4 emission standards (also known as transitional) in Title 13, CCR, Section 2423(b)(1)(B) or Title 40, CFR, Part 1039.101, as they existed on April 27, 2010, both of which are incorporated herein by reference. This also includes engines certified under the averaging, banking, and trading program with respect to the Tier 4 FEL listed in Title 13, CCR, 2423(b)(2)(B) or Title 40, CFR, Part 1039.101, as they existed on April 27, 2010, both of which are incorporated herein by reference.
- (89) "Total Hydrocarbons (THC)" or "Hydrocarbons (HC)" means the total mass of open chain and cyclic hydrocarbon molecules.
- (90) "Towboat" means any self-propelled vessel engaged in or intending to engage in the service of pulling, pushing, or hauling along side barges or other vessels, or any combination of pulling, pushing, or hauling along side barges or other vessels.
- (91) "Tugboat" means any self-propelled vessel engaged in, or intending to engage in, the service of pulling, pushing, maneuvering, berthing, or hauling along side other vessels, or any combination of pulling, pushing, maneuvering, berthing or hauling along side such vessels in harbors, over the open seas, or through rivers and canals. Tugboats generally can be divided into three groups: harbor or short-haul tugboats, ocean-going or long-haul tugboats, and barge tugboats. "Tugboat" is interchangeable with "towboat" and "push boat" when the vessel is used in conjunction with barges. On and after January 1, 2023, "tugboats" also include three types of vessels: ship-assist and escort tugboats; ocean-going ATB and line towing tugboats; and, near-shore pushing and towing tugboats.

"U.S. Coast Guard Documentation Number (USCG Number)" is a national form of registration. Documentation provides conclusive evidence of nationality for international purposes, provides for unhindered commerce between the states, and admits vessels to certain restricted trades, such as coastwise trade and the fisheries.

- (92) "Verification Procedure, Warranty and In-Use Compliance Requirements for In-Use Strategies to Control Emissions from Diesel Engines (Verification Procedure)" means the CARB regulatory procedure codified in title 13, CCR, commencing with section 2700, which is incorporated herein by reference, that engine manufacturers, sellers, owners, or operators may use to verify the reductions of diesel PM or NO_x from in-use diesel engines through the use of a particular diesel emission control strategy.
- (93) "Verified Diesel Emission Control Strategy (VDECS)" means an emission control strategy, designed primarily for the reduction of diesel PM emissions, which has been verified pursuant to the "Verification Procedure for In-Use Strategies to Control Emissions from Diesel Engines" in title 13, CCR, commencing with section 2700. VDECS can be verified to achieve Level 1 diesel PM reductions (25-49 percent), Level 2 diesel PM reductions (50-84 percent), or Level 3 diesel PM reductions (85 percent or greater). VDECS may also be verified to achieve NO_x reductions.
- (94) "Vessel" or "Marine Vessel" means any tugboat, tanker, freighter, passenger ship, barge, or other boat, ship, or watercraft, except those used primarily for recreation.

"Vessel Tenant" means a commercial harbor craft vessel which docks or moors for seven (7) or more days in a calendar month at a facility.

"Water Taxi" means a ferry including U.S. Coast Guard uninspected passenger vessels carrying six or less passengers for hire or U.S. Coast Guard inspected passenger vessels that carry seven or more passengers for hire that transits paying passengers to any destination rather than operating over a fixed route and schedule.

- (95) "Work-Boat" means a self-propelled vessel that is used to perform duties such as fire/rescue, law enforcement, hydrographic surveys, spill/response, research, training, and construction (including drilling). On and after January 1, 2023, "Workboat" means a self-propelled vessel that is used to perform any duty not specifically listed by another category of commercial harbor craft, including but not limited to duties such as hydrographic surveys, spill/response, school training, marketing (such as advertising), and construction (including drilling). Workboat can include vessels owned by public, private, and not-for-profit organizations.

“ZEAT” refers to Zero-Emission and Advanced Technology, which collectively includes zero-emission capable hybrid, and zero-emission vessels.

“Zero-Emission” means a propulsion system, auxiliary power system, and/or vessel utilizing a zero-emission propulsion and auxiliary power system that has no tailpipe exhaust emissions other than water vapor or diatomic nitrogen from the onboard source(s) of power.

“Zero-Emission Capable Hybrid Vessel” means a commercial harbor craft utilizing a hybrid power system with two or more onboard power sources, one or more of which is approved by CARB’s E.O. to be capable of providing a minimum of 30 percent of vessel power required for main propulsion and auxiliary power operation with zero tailpipe emissions when averaged over a calendar year.

“Zero-Emission Infrastructure” means installed dockside infrastructure necessary to support operation of a ZEAT vessel. For example, charging equipment for propulsion system batteries, and on-dock hydrogen storage tanks, and fueling infrastructure.

(e) Fuel Use and Engine Emission Requirements.

[Note: The plain English narrative in this overview is intended as a convenient guide for the reader and in no way adds, deletes, modifies, or otherwise affects the legal requirements and substantive provisions specified in subsection (e) or any other part of this section. Subsection (e) sets forth the various fuel and emission requirements for harbor craft subject to this regulation, and can be broken down as follows:

- ~~Subsection (e)(1) specifies low sulfur fuel use requirements that apply to all harbor craft, new and in use.~~
- ~~Subsection (e)(2) specifies the requirement for installing hour meters on all harbor craft, new and in use.~~
- ~~Subsection (e)(3) establishes requirements that apply to transactions involving new engines to be installed on in use vessels, including a limited 6 month “sell through” provision for non-complying engines, and engine replacement in cases where a compliant engine meeting the required physical or performance characteristics is not available.~~
- ~~Subsection (e)(4) sets forth requirements that apply to newly acquired new harbor craft, including ferries.~~
- ~~Subsection (e)(5) sets forth requirements that apply only to newly acquired new ferries, above and beyond those established in subsection~~

~~(e)(4). These provisions include requirements for applying Best Available Control Technology (BACT) to new ferries and their engines.~~

- ~~• Subsection (e)(6) is the key provision of this regulation, as it achieves emission reductions by requiring the eventual replacement or cleanup of engines in the fleet of in use ferries, excursion vessels, tugboats, towboats, push boats, crew and supply vessels, and barge and dredge vessels. This subsection requires that owners and operators eventually replace or otherwise bring into compliance with the specified engine standards all of their pre Tier 1 and Tier 1 certified engines in their in use vessels by the dates shown in the specified compliance schedules. The compliance dates are designed to clean up the fleet's oldest and dirtiest engines first, while giving more time for relatively newer, Tier 1 engines to be upgraded or replaced. Vessels (ferries, excursion vessels, tugboats, and towboats) with their homeport in the SCAQMD have an accelerated compliance schedule to reflect that district's greater need for expedited emission reductions. The compliance schedules are grouped by vessel type, location of the vessel's homeport, the engine's model year, and the engine's annual hours of operation.~~
- ~~• Subsection (e)(6)(E) provides for a limited set of circumstances under which the E.O. may grant short extensions to the compliance dates if warranted.]~~

(1) *All Harbor Craft – Low Sulfur Fuel Use Requirement (Applicable Until December 31, 2022).*

Beginning January 1, 2009, a person subject to this section may only fuel a diesel engine on a harbor craft with one of the following:

- (A) CARB diesel fuel; or
- (B) an alternative diesel fuel as defined in subsection (d)(2); or
- (C) any alternative diesel fuel that does not meet subsection (e)(1)(B) above but is certified by CARB as meeting the requirements of the Verification Procedure; or
- (D) CARB diesel fuel used with fuel additives that meet the requirements of the Verification Procedure; or
- (E) any combination of subsection (e)(1)(A) through (D) above; or
- (F) if a harbor craft subject to this section is traveling from a port located outside of California, and that port does not have any fuels listed in subsections (e)(1)(A) through (E), that vessel's diesel engines can be fueled with either: U.S. EPA on-road diesel fuel meeting the specifications contained in 40 CFR §§ 80.500 et seq., as they existed on April 27, 2010, or U.S. EPA nonroad diesel fuel meeting the specifications contained in

40 CFR 80.29 as it existed on April 27, 2010, and 69 FR 38958 (June 29, 2004). The vessel owner or operator must retain records documenting the fuel purchase, the location and the name of the non-California port, and its lack of availability of fuels listed in subsections (e)(1)(A) through (E) on board the vessel for a minimum of one year after the purchase of the fuel, and must make such records available upon the request of the Executive Officer.

(2) *All Harbor Craft – Installation and Use of Non-Resettable Hour Meters.*

Beginning January 1, 2009, a person subject to this section may not operate a harbor craft without an installed and properly operating, non-resettable hour meter, which accurately measures the number of hours an engine operates. The hour meter must be installed on each diesel engine on the vessel in a manner that allows reasonable personnel access to the hour meter without impediment. Beginning January 1, 2023, in the event the hour meter fails to operate properly or is replaced, a person subject to this subsection must also within 30 days, replace the hour meter and report to CARB the date the hour meter stopped working, the date it was replaced, and the current hour readings of both the original and replacement meter.

(3) *All In-Use Harbor Craft – Requirements for Newly Acquired Engines (Applicable Until December 31, 2022).*

During the time period bBeginning January 1, 2009 and ending December 31, 2022, a person subject to this section may not sell, purchase, offer for sale, lease, rent, import, or otherwise acquire a new or in-use diesel engine for an in-use harbor craft, which is intended to operate or actually operates in any of the Regulated California Waters, unless that engine on the date of acquisition:

- (A) is certified to meet the Tier 2 or Tier 3 marine standards in effect on that date for a new engine of the same power rating and displacement. The newly acquired engine is not required to meet the Tier 4 marine standards unless it is replacing an engine on the in-use vessel that was certified as meeting Tier 4 marine standards. Engines certified to meet the Tier 2, Tier 3, or interim Tier 4 off-road standards in effect on the date of acquisition for a new engine of the same power rating and displacement may only be acquired for use as an auxiliary or propulsion engine on harbor craft if the engine or vessel manufacturer has complied with 40 CFR § 1042.605 (*Marinized land-based engines already certified to other standards for nonroad or heavy-duty highway engines for marine use*), as it existed on April 27, 2010; or

- (B) is newly acquired within the allowable 6 month “sell-through” period, as set forth in this paragraph. For purposes of this paragraph only, the allowable sell-through period runs through 6 months after the date the Tier 2, Tier 3, or Tier 4 marine standards or Tier 3, interim Tier 4, or final Tier 4 off-road standards have come into effect for a new engine of the same power rating and displacement as the engine being replaced on the in-use vessel. Engines that are subsequently sold, supplied, offered for sale, or otherwise newly acquired after the 6 month sell-through period are subject to the requirements specified in paragraph (A) of this subsection, even if the engine was previously newly acquired within the 6 month sell-through period; or
- (C) is replacing an engine that is non-functioning due to equipment failure, and the E.O. has determined, pursuant to the provisions of 40 CFR § 1042.615 engine replacement exemption, as it existed on April 27, 2010, that no engine certified to the current standards is produced by any manufacturer with the appropriate physical or performance characteristics to repower the vessel. In such event, an alternate engine may be acquired for the replacement. Pursuant to 40 CFR § 1042.615, a separate determination, addressing each tier of emission standards that is more stringent than the emission standards for the engine being replaced must be made. For example, if the engine being replaced was built before the Tier 2 standards applied, and engines of that size are currently subject to Tier 3 standards, a person must consider whether any Tier 2 or Tier 3 engines have the appropriate physical and performance characteristics for replacing the old engine. If a Tier 2 engine is determined to have the appropriate physical and performance characteristics, it may be selected as the replacement engine. Documentation of these determinations must be supplied to the E.O. and the E.O.’s determination must be obtained before an engine replacement is made pursuant to this provision.
- (4) *All New Harbor Craft (Including All New Ferries) – Requirements for Newly Acquired Vessels (Applicable Until December 31, 2022).*

During the time period beginning January 1, 2009 and ending December 31, 2022, a person subject to this section may not sell, purchase, offer for sale, lease, rent, import, or otherwise acquire a new harbor craft for use in any of the Regulated California Waters unless each diesel propulsion and auxiliary engine on the vessel meets the applicable Tier 2, Tier 3, or Tier 4 marine standards in effect on the date of vessel acquisition. Auxiliary or propulsion engines meeting the applicable Tier 2, Tier 3, interim Tier 4, or Final Tier 4 off-road

standards in effect on the date of vessel acquisition may be sold, purchased, offered for sale, leased, rented, imported, or otherwise acquired for use if the engine or vessel manufacturer has complied with 40 CFR 1042.605 (*Marinized land-based engines already certified to other standards for nonroad or heavy-duty highway engines for marine use*), as it existed on April 27, 2010. Diesel propulsion engines in new ferries with a capacity to transport more than 75 passengers in Regulated California Waters must also meet the requirements specified in subsection (e)(5) below.

(5) *Selected New Ferries Only – Additional Requirements for All Newly Acquired Propulsion Engines (Applicable Until December 31, 2022).*

(A) During the time period beginning January 1, 2009 and ending December 31, 2022, any person who owns or operates a new ferry with the capacity to transport 75 or more passengers and that is used in any of the Regulated California Waters must demonstrate that each diesel propulsion engine that is certified to either the Tier 2 or Tier 3 marine standards will be operated in conjunction with the use of Best Available Control Technology (BACT) as determined and pre-approved by the E.O. pursuant to this provision.

(B) For purposes of this section, "BACT" is the diesel emission control strategy (DECS), whether verified or unverified pursuant to 13 CCR section 2700 et seq., that is determined by the E.O. as meeting all of the following criteria:

1. it provides or is expected to continuously provide the greatest reduction feasible of NO_x or diesel PM when used with the ferry's propulsion diesel engine;
2. the use of BACT does not result in an increase of 10 percent or more of any air pollutant, including NO_x and diesel PM, relative to the engine's emissions of that air pollutant without the use of BACT; and
3. either the DECS manufacturer or an authorized dealer of the DECS determines or otherwise agrees with the E.O. that use of the DECS on or with the new ferry's propulsion engine(s) would not invalidate or otherwise adversely affect the propulsion engine's original warranty.

For purposes of this section, DECS may include, but is not be limited to, exhaust treatment controls and the use of alternative fuels or fuel additives.

(C) The E.O. shall determine the appropriate level of BACT and specify such

BACT in an Executive Order granting such approval. Applications to comply with the requirements of paragraph (A)2 by using BACT must follow the application and review procedure set forth below:

1. Application Process.

For all new ferries for which the keel is laid on or after January 1, 2009, the application for BACT approval must be submitted in writing to the E.O. for evaluation before the keel is laid. The BACT application must contain, at a minimum, the following information:

- a. the applicant company's name, address, and contact information;
- b. information specific to the harbor craft and engine(s) on which BACT will be used, including the vessel name and identification number(s); engine make, model, and serial numbers; and all other information that uniquely identify the engine;
- c. certification documentation, engineering calculations, emissions test data, or other information that establishes the diesel PM and NO_x emissions of the engine in combination with the proposed BACT. Emissions and emission reduction estimates must include both diesel PM and NO_x emissions and be expressed in grams per brake horsepower-hour (g/bhp-hr) unless otherwise specified by the E.O. Information submitted pursuant to this provision will be used as follows:
 - i. The E.O. shall use the information to compare the emissions resulting from the proposed use of BACT with the emissions quantified in BACT determinations previously approved by the E.O.;
 - ii. If there are no previous BACT determinations available for comparison, the E.O. shall use CARB staff's best engineering judgment to determine if the proposed BACT provides the greatest feasible reduction of diesel PM or NO_x; and
 - iii. The E.O. may require the applicant to submit additional emissions data for other air pollutants if the E.O. believes that the proposed use of BACT may increase any air pollutant by 10 percent or more relative to the engine emissions without the proposed BACT; and

- d. the proposed recordkeeping, reporting, monitoring, and testing procedures that the applicant plans to use to demonstrate continued effectiveness of the BACT.

2. E.O. Review and Final Decision-Making Process.

- a. Within 15 days after receiving a BACT application, the E.O. shall notify the applicant whether the application is deemed sufficiently complete to proceed with further evaluation. If the application is deemed incomplete, the notification must identify the application's deficiencies. The E.O. shall have an additional 15-day period for reviewing each set of documents or information submitted in response to an incomplete determination. Nothing in this subsection prohibits the E.O. from requesting additional information from the applicant, during any part of the BACT application process, which the E.O. determines is necessary to evaluate the application.
- b. Within 30 days of deeming an application complete, the E.O. shall take final action to either approve or deny a BACT application, and the E.O. shall notify the applicant accordingly. If the application is denied or modified, the E.O. shall state the reasons for the denial or modification in the notification. The E.O. shall specify all terms, conditions, and requirements the E.O. believes are necessary for the ferry engine and BACT to operate properly and reduce emissions of air pollutants consistent with this section. The reporting and recordkeeping requirements specific to the use of BACT must include, at a minimum:
 - i. hours of operation for the engine and BACT and fuel usage;
 - ii. usage of any alternative fuels, additives, agents, flow rates, and emission test results;
 - iii. maintenance procedures for the engine(s) and its BACT; and
 - iv. any other measurements or recordings specified by the E.O.

The E.O. shall make the approval/disapproval notification to the applicant and identification of the approved/disapproved BACT available to the public on CARB's internet site.

3. Post-Approval Vessel, Engine, and BACT Operation.

A person who owns or operates a new ferry with the capacity to transport 75 or more passengers and that is used in Regulated California Waters must maintain operating records and other information in the manner and form specified by the E.O. in the BACT approval and must submit to CARB upon request all records and reports created pursuant to this provision, which must be maintained and retained for CARB inspection a minimum of three years after the records or reports were created.

(6) *In-Use Engines and Vessels – Schedules for Meeting Tier 2 or Tier 3 Standards (Applicable Until December 31, 2022).*

(A) *For Pre-Tier 1- and Tier-1 Certified Engines on Ferries, Excursion Vessels, Tugboats, Towboats, Push Boats, Crew and Supply Vessels, and Barge and Dredge Vessels Only.*

1. *Applicability.*

This subsection (e)(6) applies, until December 31, 2022, to any person who owns, operates, sells, purchases, offers for sale, leases, rents, imports, or otherwise acquires an in-use ferry, excursion vessel, tugboat, towboat, push boat, crew and supply vessel, or barge and dredge vessel (in-use regulated category vessel) with a pre-Tier 1- or Tier-1-certified marine or off-road engine operating in any one of the above regulated in-use vessel categories for:

- a. a total of 300 hours per calendar year or more if operating in either ferry, excursion vessel, tugboat, towboat, pushboat, or crew and supply vessel categories, or
- b. a total of 80 hours per calendar year if operating in either barge or dredge vessel categories in Regulated California Waters. This subsection applies to all such engines on all such vessels.

