I. Overview of CARB's Commercial Harbor Craft Regulation

A. CHC Regulatory Background

The existing Commercial Harbor Craft Regulation (regulation) requires vessel categories such as ferries, tug boats, crew and supply, barges, dredges, and other vessel types with older pre-Tier 1 or Tier 1 engines to be repowered with engines meeting Tier 2 or Tier 3 standards. The regulation also subjects owner/operators of all harbor craft operating in California regulated waters to reporting, recordkeeping, hour meter, and fuel use requirements.

B. Need for Additional Reductions

Staff assessments show that when the rule is fully implemented in 2023, Commercial Harbor Craft will still contribute a significant amount of diesel particulate matter risk to the community. As a result, staff proposed at the March 2018 Board Hearing to develop regulations to further reduce emissions from commercial harbor craft and other freight sources including ocean-going vessels, cargo handling equipment, and drayage trucks. CARB staff anticipate taking new concepts for commercial harbor craft to the Board in 2020 for implementation beginning in 2023.

The State of California has recently placed additional emphasis on protecting local communities from harmful effects of air pollution through the passage of Assembly Bill 617 (AB 617) (Garcia, Chapter 136, Statutes of 2017). AB 617 is a significant piece of air quality legislation that highlights the need for further emission reductions in communities with high exposure burdens, like those near ports. These regulatory efforts will help achieve needed public health protection for local port communities, reduce exposure to toxic air emissions in disadvantaged communities and meet South Coast Air Quality Management District's 2023 and 2031 emission reduction goals for oxides of nitrogen (NOx).

C. Challenges of Implementing Existing Owner-Operator Requirements

A comparison between CARB's self-reported harbor craft database and U.S. Coast Guard's Merchant Vessel list indicates that about 1/3 of the state's harbor craft have not satisfied the reporting requirements of CARB's regulation. Unreported vessels may have non-compliant engines, and CARB is unable to locate, identify, and ensure that the vessels are compliant with the regulation and are achieving the intended emission reductions.

Additionally, as advanced and alternative technologies emerge for the harbor craft sector, staff is taking into consideration the infrastructure needed to support them. There are some vessels operating in California that are capable of zero-emission operation, but inadequate infrastructure is available to maximize the use of zero-emission operation and reduce emissions. Additionally, the introduction of zero-emission power systems is expanding, from both new and established marine power train manufacturers. As of today, there is insufficient infrastructure available to support widespread deployment of zero-emission and other advanced technologies.

II. Potential Facility Concepts

A. Who would be subject to potential facility concepts?

- Any facility that homeports CHC such as, but not limited to, ports, terminals, marinas, harbors, and dock owners.

B. What are the facility concepts?

<u>Concept 1: Enhanced Vessel Reporting</u>

- Facilities to report to CARB which vessels regularly dock at the facility.
- Most harbor craft will remain within the state when not in use; therefore, Staff anticipate facility reporting concepts will capture the remaining harbor craft inventory that is not already accounted for by owner/operator self-reported data.
- CARB will be workshopping vessel labeling concepts for vessel owner/operators in late summer 2019. These concepts include CARB unique identifiers on both sides of the hull of vessels that will assist facilities to identify commercial harbor craft that is subject to the regulation and implement vessel reporting concepts.

Discussion Questions

1. We intend "regularly dock" to capture vessels that operate permanently or temporarily in California at the primary facility, even if they operate, dock, or moor at more than one facility.
    a. How should "regularly dock" be defined?
2. Does the facility have direct contact with harbor craft owner/operators?
    a. If no, what process would be needed to have direct contact?
    b. Is a third-party involved?
3. Are any harbor craft allowed to dock/moor at your facility without a lease/contract?

- Concept 2: Deploy Infrastructure for Advanced Technology
    - Allow installation and maintenance of on-site infrastructure to support homeported harbor craft that have adopted zero and/or alternative control technology emission vessels to ensure shore-side infrastructure isn't a limiting factor.

Discussion Questions

1. What kinds of infrastructure currently exist for harbor craft? (e.g. electrical plug-in for auxiliary engines, fast chargers for plug-in hybrid battery technology, hydrogen fueling, etc.)
2. Who is liable for dock infrastructure or paying for other electric or fueling infrastructure at your facility? (e.g. energy needs for hybrid technology, fueling infrastructure, etc.)

