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**Title:** INFORMATIONAL UPDATE AND DIRECTION TO STAFF ON THE MARITIME CLEAN AIR STRATEGY'S ZERO EMISSION HEAVY-DUTY TRUCK OBJECTIVES INCLUDING:

- A) PROGRESS ON THE ZERO EMISSION HEAVY-DUTY TRUCK TRANSITION PLAN; AND
- B) COMPILATION OF FORESEEABLE TASKS AND MILESTONES FOR TRUCK OBJECTIVE 1B: DEVELOPMENT OF A SHORT-HAUL ZERO EMISSION TRUCK PROGRAM; TRUCK OBJECTIVE 1D: CREATION OF A TRUCK REGISTRY; AND TRUCK OBJECTIVE 2A: IDENTIFICATION OF FOUR LOCATIONS FOR ZERO EMISSION TRUCK CHARGING

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**DATE:** January 11, 2022

**SUBJECT:**

**INFORMATIONAL UPDATE AND DIRECTION TO STAFF ON THE MARITIME CLEAN AIR STRATEGY'S ZERO EMISSION HEAVY-DUTY TRUCK OBJECTIVES INCLUDING:**

- A) PROGRESS ON THE ZERO EMISSION HEAVY-DUTY TRUCK TRANSITION PLAN; AND**
- B) COMPILATION OF FORESEEABLE TASKS AND MILESTONES FOR TRUCK OBJECTIVE 1B: DEVELOPMENT OF A SHORT-HAUL ZERO EMISSION TRUCK PROGRAM; TRUCK OBJECTIVE 1D: CREATION OF A TRUCK REGISTRY; AND TRUCK OBJECTIVE 2A: IDENTIFICATION OF FOUR LOCATIONS FOR ZERO EMISSION TRUCK CHARGING**

**EXECUTIVE SUMMARY:**

The Maritime Clean Air Strategy (MCAS) sets a bold vision of "Health Equity for All" and presents thirty-four near-term objectives to reduce emissions from maritime-related activities. Importantly, the MCAS aims to achieve 40 percent zero emission truck trips to the District's marine cargo terminals in 2026 and 100 percent zero emission heavy-duty truck trips in 2030. During the November 9, 2021 Board of Port Commissioners Board Meeting, the Board directed staff to develop a Heavy-Duty Zero Emission Truck Transition Plan (Truck Transition Plan) to serve as roadmap to achieve these targets. Staff were requested to complete the Truck Transition Plan by June 2022 and to provide updates

during Board meetings in January and March of 2022.

Staff have retained a consultant, WSP, to help prepare the Truck Transition Plan. Data collection is ongoing to identify trucks and their operating characteristics which service the District's marine cargo terminals. Development of a framework to predict when the population of trucks may convert to zero emission technologies is proceeding.

Additionally, staff were directed to provide an update to the Board in January 2022 and to include a compilation of foreseeable tasks and milestones on a variety of MCAS Truck Objectives that support the transition of heavy-duty diesel trucks to zero emission technologies. These objectives include:

- Truck Objective 1B: Development of a Short-Haul Zero Emission Truck Program;
- Truck Objective 1D: Creation of a Truck Registry to Track Truck Trips; and
- Truck Objective 2A: Identification of Four Locations for Zero Emission Truck Charging.

The scope and schedule to complete these objectives is provided herein.

### **RECOMMENDATION:**

Receive informational update and provide direction to staff on the Maritime Clean Air Strategy's zero emission heavy-duty truck objectives including:

- A) Progress on the Zero Emission Heavy-Duty Truck Transition Plan; and
- B) Compilation of foreseeable tasks and milestones for Truck Objective 1B: Development of a Short-Haul Zero Emission Truck Program; Truck Objective 1D: Creation of a Truck Registry; and Truck Objective 2B: Identification of Four Locations for Zero Emission Truck Charging

### **FISCAL IMPACT:**

Funds associated with the preparation of District plans and technical work are included in the FY 2022 budget within the Professional Services expense account (#620100). Funds required for future fiscal years associated with this topic will be budgeted for in the appropriate year subject to Board approval upon adoption of each fiscal year's budget.