2. *General Requirement.*

a. During the time period beginning After January 12, 2009 and ending December 31, 2022, a person who owns, operates, sells, purchases, offers for sale, leases, rents, imports, or otherwise acquires an in-use ferry, excursion vessel, tugboat, towboat, or push boat with a pre-Tier 1- or Tier-1-certified marine or off-road engine and that operates in any of the above regulated in-use vessel categories may not own, operate, sell, purchase, offer for sale, lease, rent, import, or otherwise acquire an

in-use engine, or a vessel with an in-use engine, unless that engine complies with at least one of the compliance methods set forth in subsection (e)(6)(C) by the applicable compliance date. The compliance methods set forth in subsection (e)(6)(C) involve either replacement of the in-use engine with a cleaner engine or demonstrating that the in-use engine already meets specified standards, as set forth below.

b. During the time period beginning~~After~~ January 12, 2009 and ending December 31, 2022, a person who owns, operates, sells, purchases, offers for sale, leases, rents, imports, or otherwise acquires an in-use crew and supply vessel, or barge and dredge vessel with a pre-Tier 1- or Tier-1-certified marine or off-road engine and that operates in any of the above regulated in-use vessel categories may not own, operate, sell, purchase, offer for sale, lease, rent, import, or otherwise acquire an in-use engine, or a vessel with an in-use engine, unless that engine complies with at least one of the compliance methods set forth in subsection (e)(6)(C) by the applicable compliance date. The compliance methods set forth in subsection (e)(6)(C) involve either replacement of the in-use engine with a cleaner engine or demonstrating that the in-use engine already meets specified standards, as set forth below.

For purposes of this subsection, “applicable compliance date” is either the compliance date, as set forth in subsection (e)(6)(D) for the in-use engine, or the compliance date from subsection (e)(6)(D) for the in-use engine, as extended pursuant to subsection (e)(6)(E), whichever applies and occurs later.

(B) [Reserved for Future Use]

(C) *Compliance Methods.*

1. *Method C1 – Replacement of the in-use engine with a U.S. EPA certified marine or off-road Tier 2 engine or one with a higher certification level (e.g., Tier 3-certified).*

A person may comply under this method by replacing the in-use engine with an engine certified to Tier 2 or Tier 3 marine or off-road engine emission standards as set forth in this paragraph. The replacement engine must meet the U.S. EPA Tier 2 or Tier 3 marine or off-road engine emission standards that would apply to a new engine, of the same size and configuration as the in-use engine, at the time of the

applicable compliance date set forth in subsection (e)(6)(D). The replacement engine must meet the provisions of section 93118.5(e)(3).

[Note: For example, if the applicable compliance date is January 1, 2010, and the Tier 2 marine or off-road emission standards would be in effect at that time for a new engine of the same size and configuration as the in-use engine, the replacement would need to meet Tier 2 marine or off-road emission standards. However, if the applicable compliance date is instead January 1, 2013, and the Tier 3 marine or off-road emission standards would be in effect for a new engine of the same size and configuration as the in-use engine, the replacement engine would need to meet Tier 3 marine or off-road emission standards.]

Once the in-use engine has been replaced with an engine that is U.S. EPA-certified to meet Tier 2 or Tier 3 marine or off-road emission standards, as set forth above, the engine is deemed to be in compliance with this subsection (e)(6) and no further replacements of this engine are required under this subsection. Tier 3-certified marine or off-road engines may be used as the replacement engine to comply with this paragraph, even if Tier 4-certified marine or off-road emission engines become available by the applicable compliance date;

2. *Method C2 – Demonstrate to the E.O.’s written satisfaction that the in-use engine already meets the Tier 2 marine standards or Tier 2 off-road standards for auxiliary or propulsion engines greater than 50 hp or less than 75 hp, or greater than 750 hp that apply or would apply to new engines on the date the Tier 2 marine or off-road standards became effective.*

a. A person may comply under this method by demonstrating to the E.O.’s written satisfaction that:

- i. the in-use engine already meets the Tier 2 marine standards or Tier 2 off-road standards for engines greater than 50 hp or less than 75 hp, or greater than 750 hp,
- ii. which apply to new engines of the same power rating and displacement as the in-use engine.

b. This compliance method is available only if the person makes the required demonstration before the date Tier 3 marine or off-road emission standards become effective for new engines of the same

size and configuration as the in-use engine. The person may rebuild the in-use engine to a cleaner standard or implement a diesel emission control strategy to aid in meeting these standards. [Note: For example, if the Tier 3 marine or off-road emission standards would have become effective on January 1, 2015 for a new engine of the same size and configuration as the in-use engine, the person would need to provide the Tier 2-compliance demonstration to the E.O.'s written satisfaction by January 1, 2015.]

- c. For purposes of the demonstration, the person may, upon approval by the E.O., rely on any source of reliable and credible information, including but not limited to, any of the following:
 - i. the results from using the test method specified in section (j) or an alternative method approved by the E.O.;
 - ii. the in-use engine manufacturer's certification test data or other emissions test data for that in-use engine;
 - iii. emissions test data derived from another in-use engine that is configured and used in a substantially similar way to the in-use engine;
 - iv. emissions test data used to meet the regulatory requirements of CARB's Verification Procedure for the non-verified emission control strategy implemented; or
 - v. emissions test data used to meet the requirements for U.S. EPA certification for systems providing remanufacture to a cleaner standard.

The E.O. may, in his/her sole discretion and based on good engineering judgment, exclude any information he/she determines is not reliable or credible.

- 3. *Method C3 – Demonstrate to the E.O.'s written satisfaction that the in-use engine already meets the Tier 2 or Tier 3 marine or Tier 2 or Tier 3 off-road emission standards for auxiliary or propulsion engines in effect or would be in effect for new engines at the time of the applicable compliance date.*

- a. A person may comply under this method by demonstrating to the E.O.'s written satisfaction that:

- i. the in-use engine already meets the Tier 2 or Tier 3 marine standards or Tier 2 or Tier 3 off-road emission standards for auxiliary or propulsion engines,
 - ii. which apply to new engines of the same power rating and displacement as the in-use engine,
 - iii. at the time of the applicable compliance date for the in-use engine.
- b. To comply with this method, the person may demonstrate that the in-use engine meets the Tier 3 marine or off-road engine emission standards, even if Tier 4 marine or off-road engine emission standards come into effect by the applicable compliance date. The person may rebuild the in-use engine to a cleaner standard or implement a diesel emission control strategy to aid in meeting these standards.
- c. For purposes of the demonstration, the person may, upon E.O. approval, rely on any source of reliable and credible information, including but not limited to, any of the following:
 - i. the results from using the test method specified in section (j) or an alternative method approved by the E.O.;
 - ii. the in-use engine manufacturer's certification test data or other emissions test data for that in-use engine;
 - iii. emissions test data derived from another in-use engine that is configured and used in a substantially similar way to the in-use engine;
 - iv. emissions test data used to meet the regulatory requirements of ARB's Verification Procedure for the non-verified emission control strategy implemented; or
 - v. emissions test data used to meet the requirements for U.S. EPA certification for systems providing remanufacture to a cleaner standard.

The E.O. may, in his/her sole discretion and based on good engineering judgment, exclude any information he/she determines is not reliable or credible.

- 4. *Method C4 – Demonstrate to the E.O.'s written satisfaction that the in-use engine has not and will not operate 300 or more hours per calendar year in any of the regulated in-use vessel categories or 80 or more hours per calendar year in the barge or dredge vessel categories.*

A person may comply under this method by demonstrating to the E.O.'s written satisfaction that the engine is a low-use engine. This compliance method requires the person to provide records to the E.O. of the engine's total annual hours of operation while operating in any of the regulated in-use vessel categories for the calendar year immediately preceding the demonstration. The person must also provide documentation sufficient for the E.O. to project future annual hours of operation for the engine. The person will be deemed in compliance with this method only if such records and documentation demonstrate to the E.O.'s written satisfaction that the in-use engine has not and will not operate 300 or more hours per calendar year in any of the regulated in-use vessel categories with the exception of the dredge or barge categories, or 80 or more hours per calendar year in either the dredge or barge categories.

(D) *Compliance Dates.*

Table 7, Table 8, Table 9, and Table 10 below set forth the compliance dates by which a person must meet the requirements of subsection (e)(6)(A). Table 7 applies only to engines on ferries, excursion vessels, tugboats, towboats, and push boats with a homeport outside of the SCAQMD; Table 8 applies only to engines on ferries, excursion vessels, tugboats, towboats, and push boats with a homeport within the SCAQMD; Table 9 applies only to engines on crew and supply vessels, and Table 10 applies to engines on barge and dredge vessels. The compliance dates are set forth by engine model year and total annual hours of operation (for use in any regulated in-use vessel category) of the vessel in Regulated California Waters. For Table 7, Table 9, and Table 10, Method D1, D2, or D3 below may be used for determining the actual or effective engine model year. For Table 8, only Method D1 or D3 may be used for determining the actual or effective engine model year.

1. *Method D1 – the engine's actual model year of manufacture.*

A person may determine an engine's compliance date under this method by using the engine's actual model year of manufacture, as documented by the sales contract, invoice, purchase order, or other legitimate proof of purchase for the engine. The actual model year of manufacture may also be shown on a label permanently affixed to the engine by the manufacturer. In the event of a conflict between the

proof of purchase and the permanent label, the date of manufacture shown on the permanent label controls.

2. *Method D2 – the engine’s effective model year based on the “Engine’s Model Year + 5” method.*

A person may determine an engine’s compliance date under this method by calculating the engine’s effective model year as the actual model year, using Method D1 above, and adding to that number 5 more years. To use this method, the person must use a diesel emissions control strategy (DECS) with the engine, as set forth below:

- a. Relative to the emissions without the use of the DECS, the engine with the DECS must be demonstrated to the E.O.’s written satisfaction as emitting at least 25 percent less diesel PM or NO_x, and neither of those pollutants are increased by more than 10 percent. This requirement is met automatically if the DECS is a verified DECS (VDECS);
- b. If the DECS is not a VDECS, the person must demonstrate compliance with this paragraph by submitting to the E.O. emissions data that demonstrate the non-verified emission control technology achieves a diesel PM or NO_x emission reduction of 25 percent or better, using the test methods specified in subsection (j). Upon approval of the E.O., the person may submit data derived from the use of other test methods to demonstrate to the E.O.’s written satisfaction the required 25 percent minimum emission reductions, such as:
 - i. marine engine certification test data for the harbor craft propulsion or auxiliary engine, or engine manufacturer emissions test data;
 - ii. emissions test data derived from another engine that is configured and used in a substantially similar way to the in-use engine on which the emission control strategy is to be used; or
 - iii. emissions test data used to meet the regulatory requirements of the CARB Verification Procedure for the non-verified emission control strategy implemented.

The E.O. may, in his/her sole discretion and based on good engineering judgment, exclude any data derived from the test

methods under paragraph b above that he/she determines are not reliable or credible.

A person’s use of a DECS or VDECS, which meets the requirements of this provision, extends the engine’s compliance date to the compliance date for a similar engine that is five model years newer (i.e., the actual model year for the engine with the emissions control strategy + 5).

[Note: For example, the owner of a 1995 model year engine on a tugboat, which has a homeport outside of SCAQMD and operates in Regulated California Waters for 750 hours in 2013, would normally be required to meet a December 31, 2014 compliance date, as set forth in Table 7. However, if a DECS that meets the requirements of this provision is implemented with this engine prior to the 2014 nominal compliance date, the engine’s actual compliance date would be extended to the compliance date for a 2000 model year engine (i.e., the effective model year = the 1995 model year + 5). Accordingly, in that scenario, the engine’s effective model year would extend the compliance date to December 31, 2016];

3. *Method D3 – the engine’s effective model year based on the “Engine’s Tier 1 Rebuild Model Year” method.*

A person may determine an engine’s compliance date by demonstrating, to the E.O.’s written satisfaction, that the engine is an existing pre-2004 model year engine that was rebuilt to conform with U.S. EPA Tier 1 marine standards prior to January 1, 2008. If the E.O. is thus satisfied, the effective model year of the Tier 1 rebuilt engine, for purposes of determining the compliance date in Table 7, Table 8, Table 9, or Table 10, is the actual year in which the Tier 1 rebuild occurred.

Table 7: Compliance Dates for Engines on Ferries, Excursion Vessels, Tugboats, Towboats, and Push Boats with Homeports Outside SCAQMD

Engine Model Year	Total Annual Hours of Operation	Compliance Date
1975 and earlier	≥ 1500	12/31/2009
1975 and earlier	≥300 and < 1500	12/31/2010
1976 – 1985	≥1500	12/31/2011
1976 – 1985	≥ 300 and < 1500	12/31/2012

1986 – 1995	≥ 1500	12/31/2013
1986 – 1995	≥ 300 and < 1500	12/31/2014
Ferries Only 1996 – 1999	≥ 300	12/31/2014
Vessels Other Than Ferries 1996 – 1999	≥ 1500	12/31/2015
Vessels Other Than Ferries 1996 – 1999	≥ 300 and < 1500	12/31/2016
2000	≥ 1500	12/31/2015
2000	≥ 300 and < 1500	12/31/2016
2001 – 2002	≥ 300	12/31/2017
2003	≥ 300	12/31/2018
2004	≥ 300	12/31/2019
2005	≥ 300	12/31/2020
2006	≥ 300	12/31/2021
2007	≥ 300	12/31/2022

[Note: For example, if a 1982-model year diesel engine on a tugboat operating in Regulated California Waters is used for 750 hours in 2011, the owner or operator must bring the engine into compliance with the requirements of subsection (e)(6)(C) by December 31, 2012.].

Table 8: Compliance Dates for Engines on Ferries, Excursion Vessels, Tugboats, Towboats, and Push Boats with Homeports in SCAQMD

Engine Model Year	Total Annual Hours of Operation	Compliance Date
1979 and earlier	> 300	12/31/2009
1980 – 1985	> 300	12/31/2010
1986 – 1990	> 300	12/31/2011
1991 – 1995	> 300	12/31/2012
1996 – 2000	> 300	12/31/2013
2001	> 300	12/31/2014
2002	> 300	12/31/2015
2003	> 300	12/31/2016
2004	> 300	12/31/2017
2005	> 300	12/31/2018
2006	> 300	12/31/2019
2007	> 300	12/31/2020

[Note: For example, if a 1982-model year diesel engine on a tugboat operating in Regulated California Waters is used for 300 or more hours in 2009, the owner or operator must bring the engine into compliance with the requirements of subsection (e)(6)(C) by December 31, 2010.]

Table 9: Compliance Dates for Engines on Crew and Supply Vessels Statewide

Engine Model Year	Total Annual Hours of Operation	Compliance Date
1985 and earlier	> 1500	12/31/2011
1985 and earlier	> 300 and < 1500	12/31/2012
1986 – 1995	> 1500	12/31/2013
1986 – 1995	> 300 and < 1500	12/31/2014
1996 – 2000	> 1500	12/31/2015
1996 – 2000	> 300 and < 1500	12/31/2016
2001 – 2002	> 300	12/31/2017
2003	> 300	12/31/2018
2004	> 300	12/31/2019
2005	> 300	12/31/2020
2006	> 300	12/31/2021
2007	> 300	12/31/2022

Table 10: Compliance Dates for pre-Tier 1 and Tier 1 Engines on Dredge and Barge Vessels Statewide

Engine Model Year	Total Annual Hours of Operation	Compliance Date
1975 and earlier	>80	12/31/2011
1976 – 1980	>80	12/31/2012
1981 – 1985	>80	12/31/2013
1986 – 1990	>80	12/31/2014
1991 – 1995	>80	12/31/2015
1996 – 1999	>80	12/31/2016
2000 – 2001	>80	12/31/2017
2002	>80	12/31/2018
2003	>80	12/31/2019
2004	>80	12/31/2020
2005	>80	12/31/2021
2006	>80	12/31/2022

(E) *Compliance Extensions.*

Pursuant to this subsection (e)(6)(E), a person subject to the requirements of subsection (e)(6)(C) may request in writing to the E.O. an extension to a compliance date set forth in subsection (e)(6)(D) (i.e., extension to the “nominal” compliance date). The E.O. may grant the person an extension to the nominal compliance date for any one of the reasons set forth below. A person granted such an extension is deemed to be in compliance with the requirements of subsection (e)(6)(C) during the extension period, but only upon written authorization from the E.O. made pursuant to this provision and only until the end of the extension period. During the extension, the person must meet all other requirements of this section. Immediately upon the end of the extension period, the person must meet all the applicable requirements of this section, including but not limited to, subsection (e)(6)(C).

Except as provided in paragraph (e)(6)(E)3 below, the E.O. may not combine compliance extensions granted pursuant to this provision with any other compliance date extensions, including those set forth in this provision and in subsection (e)(6)(D)2 and (D)3. And except as provided in paragraphs (e)(6)(E)2 and (e)(6)(E)3 below, under no circumstances may the E.O. grant more than one compliance extension for any individual engine, set of engines, or harbor craft.

1. *Change in Annual Hours of Operation.*

The E.O. may grant a one-time, maximum one year extension to the nominal compliance date set forth in subsection (e)(6)(D), provided the person demonstrates to the E.O.'s written satisfaction that the all of the following have occurred:

- a. The person reasonably determined the vessel engine's nominal compliance date based on the engine's hours of operation two years before the nominal compliance date; and
- b. In the year immediately prior to the nominal compliance date, the engine's annual hours of operation increased significantly from the prior year such that the engine's nominal compliance date would have been accelerated from one compliance date to an earlier compliance date.

[Note: For example, suppose an operator has a 1982-model year engine on a tugboat, which has a homeport outside of SCAQMD and operates for 750 hours in Regulated California Waters in 2010. If it is reasonable for the operator to assume the annual hours of operation in 2011 will be similar to 2010, the operator would project from Table 7 that the engine's compliance date is December 31, 2012, and would plan his operations accordingly. However, if the vessel engine's operation increased substantially to 1600 hours in 2011, the engine normally would then have its compliance date accelerated to December 31, 2011, according to Table 7. The one-year extension would, therefore, extend the engine's actual compliance date back to what it would have been without the change in hours of operation (i.e., back to December 31, 2012).].

2. *No Suitable Engine Replacement for Harbor Craft.*

The E.O. may grant to a person a one year extension, which can be renewed annually, only if the person demonstrates to the E.O.'s written satisfaction that there is no suitable Tier 2 or Tier 3 marine or off-road-certified replacement engine available anywhere that can be used in the person's specific vessel, and the person cannot otherwise meet the requirements of subsection (e)(6)(C).

The E.O., in his/her sole discretion, may use any information available to the E.O. to rebut the person's demonstration. For purposes of this

paragraph, the E.O. may deem an engine as suitable to replace an existing engine if the replacement engine is similar in horsepower to the existing engine, the replacement engine can fit within the vessel's engine compartment, and installation of the replacement engine would not cause the vessel to violate U.S. Coast Guard or other applicable safety regulations. The E.O. may not consider the cost of the replacement engine, by itself or including installation and downtime costs, in determining its suitability as a replacement.