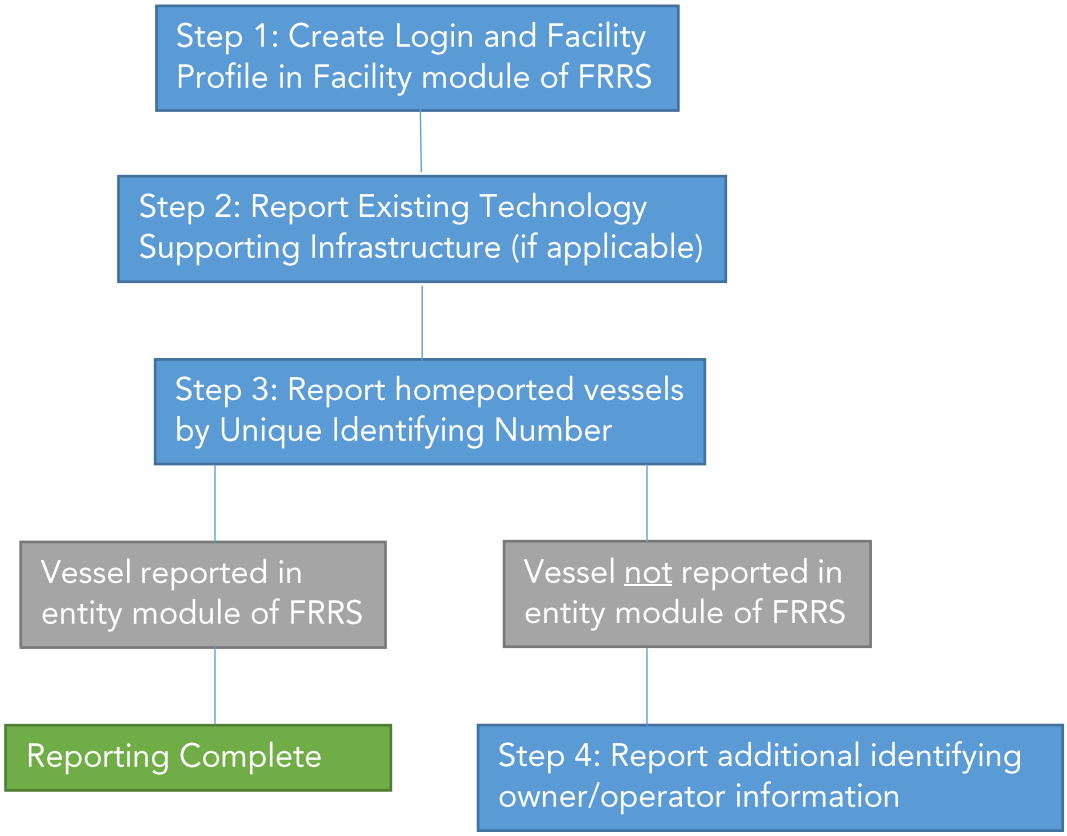
C. How would facilities fulfill the reporting concepts?

Using a new web-based system that CARB is currently developing, the Freight Regulation Reporting System (FRRS), facility owner would need to register as a facility and report the following:

- Facility Information
    - Owner/operator contact
    - Mailing/physical address
    - Type such as: port, harbor, marina, etc.

- Infrastructure Information
    - Type, Manufacturer, Serial Number, Public/Private use
    - Installation Company and Date
    - Number and Type of Equipment Supported
    - Capacity (fuel/energy storage volume)

- Homeported Vessel Information
    - One or more of the vessel's unique identifying numbers such as: U.S. Coast Guard documentation number, California Fish and Game license number, CARB issued Identification Number, etc.
    - Owner/operator contact
    - Vessel name and type



Discussion Questions:

a. What identifying information is kept for each vessel?
b. What information is kept on the owner/operator?
c. If no information is kept, what would the process be to obtain this information?

D. When would these facility concepts go into effect?

CARB staff anticipate taking new concepts for commercial harbor craft to the Board in 2020. The FRRS is expected to be online by the end of 2020, or earlier. Vessel owners and operators are expected to have additional implementation requirements beginning in 2023.

Discussion Question:

1. What is a reasonable timeframe for facilities to gather the information needed to create a profile and report homeported vessels?