### **COMPASS STRATEGIC GOALS:**

This agenda item supports the following Strategic Goal(s).

- A Port that the public understands and trusts.
- A thriving and modern maritime seaport.
- A Port with a healthy and sustainable bay and its environment.
- A Port that is a safe place to visit, work and play.
- A Port with an innovative and motivated workforce.
- A financially sustainable Port that drives job creation and regional economic vitality.

### **DISCUSSION:**

The Board of Port Commissioners adopted the Maritime Clean Air Strategy (MCAS) on October 12, 2021. The MCAS includes a vision of “Health Equity for All” and contains approximately thirty-four near-term objectives, several of which aim to reduce emissions from maritime-related activities and industries. The MCAS also includes long-term goals to achieve 100% zero emission trucks and cargo handling equipment by 2030. These goals advance the conversion to zero emission technologies ahead of the 2035 zero / near-zero emission goals established by the State.

As one of the seven emission sources presented in the MCAS, the transition from diesel heavy-duty trucks to zero emissions was an important priority for several stakeholders. Importantly, the MCAS aspires to achieve 40 percent zero emission truck trips to/from the District’s marine cargo terminals by June 30, 2026, and 100 percent zero emission heavy-duty truck trips by December 31, 2030. At the November 9, 2021 Board meeting, the Board provided direction to staff to initiate a Heavy-Duty Zero Emission Truck Transition Plan to serve as roadmap to achieve these targets. The Board also directed staff to provide a status update on the Truck Transition Plan at their forthcoming January 11, 2022 Board meeting. Therefore, a summary of the progress made on the Truck Transition Plan will be provided herein.

The MCAS also contains objectives to support the tracking and implementation of zero emission trucks. For example, Truck Objective 1B aims to develop a Short Haul Zero Emission Truck Program by the end of 2022. Truck Objective 1D calls for the creation of a truck registry or database to track truck trips in and out of the District’s marine cargo terminals. Lastly, Truck Objective 2A tasks staff to identify four potential locations where public-facing medium/heavy duty electric truck charging can be sited. Staff have compiled a list of all foreseeable tasks and timelines to achieve these objectives and will be presented below.

### **Update on the Heavy-Duty Zero Emission Truck Transition Plan**

As noted earlier, the Board directed staff at their November 9, 2021 Board meeting to hire a consultant to help prepare a Truck Transition Plan that identifies a pathway(s) to meet the MCAS zero emission truck goals for 2026 and 2030. The Board also directed staff to include an additional near-term scenario that incorporates a combination of zero and near-zero emission technologies to achieve equivalent or better emission reductions by 2026. Staff were requested to complete the Truck Transition Plan by June 2022 and to provide status updates to the Board meetings January and March of 2022.

Since the November Board meeting, staff have retained a consultant, WSP, to help prepare the Truck Transition Plan. WSP has experience working on similar zero emission truck transition plans such as the San Francisco Municipal Transit Agency’s zero emission bus transition plan. Furthermore, WSP has worked throughout the United States and in other countries such as Australia developing comparable plans.

Critical to the Truck Transition Plan is the collection of data, which is necessary to establish a baseline inventory of heavy-duty trucks which transport freight to and from the District’s marine cargo terminals. District staff and WSP will utilize two methods to collect the necessary data to create a baseline inventory of heavy-duty trucks: Automated License Plate Reader (ALPR) technology and a survey. Following an analysis of District resources, it was determined that the existing ALPR system located at the Tenth Avenue Marine Terminal, which has been used to ascertain compliance with State regulations for drayage trucks, also collects and temporarily stores license plate data related to incoming trucks. Upon further investigation, staff learned there is a data file that includes twelve months of license plate data, which may be helpful to better understand the characteristics of trucks

that call to the terminal. WSP is validating the data and analyzing it to determine if the make, model, and year of the vehicles can be extracted from the file. This system is only present at the Tenth Avenue Marine Terminal.