The application for and issuance of an initial extension and subsequent extensions pursuant to this paragraph are subject to the following requirements:

- a. For an initial extension and all subsequent annual extensions to be granted pursuant to this paragraph, the E.O. shall follow the same procedures for applying, determining completeness, allowing public review and considering public comments, taking final action, and publishing E.O. decisions that are set forth in subsection (f) for Alternative Control of Emissions (ACE) applications;
- b. The E.O. shall consider all information submitted by the public, including but not limited to, information related to the availability of replacement engines suitable for the person's vessel;
- c. Except for the engine(s) for which the extension is sought, the person must demonstrate that all other engines subject to the person's direct control meet the requirements of subsection (e)(6);
- d. The person must submit the application for an extension so that it is received by the E.O. no later than 6 months before the nominal compliance date of the engine for which the extension is requested;
- e. The person must identify in the application each engine for which the extension is requested;
- f. For each engine identified in paragraph 2 above, the person must provide in the application a detailed description of the reasons and factors that serve as the basis for the claim that no suitable replacement engine is available. This description must include, at a minimum, detailed engineering diagrams, calculations, and citations to applicable U.S. Coast Guard regulations that support the

person's claim that there are no suitable replacement engines available.

- g. After the initial extension, the E.O. may grant additional one year extensions, provided the following requirements are met:
 - i. All procedures specified in paragraph (e)(6)(E)2.a and (e)(6)(E)2.b above are followed;
 - ii. The application for an additional extension demonstrates the engines identified in paragraph (e)(6)(E)2.c remain in compliance with this section;
 - iii. The application is received by the E.O. no sooner than 6 months but no later than 2 months before the expiration of the previous extension;
 - iv. The application identifies the engine(s) for which the additional extension is requested;
 - v. For each engine identified in paragraph (e)(6)(E)2.g.iv above, the person must provide in the application a detailed description of the reasons and factors that serve as the basis for the claim that suitable replacement engines remain unavailable. This description must include, at a minimum, detailed engineering diagrams, calculations, and citations to applicable U.S. Coast Guard regulations that support the person's claim that there are still no suitable replacement engines available.

3. *Equipment Manufacturer Delays or Installation Difficulties.*

Upon written request, the E.O. may grant to a person a 6-month extension to the nominal compliance date set forth in subsection (e)(6)(D), provided all the following criteria are met:

- a. the person ordered the new replacement engine or other equipment necessary to comply with the requirements of subsection (e)(6)(C) prior to the nominal compliance date set forth in subsection (e)(6)(D);
- b. the purchase order identified in paragraph a above was placed with the manufacturer no later than 6 months before the engine's nominal compliance date;
- c. the new engine or equipment has not been received or installed since it was ordered due to manufacturing delays or excessive

difficulties encountered by the engine or equipment installer;
and

- d. the applicant for the extension provides documentation to the E.O.'s satisfaction that demonstrates the criteria in subparts a. through c. above have been met. The E.O. may, in his/her sole discretion, use any information available to rebut any of the documentation submitted pursuant to subparts a through c above.

4. *Multiple Engines on Multiple Vessels Within Same Fleet and With Same Compliance Dates.*

This provision applies only to fleets of 2 or more vessels that are owned by the same person. Upon written request, the E.O. may grant to the person an extension to the nominal compliance date(s) for engines on vessels within such fleets, as set forth below;

- a. For each set of engines on two or more vessels or for each single engine in three or more vessels with compliance dates of 2009 or 2010 for ferries, excursion vessels, tugboats, towboats, and push boats and 2011 or 2012 for crew and supply vessels and barge and dredge vessels (a "set" means 2 or more engines), the E.O. may grant a one-time extension of the compliance date to December 31, 2013 for ferries, excursion vessels, tugboats, towboats, and push boats and to December 31, 2015 for crew and supply boats and barge and dredge vessels, provided the E.O. receives and approves a compliance schedule from the person that meets the requirements set forth below:
 - i. The compliance schedule is received by the E.O. no later than December 31, 2009 for ferries, excursion vessels, tugboats, towboats, and push boats and prior to December 31, 2011 for crew and supply, barge, and dredge vessels;
 - ii. For each year, up to and including 2013 for ferries, excursion vessels, tugboats, towboats, and push boats and 2015 for crew and supply vessels and barge and dredge vessels, that the extension will be in effect, the compliance schedule must identify, at a minimum, the engines on specified vessels in the fleet that will meet the requirements of subsection (e)(6)(C) within any given year;

- iii. The compliance schedule must show that all engines with compliance dates of 2009 or 2010 for ferries, excursion vessels, tugboats, towboats, and push boats and 2011 or 2012 for crew and supply vessels and barge and dredge vessels on the specified vessels in the fleet will be in compliance with subsection (e)(6)(C) by December 31, 2013 for ferries, excursion vessels, tugboats, towboats, and push boats and December 31, 2015 for crew and supply vessels and barge and dredge vessels. [Note: For example, an approvable plan may show that 25% of these engines on the specified vessels in a fleet will be in compliance in 2010, 50% in 2011, 75% in 2012, and 100% by December 31, 2013.]; and
 - iv. The compliance schedule must include all other information the E.O. deems necessary and appropriate for implementing this provision.
- b. For each set of engines on two or more vessels or each single engine on three or more vessels with a compliance date of 2011 or later for ferries, excursion vessels, tugboats, towboats, and push boats and 2013 or later for crew and supply vessels and barge and dredge vessels (a "set" means 2 or more engines), the E.O. may grant to a person a one-time, maximum one-year extension of the nominal compliance date. To receive an extension under this provision, the person must submit a written request to the E.O. that meets the following requirements:
- i. The request must be received by the E.O. no later than December 31st of the year immediately preceding the nominal compliance date for the set of engines; and
 - ii. The request identifies the engines in each set of engines and the vessels in the person's fleet that are subject to the requested extension.

For all engines within a person's fleet that have not been granted an extension pursuant to paragraphs a or b above, the compliance dates for such engines remain as set forth in subsection (e)(6)(D).

(F) *Special Provisions Applicable to the Use of a Diesel Emission Control Strategy (DECS), including Verified Diesel Emission Control Strategies (VDECS).*

The following requirements apply to any person's use of a DECS pursuant to subsections (e)(5) or (e)(6) and are in addition to any other applicable requirements:

1. Once the DECS is installed or otherwise employed on a person's vessel, the person must continue to operate and maintain the DECS, in accordance with the manufacturer's directions, to achieve the original level of emission reductions that the DECS was designed and intended to achieve;
2. In the event a DECS fails, breaks down, or is otherwise damaged (collectively referred to hereinafter as "fail" or "failure"), the vessel owner or operator must, within 90 days of the DECS failure, do at least one of the following:
 - a. repair the DECS to good working order;
 - b. replace the failed DECS with another working DECS, if it cannot be repaired; or
 - c. employ another method that meets the requirements of subsection (e)(6)(C) and other applicable provisions of this section, if the DECS cannot be repaired.
3. The determination in subpart 2.b and 2.c above of whether a DECS cannot be repaired may only be made by either the DECS manufacturer or an authorized dealer.
4. For each replacement DECS installed under subpart 2.b above, the person must provide to the E.O. the same documentation for the replacement DECS that was required for the DECS that failed, and the person must obtain the same E.O. approvals that were required with the failed DECS.

(7) *All Harbor Craft – Renewable Diesel Fuel Requirements (Applicable On and After January 1, 2023).*

(A) *Beginning January 1, 2023, a person subject to this section shall only fuel a diesel engine on a harbor craft with Renewable Diesel (R100) fuel or*

R99 fuel blend, except to demonstrate compliance with engine and fuel standards as specified in subsection (q).

(B) In the following situations, a harbor craft can be fueled with either: U.S. EPA on-road diesel fuel meeting the specifications contained in 40 CFR §§ 80.500 et seq., as they existed on April 27, 2010, or U.S. EPA nonroad diesel fuel meeting the specifications contained in 40 CFR 80.29 as it existed on April 27, 2010, and 69 Federal Register 38958 (June 29, 2004), which are both incorporated by reference herein:

1. If a harbor craft subject to this section is traveling from a port located outside of California, and that port does not have R100 or R99. The vessel owner or operator must retain records documenting the fuel purchase, the location and the name of the non-California port, and its lack of availability of R100 or R99 fuel for a minimum of three years after the purchase of the fuel, and must make such records available upon the request of the E.O.; or
2. If as of January 1, 2023 a vessel operator has an existing fueling contract, and the operator can demonstrate that the terms of the contract cannot be modified to supply R100 or R99. The vessel owner or operator must provide a copy of the documentation (such as the contract) to CARB. A vessel owner or operator must use R100 or R99 once the contractual issues no longer exist, or by December 31, 2025, whichever occurs sooner.

(8) All Harbor Craft (Excluding Commercial Fishing Vessels) – Requirements for New and Newly Acquired Diesel Engines (Applicable On and After January 1, 2023).

Beginning January 1, 2023, any person subject to this subsection shall not: enter into a contract to sell, purchase, lease, rent, or import; offer for sale; or otherwise acquire or supply a new or in-use engine for a new or in-use harbor craft, which is intended to operate or currently operates in Regulated California Waters, unless that engine, on the date of action, conforms to any one of the following scenarios (A through D):

(A) Is certified to meet the most stringent of the Tier 3 or the Tier 4 marine standards, the Tier 4 Final off-road standards in effect on that date for a new engine with applicable horsepower rating and duty cycle rating, or is certified to meet performance standards in Tables 11, 12, or 13 in

subsection (e)(9) for a new engine of applicable horsepower rating and duty cycle rating.

1. A newly acquired marine engine rated below 600 kW is not required to meet the Tier 4 marine standards if there are no engines available on the date of acquisition that are certified to the Tier 4 marine emission standards for an engine of the same engine category and rated horsepower.
2. Engines certified to meet the Tier 4 Final off-road standards in effect on the date of acquisition for a new engine of applicable horsepower rating and duty cycle rating may only be acquired for use as an auxiliary or propulsion engine on harbor craft if the engine or vessel manufacturer has complied with 40 CFR § 1042.605 (*Marinized land-based engines already certified to other standards for nonroad or heavy-duty highway engines for marine use*), as it existed on April 27, 2010, which are incorporated by reference herein.
3. Engines rebuilt to meet Tier 3 or Tier 4 emission standards may be acquired for use if Tier 3 or Tier 4 standards are the most stringent emission standards in effect on the date of engine rebuild for a new engine of the horsepower rating and duty cycle rating. For the purpose of the demonstration, the person may upon approval by the E.O., rely on any source of reliable and credible information, including but not limited to, any of the following:
 - a. The results from using the test method specified in subsection (q) or an alternative method approved by the E.O.;
 - b. Engine manufacturer's certification test data or other emissions test data for that in-use engine;
 - c. Emissions test data derived from another in-use engine that is configured and used in a substantially similar way to the in-use engine;
 - d. Emissions test data used to meet the regulatory requirements of CARB's Verification Procedure for the non-verified emission control strategy implemented; or
 - e. Emissions test data used to meet the requirements for U.S. EPA certification for systems providing a rebuild to a cleaner standard.

The E.O. may, in their sole discretion and based on good engineering judgment, exclude any information they determine is not reliable or credible;

(B) Is newly acquired within the allowable 6 month "sell-through" period, as set forth in this paragraph. For purposes of this subsection only, the allowable sell-through period runs through 6 months after the date of the Tier 3, or Tier 4 marine standards, or Tier 4 Final off-road standards have come into effect for a new engine of applicable horsepower rating and duty cycle rating as the engine being replaced. Engines that are subsequently sold, supplied, offered for sale, or otherwise newly acquired after the 6 month sell-through period are subject to the requirements specified in subsection (A) of this subsection;

(C) Is replacing an engine that is non-functioning due to equipment failure, and the E.O. has determined, pursuant to the provisions of 40 CFR § 1042.615 engine replacement exemption, as it existed on April 27, 2010, which is incorporated by reference, that no engine certified to the current standards is produced by any manufacturer with the appropriate physical or performance characteristics to repower the vessel. In such event, an alternate engine may be acquired for the replacement. Pursuant to 40 CFR § 1042.615, a separate determination, addressing each tier of emission standards that is more stringent than the emission standards for the engine being replaced must be made. For example, if the engine being replaced was built before the Tier 3 standards were in effect, and engines of that size are currently subject to Tier 4 standards, a person must consider whether any Tier 3 or Tier 4 engines have the appropriate physical and performance characteristics for replacing the old engine. If a Tier 4 engine is determined not to have the appropriate physical and performance characteristics, but a Tier 3 engine does have the appropriate physical and performance characteristics, it must be selected as the replacement engine. In no case after a failure can the replacement engine be certified to a less stringent standard than the engine it is replacing. Documentation (e.g. an engineering evaluation) of these determinations must be supplied to the E.O. and the E.O.'s determination must be obtained before an engine replacement is made pursuant to this provision; or,

(D) Is replacing an engine the E.O. has approved for low use, as outlined in subsection (e)(6) prior to January 1, 2023, or subsection (e)(14) on or after January 1, 2023, as long as the new engine meets or exceeds the current engine's emission standards.

(9) All Harbor Craft (Excluding Commercial Fishing Vessels) – Requirements for New and Newly Acquired In-Use Harbor Craft (Applicable On and After January 1, 2023).

(A) Requirements for new harbor craft.

1. Beginning January 1, 2023, any person subject to this subsection shall not: enter into a contract to sell, purchase, lease, rent, or import; offer for sale; or otherwise acquire or supply a new harbor craft for use in any of the Regulated California Waters unless the tailpipe emissions from each propulsion and auxiliary engine on the vessel meets the applicable performance standards in Table 11, Table 12 or Table 13 set forth in this subsection. Propulsion or auxiliary engines meeting the applicable performance standards in Table 11, Table 12, or Table 13, using Tier 4 Final off-road engines in effect on the date of vessel acquisition may be sold, purchased, offered for sale, leased, rented, imported, or otherwise acquired for use if the engine or vessel manufacturer has complied with 40 CFR 1042.605 (Marinized land-based engines already certified to other standards for nonroad or heavy-duty highway engines for marine use), as it existed on April 27, 2010.
2. New vessels with engines rated less than 600 kW shall meet the tailpipe emission performance standards in Table 11 if Tier 4 marine engines are certified for the applicable horsepower rating and duty cycle rating on the date the keel is laid.
3. Methane (CH₄) emissions from engines must not exceed 1.0 g/bhp-hr when using a gaseous or liquid fuel other than diesel.
4. New excursion vessels and short-run ferries must meet performance standards listed in Tables 11, 12, and 13 if acquired on or after January 1, 2023, but prior to compliance dates as set forth in Table 14 in subsection (e)(10).
5. In the event Tier 3 or Tier 4 engines are available, but no engines or aftertreatment devices are available to meet Tier 3 + DPF or Tier 4 + DPF performance standards as shown in Tables 11 through 13, a person subject to this subsection must, prior to commencing construction on the new vessel, submit a request to the E.O. detailing the reasons why performance standards cannot be met. The E.O. may approve use of a certified Tier 3 or Tier 4 engine not meeting the performance standards shown in Tables 11 through 13. Any engines on

new vessels approved by the E.O. for not meeting this standard shall be subject to requirements of subsection (e)(12) after the vessel commences operating in Regulated California Waters.

Table 11: Performance Standards* for Propulsion and Auxiliary Marine Engines – Tier 4 + DPF

Category	Displacement (L/cylinder)	Maximum Engine Power (kW)	Tier 4 Engine Model Year	NOx (g/bhp-hr)	PM (g/bhp-hr)
<u>C1 Commercial</u>	All	$\text{kW} < 1,400$	2017+	1.3	0.005
<u>C1 Commercial</u>	All	$1,400 \leq \text{kW} < 2,000$	2016+	1.3	0.005
<u>C1 Commercial</u>	All	$2,000 \leq \text{kW} < 3,700$	2014+	1.3	0.005
<u>C1 Commercial</u>	≤ 7.0	$\geq 3,700$	2014-2015	1.3	0.010
<u>C1 Commercial</u>	≤ 7.0	$\geq 3,700$	2016+	1.3	0.010
<u>C2 Commercial</u>	All	$600 \leq \text{kW} < 1,400$	2017+	1.3	0.005
<u>C2 Commercial</u>	All	$1400 \leq \text{kW} < 2,000$	2016+	1.3	0.005
<u>C2 Commercial</u>	All	$2,000 \leq \text{kW} < 3,700$	2014+	1.3	0.005
<u>C2 Commercial</u>	≤ 15.0	$\geq 3,700$	2014-2015	1.3	0.010
<u>C2 Commercial</u>	$15.0 \leq \text{disp} < 30.0$	$\geq 3,700$	2014-2015	1.3	0.030
<u>C2 Commercial</u>	All	$\geq 3,700$	2016+	1.3	0.010

Note*: Performance standards are emissions measured when tested on CARB diesel, not R100 if engines are diesel-fueled, and testing should be done pursuant to requirements as outlined in subsection (q).

Table 12: Performance Standards* for Propulsion and Auxiliary Marine Engines – Tier 3 + DPF

<u>Category</u>	<u>Displacement (L/cylinder)</u>	<u>Maximum Engine Power (kW)</u>	<u>Tier 3 Engine Model Year</u>	<u>HC+NO_x (g/bhp-hr)</u>	<u>PM (g/bhp-hr)</u>
<u>C1 Commercial < 75 kW</u>	<u>< 0.9</u>	<u>< 8</u>	<u>2009+</u>	<u>5.6</u>	<u>0.045</u>
<u>C1 Commercial < 75 kW</u>	<u>< 0.9</u>	<u>8 ≤ kW < 19</u>	<u>2009+</u>	<u>5.6</u>	<u>0.045</u>
<u>C1 Commercial < 75 kW</u>	<u>< 0.9</u>	<u>19 ≤ kW < 37</u>	<u>2009-2013</u>	<u>5.6</u>	<u>0.034</u>
<u>C1 Commercial < 75 kW</u>	<u>< 0.9</u>	<u>19 ≤ kW < 37</u>	<u>2014+</u>	<u>3.5</u>	<u>0.022</u>
<u>C1 Commercial < 75 kW</u>	<u>< 0.9</u>	<u>37 ≤ kW < 75</u>	<u>2009-2013</u>	<u>5.6</u>	<u>0.034</u>
<u>C1 Commercial < 75 kW</u>	<u>< 0.9</u>	<u>37 ≤ kW < 75</u>	<u>2014+</u>	<u>3.5</u>	<u>0.034</u>
<u>C1 Commercial Engines with ≤ 35 kW/L power density</u>	<u>< 0.9</u>	<u>≥ 75</u>	<u>2012+</u>	<u>4.0</u>	<u>0.016</u>
<u>C1 Commercial Engines with ≤ 35 kW/L power density</u>	<u>0.9 ≤ disp < 1.2</u>	<u>All</u>	<u>2013+</u>	<u>4.0</u>	<u>0.013</u>
<u>C1 Commercial Engines with ≤ 35 kW/L power density</u>	<u>1.2 ≤ disp < 2.5</u>	<u>< 600</u>	<u>2014-2017</u>	<u>4.2</u>	<u>0.010</u>
<u>C1 Commercial Engines with ≤ 35 kW/L power density</u>	<u>1.2 ≤ disp < 2.5</u>	<u>< 600</u>	<u>2018+</u>	<u>4.2</u>	<u>0.010</u>
<u>C1 Commercial Engines with ≤ 35 kW/L power density</u>	<u>2.5 ≤ disp < 3.5</u>	<u>< 600</u>	<u>2013-2017</u>	<u>4.2</u>	<u>0.010</u>
<u>C1 Commercial Engines with ≤ 35 kW/L power density</u>	<u>2.5 ≤ disp < 3.5</u>	<u>< 600</u>	<u>2018+</u>	<u>4.2</u>	<u>0.010</u>

<u>C1</u> Commercial Engines with ≤ 35 kW/L power density	$3.5 \leq \text{disp} < 7.0$	< 600	<u>2012-2017</u>	<u>4.3</u>	<u>0.010</u>
<u>C1</u> Commercial Engines with ≤ 35 kW/L power density	$3.5 \leq \text{disp} < 7.0$	< 600	<u>2012-2017</u>	<u>4.3</u>	<u>0.010</u>
<u>C1</u> Commercial Engines with ≤ 35 kW/L power density	$3.5 \leq \text{disp} < 7.0$	< 600	<u>2018+</u>	<u>4.3</u>	<u>0.010</u>
<u>C1</u> Commercial Engines with ≤ 35 kW/L power density	$3.5 \leq \text{disp} < 7.0$	< 600	<u>2018+</u>	<u>4.3</u>	<u>0.010</u>
<u>C1</u> Commercial Engines with > 35 kW/L power density	< 0.9	≥ 75	<u>2012+</u>	<u>4.3</u>	<u>0.017</u>
<u>C1</u> Commercial Engines with > 35 kW/L power density	$0.9 \leq \text{disp} < 1.2$	All	<u>2013+</u>	<u>4.3</u>	<u>0.010</u>
<u>C1</u> Commercial Engines with > 35 kW/L power density	$1.2 \leq \text{disp} < 2.5$	All	<u>2014+</u>	<u>4.3</u>	<u>0.010</u>
	$2.5 \leq \text{disp} < 3.5$	All	<u>2013+</u>	<u>4.3</u>	<u>0.010</u>
<u>C1</u> Commercial Engines with > 35 kW/L power density	$3.5 \leq \text{disp} < 7.0$	All	<u>2012+</u>	<u>4.3</u>	<u>0.010</u>
<u>C2</u>	$7.0 \leq \text{disp} < 15.0$	< 600	<u>2013+</u>	<u>4.6</u>	<u>0.010</u>
<u>C2</u>	$15.0 \leq \text{disp} < 20.0$	< 600	<u>2014+</u>	<u>5.2</u>	<u>0.038</u>
<u>C2</u>	$20.0 \leq \text{disp} < 25.0$	< 600	<u>2014+</u>	<u>7.3</u>	<u>0.030</u>
<u>C2</u>	$25.0 \leq \text{disp} < 30.0$	< 600	<u>2014+</u>	<u>8.2</u>	<u>0.030</u>
<u>C3</u>	≥ 30.0	All	<u>2016+</u>	<u>2.5 (rpm < 130)</u>	<u>0.010</u>
<u>C3</u>	≥ 30.0	All	<u>2016+</u>	<u>$6.7 \times N^{-0.201}$ (130 \leq rpm $< 2,000$)</u>	<u>0.010</u>

C3	>30.0	All	2016+	1.5 (rpm ≥ 2,000)	0.010
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Note*: Performance standards are emissions measured when tested on CARB diesel, not R100 if engines are diesel-fueled, and testing should be done pursuant to requirements as outlined in subsection (q).

Table 13: Performance Standards* for Propulsion and Auxiliary Off-Road Engines – Tier 4 Final + DPF

Rated Power (kW)	Tier 4 Engine Model Year	NMHC (g/bhp-hr)	NMHC + NOx (g/bhp-hr)	NOx (g/bhp-hr)	PM (g/bhp-hr)
kW < 8	2008+	-	5.6	-	0.045
8 ≤ kW < 19	2008+	-	5.6	-	0.045
19 ≤ kW < 37	2013+	-	3.5	-	0.005
37 ≤ kW < 56	2013+	-	3.5	-	0.005
56 ≤ kW < 75	2014+	0.14	-	0.30	0.005
75 ≤ kW < 130	2014+	0.14	-	0.30	0.005
130 ≤ kW < 225	2014+	0.14	-	0.30	0.005
225 ≤ kW < 450	2014+	0.14	-	0.30	0.005
450 ≤ kW < 560	2014+	0.14	-	0.30	0.005
560 ≤ kW < 900	2015+	0.14	-	2.61 / 0.50 ^a	0.005
kW > 900	2015+	0.14	-	2.61 / 0.50 ^a	0.005

Note*: Performance standards are emissions measured when tested on CARB diesel, not R100 if engines are diesel-fueled, and testing should be done pursuant to requirements as outlined in subsection (q).

(a) The NOx standard for generator sets is 0.50 g/bhp-hr.

(B) Requirements for newly acquired in-use vessels.

1. Any person subject to this subsection shall not: enter into a contract to sell, purchase, lease, rent, or import; offer for sale; or otherwise acquire or supply an in-use harbor craft for use in any of the Regulated California Waters unless each propulsion and auxiliary engine on the vessel meets the same requirements for new build vessels as set forth in subsection (e)(9)(A).
2. In situations where in-use vessels are approved for low-use exception or the vessels are in compliance using compliance extensions, the approval of low-use exception and compliance extensions are not transferable to new owners.

3. Newly acquired in-use vessels are not eligible for low-use exceptions as set forth in subsection (e)(14) or compliance extensions except for (e)(12)(E)(2) and (e)(12)(E)(4).
4. Relocated vessels within a person's direct control transferred from outside California into RCW are not newly acquired vessels, and subject to requirements in subsection (e)(12). If a vessel is claimed as a relocated vessel, vessel owners/operators must submit paperwork of vessel acquisition with acquisition transaction date as set forth in subsection (m)(14) and subsection (o). For the purpose of this subsection, any newly reported vessel will be classified as newly acquired unless records show otherwise.

(10) Requirements for Zero-Emission and Advanced Technologies (ZEAT) for New, Newly Acquired and In-Use Short-Run Ferries, and New and Newly Acquired Excursion Vessels (Applicable On and After January 1, 2023).

- (A) Any person who sells, purchases, offers for sale, leases, rents, imports, or otherwise acquires the following that operates or is intended to operate in Regulated California Waters must comply with the applicable ZEAT requirements shown in Table 14 for new excursion vessels, newly acquired excursion vessels, new short-run ferries, newly acquired short-run ferries, or in-use short-run ferries operated above the annual hour limits for low-use exceptions as set forth in subsection (e)(14).
1. Zero-emission vessels must not be pushed, towed, attached, or otherwise propelled during revenue service by another vessel that does not meet the definition of "zero-emission."
 2. A non-zero-emission temporary replacement vessel operating on a short-run ferry route must meet the requirements set forth in subsection (c)(2), which include but is not limited to reporting requirements set forth in subsection (m).

Table 14: Compliance Dates for Zero-Emission and Advanced Technologies

<u>Marine Technology Type</u>	<u>Vessel Category Requirement</u>	<u>ZEAT Required Starting On</u>
<u>Zero-Emission Capable Hybrid</u>	<u>New and Newly Acquired Excursion Vessels</u>	<u>December 31, 2024</u>
<u>Zero-Emission</u>	<u>New, Newly Acquired and In-Use Short-Run Ferries</u>	<u>December 31, 2025</u>

(B) On or after the dates shown in Table 14, all internal combustion engines, regardless of fuel type, must meet the following requirements:

1. Engines on any (in-use, new and newly acquired) short-run ferry must meet, at minimum, the most stringent of the Tier 3 or the Tier 4 marine standards, or the Tier 4 Final off-road standards in effect on the compliance dates shown in Table 14;
2. Engines on short-run ferries are not permitted to operate more than 20 hours/year unless performing non-short-run ferry service, such as operating in a secondary vocation or performing emergency operations. Non-short-run ferry service shall be documented according to recordkeeping requirements in subsection (m)(19) and reported to CARB according to subsection (o). Operation as a secondary vocation is subject to provisions in subsection (e)(12);
3. Engines on new and newly acquired excursion vessels must meet the performance standards as set forth in subsection (e)(9).

(C) Before adopting ZEAT, a person must submit an application to, and receive approval from the E.O., as set forth below:

1. Application Process.

At least 18 months prior to the compliance date, a ZEAT application must be submitted with a minimum of the following information:

- a. The applicant company's name, address, and contact information;

- b. Information specific to the harbor craft and engine(s) on which ZEAT will be used, including the vessel name and identification number(s); engine make, model, and serial numbers; and all other information that uniquely identify the engine;
- c. Certification documentation, a detailed engineering analysis or calculations, design information, battery or fuel cell capacities, typical trips or other information required to demonstrate meeting the following performance standards:
 - i. Vessels adopting zero-emission capable hybrid technology must demonstrate that 30 percent or more of combined main propulsion and auxiliary power will be derived from a zero-emission tailpipe emission source when averaged over a calendar year. Zero-emission power sources include but are not limited to, battery plug-in hybrid propulsion systems using electricity from the electric grid or grid-neutral source, or hydrogen fuel cells.
 - ii. Short-run ferries or other full zero-emission vessels must not use an internal combustion engine to generate propulsion or auxiliary power for the normal operation of the vessel (more than 20 hours/year) unless the engine meets the emission limits for distributed generation or is used exclusively during emergency operations. Use of internal combustion engines for emergency operation is permitted but subject to recordkeeping requirements in subsection (m)(19).
- d. Information and plans for charging or fueling infrastructure that include an overall description of the frequency and duration of charging or fueling, a list of key hardware components, and applicable documentation of communication with utility companies, fueling contracts with hydrogen providers, and/or installation of on-site fueling systems.
- e. The proposed recordkeeping, reporting, monitoring, and if applicable, testing procedures, that the applicant plans to use to demonstrate continued effectiveness of the ZEAT. Recordkeeping and reporting must include, at a minimum, the requirements in subsection (m)(19).

2. E.O. Review and Final Decision-Making Process.

- a. Within 30 days after receiving a ZEAT application, the E.O. shall notify the applicant whether the application is deemed sufficiently complete to proceed with further evaluation. If the application is deemed incomplete, the notification must identify the application's deficiencies. The applicant shall submit the supplemental documentation within 30 days of receiving a notification the application is incomplete. The E.O. shall have an additional 30-day period for reviewing each set of documents or information submitted in response to an incomplete determination.

- b. Within 60 days of deeming an application complete, the E.O. shall take final action to either approve or deny a ZEAT application, and the E.O. shall notify the applicant accordingly. In approving or disapproving a ZEAT application, the E.O. will base their determination on the information submitted in the ZEAT application and their exercise of good engineering judgment. If the application is denied or modified, the E.O. shall state the reasons for the denial or modification in the notification. The E.O. shall specify all terms, conditions, and requirements the E.O. determines are necessary for the applicable vessel to operate properly and reduce emissions of air pollutants consistent with this section.

(11) ZEAT Credit for Early or Surplus Deployments (Applicable On and After January 1, 2023).

(A) Applicability.

If a person adopts ZEAT on new or newly acquired excursion vessels or short-run ferries three years prior to compliance dates shown in Table 14, or at any time for any other category of vessel, a person may be granted additional compliance time set forth in Table 15 for another excursion vessel or short-run ferry subject to subsection (e)(10), for each in-use engine to meet performance standards in subsection (e)(12) on another vessel in any regulated in-use category, or for each in-use engine to meet the requirements for commercial fishing vessels in subsection (e)(13) that is

under a person’s direct control and operating within the same California air basin.

Table 15. ZEAT Credit Time for Surplus ZEAT Deployment

<u>Marine Technology Type</u>	<u>Maximum Additional Compliance Time</u>
<u>Zero-Emission Capable Hybrid</u>	<u>3 Extra Years</u>
<u>Zero-Emission</u>	<u>7 Extra Years</u>

For example, consider the scenario in which a pilot boat, which is not subject to ZEAT requirements as set forth in subsection (e)(10), but must meet Tier 4 + DPF performance standards as set forth in subsection (e)(12) by December 31, 2027 is removed from service and replaced with a zero-emission vessel December 31, 2026. In that scenario, the owner or operator of the pilot boat may request that CARB grant up to seven additional years to the compliance date for another vessel in the owner or operator’s fleet that is operating in the same air basin, to comply with requirements of subsection (e)(12).

(B) Eligibility and Requirements for Receiving ZEAT Credit.

1. Before applying the ZEAT credit to another vessel in their fleet, the ZEAT vessel generating the credit must be deployed and operational.
2. Vessels that are part of an Alternative Control of Emissions (ACE) as set forth in subsection (f) are not eligible to generate or receive a ZEAT credit pursuant to this subsection.
3. ZEAT vessels deployed using incentive funding are eligible to generate ZEAT credit unless restricted by guidelines for the incentive funding program.
4. ZEAT vessels deployed in Regulated California Waters prior to or after January 1, 2023 are eligible to generate ZEAT credit.
5. ZEAT credit can only be applied to vessels with engines certified to Tier 2 or more stringent emission standards.

6. Receiving a ZEAT credit for engines or vessels in a person's fleet does not preclude a person from applying for feasibility extensions set forth in subsections (e)(12)(E)(2-4) after the expiration of the ZEAT credit.
7. Any combination of multiple ZEAT credits and compliance extensions shall not extend the compliance date of any engine or vessel beyond December 31, 2034.
8. ZEAT credit may be applied to vessels with a homebase or regularly scheduled stops within two miles of a Disadvantaged Community (DAC) only if the ZEAT vessel deployed to generate the ZEAT credit also has a homebase or regularly scheduled stops within two miles of any DAC.
9. A person is eligible to receive the ZEAT credit time shown in Table 15 without an analysis of emissions showing that deploying the ZEAT vessel achieves equal or greater emission reductions within their fleet. Emissions analysis is required for zero-emission capable hybrid vessels in partial fulfillment of meeting requirements of CARB approval of technologies as listed in (e)(10)(C)1.a-e.
10. The ZEAT credit applies one time only to each ZEAT vessel when it is first put into service in RCW. The ZEAT credit applies to one selected vessel in the owner's or operator's fleet and is not transferable to another vessel within the fleet or to a subsequent owner after the sale of the ZEAT vessel.

(C) ZEAT Credit Application Process.

1. At least 9 months prior to the compliance date of engines/vessel receiving the ZEAT credit, an applicant must submit an application to, and receive written approval from the E.O. The application package must include a minimum of the following information:
 - a. The applicant company's name, address, and contact information;
 - b. ZEAT vessel information, including vessel name, vessel unique identifier and homebase, and supplemental documentation demonstrating the deployed ZEAT vessel meets the performance standards and requirements set forth in subsection (e)(10)(C)1.a-e.;and

- c. Identification of the specific harbor craft and engine(s) for which the applicant proposes to apply ZEAT, including vessel name, identification number(s) and homebase; engine make(s), model(s), model year, and serial number(s).
2. Within 30 days after receiving a ZEAT credit application, the E.O. shall notify the applicant whether the application is deemed sufficiently complete to proceed with further evaluation. If the application is deemed incomplete, the notification shall identify the application's deficiencies. The applicant shall submit the supplemental documentation within 30 days of receiving a notification indicating the application is incomplete. The E.O. shall have an additional 30-day period for reviewing each set of documents or information submitted in response to an incomplete determination. Nothing in this subsection prohibits the E.O. from requesting additional information from the applicant, during any part of the ZEAT credit application process, which the E.O. determines is necessary to evaluate the application.
3. Applicants with an approved ZEAT credit must notify the E.O. in writing within 30 days upon learning of any information that would alter the analysis submitted. If the E.O. has information that indicates an approved ZEAT credit has been granted to a person that no longer meets the criteria for a ZEAT credit, the E.O. may modify or revoke the application as necessary to assure that the applicant and subject vessel(s) meet the emission reduction requirements in this section.
4. Records made pursuant to subsection (e)(11) shall be kept for the lifetime of each engine receiving the ZEAT credit. This information shall be supplied to the E.O. within 30 days of a request from CARB staff.

(12) In-Use Engines and Vessels (Excluding Commercial Fishing Vessels) – Requirements for Meeting Performance Standards (Applicable On and After January 1, 2023).

(A) Applicability. For Any Engines on Regulated In-Use Vessels.

1. For purposes of this subsection, regulated in-use vessels include ATBs, barges (including tank barges, and barges operating as part of ATBs), commercial passenger fishing vessels, crew and supply vessels, dredges, excursion vessels, ferries (excluding in-use short-run ferries),

pilot vessels, push boats, research vessels, tugboats (including ocean-going tugboats and towboats, and tugboats operating as part of ATBs), towboats, and workboats.

2. This subsection (e)(12) applies on and after January 1, 2023 to any person who owns or operates a regulated in-use vessel with any marine or off-road engines operating more than the annual low-use hours limits specified in Table 22 in subsection (e)(14).

(B) General Requirements.

1. On and after January 1, 2023, a person who owns, operates, sells, purchases, offers for sale, leases, rents, imports, or otherwise acquires a regulated in-use vessel with any marine or off-road diesel engines may not operate, sell, purchase, offer for sale, lease, rent, import, or otherwise acquire an in-use vessel, unless the engine or diesel engine system on the vessel complies with at least one of the compliance methods set forth in subsection (e)(12)(C) by the compliance date. Engines approved to operate as low-use pursuant to (e)(6)(C)(4) prior to January 1, 2023 must continue to meet low-use limits defined in subsection (e)(6) until compliance dates in this subsection (e)(12).
2. In-use engines rated below 600 kW shall not be repowered with engines meeting Tier 3 marine standards if an engine with the applicable horsepower and duty cycle rating is certified to the Tier 4 marine standards is available. If Tier 4 engines are not available under 600 kW, and engines are repowered on or after January 1, 2023 to the Tier 3 standards, they would not need to be repowered to Tier 4 standards when Tier 4 engines become available.
3. In-use engines rated below 600 kW that meet Tier 3 standards before January 1, 2023 are subject to meeting Tier 4 standards if an engine of the applicable horsepower rating and duty cycle is available 12 months prior to the compliance date unless after January 1, 2023, no Tier 4 engines are available and the Tier 3 engines are retrofit with a DPF and meet Tier 3 + DPF standards by the compliance dates.
4. In-use engines or engine systems rated above 600 kW shall meet Tier 4 + DPF performance standards under this subsection. If no engines with the power and duty cycle ratings needed by the vessel that meet the Tier 4 marine + DPF performance standards or the Tier 4 Final off-road + DPF performance standards available by the compliance date, the

vessel owner would be eligible for a compliance extension as set forth in subsection (e)(12)(E). Early upgrades before compliance dates of engines rated above 600 kW that meet Tier 3 standards must still repower with engines meeting Tier 4 standards.