The second method involves the collection of information via a traditional survey of truck fleets and an intercept survey of drivers. WSP has worked with staff to develop a series of survey questions focused on obtaining truck and operating characteristics of the heavy-duty truck population. Testing of the survey was convened in December and distributed among fleets which operate at both the Tenth Avenue Marine Terminal and the National City Marine Terminal in January. WSP will reconcile results from the ALPR system and the survey. Data collection is expected to progress through mid-February.

The data obtained from the ALPR system and the survey will be used to forecast when the existing fleet may convert to zero emission trucks and to prioritize specific trucks and routes that are most appropriate for zero emission operations. The framework to predict truck turnover to zero emission options is currently being developed by WSP. As mentioned, the preliminary pathways to transition certain trucks and/or routes to zero emissions will be presented to the Board at the March 8, 2022 Board Meeting. A final Truck Transition Plan will be presented to the Board in June 2022. The full scope and schedule of the Truck Transition Plan is outlined below.

**Heavy Duty Zero Emission Truck Transition Plan Schedule**

Task	Description	Schedule
Truck Population and Characteristics	Collect data regarding heavy-duty truck and operating characteristics	December 2021– February 2022
Preliminary Zero Emission Forecast	Develop preliminary zero emission transition pathway to achieve MCAS targets	February – March 2020
March 2022 Board Meeting	Present Preliminary Zero Emission Truck Forecast and receive feedback and direction	March 8, 2022
Alternate Pathways	Create alternate pathway(s) incorporating zero and near-zero emission trucks to achieve equivalent or better emissions by 2026	March – April 2022
Implementation Recommendations	Provide recommendations including but not limited to policies, incentives, and programs to achieve transition pathway	April – May 2022
Final Heavy-Duty Zero Emission Truck Transition Plan	Finalize Heavy-Duty Zero Emission Truck Transition Plan	June 2022
Stakeholder Engagement	Provide opportunities throughout the development of the Heavy-Duty Zero Emission Truck Transition Plan with increased emphasis during April and May	January – June 2022
June 2022 Board Meeting	Present Final Heavy-Duty Zero Emission Truck Transition Plan	June 14, 2022

**Additional MCAS Heavy-Duty Truck Objectives**

As explained above, there are many objectives outlined in the MCAS, several of which support the transition to zero emission technologies, including: (1) the introduction of an initial Short Haul Zero Emission Truck Program, (2) establishment and deployment of a truck registry or database to track truck trips to measure progress to achieve MCAS truck targets, and (3) identification of potential locations in the San Diego region where medium/heavy-duty truck charging can take place, which

may include locations in close proximity to the District’s two marine cargo terminals. District staff have developed a compilation of foreseeable tasks and timelines to complete each of these objectives.

**Truck Objective 1B: Short Haul Zero Emission Truck Program**

Truck Objective 1B directs staff to develop an initial Short-Haul Zero Emission Truck Program by the end of 2022, that targets displacing approximately 65,000 diesel truck miles. Staff from the Planning department will lead the development and implementation of the Short Haul Zero Emission Truck Program with assistance from Maritime. The goal of the program is to provide funding and resources to trucking fleets which service the District’s marine cargo terminals to accelerate early adoption of zero emission technologies. This objective was created in coordination with the Community Emission Reduction Plan (CERP) for the Portside Environmental Justice Neighborhoods (AB 617 Portside Community), which contains a similar goal.

The program will seek to identify several trucks and their routes, funding partners, incentive structures to deploy zero emission technology, and necessary infrastructure for vehicle charging. The Truck Transition Plan will help to inform the program. The program will be presented to the Board for consideration by the end of 2022, and targets having the charging infrastructure in place in 2024, so that operations may commence later that calendar year.