5. If an in-use ZEAT short-run ferry operates in other regulated in-use vessel categories as secondary or other use, or if an in-use commercial fishing vessel operates in regulated in-use vessel category as secondary or other use, operation of the secondary or other use is subject to the requirements of this subsection and is eligible for a low-use exception as defined in subsection (e)(14) based on engine tier level and operating hours of the engine.
6. In situations where in-use engines that are subject to the requirements of subsection (e)(12) do not meet performance standards but remain installed on the vessel, a person subject to subsection (e)(12) must take actions to ensure said engines cannot be operated. Examples include, but are not limited to, electrically or mechanically locking the engine to prevent operation, or permanently disconnecting fuel lines. Non-operational engines must meet applicable recordkeeping and reporting requirements defined in subsections (m) and (o).
7. Vessel owners or operators that intend to sell a CHC that is only intended to operate beyond Regulated California Waters but will perform sea trials in RCW, or will need to transit through RCW to the seller, must first request and receive written approval from the E.O. At least 14 days prior to the planned operation, the seller must submit a formal request, including the vessel name, unique vessel identifier, engine make, model, model year, serial number, an estimate of operating hours on each non-compliant engine, the dates and locations of operation, and demonstrate what efforts will be taken to minimize the number of operational hours. The E.O. will base their determination on the information submitted and on the exercise of good engineering judgment whether the request comprises a good faith attempt to minimize the operation of that CHC in RCW.

(C) Compliance Methods.

1. Method C1 – Replace the in-use engine with a U.S. EPA certified marine Tier 3 or Tier 4 engine or off-road Tier 4 Final engine that meets CARB performance standards in its certified condition by U.S. EPA or CARB.

A person may comply under this method by replacing the in-use engine with an engine certified to the most stringent of either the Tier 3 marine, Tier 4 marine or Tier 4 Final off-road engine emission standards applicable to a new engine with the applicable horsepower rating and duty cycle rating as the in-use engine at issue, that meets the CARB performance standards in either Table 11, Table 12, or Table 13, as applicable, as set forth in subsection 93118.5(e)(9) in its certified condition by U.S. EPA or CARB. The replacement engine must meet CARB defined performance standards that would apply to a new engine, of the applicable horsepower rating and duty cycle rating as the in-use engine, at the time of the compliance date set forth in subsection (e)(12)(D) plus any compliance extensions approved pursuant to subsection (e)(12)(E).

2. Method C2 – Repower or Rebuild the in-use engine with a U.S. EPA certified marine Tier 3 or Tier 4 engine or U.S. EPA or CARB certified off-road Tier 4 Final engine that does not meet CARB performance standards and install a CARB Level 3 verified diesel emission control strategy (Level 3 VDECS or DPF).

If an engine does not meet CARB performance standards in Table 11, Table 12, or Table 13 as set forth in subsection 93118.5(e)(9), a person may comply under this method by replacing the in-use engine with an engine certified to the most stringent of either the Tier 3 marine, Tier 4 marine or Tier 4 Final off-road engine emission standards applicable to a new engine with applicable horsepower rating and duty cycle rating as the in-use engine and by additionally retrofitting the engine with a DPF.

3. Method C3 – Demonstrate to the E.O.'s satisfaction that the tailpipe emissions meet the performance standards using Alternative Control of Emissions.

A person may comply under this method by demonstrating that the tailpipe emissions otherwise meet the performance standards set forth in Table 11, Table 12, and Table 13 of subsection 93118.5(e)(9) using an Alternative Control of Emissions as outlined in subsection 93118.5(f). To comply with this method, the applicant must follow the provisions set forth in subsection 93118.5(f).

4. Method C4 – Meet CARB performance standards using a two-step phase-in method (pre-Tier 1 and Tier 1 engines only).

Any pre-Tier 1 or Tier 1 certified engines on regulated in-use vessels may meet CARB performance standards using phase-in method described below:

- a. Replace the in-use pre-Tier 1 or Tier 1 certified engine with an engine meeting the most stringent standards (Tier 3 or Tier 4 marine; or Tier 4 Final off-road) for a new engine with the applicable horsepower rating and duty cycle rating as the in-use engine by the compliance date set forth in Table 16 in subsection (e)(12)(D) or (e)(12)(E) if compliance extensions are approved. The replacement engine must meet the provisions of subsection (e)(8).
- b. Retrofit the U.S. EPA certified Tier 3 or Tier 4 marine or Tier 4 Final off-road engine with a DPF by the compliance date set forth in Table 17, Table 18 or Table 19 in subsection (e)(12)(D) or (e)(12)(E) if compliance extensions are approved. If Tier 3 or Tier 4 engines already meet CARB performance standard set forth in subsection (e)(9) in their certified condition by U.S. EPA, retrofitting with a DPF is not required.

Regulated in-use vessels with pre-Tier 1 or Tier 1 certified engines may follow any of the above applicable compliance methods (e)(12)(C)(1) through (3) to comply with the performance standards set forth in subsection (e)(9).

(D) Compliance Dates.

Table 16, Table 17, Table 18, and Table 19 below set forth the compliance dates by which a person must demonstrate that a regulated in-use vessel or engine meets the requirements of subsection (e)(12)(B). Table 16 applies only to any pre-Tier 1 and Tier 1 certified engines on regulated in-use vessels, which include but are not limited to workboats, research vessels, pilot vessels, tank barges, and commercial passenger fishing vessels that were not subject to the in-use engine compliance requirements prior to January 1, 2023; Table 17 applies only to Tier 2, Tier 3, or Tier 4 engines on ferries (except for short-run ferries), pilot vessels, all tugboats, towboats, and push boats; Table 18 applies only to Tier 2, Tier 3, or Tier 4 engines on research vessels, commercial passenger fishing vessels, and in-use excursion vessels, and Table 19 applies to Tier 2, Tier 3,

or Tier 4 engines on barge and dredge vessels, crew and supply vessels, and workboats. The compliance dates are set forth by engine model year. For Table 16, Table 17, Table 18, and Table 19, Method D1, or D2 below may be used for determining the actual or effective engine model year.

1. Method D1 – the engine’s actual model year.

- a. A person may determine an engine’s compliance date under this method by using the engine’s actual model year of manufacture, as documented by the sales contract, invoice, purchase order, or other legitimate proof of purchase for the engine. The actual model year of manufacture may also be shown on a label permanently affixed to the engine by the original engine manufacturer (OEM). In the event of a conflict between the proof of purchase and the permanent label, the earlier of the two dates shall be used for the purpose of this paragraph.
- b. Using Method D1, with the exception of engines complying by subsection (e)(12)(C)(4)b., the compliance date for an engine is based on the model year of the in-use engine that was installed in the in-use vessel as of December 31, 2022.

2. Method D2 – the engine’s effective model year based on the “Engine’s Tier 3 or Tier 4 Rebuild Model Year” method.

- a. A person may determine an engine’s compliance date by demonstrating, to the E.O.’s written satisfaction, that the engine was rebuilt to conform with U.S. EPA Tier 3 or Tier 4 marine standards.
- b. For the purpose of the demonstration, the person must submit information to validate the criterion set forth in subsection (e)(12)(D)2.a, including but not limited to: proof of ownership of the preexisting engine, receipts or work orders evidencing the date and work needed to rebuild the engine to conform with Tier 3 or Tier 4 marine engine standards, and emissions test data from the rebuilt engine demonstrating compliance with U.S. EPA Tier 3 or Tier 4 marine engine standards.
- c. Upon receipt of a request, the E.O. will review the information submitted by an applicant and determine, within 30 working days, whether the information meets the criterion set forth in subsection

(e)(12)(D)2.a. In making that determination, the E.O. will rely on the information submitted by the applicant and on good engineering judgment.

d. If the E.O. determines that the applicant satisfies the criterion set forth in subsection (e)(12)(D)2.a., the effective model year of the Tier 3 or Tier 4 rebuilt engine, for purposes of determining the compliance date in Table 16, Table 17, Table 18, or Table 19, is the actual year in which the Tier 3 or Tier 4 rebuild occurred.

e. Using Method D2, with the exception of engines complying by subsection (e)(12)(C)4b., the compliance date for an engine is based on the model year for the in-use engine that was installed on the in-use vessel as of December 31, 2022.

Table 16: Compliance Dates for Any Pre-Tier 1 and Tier 1 Certified Engines on All Regulated In-Use Vessels

<u>Engine Model Year</u>	<u>Compliance Date</u>
<u>1993 and earlier</u>	<u>12/31/2023</u>
<u>1994 – 2001</u>	<u>12/31/2024</u>
<u>2002 – 2007</u>	<u>12/31/2025</u>

[Note: For example, for a 1993 model year diesel engine on a research vessel operating in Regulated California Waters, the owner or operator must bring the engine into compliance with the requirements of subsection (e)(12)(C) by December 31, 2023.]

Table 17: Compliance Dates for Tier 2, Tier 3, or Tier 4 Engines on Ferries (Except Short-Run Ferries), Pilot Vessels, All Tug/Towboats, and Push Boats

<u>Engine Model Year and Vessel Category</u>	<u>Compliance Date</u>
<u>2009 and earlier (Except Pilot Vessels)</u>	<u>12/31/2024</u>
<u>2012 and Earlier Pilot Vessels</u>	<u>12/31/2025</u>
<u>2010 – 2012 All Other Vessels*</u>	<u>12/31/2025</u>
<u>2013 – 2015**</u>	<u>12/31/2026</u>
<u>2016 – 2019**</u>	<u>12/31/2027</u>
<u>2020 – 2021**</u>	<u>12/31/2028</u>
<u>2022 and later**</u>	<u>12/31/2029</u>

*Ferries (Except Short-Run Ferries), All Tug/Towboats, and Push Boats. **All vessels listed in the title of this table, including ferries (except short-run), pilot, all tug/towboats, and push boats. [Note: For example, for a 2020 model year diesel engine on a tugboat operating in Regulated California Waters, the owner or operator must bring the engine into compliance with the requirements of subsection (e)(12)(C) by December 31, 2028.]

Table 18: Compliance Dates for Tier 2, Tier 3, or Tier 4 Engines on Research Vessels, Commercial Passenger Fishing Vessels, and In-Use Excursion Vessels

<u>Engine Model Year</u>	<u>Compliance Date</u>
<u>2010 and earlier</u>	<u>12/31/2026</u>
<u>2011 – 2012</u>	<u>12/31/2027</u>
<u>2013 – 2014</u>	<u>12/31/2028</u>
<u>2015 – 2017</u>	<u>12/31/2029</u>
<u>2018 and later</u>	<u>12/31/2030</u>

[Note: For example, for a 2015 model year diesel engine on a research vessel operating in Regulated California Waters, the owner or operator must bring the engine into compliance with the requirements of subsection (e)(12)(C) by December 31, 2029.]

Table 19: Compliance Dates for Tier 2, Tier 3, or Tier 4 Engines on Barges, Dredges, Crew and Supply Vessels, and Workboats

<u>Engine Model Year</u>	<u>Compliance Date</u>
<u>2009 and earlier</u>	<u>12/31/2028</u>
<u>2010 – 2013</u>	<u>12/31/2029</u>
<u>2014 – 2017</u>	<u>12/31/2030</u>
<u>2018 and later</u>	<u>12/31/2031</u>

[Note: For example, for a 2010 model year diesel engine on a workboat operating in Regulated California Waters, the owner or operator must bring the engine into compliance with the requirements of subsection (e)(12)(C) by December 31, 2029.]

(E) Compliance Extensions.

A person may request that the E.O. grant an extension from the compliance dates forth in subsection (e)(10), (e)(12), (e)(13), or (i)(1) for infrastructure, feasibility, or scheduling delays. Compliance extensions are not transferrable to a subsequent owner after the sale of an engine or vessel. Except for Extension E5 for shipyard delays for new build vessels, owners/operators are not eligible to apply for extensions for newly acquired harbor craft.

With the exception of Extensions E2, Extension E3 for workboats pursuant to subsection (e)(12)(E)3.c.ii., and Extension E4, no extensions may extend beyond December 31, 2034.

With the exception of Extensions E2, Extension E3 for workboats pursuant to subsection (e)(12)(E)3.c.ii, and Extension E4, extensions may be combined, but the combination of extensions may not result in an extension for a single engine more than 6 years after the compliance date, or for more than 8 years for vessels specified in subsection (e)(12)(E)3.c.i.

For each initial extension or renewal of an extension, the E.O. will review the application upon receiving a complete application. The E.O will approve or disapprove the requested compliance extension or renewal by relying on the information in the application, technical feasibility, and product availability as of the date of the deadline of the application, and their good engineering and financial judgment. If an applicant seeks a renewal of an extension, they must submit the same information required by the initial application.

1. Extension E1: Shore Power and ZEAT Infrastructure Delays.

a. Length of Extension: The E.O. may grant an applicant a one-year compliance extension to the compliance date set forth in subsection (i)(1) for shore power or subsection (e)(10) for ZEAT.

b. Eligibility and Application Package: The applicant, whether a vessel or facility owner or operator, shall submit an application to the E.O. at least 9 months prior to compliance dates, or as specified in subsection (e)(12)(E)1.c. for a renewal, that includes the following information:

i. Start and end dates of the requested extension period;

- ii. A description of the unforeseen, temporary, or extenuating circumstances outside of the applicant's control;
 - iii. Documentation that supports the finding of circumstances requiring an extension, such as but not limited to documentation from the electrical utility, third-party engineering evaluations, or site-specific physical constraints requiring additional time for safety review; and
 - iv. Efforts taken to mitigate future need for the extension.
- c. Renewal: The applicant may apply for an additional one-year extension no later than 9 months and no earlier than 12 months before the expiration of the extension.

2. Feasibility Extension E2 - No Certified Engines or DPFs Available.

- a. Length of Extension: The E.O. may grant an applicant a two-year compliance extension to the compliance dates or requirements set forth in subsection (e)(8), (e)(9), or (e)(12).
- b. Eligibility and Application Package: The applicant must demonstrate that there are no certified engines or DPFs available to meet performance standards by compliance dates. The application package must be supplied to the E.O. no later than 9 months and no earlier than 12 months before the compliance date for the initial application or as specified in subsection (e)(12)(E)2.c. for a renewal, and must include:
 - i. An evaluation of all U.S. EPA certified engines meeting applicable performance standards by the compliance date;
 - ii. An evaluation of all CARB verified DPFs by the compliance date;
 - iii. Engineering analysis indicating that no combination of certified engines could be used in lieu of engines of the original horsepower rating to perform the work of the original vessel design. This analysis must consider all engines within an applicable range of power ratings, power densities, and other vessel powertrain modifications, including but not limited to engine controls, azimuth drives and propeller configurations.

c. Renewal: The applicant may apply for an additional two-year extension no later than 9 months and no earlier than 12 months before the expiration of the extension.

d. Additional Provisions:

i. Cleanest Engine Requirement: In situations where engines certified to current Tier 3 marine, Tier 4 marine, or Tier 4 Final off-road are available but DPFs are not available, the person must repower the vessel with the available Tier 3 marine, Tier 4 marine, or Tier 4 Final off-road engines. Compliance dates shown in Tables 11, 12, and 13 are based on the model year of the original in-use engine. A person must retrofit the vessel with a DPF within 6 months after a DPF becomes available for the engine installed on the vessel or by the last compliance extension pursuant to this extension expires, whichever is sooner.

ii. Unavailability of a DPF for a Specific Engine Manufacturer or Model: If a person repowers with a Tier 3 marine, Tier 4 marine, or Tier 4 Final engine after January 1, 2023, they will not have to replace the engine with one of a different model if a DPF becomes verified for that other engine model. A person applying for this extension, must also need to repower their engine with one certified to a more stringent standard, must consider all available engines for the power and duty cycle rating of their operation, regardless of engine manufacturer or engine model.

3. Feasibility Extension E3 - Engines or DPF not Feasible and Cannot Afford Vessel Replacement.

a. Length of Extension: The E.O. may grant an applicant a two-year compliance extension to the compliance date set forth in subsection (e)(12).

b. Eligibility and Application Package: The applicant must demonstrate that no suitable engines (Tier 3 or Tier 4 marine, or Tier 4 Final off-road) and/or DPFs physically fit within the existing vessel structure.

and no amount of modifications can be made to the vessel structure without compromising its structural integrity, to meet requirements of subsection (e)(12). The applicant must also demonstrate that removing the vessel from service and replacing it with a newly acquired vessel with compliant engines is not financially possible. The application package must be supplied to the E.O. no later than 18 months before the compliance date of the engine(s) or vessel(s) for which the extension is requested or as specified in subsection (e)(12)(E)3.c. for a renewal, and must include:

- i. For extensions to repowering engines, technical feasibility analysis demonstrating that no certified Tier 3 marine, Tier 4 marine or Tier 4 Final off-road engine can be used to repower engines meeting performance standards on the vessel(s);
 - ii. For extensions to installing DPFs, technical feasibility analysis demonstrating that no DPF can be used to retrofit Tier 3 or Tier 4 engines on the vessels;
 - iii. For extensions to repowering engines or installing DPFs, technical feasibility analysis provided by a third-party naval architect demonstrating that no modifications are feasible to repower and retrofit the vessel;
 - iv. For extensions to repowering engines or installing DPFs resulting in a passenger capacity reduction of 25 percent or more are considered not feasible, demonstration, based on reasonable technical, financial, and environmental criteria, that reducing passenger capacity will result in increased emissions;
 - v. The following information, where applicable: 1) at least three years of federal and State income tax documents, 2) at least three years of Profit and Loss statements;
 - vi. A list of actions that the applicant has taken to comply or in anticipation to comply with the regulation at the earliest compliance date and supporting documentation to demonstrate that these actions have been taken; and
 - vii. A list of engine(s) for which the extension is(are) requested, and a demonstration that all other engines within the fleet subject to the applicant's direct control meet the requirements of this section.
- c. *Renewal:* The applicant may apply for an additional two-year extension no later than 9 months and no earlier than 12 months before the expiration of the extension. No compliance extensions can be approved pursuant to this extension if either 6 years of any

extension has been granted or if compliance dates for any engine will be extended beyond December 31, 2034, except for:

- i. Commercial Passenger Fishing Vessels, Excursion Vessels, and Ferries, which can receive an additional extension of 2 years for a total of 8 years if the vessel has any nominal compliance deadline on December 31, 2024 or earlier; and,
- ii. Vessels operating any number of hours as a workboat that do not operate more than the hours listed in Table 22, in any other category of vessel, which can receive an unlimited number of extensions. To be eligible for unlimited extensions in effect at any time after December 31, 2034, engines on workboats must meet at least Tier 3 marine or off-road emission standards.

4. Feasibility Extension E4 – Tier 4 Engines with Limited Operating Hours and DPFs not Feasible.

- a. Length of Extension: The E.O. may grant an applicant a two-year compliance extension to the compliance date set forth in subsection (e)(12).
- b. Eligibility and Application Package: The applicant must demonstrate that available DPFs do not fit the regulated in-use vessel based on feasibility analysis. The regulated in-use vessel must be equipped with Tier 4 marine or Tier 4 Final off-road engines. The application package must be received by the E.O. no later than 9 months and no earlier than 12 months prior to the compliance date or as specified in subsection (e)(12)(E)4.c. for a renewal, and must include:
 - i. Feasibility study that demonstrates that meeting Tier 4 + DPF performance standards is not technically feasible without replacing the vessel due to fitment feasibility (modifications lowering passenger capacity by more than 25 percent are considered not feasible), and the vessel has not, and will not operate above the annual hour thresholds listed in Table 20. For the evaluation periods for determining past operational hours, applicants should follow procedures for low-use exceptions set forth in subsection (e)(14).
- c. Renewal: The applicant may apply for an additional two-year extension no later than 9 months and no earlier than 12 months before the expiration of the extension.

d. Additional Provisions:

i. Engine Type Determining Eligibility: For barge and barge mounted dredge vessels to be eligible for this extension, all auxiliary engines must meet Tier 4 marine or Tier 4 Final off-road standards. If present, any main propulsion engines on barges or barge mounted dredges will not need to meet Tier 4 standards or operated below the limits in Table 20 to be eligible for this extension.

For all other regulated in-use vessel categories, except for barges and barge mounted dredges, to be eligible for this extension, all main propulsion engines must meet Tier 4 marine or Tier 4 Final off-road standards. Auxiliary engines on board regulated vessel categories except for barges and barge mounted dredges will not need to meet Tier 4 standards or operated below the limits in Table 20 to be eligible for this extension.

ii. Extension Termination: If Tier 4 engines that are granted an extension under this subsection are operated beyond the applicable threshold hours in any calendar year, any compliance extensions granted pursuant to this subsection are terminated. The vessel owner or operator must notify the E.O. within 30 days, and must take vessel out of service or bring their vessel into compliance by installing an engine meeting the Tier 4 + DPF performance standards. Engines on vessels that are operated above the limits in Table 20 are indefinitely no longer eligible to apply for compliance extensions pursuant to subsection (e)(12)(E)4.

**Table 20: Annual Operating Thresholds for Feasibility Extension (E)4
Applicability**

<u>Homebase or Regularly Scheduled Stop Location</u>	<u>Extension Available if Operating Below</u>
<u>All Other Areas</u>	<u>2,600 hours/year</u>
<u>Within 2 Miles of a DAC</u>	<u>1,300 hours/year</u>

5. Scheduling Extension E5.

- a. Length of Extension: The E.O. may grant an applicant a one-year compliance extension, which is not renewable, to the compliance date set forth in subsection (e)(12)(D), (e)(10) or subsection (e)(13).

- b. Eligibility and Application Package: The applicant must demonstrate equipment manufacturer delays or installation difficulties, including new build vessel delays due to shipyard capacities, multiple engines on multiple vessels with the same compliance dates, or multiple engines on a single vessel with different compliance dates. The extension request must be received by the E.O. for approval prior to the compliance date, and must include:
 - i. For equipment manufacturer delays or installation difficulties, all the following: the applicant ordered the new replacement engine or other equipment necessary to comply with the requirements of subsection (e)(12), (e)(13) or (e)(10) at least 6 months prior to the compliance date set forth in subsection (e)(12)(D), (e)(13) or (e)(10); and, the new engine or equipment has not been received or installed since it was ordered due to manufacturing delays or excessive difficulties encountered by the engine or equipment installer. The applicant must identify in-use engine(s) that the applicant chooses to receive the extension.

 - ii. For new build vessel delays due to shipyard capacity, a copy of the contract or agreement with the shipyard that the applicant entered into contract 12 months prior to their compliance dates. The applicant must provide a letter demonstrating the reasons for the delay with supplemental documentation from shipyard.

- iii. For multiple engines multiple vessels with same compliance dates, all the following: evidence that the fleet consists of 2 or more regulated in-use vessels subject to subsection (e)(12), (e)(13), or (e)(10) that are owned by the same person; and evidence that two or more engines on a vessel have the same compliance date as two or more engines on another vessel, or if each single engine on three or more vessels have the same compliance date. The applicant must identify in-use engine(s) that the applicant chooses to receive the extension(s).
- iv. For multiple engines on single vessel with different compliance dates, all the following: evidence that two or more engines on a single regulated in-use vessel are subject to different compliance dates in subsection (e)(12), (e)(13), or (e)(10), and identifying which specific in-use engine that the applicant chooses to receive the extension.

(F) Special Provisions Applicable to the Use of a DPF and Other Verified Diesel Emission Control Strategies (VDECS).

The following requirements apply to any person's use of a DPF and other VDECS pursuant to subsections (e)(9), or (e)(10) or (e)(12) or (f) and are in addition to any other applicable requirements:

1. Once a VDECS is installed on vessel, the owner or operator must continue to operate and maintain the VDECS, in accordance with the manufacturer's directions, to achieve the original level of emission reductions that the VDECS was designed and intended to achieve;
2. In the event a VDECS fails, breaks down, or is otherwise damaged (collectively referred to hereinafter as "fail" or "failure"), the vessel owner or operator must, within 30 days of the VDECS failure, do at least one of the following:
 - a. Repair the VDECS to good working order;
 - b. Replace the failed VDECS with another working VDECS, if it cannot be repaired; or
 - c. Employ another method that meets the requirements of subsection (e)(12)(C) and other applicable provisions of this section, if the VDECS cannot be repaired.

- 3. The determination in subsection 2.b and 2.c above of whether a VDECS cannot be repaired may only be made by either the VDECS manufacturer or an authorized dealer or installer.
- 4. If a VDECS is replaced within 30 days of failure, the original failed VDECS may only remain on the vessel if it is not connected to the exhaust manifold of the engine for which it was originally installed.

(13) Engine Requirements on Commercial Fishing Vessels.

(A) In-Use Engines on In-Use Commercial Fishing Vessels – Requirements for Meeting Tier 2 and Higher Emission Standards.

Beginning January 1, 2023, a person who owns, operates, sells, purchases, offers for sale, leases, rents, imports, or otherwise acquires an in-use commercial fishing vessel with a pre-Tier 1 - or Tier 1-certified marine or off-road engines may not own, operate, sell, purchase, offer for sale, lease, rent, import, or otherwise acquire an in-use engine, or a commercial fishing vessel with an in-use engine, unless that engine meets, at a minimum, U.S. EPA certified Tier 3 marine or off-road engine standards by the compliance dates as set forth in Table 21. In-use engines meeting Tier 2 marine or off-road standards do not have a compliance deadline for repowering to Tier 3 pursuant to this subsection.

Table 21: Compliance Dates for Any Pre-Tier 1 and Tier 1 Certified Engines on Commercial Fishing Vessels

<u>Engine Model Year</u>	<u>Compliance Date</u>
<u>1987 and earlier</u>	<u>12/31/2030</u>
<u>1988 – 1997</u>	<u>12/31/2031</u>
<u>1998 and later</u>	<u>12/31/2032</u>

[Note: For example, for a 1993 model year diesel engine on a commercial fishing vessel operating in Regulated California Waters, the owner or operator must bring the engine into compliance with the requirements of subsection (e)(13) by December 31, 2031.]

(B) Engines on New and Newly Acquired Commercial Fishing Vessels.

Beginning January 1, 2023, a new commercial fishing vessel shall not be built or its keel shall not be laid, unless engines on the new build commercial fishing vessel meets the most stringent of either the Tier 3 or the Tier 4 marine or Tier 4 Final off-road emission standards in effect on the date of engine acquisition.

(14) Low-Use Exceptions.

Beginning January 1, 2023, a person may apply for a low-use exception to operate, on a limited basis, engines that do not meet the performance standards set forth in subsection (e)(12), or the engine requirements for commercial fishing vessels in subsection (e)(13), or the ZEAT requirements in subsection (e)(10).

(A) E.O. Approval.

An E.O. approval letter must be obtained prior to an engine's compliance dates as set forth in subsection (e)(12)(D), (e)(13), (e)(10), compliance dates resulting from approved compliance extensions, or the date that vessels first enter RCW if those vessels are based outside of RCW.

(B) Requirements.

1. Low-use exception requires that the applicable engine has not, and will not be operated more than the limits as set forth in Table 22 in a calendar year. For this subsection, a vessel operates in a DAC if it has a homebase or has any regularly scheduled stops within 2 miles of a DAC.
2. No low-use exceptions shall be approved unless all engines on all vessels within the fleet subject to the person's direct control comply with the requirements of this section.
3. No more than five vessels within a person's direct control based outside of RCW shall be eligible for this exception per calendar year. There is no limit to the number of vessels within a person's fleet that are eligible for this low-use exception if the vessels operate within RCW the majority of the time.
4. Any vessel, including regulated in-use vessels and commercial fishing vessels, that is newly acquired after January 1, 2023 is not eligible for low-use exceptions.

Table 22: Annual Low-Use Hours Limits for Engines on Vessels with a Homebase or Regularly Scheduled Stops Within 2 Miles of a Disadvantage Community (DAC) and All Other Areas

<u>Engine Tier</u>	<u>Pre-Tier 1</u>	<u>Tier 1</u>	<u>Tier 2</u>	<u>Tier 3 or 4</u>
<u>Limits – All Other Areas (hours/year)</u>	<u>80</u>	<u>300</u>	<u>400</u>	<u>700</u>
<u>Limits – DACs (hours/year)</u>	<u>40</u>	<u>150</u>	<u>200</u>	<u>350</u>

(C) Initial Low-Use Application for E.O.’s Review.

1. Applicants must submit an application package at least 60 days prior to an engine’s compliance date, or 60 days before vessels are scheduled to first enter RCW.
2. The application package, at a minimum, must contain a formal request letter including the following information:
 - a. A table that identifies each applicable vessel and engine, including vessel name, Unique Vessel Identifier (UVI), engine type, make, model year, serial number and engine family name if applicable. If no UVI is assigned to a vessel, the IMO Number, USCG Number, or DMV CF number must be provided;
 - b. Current hour meter reading for each engine on the vessel for which a low-use exception is requested, and evidence that each such engine is equipped with a functioning non-resettable hour meter;
 - c. Supporting documents (such as, logbooks or records indicating hour meter readings on past dates) to demonstrate that the engine has not operated more than the limits specified in Table 22 in the previous calendar year (January 1 to December 31), and is not expected to operate more than the specified limits in the current year of demonstration. If the application is for a vessel based outside of RCW that is scheduled to enter RCW for the first time, or is newly acquired by a person in the current

calendar year, no demonstration of annual operation hours in the previous or current calendar year to date is required;

d. Activity plans or commitments demonstrating that the engine will not operate more than the limits specified in Table 22 in the subsequent years following the demonstration;

e. If engines are used non-commercially, such as personal pleasure, such hours do not count toward the limits specified in Table 22 only if such hours are clearly documented in logbooks for past operation and future activity plans demonstrate how future regulated commercial operation will remain below applicable limits; and

f. The vessel name and UVI of all other vessels that have approved low-use exceptions and are currently operating within Regulated California Waters in the current calendar year.

3. In granting or denying the extension request, the E.O. will rely on the information submitted by the applicant and utilize their engineering judgment to evaluate whether the information meets the criteria in subsections (e)(14)(B) and (C).

(f) *Alternative Control of Emissions (ACE).*

The purpose of this subsection is to allow a person ("person" or "applicant") the option of applying alternative strategies to achieve equivalent or additional emission reductions relative to requirements of subsection (e)(10), (e)(12), or (e)(13).

(1) Requirements for ACE.

(A) ~~The purpose of this subsection is to allow a person ("person" or "applicant") the option of complying with the requirements of this subsection in lieu of the requirements of subsection (e). As set forth in this subsection, a person may be deemed in compliance with subsection (e) by implementing an alternative emission control strategy(ies) (AECS) approved by the E.O. In no case may the E.O. approve an AECS that results in or has the potential to result in any increase of diesel PM and NO_x emissions or any increase in emissions greater than 10 percent for any~~

~~other pollutant, relative to the emissions of diesel PM, NO_x, and other pollutants that would have occurred under compliance with subsection (e).~~

An applicant must establish that the ACE achieves equivalent or greater emissions reductions than if the applicant were to directly comply with subsection (e)(10), (e)(12), and (e)(13), which is considered the Nominal Compliance Baseline. The ACE can include alternative emission control strategy(ies) (AECS) approved by the E.O. as set forth in subsection (f)(1)(E) below. For the purpose of demonstrating equivalent or greater emission reductions, the applicant must evaluate emission reductions of PM and NO_x that are projected to result from an AECS for a time period from January 1, 2023 through December 31, 2034, relative to the Nominal Compliance Baseline with a maximum of 2 years of any feasibility extension with documentation submitted according to the requirements as set forth in subsection (e)(12)(E)(2-4). Engine repowers, retrofits, or other strategies (such as ZEAT) that were in place as of January 1, 2023 can be included in an applicant's ACE for the time period of January 1, 2023 through December 31, 2034 only if they were surplus to requirements of subsection (e)(6).

- (B) An applicant wishing to participate in an ACE may include one or more harbor craft in the ACE, but the applicant may only include harbor craft that the person owns or operates under the person's direct control.
- (C) No harbor craft may be included in more than one ACE plan.
- (D) Harbor craft included in an ACE must continue to be included in and operated pursuant to the approved ACE for the duration of the ACE.
- (E) AECS may only apply to emissions from harbor craft subject to this section, and may not apply to other mobile or stationary source categories. AECS may include, but are not limited to, any combination of the following:
 - 1. engine modifications;
 - 2. exhaust treatment control;
 - 3. engine repower or rebuild to a more stringent standard;
 - 4. ~~use of alternative fuels or fuel additives~~ZEAT deployment in vessel categories where ZEAT is not required;
 - 5. shore-side power;
 - 6. fleet averaging, including ZEAT vessels unless they have been separately used to generate or received a ZEAT credit as set forth in subsection (e)(11); and

7. CARB Approved Emission Control Systems (CAECS); and
87. any other measures that sufficiently reduce emissions.

CAECS may be used in an ACE application to meet the performance standards required in subsection (e)(12). To receive the E.O.'s approval, the application must meet the following requirements:

- i. The CAECS must be approved pursuant to Control Measure for Ocean-going At Berth, title 17 section 93130.5; and
- ii. The applicant must demonstrate that the CAECS is applicable to the harbor craft specified in the application and meet the performance standards.

For purposes of the demonstration, the E.O. may request additional emissions testing based on good engineering judgment.

- (F) A person complying under this provision must obtain E.O. approval of an ACE application that demonstrates compliance with this subsection and contains, at a minimum, the following information:
1. the company name, address, and contact information;
 2. the harbor craft and engine(s) subject to the ACE, including the vessel name and identification number(s), engine make, model, and serial numbers, and other information that uniquely identify the engine;
 3. documentation, calculations, emissions test data, or other information that establishes the diesel PM and NO_x reductions, expressed in pounds, are equal to or greater than the emission reductions that would have been achieved upon compliance with subsection (e), including but not limited to the requirements specified in subsection (e)(6)(C) and (e)(6)(D) prior to January 1, 2023 and in subsection (e)(12)(C) and (e)(12)(D) on and after January 1, 2023; and
 4. the proposed recordkeeping, reporting, monitoring, and testing procedures that the applicant will use to demonstrate continued compliance with the ACE.
- (G) For each ACE, the emission reduction calculations demonstrating equivalence with the requirements of subsection (e)(10), (e)(12), or (e)(13) may include only those diesel PM and NO_x emissions from harbor craft ~~with its homeport~~ within the applicant's fleet that operate within a single specified California air district basin, or another defined geographic area approved by the E.O.

(H) A person subject to an approved ACE must maintain operating records in the manner and form as specified by the E.O as an element of any approved ACE. Required records must include, at a minimum:

1. all the reporting and recordkeeping requirements specified in subsections ~~(g)(m)~~ and ~~(h)(n)~~ prior to January 1, 2023 and in subsection (m) and (o) on and after January 1, 2023;
2. maintenance procedures; and
3. emissions test results.

A person subject to an approved ACE must retain records and reports ~~on each vessel or at an office at the vessel's homeport~~ for the lifetime of each engine and must submit these records and reports to the E.O. in the manner specified in the approved ACE or upon request by the E.O.

(I) Emission reductions included in an ACE may not include reductions that are otherwise required by any local, State, or federal rule, regulation, or statute, or that are achieved or estimated from equipment not located in the region to which the ACE applies. The ACE application must not use equipment acquired by funds or grants that cannot be used to comply with State regulations, laws, or mandates.

(J) A person subject to an approved ACE may not operate any harbor craft under the ACE unless the person has first been notified in writing by the E.O. of the ACE's approval. Prior to such approval, the applicant must comply with the provisions of this section, including the requirements in subsection (e)(6)(C) and (e)(6)(D) prior to January 1, 2023 and in subsection (e)(12)(C), (e)(12)(D), (e)(10), and (e)(13) on and after January 1, 2023.

(K) Applicants shall demonstrate that their ACE will not result in a higher burden to DACs relative to other communities impacted by the emissions from their vessel operations.

(2) Application Process for ACE.

(A) Prior to January 1, 2023, aApplications for an ACE must be submitted in writing to the E.O. for evaluation by February 28 of the first year that vessel engine compliance is required. After January 1, 2023, applications for an ACE must be submitted at least 6 months prior to the first date that vessel engine compliance is required, and no later than December 31, 2025.

(B) The E.O. shall establish an internet site ("ACE internet site") in which all documents pertaining to an ACE application shall be made available for public review. The E.O. shall also provide a copy of all such documents to each person who has requested copies of the documents; these persons shall be treated as interested parties. The E.O. shall provide two separate public comment periods during the ACE application process, as specified in subsection (f)(2)(D) and (f)(2)(E).

(C) Completeness Determination.

Within ~~45~~30 days after receiving an ACE application, the E.O. shall notify an applicant whether the application is deemed sufficiently complete to proceed with further evaluation. If the application is deemed incomplete, the notification shall identify the application's deficiencies. The applicant shall submit the supplemental documentation within 30 days of receiving a notification the application is incomplete. The E.O. shall have an additional ~~45~~30-day period for reviewing each set of documents or information submitted in response to an incomplete determination. Nothing in this subsection prohibits the E.O. from requesting additional information from the applicant, during any part of the ACE application process, which the E.O. determines is necessary to evaluate the application.

(D) Notice of Completeness and 30-Day First Public Comment Period.

After an ACE application has been deemed complete, within 30 days the E.O. shall provide a 30-day public comment period to receive comments on any element of the ACE application and whether the E.O. should approve or disapprove the ACE application based on the contents and merits of the application. The E.O. shall notify all interested parties of the following:

1. the applicant(s);
2. the start and end dates for the 30-day first comment period; and
3. the address of the ACE internet site where the application is posted.