**Compilation of Foreseeable Tasks and Milestones for Truck Objective 1B**

<b>Task</b>	<b>Description</b>	<b>Tentative Schedule</b>
Partnership Development	Develop funding partnerships with other entities such as the San Diego County Air Pollution Control District and San Diego Gas and Electric to contribute to the District’s Short Haul Zero Emission Truck Program	January – March 2022
Needs Assessment	Define criteria for the Short-Haul Zero-Emission Truck Program including but not limited to the number of trucks, routes, infrastructure needs, business models and ownership, and costs.	April – June 2022
Funding	Determine funding and budget to support the program	June – July 2022
Solicitation and Agreement Structure	Establish appropriate structure to involve trucking fleets, truck manufacturers, and/or other interested entities; develop agreement structure including eligibility criteria, expectations, responsibilities, and reporting/monitoring requirements	July – December 2022
Stakeholder Engagement	Provide opportunities throughout the development of the Short Haul Zero Emission Truck Program to engage with regional stakeholders including a request to present to the AB617 Portside Community Steering Committee	July – October 2022
December 2022 Board Meeting	Present Short-Haul Zero Emission Truck Program Concept to the Board for consideration and direction	December 13, 2022
Solicitation	Conduct solicitation to deploy zero emission trucks and necessary infrastructure	January – March 2023
Execute Agreements	Negotiate and finalize agreements with partners and recipients	April to June 2023

Truck Objective 1D: Truck Registry and Tracking Mechanism

The purpose of Truck Objective 1D is to establish a tracking mechanism to measure progress to achieve the MCAS goals of 40 percent zero emission truck trips by 2026 and 100 percent by 2030. Staff from the Information and Technology department will assist the Planning and Maritime departments to complete this objective. To accomplish the objective, staff will identify appropriate processes and technologies to count and report truck trips. Likewise, it is anticipated that forthcoming state regulations will require ports in California to collect this information and report it annually. As such, the system will be deployed at both the Tenth Avenue Marine Terminal and the National City Marine Terminals. Equipment and/or capital expenses identified to fulfill Objective 1B will be included in the Fiscal Year 2023 budget. Deployment and Implementation of the truck tracking system is will occur by June 30, 2023.

Compilation of Foreseeable Tasks and Milestones for Truck Objective 1D

Task	Description	Tentative Schedule
Project Initiation	<ul style="list-style-type: none"> <li>o Approve business case</li> <li>o Project definition</li> <li>o High level requirements gathering</li> <li>o Identify Sponsor and Project Steering Committee Members</li> <li>o Preliminary capacity screening and planning</li> <li>o Identify potential technology solutions to consider</li> </ul>	January – March 2022
Project Preparation and Planning	<ul style="list-style-type: none"> <li>o Detailed requirements gathering and tracing</li> <li>o Complete proof of concept or prototype <i>if needed</i></li> <li>o Project Scope of Work completed</li> <li>o Risk identification &amp; analysis</li> <li>o Solution architecture defined</li> <li>o Project schedule created</li> <li>o Communication plan developed</li> <li>o Engagement with AB617 Portside Community Steering Committee targeting June/July 2022</li> <li>o Compete &amp; procure solution</li> <li>o Fall 2022 Board Meeting for procurement, if necessary</li> <li>o Identify policy instrument to institute Truck Registry System</li> </ul>	April – December 2022
Solution Definition and Design	<ul style="list-style-type: none"> <li>o On-board implementor</li> <li>o Project Kickoff</li> <li>o Finalize data model and data migration plan</li> <li>o Solution architecture finalized</li> <li>o Create Test plan</li> <li>o Create training plan</li> <li>o Create "Transition to Operations" plan</li> </ul>	January – February 2023
Solution Build	<ul style="list-style-type: none"> <li>o Build/configure/integrate solution</li> <li>o Database and data dictionary created</li> <li>o Execute data migration plan</li> <li>o Test Scripts created</li> <li>o Implement policy instrument to establish Truck Registry</li> </ul>	February – April 2023
Solution Test	<ul style="list-style-type: none"> <li>o Unit Testing, Integration Testing, System and Load testing, Regression testing conducted</li> <li>o User Acceptance Testing</li> <li>o User training conducted</li> <li>o User documentation completed</li> </ul>	April – May 2023
Solution Deployment	<ul style="list-style-type: none"> <li>o Cut over</li> <li>o Hypercare as appropriate</li> <li>o Execute transition to operations plan</li> </ul>	May – June 2023

Truck Objective 2A: Heavy-Duty Truck Charging Locations

As the District recognizes the importance of infrastructure to support the transition of heavy-duty diesel trucks to zero emissions, the goal of Truck Objective 2A is to identify potential locations where charging for battery electric vehicles can be sited. It is the intent of Objective 2A to identify at least four public charging locations with each site capable of charging ten medium- and/or heavy-duty vehicles. These locations may be situated throughout the San Diego region along freight corridors and/or in close proximity to the District’s marine cargo terminals. Staff from the Planning and Maritime departments will spearhead Objective 2A and will present a concept plan to the Board for further consideration by the end of 2022.