The E.O. shall also make this notification available for public review on the ACE internet site.

(E) Proposed Action and 15-Day Second Public Comment Period.

Within 30 days after the first public comment period ends, the E.O. shall notify the applicant and all interested parties of CARB's proposed approval or disapproval. This notification shall propose to approve the application as submitted, disapprove the application, or approve the ACE application with modifications as deemed necessary by the E.O. The notification shall identify the start and end dates for the 15-day second public comment period.

During the second public comment period, any person may comment on the E.O.'s proposed approval or disapproval of the ACE application and any element of the application. The E.O. shall also make this notification available for public review on the ACE internet site.

(F) Final Action.

Within ~~45~~30 days after the second public comment period ends, the E.O. shall take final action to either approve or deny an ACE application and shall notify the applicant accordingly. If the application is denied or modified, the E.O. shall state the reasons for the denial or modification in the notification. The notification to the applicant and approved ACE plan, if applicable, shall be made available to the public on the ACE internet site. In addition, the E.O. shall consider and address all comments received during the first and second public comment periods, and provide responses to each comment on the ACE internet site.

(G) Renewal of an Approved ACE.

An applicant may apply for renewal of an approved ACE by forwarding the E.O. updated information for all elements of the approved ACE for review and re-approval. The applicant must submit the renewal application so that the E.O. receives the application no later than 30 days prior to the end of the ACE compliance period.

(H) Notification to the E.O. of Changes to an Approved ACE.

A person with an approved ACE must notify the E.O. in writing within 30 days upon learning of any information that would alter the emissions estimates submitted during any part of the ACE application process. If the E.O. has reason to believe that an approved ACE has been granted to a person that no longer meets the criteria for an ACE, the E.O. may, pursuant to subsection (f)(3) below, modify or revoke the ACE as necessary

to assure that the applicant and subject vessel(s) meet the emission reduction requirements in this section.

(3) Revocation or Modification of Approved ACE.

With 30 days of notice of violation to the ACE holder, the E.O. may revoke or modify, as needed, an approved ACE if any of the following apply:

- (A) there have been multiple violations of the ACE provisions or the requirements of the approved ACE plan;
- (B) the E.O. has reason to believe that an approved ACE has been granted that no longer meets the criteria or requirements for an ACE; or
- (C) the person can no longer comply with the requirements of the approved ACE in its current form.

Public notification of a revocation or modification of an approved ACE shall be made available on the ACE internet site.

(g) Unique Vessel Identifier Requirement.

(1) All harbor craft operating in Regulated California Waters are required to have a CARB Unique Vessel Identifier (UVI).

(A) The CARB UVI is a unique set of letters and numbers in a format of "CARB 01234" that is assigned to a vessel to ensure traceability and permanent identification of the vessel.

(2) Requirements.

(A) On or before January 1, 2024, applicable harbor craft must have a CARB UVI permanently affixed to their vessel.

(B) Beginning March 1, 2023, or within 30 calendar days of fulfilling the vessel registration and reporting requirements in subsection 93118.5(m) and 93118.5(o), whichever occurs later, the E.O. shall issue CARB UVI numbers via electronic mail or hard copy mailed to the business address provided by vessel owners or operators.

(C) Vessel owners or operators shall permanently affix or paint the identification number in clear view according to the following specification:

1. Letters and numbers shall be readily legible during daylight hours. Each character of the CARB UVI must be in a legible sans-serif font at least 5 inches (12.7 centimeters) in height and 2.5 inches (3.8 centimeters) in width.
2. Each character of the CARB UVI must remain legible for the entire life of the vessel.
3. Letters and numbers shall be black and the background surface shall be lime green with decimal code (R,G,B) – (0,255,0) on which the letters and numbers are placed. The lime green CARB UVI label background shall measure at least 40 inches in width and 10 inches in height. CARB issued UVIs may be either affixed as printed labels or painted onto the vessel.
4. CARB UVI shall be installed and fixed to both sides of the pilot house in a visible location but not obstructing captain/pilot view. If the vessel does not have a pilot house, another visible location on both sides of the vessel can be selected.
5. Marking shall be kept maintained in a manner that retains the legibility required by the subsections (C)(1-4) immediately above.

(D) Registered historic vessels are allowed to install cast bronze, brass, or carved wooden plaques, or other UVI format, but shall meet the specifications (C)(1),(2),(4) and (5) described above.

(h) Main Engine Idling and Auxiliary Engine Operating and Idling Limits.

All harbor craft subject to this subsection shall meet the following requirements.

- (1) Beginning on January 1, 2024, no vessel subject to this subsection shall idle propulsion engines, or idle or operate auxiliary engines with a power rating of 99 kW or less for more than 15 consecutive minutes when docked, berthed, or moored at any facility. The idling and operational limits do not apply to:
 - (A) Idling at dedicated facilities used for the testing, servicing, or repairing of engines;
 - (B) Operation of auxiliary engines that are not electric generators while at a dockside location;
 - (C) Idling or operation that meets the definition of emergency operation;

(D) Idling or operation at facilities where shore power is not available or not required pursuant to vessel visit thresholds as defined in subsection (i); and

(E) Idling or operation for up to 30 consecutive minutes for the initial start-up of a vessel each day, or when a shift or crew change occurs on any vessel type.

(2) Vessel owner and operator shore power responsibilities. If selected as a compliance method to have auxiliary power while at dock, vessel owners and operators must install, maintain, and operate equipment on their vessel that are needed to draw power provided by shore power connections.

(3) If vessel owners or operators require use of harbor craft shore power up to 99 kW, the facility owners/operators must provide available access to power and accessible connection points as outlined in subsection (i)(1).

(i) Facility Infrastructure Requirements.

(1) Facility Owner and Facility Operator Shore Power Requirements.

Facility owners and facility operators are jointly responsible for, and must provide land-side shore power infrastructure sufficient to provide all auxiliary power needs, up to 99 kW for each vessel docked at their facilities as needed to comply with the requirements as set forth in subsection (h).

(A) By January 1, 2024, shore power must be made available at all facilities pursuant to the following criteria:

1. The requirements of this subsection apply to any facility that allows more than 50 vessel visits per year.
2. For the purpose of this subsection, a vessel visit is a period of time lasting between 1 and 24 hours where a vessel operates its auxiliary engines while at dock. For example, 50 different vessels operating 2 hours each, or 1 single vessel operating consecutively for 50 days, would each equal 50 visits for a given facility.
3. Facility owners and facility operators are jointly responsible for, and must purchase, install and maintain all infrastructure needed to support vessel operator shore power requirements in subsection (h)(3) of this section.

- a. A facility owner or operator that is not able to install the infrastructure required by subsection (i)(1)(A) by January 1, 2024, may request compliance extension from the E.O., following the procedures outlined in subsection (e)(12)(E)(1).
- (B) Facility owners and operators shall install shore power up to 99 kW per vessel docking. Any vessel shore power needs greater than 99 kW per vessel are not the responsibility of facility owners/operators.
- (C) If distributed generation is used to supply shore power, the electricity generated must meet the emissions standards defined in subsection (d).
- (D) Facility owners or facility operators who do not allow 50 vessel visits or more per year at their location and do not have shore power infrastructure for vessels are required to submit an exemption request to the E.O. The request must include records or an estimate of vessel visits for a minimum of the past two years prior to January 1, 2024. The E.O will review and make a decision on the request within 30 days. The facility owners or operators who receive approval for an exemption must keep records of the number of vessel visits in each calendar and records must be made available upon request by CARB. If a facility owner or operator who has received an exemption allows 50 or more visits per year, the facility owners or operators must provide shore power by January 1 of the year that is between 12 and 24 months after the facility allows more than 50 visits in a calendar year. For example, a facility covered by an exemption in 2025 who allows more than 50 visits would need to provide shore power for all vessels visiting the facility by January 1, 2027.

(2) Facility Owner and Facility Operator ZEAT Infrastructure Requirements.

The requirements of this subsection apply to any facility where ZEAT vessels dock or moor at its location.

- (A) Facilities where ZEAT vessels dock or moor must allow the installation of charging or fueling infrastructure needed to power such ZEAT vessels.
- (B) Facility owners and facility operators are jointly responsible for cooperating with vessel owners/operators to allow for surveying, permitting, construction, installation, and maintenance of the necessary charging or fueling infrastructure required to effectively operate ZEAT vessels.

(3) Vessel Owners/Operators ZEAT Infrastructure Requirements.

(A) ZEAT vessel owners/operators own and are responsible for purchasing, installing, and maintaining ZEAT infrastructure.

(j) Facility Recordkeeping and Reporting Requirements.

(1) Facility owners or facility operators shall provide a list of all vessel tenants subject to this subsection that have use agreements, to rent or lease a slip or dock, berth, or moor for seven (7) days or longer (per month) at the reporting facility, or any number of visits for a marine oil terminal. This list of vessel tenants shall be reported to CARB no later than July 1, 2023 and on an annual basis thereafter and shall follow the procedures as set forth in subsection (u) and contain the following information:

(A) Facility Information.

1. Applicable facility name;
2. Applicable facility address, state, zip code;
3. Applicable facility geographic coordinates, using a series of latitude and longitude, or alternatively a geographic information system shape file or "geofence", delineating the property boundaries;
4. Property owner name;
5. Applicable facility owner or operator;
6. Applicable facility owner or operator address; and
7. Responsible official and applicable facility owner or operator contact information.

(B) Vessel CARB UVI, vessel name, vessel type, and if no CARB UVI is available, or prior to January 1, 2024, one of the following unique identifying numbers: US Coast Guard Documentation Number, California Department of Motor Vehicles CF number, or International Maritime Organization number.

(C) Vessel owner/operator information including:

1. Company name;
2. Company mailing address;
3. Primary contact;
4. Vessel owner/operator primary phone number; and
5. Vessel owner/operator e-mail address.

(D) Start date of vessel and facility use agreement.

(E) Dock, berth or slip location or number at facility.

(F) If applicable, the end date of a use agreement indicating when a vessel has left the facility.

(G) If the facility does not provide shore power to all harbor craft visiting the facility, and the facility allows fewer than 50 visits per year total, the annual number of visits.

(2) Facilities with land-side infrastructure, to support the use of shore power for vessels while at dock, must report the following additional information by January 1, 2024, or within 30 days of infrastructure completion if built after January 1, 2024, and reporting shall be performed according to the procedures as set forth in subsection (u):

(A) Infrastructure type, manufacturer, serial number, and installation date;

(B) Equipment type supported, number of vessels supported, and number of plugs; and

(C) Amperage and voltage for each connection.

(3) Beginning January 1, 2023, any person subject to this subsection shall retain and maintain daily records in English, which contain the following information for at least three years following the date when the records were made, and be supplied to the E.O. within 30 days of a request from CARB staff:

(A) Date, local time, and position (e.g. slip number) for each vessel tenant, and if applicable, the date of vacancy for each vessel tenant.

(k) Opacity Testing and Emission Control Repair Requirements.

This subsection applies to all main propulsion and auxiliary engines operating on all vessels (including commercial fishing vessels), low-use engines regardless of engine model year, engine tier level or compliance date. Applicable opacity limits as set forth in subsection (k)(2) must be met whenever the test procedure is administered.

(1) Test Procedure and Repair Requirements.

Opacity shall be performed, measured, and evaluated using Society of Automotive Engineers "Surface Vehicle Recommended Practice, Snap

Acceleration Smoke Test Procedure for Heavy-Duty Powered Vehicles” (SAE J1667, February 1996), which is incorporated by reference herein.

- (A) For the purpose of this subsection, smoke opacity shall be measured at a location in the engine exhaust stream after the DPF (if installed) but before the point/location of any seawater injection into exhaust, utilizing either a full- or partial-flow opacity meter.
- (B) The following test sequence shall be used for adapting the SAE J1667 test procedure to main propulsion engines, which is incorporated by reference herein:
1. Transit vessel to a safe location in open waters
 2. Stop vessel, clutch-in with engines at idle
 3. Transition controls from idle to full throttle within 2 seconds
 4. Record opacity measurement for 15 seconds or until engines reach full power, whichever is longer
 5. Repeat test procedure five more times
 6. Final opacity measurement will be the average of the 0.5-second maximum of the last three accelerations
- (C) Individuals conducting opacity tests must have completed applicable training from the California Council on Diesel Education and Technology and obtained certification on the proper administration of the specified test procedure. The E.O. may approve or offer alternative training courses that satisfy this requirement.
- (D) If it can be demonstrated that complying with the requirements of subsection (k) is not feasible due to a safety concern, or the engine configuration, then an alternative compliance method may be used if approved by the E.O. In approving a request for use of an alternative method, the E.O. shall consider whether the owner/operator is able to demonstrate that alternative method will be able to detect increase in soot accumulation rates in the aftertreatment control device and be able to provide necessary maintenance and repair.
- (E) If a Category 2 or Category 3 engine does not meet opacity limits as set forth in subsection (k)(2), a letter or attestation may be considered as an alternative compliance method with opacity requirements if approved by the E.O. The letter or attestation must be provided by a certified third party SAE certified technician or OEM engine factory, distributor, or dealership certified technician demonstrating that the engine is in proper operating condition.

(F) CARB may perform confirmatory opacity testing in the field, or audit opacity test records at any time. Additionally, upon having information that an engine may be operating with emission control malfunctions, the E.O. can request for an engine or emission control system inspection report from a certified dealer/distributor engine within 30 days. The owner/operator is responsible for performing any corrective action and reporting to CARB within 30 days of receiving an engine or emission control system inspection.

(G) Swing engines are not subject to subsection (k) when maintained at a dockside location, but are subject to subsection (k) once installed into a vessel.

(2) Opacity Limits for Main Propulsion and Auxiliary Engines.

No engine shall exceed the smoke opacity levels provided below when tested in accordance with this subsection.

(A) Engines meeting the Tier 3 + DPF or Tier 4 + DPF performance standards, tested shall not exceed 5 percent smoke opacity.

(B) Engines without DPFs tested shall not exceed 40 percent smoke opacity.

(3) Biennial Testing Requirements for Main Propulsion Engines.

(A) By March 31, 2024, a vessel owner/operator subject to this subsection shall perform opacity testing and report to CARB biennially (every two years) along with other reporting requirements outlined in subsection (o). For all engines, opacity testing must be performed once every two year period ending, and reported to CARB by March 31 of each even-numbered calendar year (i.e. 2024, 2026, 2028, etcetera). For example, opacity test results that must be reported to CARB by March 31, 2026 need to have been performed on the engines between April 1, 2024 and March 31, 2026.

(B) Engines with model year 2020 or newer model year engines are exempt from biennial testing in this subsection (k)(3) until the calendar year that is four years after the model year of the engine. For example, a 2021 model year engine is exempt until 2025, and the first opacity test of the engine must be performed and reported to CARB by March 31, 2026.

- (C) If any vessel(s) coming from outside of California will be in RCW for more than 30 consecutive days, engines are newly installed on a vessel (such as a newly acquired engine or a swing engine), or a vessel has been out of service and in dry-dock, opacity testing must be performed and reported on all applicable engines within 30 days of operating within RCW, unless the engine meets the criteria of subsection (k)(3)(B) or has been tested to meet opacity limits within the last two years. If the vessel remains in RCW, the test results would satisfy opacity testing requirements required by March 31 of the next even-numbered calendar year.
- (D) If the opacity test results exceed the applicable opacity limits as set forth in subsection (k)(2), the engine or DPF shall be repaired within 30 calendar days from the date of the failed opacity test or the engine shall be taken out of service. The information shall be recorded as specified in subsection (m)(18). Before being put back into service the engine, DPF, or other emission control systems shall be repaired such that it meets the opacity requirements before being returned to service. A post-repair opacity test shall be performed to determine if the measured opacity is within the requirements in subsection (k)(2).
- (E) If the post-repair opacity is greater than the opacity requirements in subsection (k)(2), the engine shall remain out of service. The engine may be returned to service if it can be repaired so that the post-repair opacity meets opacity limits in subsection (k)(2).

(4) Opacity Compliance Requirements for Auxiliary Engines.

- (A) Auxiliary engines are subject to meeting the opacity limits as set forth in (k)(2), but are not subject to biennial testing requirements.
- (B) If auxiliary engines do not meet opacity limits, the vessel owner/operator has 30 days to repair the engine, demonstrate it meets applicable opacity limits, and notify CARB. Auxiliary engines that do not meet opacity limits must be taken out of service within 30 days from initially not meeting opacity limits.

(l) Compliance Fee Requirements.

This subsection applies to owners or operators of all commercial harbor craft subject to this subsection, except for commercial fishing vessels:

- (1) Fees are assessed based on the number of main engines and number of vessels of the most up-to-date information reported to CARB as of March 31 of each calendar year; no fees are assessed for auxiliary engines operating on harbor craft.
- (2) The E.O. shall assess and collect reasonable fees for deposit in the Certification and Compliance Fund to recover the estimated costs of the E.O. administering this subsection.
- (3) Fees shall be due and payable to CARB by September 1 of each calendar year beginning in 2023.
- (4) Fees are nonrefundable except in circumstances as determined by the E.O.
- (5) Owners or operators of vessels must submit fees to the E.O. in accordance with the fee schedule, including late fees as applicable, in Table 23. A late fee is any payment received after September 1st that must be paid by December 31st of the same calendar year fees are due.

Table 23. Annual Fees for Owners or Operators of Regulated In-Use Vessels

Category	Fee Amount
Per vessel, for single-vessel fleets	\$364
Per vessel, for all other fleets	\$486
Per main engine, for single-vessel fleets	\$297
Per main engine, for all other fleets	\$396
Per main engine, if complying by low-use exception as set forth in subsection (e)(14)	\$594
Late fee, per vessel	\$130
Late fee, per engine	\$86

For example, for a vessel in a multi-vessel fleet with two main engines, the vessel owner or operator shall pay a total of $\$486 + (\$396 \times 2) = \$1,278$ per year for that one vessel. If the operator fails to pay this amount by September 1st, an additional $\$130 + (\$86 \times 2) = \$302$ would be required for this vessel. For a fleet with one vessel only, with three main engines total, one of which is a low-use engine, the vessel owner or operator shall pay a total of $\$364 + (\$297 \times 2) + \$594 = \$1,552$ per year. If the operator fails to pay this amount by September 1st, an additional $\$130 + (\$86 \times 3) = \$388$ would be required for this vessel.

(gm) Recordkeeping Requirements.

Beginning January 1, 2009, the owner or operator of a harbor craft must maintain the records specified in this subsection on the vessel or at the vessel's ~~homeport~~homebase for the life of each engine subject to this section, including fleet swing engines and marinized land-based engines. Records required beginning on January 1, 2023 must be retained beginning January 1, 2023. The owner or operator must provide such records for inspection to an agent or employee of CARB upon request for all harbor craft subject to this section. Records may be provided as a hard copy, electronic, or any alternative reporting strategy approved by the E.O. Records provided by the person under this provision must include, at a minimum, the following (if applicable):

- (1) Owner or Operator Contact Information:
 - (A) Company name;
 - (B) Contact name, phone and fax number, address, e-mail address;
 - (C) Address where vessel is registered prior to January 1, 2023; Address where company is located on and after January 1, 2023; and
 - (D) Reporting year.

- (2) Vessel information:
 - (A) Harbor craft name;
 - (B) Specify vessel use(s) (ferry, excursion vessel, tugboat, ocean-going tugboat, towboat, push boat, work-boat, commercial fishing vessel, charter fishing vessel, crew and supply vessel, pilot vessel, or other if none of the preceding apply; On and after January 1, 2023, vessel uses include: barge-ATB, barge-bunker, barge-other, barge-petrochemical, commercial fishing, commercial passenger fishing, crew and supply, dedicated emergency response, dredge, excursion, ferry (catamaran), ferry (monohull), ferry (short-run), oil spill response, pilot, research, tugboat-ATB, tugboat-escort/ship-assist, tugboat-push/tow, or workboat;
 - (C) Vessel homeport prior to January 1, 2023; Vessel homebase on and after January 1, 2023;
 - (D) Vessel build year;
 - (E) U.S. Coast Guard documentation number;
 - (F) California Fish and Game license number;
 - (G) International Maritime Organization (IMO) number;
 - (H) Call Sign number; and
 - (I) Maritime Mobile Service identity number.

- (3) Engine Information (for each diesel engine on the vessel, including swing engines):
 - (A) Current hour meter reading;
 - (B) Make of engine;

- (C) Model of engine;
 - (D) Engine family (if applicable);
 - (E) Engine serial number;
 - (F) Year of manufacture of engine (if unable to determine, provide its approximate age) prior to January 1, 2023; Engine model year on and after January 1, 2023;
 - (G) Rated brake horsepower;
 - (H) Total engine displacement; and
 - (I) Number of cylinders.
- (4) Operational Information:
- (A) Describe the general use of engine (propulsion or auxiliary engine);
 - (B) Total annual hours of commercial operation, based upon readings of the non-resettable hour meters for previous calendar year per engine (for engines without an hour meter before 2009, provide an estimate), and records retained in the following items in this list;
 - (C) Total hours of operation per calendar year in each of the regulated in-use vessel categories, other commercial operation, and non-commercial operation within and outside of RCW, based upon readings of the non-resettable hour meters for previous calendar year per engine and as needed, daily operational logbooks;
 - (D) Estimated annual fuel usage per engine; and
 - (E) Estimated percent operating time as a function of distance from shore at the distances below:
 1. 0-3 nautical miles; and
 2. >3-24 nautical miles; and
 3. >24 nautical miles from shore.
- (5) Control Equipment (if applicable):
- (A) Type of diesel emission control strategy;
 - (B) Manufacturer of installed diesel emission control strategy;
 - (C) Model of installed diesel emission control strategy;
 - (D) Level of control – air pollutants controlled and percent reductions;
 - (E) Emission control serial number;
 - (F) Date control equipment installed.
- (6) Maintenance records for each installed engine and diesel emission control strategy:
- (A) Hour meter reading at last top end rebuild (i.e., less than full rebuild);
 - (B) Hour meter reading at last full engine rebuild; and
 - (C) Number of times full engine rebuild completed.

- (7) The retirement date for each near-retirement vessel for which an owner or operator is claiming an exemption pursuant to subsection (c)(13). This subsection is only applicable until December 31, 2022.
- (8) This subsection is only applicable until December 31, 2022. For each engine for which the model year is determined using the "Engine's Model Year + 5" method pursuant to subsection (e)(6)(D)2:
- (A) the name and contact information (representative, address, and phone number, and e-mail address) for the manufacturer of the emission control strategy
 - (B) the name and type of emission control strategy;
 - (C) the installation date of the emission control strategy; and
 - (D) if a VDECS is not being used for this purpose, the test plan, and the data demonstrating the emission reductions achieved due to the emission control strategy.
- (9) For each engine for which an owner or operator is claiming an extension pursuant to subsection (e)(6)(E)3 or (e)(12)(E)5, the purchase order or signed contract between the owner or operator and seller of the new engine or equipment that has been purchased to comply with subsection (e)(6)(C), ~~and (e)(6)(D), (e)(12)(C) and (e)(12)(D).~~
- (10) For each engine an owner or operator claims to have replaced, for purposes of compliance with the requirements of (e)(6) or (e)(12), written documentation that the engine has been: dismantled, destroyed, or sold out of Sstate. Alternately, the engine may be used to replace an older engine if:
- (A) The older engine is subject to the in-use engine requirements, and
 - (B) the original compliance date of the older engine is retained for the newer engine.
- (11) Records for each engine or VDECS must be retained by the owner or operator for the entire engine or VDECS life.
- (12) All records specific to an E.O. approved ACE plan.
- (13) All records specific to a BACT approved by the E.O. pursuant to subsection (e)(5). This subsection is only applicable until December 31, 2022.

Beginning January 1, 2023, the owner or operator of a harbor craft must maintain the following additional records:

- (14) Vessel Information:
- (A) A photo of the vessel;
 - (B) Vessel activity description;
 - (C) Percent time operated in each vessel category;
 - (D) Vessel overnight berthing/mooring location in RCW (if applicable), or specify whether vessel transits interstate continuously stopping only for commerce or at anchorages;
 - (E) Whether the vessel operates exclusively or periodically in RCW, and where the vessel operates most often within RCW;
 - (F) California DMV CF number (if applicable);
 - (G) Documentation of purchase transaction indicating the date, selling party, and purchasing party name;
 - (H) If sold, the date of sale, the purchasing entity name and contact information; and
 - (I) Whether any air quality incentive funding is received, and associated funding information, such as the amount, funding source, grant number, and a description of equipment (vessels or engines) covered.
- (15) Engine Information (for each diesel engine on the vessel, including swing engines):
- (A) General location on vessel (port, starboard, center, bow, upper deck, off-vessel swing engine, or other); and
 - (B) Engine Tier level (e.g. Off-Road Tier 3, Marine Tier 4).
- (16) Operational Information:
- (A) Record the operating time if a vessel is used to perform emergency operations.
- (17) Control Equipment (if applicable):
- (A) Diesel Exhaust Fluid (DEF) consumption if engines equipped with Selective Catalytic Reduction (SCR) systems; and
 - (B) Installer information for retrofit DPFs and SCRs (e.g. installer name, address, phone, and e-mail address).
- (18) Records of Opacity Testing and Emission Control Repair:
- (A) Brand name and model of the opacity meter;
 - (B) Dates of last calibration of the opacity meter and chart recorder;
 - (C) Name, phone number and email address of the opacity meter operator who conducted the test;

- (D) Name and address of the contracted opacity test facility or engine repair facility that conducted the test (if applicable);
 - (E) Unique Vessel Identifier (if issued) or other unique vessel identifier (such as IMO Number, DMV CF Number, USCG Number), vessel's engine model, engine make, engine model year, engine family number if applicable, engine serial number, and test date;
 - (F) Test date, hour meter reading at start of the test, and initial smoke test opacity levels (for three successive test readings) and average of the three readings, and test strips or electronic records of raw test data;
 - (G) Indication of whether the engine passed or failed the initial opacity test;
 - (H) If test failed, date engine was taken out of service and hour meter reading on that date;
 - (I) For engines that have failed the opacity test and been repaired, the following information:
 - 1. Name of the mechanic(s);
 - 2. Date of the repair;
 - 3. Hour meter reading at start of repair;
 - 4. A statement identifying failed components, reasons for failure, and the nature of the repairs made; and
 - 5. An itemized list of parts used in the repair.
 - (J) Post-repair test date and hour meter readings of post-test;
 - (K) Post-repair smoke test opacity levels (for three successive test readings), and average of the three readings;
 - (L) Indication of whether the engine passed or failed the post-repair opacity test, and test strips or electronic records of raw test data; and
 - (M) Date engine put back in active service and current hour meter reading.
- (19) For each vessel adopting ZEAT, the following information shall be kept:
- (A) Manufacturer, model number, and model year of each component of a ZEAT system;
 - (B) Maintenance procedures for the component(s), engine(s) and its related equipment for powertrain;
 - (C) Hours of operation and fuel usage for any onboard combustion engines;
 - (D) Hours of operation and fuel usage for zero-emission systems, including electricity in units of kilowatt hours (kWh), hydrogen in units of kilograms (KG), or other zero-emission tailpipe fuels;
 - (E) If a zero-emission vessel with a combustion engine is operated more than 20 hours/year, or combustion engine power on a zero capable hybrid vessel is operated more than 70 percent annually, documentation of the emergency operations performed while they are operated;
 - (F) If a zero-emission vessel is a short-run ferry, and operates in another vocation (such as excursion or non-short-run ferry service), the non-

resettable hour meter reading of any internal combustion engines at the beginning and end of each non-short-run ferry service and a description of the activity;

(G) If a ZEAT temporary replacement vessel operates on a zero-emission short-run ferry route, activity data of (C) and (D) above operating on a short-run ferry route shall be retained and reported separately from annual reporting;

(H) Annual operating hours for each one-way ferry route 3 nm or less, if a vessel owner/operator operates a short-run ferry that meets applicable ZEAT requirements; and

(I) All other records specific to a particular ZEAT required by its approval process or as required by the E.O. pursuant to subsection (e)(10)(C).

(20) For each vessel adopting ZEAT, the following information about land-side zero-emission infrastructure (except for land-side shore power infrastructure) shall be kept:

(A) Infrastructure type, manufacturer, serial number, installation date;

(B) Equipment type supported, number of equipment supported;

(C) Capacity (fuel/energy storage volume), amp/voltage; and

(D) Public or private use, number of plugs.

(hn) Initial and Compliance Plan Reporting Requirements (Applicable Until December 31, 2022).

(1) Initial Reporting of California Harbor Craft Fleet. By February 28, 2009, a person subject to this section must submit the information specified in subsections ~~(g)(m)(1)~~ through ~~(g)(m)(6)~~ for all harbor craft vessels in his/her California fleet. For purposes of this paragraph, "California fleet" means the total population of harbor craft under the person's direct control as of January 1, 2009.

(2) Compliance Plan. By February 28 of the year vessel engine compliance is required, a person subject to the requirements of subsection (e)(6)(C) and (e)(6)(D) must submit a Compliance Plan to the E.O. that describes in detail the engine replacements, rebuilds, upgrades, use of DECS, and any other measures the person plans to use to meet the requirements of subsection (e)(6)(C) and (e)(6)(D) for each of the person's engines and harbor craft. The person may revise the Compliance Plan, as needed, but the person must notify the E.O. within 10 business days of any changes to the Compliance Plan after the initial Compliance Plan is submitted. The Compliance Plan is for the E.O.'s informational and planning use only, and the substantive contents of the plan are not binding on either the E.O. or the person who submitted the Compliance

Plan. The E.O.'s receipt and acceptance of a submitted Compliance Plan shall not constitute or be interpreted as evidence of compliance with the requirements of subsection (e)(6)(C) or (e)(6)(D).

- (3) Demonstration of Compliance. By no later than the applicable compliance date specified in subsection (e)(6)(D), a person subject to the requirements of subsection (e) must provide the following information to the E.O.:
 - (A) All information specified in subsections ~~(g)(m)~~(1) through ~~(g)(m)~~(6), and
 - (B) The implementation date and the emission control strategy implemented for each engine in accordance with the requirements of subsection (e)(6)(D) and (e)(6)(C), respectively, for purposes of demonstrating compliance.
- (4) Reporting for Change of Annual Hours of Operation, Vessel Category/Use, Transfers of Vessels, Change of Ownership of Vessel or Engine, or Vessel Operation in Regulated California Waters.
 - (A) A person subject to this section must submit to the E.O. the information specified in subsection ~~(g)(m)~~(1) through ~~(g)(m)~~(6) within 30 days of a significant change of annual hours of operation (i.e., enough to change the engine's compliance date), vessel category/use, purchase, lease, rental, or change of ownership of the vessel or engine. In the case of a purchase, lease, rental, or change in ownership, the party in control or possession of the engine or vessel after the transaction is responsible for meeting the requirements of this paragraph;
 - (B) A person subject to this section must submit to the E.O. the information specified in subsection ~~(g)(m)~~(1) through ~~(g)(m)~~(6) within 30 days of the initial operation of a vessel brought into Regulated California Waters;
 - (C) Within 90 days of a significant change of annual hours of operation, vessel category/use, purchase, lease, rental, change of ownership, or initial operation of a vessel brought Regulated California Waters, or by the earliest applicable compliance date specified in subsection (e)(6)(D), whichever is later, a person subject to subsection (e)(6) shall submit a new Compliance Plan with the updated information pursuant to the Compliance Plan requirements specified in paragraph 2 above.

(o) Reporting Requirements (Applicable On and After January 1, 2023).

- (1) Annual Reporting of California Harbor Craft Fleet. Beginning January 1, 2023, a person subject to this subsection must submit the information specified in subsections (m)(1) through (m)(6) and applicable records required by (m)(14) through (m)(20) annually for all harbor craft vessels in their California fleet by March 31 of each year. For purposes of this subsection, "California fleet" means the total population of harbor craft that operate in Regulated California Waters for any amount of time under the person's direct control.
- (2) Reporting for Change of Annual Hours of Operation, Vessel Category/Use, Transfers of Vessels, Change of Homebase, Change of Hour Meter, Change of Ownership of Vessel, Engine, or VDECS, or Vessel Operation in Regulated California Waters, including any temporary replacement vessel operation.
- (A) A person subject to this subsection must submit to the E.O. the information specified in subsection (m)(1) through (m)(6) and applicable records required by (m)(14) through (m)(20) within 30 days of a significant change of annual hours of operation (i.e., from low-use hour to above low-use limit), vessel category/use, change of hour meter, purchase, sell, lease, rental, or change of ownership of the vessel, engine, or VDECS. In the case of a purchase, sell, lease, rental, or change in ownership, both the party in control or possession of the engine or vessel before and after the transaction is responsible for meeting the requirements of this subsection;
- (B) A person subject to this subsection must submit to the E.O. the information specified in subsection (m)(1) through (m)(6) and applicable (m)(14) through (m)(20) within 30 days of the initial operation of a vessel brought into Regulated California Waters;
- (C) A person subject to this subsection must submit to the E.O. the information specified in subsection (m)(1) through (m)(6) and applicable (m)(14) through (m)(20) within 30 days of transferring a vessel from a California facility to outside of California, or establishing a new facility within California.

(ip) Violations.

- (1) A person who is subject to this section and commits a violation of any provision, standard, criteria, or requirement in this section is subject to the penalties, injunctive relief, and other remedies specified in Health and Safety Code H&S sections 39674, 42400 et seq.; H&S section 42402 et seq.; other

applicable sections in the Health and Safety Code; and other applicable provisions as provided under California law for each violation. Nothing in this section shall be construed to limit or otherwise affect any applicable penalties or other remedies available under federal law.

- (2) Any failure to meet any provision, standard, criteria, or requirement in this section, including but not limited to the applicable emission limits; recordkeeping requirements; and ACE provision, including the requirements of any approved ACE plans, shall constitute a single, separate violation of this section for each hour that a person operates a vessel within the Regulated California Waters until such provision, standard, criteria, or requirement has been met.
- (3) A person who is subject to this section is liable for meeting the requirements of this section, notwithstanding any contractual arrangement that person may have with any third-parties.

(jg) Methods to Demonstrate Compliance with Engine and Fuel Standards.

- (1) Diesel PM, NO_x, NO, CO, HC, NMHC, and CO₂ testing must be done in accordance with the applicable method specified in the following procedures: International Organization for Standardization (ISO) 8178-2: 1996(E) ("ISO 8178 Part 2"); (2) ISO 8178-4: 1996(E) ("ISO 8178 Part 4"); and applicable methods and procedures specified in 40 CFR Part 94 (as amended in 2007), all of which are incorporated herein by reference, or 40 CFR Part 1042 for marine engines or in 40 CFR Part 89 or 40 CFR Part 1039 for nonroad (off-road) engines, as those Parts existed on April 27, 2010. Each of the procedures specified in this subsection is incorporated by reference herein.
- (2) The E.O. may approve in writing any alternative test method not specified in paragraph (1) above that the method's proponent has demonstrated to the E.O.'s satisfaction provides equivalent or better results to the methods in paragraph (1).

(kr) Right of Entry.

An agent or employee of the CARB has the right of entry to board any harbor craft for the purpose of inspecting propulsion and auxiliary engines, emission control strategies, fuel systems, and fuel storage; collecting fuel sample(s) not to exceed one liter per fuel tank; and acquiring and inspecting records required pursuant to this section.

(ls) Severability.

If any subsection, paragraph, subparagraph, sentence, clause, phrase, or portion of this regulation is, for any reason, held invalid, unconstitutional, or unenforceable by any court of competent jurisdiction, such portion shall be deemed as a separate, distinct, and independent provision, and such holding shall not affect the validity of the remaining portions of the regulation.

(mt) Submittal of Documents (Applicable Until December 31, 2022).

- (1) All documents and fees required under this regulation must be submitted to the Executive Officer as follows:

California Air Resources Board
Stationary Source
Emissions Assessment
Control Strategies Section, Harbor Craft
P.O. Box 2815
Sacramento, California 95812-2815

- (2) Electronic submittals of information associated with compliance with this section may be approved by the E.O. upon request, provided such electronic submittals use digital signatures that meet the requirements specified in Government Code section 16.5. The E.O. may request the submittal of a hard copy of any electronic submittal.

(u) Submittal of Documents (Applicable On and After January 1, 2023).

- (1) Beginning January 1, 2023, all documents, reporting, and fees required under this regulation must be submitted to the E.O. electronically via a CARB reporting system implemented to assist with document submittals of this section, by e-mail to harborcraft@arb.ca.gov, or a hard copy to the E.O. as follows:

CHIEF, TRANSPORTATION AND TOXICS DIVISION
CALIFORNIA AIR RESOURCES BOARD
C/O COMMERCIAL HARBOR CRAFT
1001 I STREET
SACRAMENTO, CA 95814

- (2) All information submitted to CARB shall be:

- (A) Written in the English language; and
- (B) True, accurate, and complete, signed under penalty of perjury by individual(s) with the authority to certify that the regulated party comply with applicable requirements of this regulation.

NOTE: Authority cited: Sections 38505, 38510, 38560, 38566, 38580, 39600, 39601, 39650, 39658, 39659, 39666, 39730, 39730.5, 41511, 43013, and 43018, and 43019.1, Health and Safety Code. Reference: Sections 38505, 38510, 38560, 38566, 38580, 39650, 39658, 39659, 39666, 39730, 39730.5, 41510, 41511, 43013, and 43018, and 43019.1, Health and Safety Code.