## Compilation of Foreseeable Tasks and Milestones for Truck Objective 2A

Task	Description	Tentative Schedule
Partnership Development	Meet with SANDAG, regional cities, San Diego Gas and Electric, State agencies, funding partners, and others to coordinate regional electric vehicle charging efforts	Current – February 2022
Needs Assessment	Identify the criteria for heavy-duty truck charging locations including but not limited to power needs, square footage, logistics, and social considerations	January – February 2022
Solicitation for Information Purposes	Solicit information from private entities and/or partners to determine technical specifications, potential business models, and estimated costs	March – June 2022
Location Analysis	Identify potential locations for heavy-duty truck charging	July – September 2022
Funding	Determine funding and budget to support the objective	October 2022
Stakeholder Engagement	Provide opportunities throughout the process to engage with regional stakeholders regarding truck charging opportunities, including a request to present to the AB617 Portside Community Steering Committee	September – October 2022
November 2022 Board Meeting	Present potential locations for charging infrastructure to the Board	November 8, 2022

In summary, progress on the development of the Truck Transition Plan is proceeding. A preliminary zero emission pathway to reach the MCAS objectives will be presented to the Board during the March 8, 2022 Board meeting. As progress continues regarding the MCAS Truck Objectives described above, necessary funds will be identified and budgeted in the appropriate fiscal year and subject to Board approval.

### General Counsel's Comments:

The Office of the General Counsel has reviewed and approved this agenda, as presented, as to form and legality.

### Environmental Review:

This Board item does not constitute an “approval” or a “project” under the definitions set forth in California Environmental Quality Act (CEQA) Guidelines Sections 15352 and 15378 because no direct or indirect changes to the physical environment would occur. CEQA requires that the District adequately assess the environmental impacts of its projects and reasonably foreseeable activities that may result from projects prior to the approval of the same. Any project approval resulting in a physical change to the environment will be analyzed in accordance with CEQA prior to such approval. CEQA review may result in the District, in its sole and absolute discretion, requiring implementation of mitigation measures, adopting an alternative, including without limitation, a “no project alternative” or adopting a Statement of Overriding Consideration, if required. The current Board direction in no way limits the exercise of this discretion. Therefore, no further CEQA review is required.

In addition, this Board item complies with Section 87 of the Port Act, which allows for the establishment, improvement, and conduct of a harbor, and for the construction, reconstruction, repair, maintenance, and operation of wharves, docks, piers, slips, quays, and all other works, buildings, facilities, utilities, structures, and appliances incidental, necessary, or convenient, for the promotion and accommodation of commerce and navigation. The Port Act was enacted by the California

Legislature and is consistent with the Public Trust Doctrine. Consequently, this update is consistent with the Public Trust Doctrine.

Finally, this Board item does not allow for “development,” as defined in Section 30106 of the California Coastal Act, or “new development,” pursuant to Section 1.a. of the District’s Coastal Development Permit (CDP) Regulations because it will not result in, without limitation, a physical change, change in use or increase the intensity of uses. Therefore, issuance of a Coastal Development Permit or exclusion is not required. However, development within the District requires processing under the District’s CDP Regulations. Future development, as defined in Section 30106 of the Coastal Act, will remain subject to its own independent review pursuant to the Districts certified CDP Regulations, PMP, and Chapters 3 and 8 of the Coastal Act. The Board’s direction in no way limits the exercise of the District’s discretion under the District’s CDP Regulations.

**Diversity, Equity, and Inclusion Program:**

The agenda sheet has no direct DEI impact on contracting or workforce reporting at this time.

**PREPARED BY:**

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Attachment(s):

Attachment A: Draft Presentation