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DATE: February 11, 2021

SUBJECT:

INFORMATIONAL PRESENTATION AND STATUS UPDATE ON THE DEVELOPMENT OF THE DISTRICT'S MARITIME CLEAN AIR STRATEGY

EXECUTIVE SUMMARY:

At the June 18, 2019 Board meeting, the Board adopted a resolution authorizing District staff to update the District's 2007 Clean Air Program to align with State programs and to develop District-related plans and identify projects that would reduce emissions and improve air quality. The District's clean air program update is also known as the Maritime Clean Air Strategy (MCAS) and will focus on strategies and measures to help reduce emissions while promoting maritime operations.

At the July 14, 2020 Board meeting, the Board directed staff to advocate that the following emission reduction strategies be included as early action items in the Assembly Bill 617 (AB 617) Draft Community Emission Reduction Plan (CERP) for the Portside Environmental Justice Neighborhoods Community (Portside Community):

- Short-haul on-road electric truck pilot program;
- Zero- and near-zero cargo handling equipment upgrades; and
- Investments in shore power, in accordance with the California Air Resources Board's (CARB) At-Berth Regulation.

On November 17, 2020, the San Diego Air Pollution Control Board approved the San Diego Air Pollution Control District's (SDAPCD) early action items that were included in the AB 617 Draft CERP and directed the Air Pollution Control Officer to complete the AB 617 CERP. The SDAPCD staff

report acknowledged that the District, the U.S. Navy, and the local shipyards also committed to several emission reduction strategies under their own authorities.

To help District staff identify priorities and potential emission reduction goals for the District's MCAS, the AB 617 Steering Committee established the AB 617 MCAS Subcommittee on September 29, 2020. The AB 617 MCAS subcommittee includes representatives from public agencies, non-governmental organizations, industry, and residents. The MCAS Subcommittee has met eight (8) times and will continue to meet once every two weeks over the next couple of months.

While much work remains to be done, the efforts listed above have already yielded a variety of emission reduction strategies, ideas, and projects in the seven MCAS sectors, as summarized below:

1. Cargo Handling Equipment (CHE)

- Facilitate the upgrading and/or replacement of CHE with zero / near zero alternatives at the District's marine terminals to attain an 80% reduction in nitrogen oxides (NOx) and an 89% reduction in diesel particulate matter (DPM) by 2025.
- Grant funding to upgrade five (5) pieces of CHE at Tenth Avenue Marine Terminal (TAMT) has been tentatively awarded to a TAMT tenant as part of the 2019 Clean Air for All Program.

2. Commercial Harbor Craft

- The Crowley E-Tug Project is aiming to be the first all-electric tug in North America and has been tentatively awarded \$8.1 million as part of the 2019 Clean Air for All Campaign.
- The emission reduction benefits and costs of electrifying a ferry boat is being evaluated by staff and is being explored as an emission reduction strategy.

3. Drayage Trucks

- Commitment to develop a short-haul on-road electric truck pilot program for one to two years that seeks to displace between 3,000 and 10,000 diesel vehicle miles traveled (VMT) and yields the corresponding emission reduction benefits.
- Entered into a memorandum of understanding (MOU) with SANDAG and Caltrans to further advance the Harbor Drive 2.0 Concept to reduce truck-related emissions and incentivize truck drivers to use the designated truck route.
- Partnering on the Blueprint Planning Grant for Medium- and Heavy-Duty (MD/HD) Zero Emission Infrastructure.
- Exploring partnership opportunities for the Zero-Emission Drayage Truck and Infrastructure Pilot Project that would support the large-scale deployment of 50 on-road zero emission Class 8 trucks in the San Diego region.

4. District Fleet

- Applied for an all-electric Class 6 Refuse Truck in December 2020.
- Applied to SDG&E's Power Your Drive Fleets Program to advance the electrification of medium- and heavy-duty fleet vehicles.
- Signed a letter of intent to purchase six electric pick-up trucks from Lordstown Motors Endurance Trucks.

- Scheduled to install 27 additional public passenger vehicle chargers at various locations on tidelands by the end of the year.

5. Shipyards

- Require portable air compressors to be zero emission or Tier 4.
- Promote best practices for reducing diesel emissions and Volatile Organic Compounds (VOC), which includes providing trainings to contractors.
- Reduce emissions from shipyard employee transportation by continuing to participate in SANDAG's iCommute program and promoting alternative transportation options, such as employee shuttles.

6. Oceangoing Vessels

- Prioritize investments in shore power to reduce vessel hoteling emissions while at berth.
- Work to secure funding in 2021 to install a second shore power system at the Cruise Ship Terminal (CST) in advance of the updated CARB At-Berth Regulation that increases compliance requirements for passenger vessels in 2023.
- Evaluate potential modifications to the District's current VSR Program.

7. Rail

- Evaluate potential technologies that may help reduce emissions associated with rail activity.

In conjunction with the MCAS Subcommittee, District staff will continue to work on developing and refining potential goals and strategies for all seven emission sectors. Staff expects to post the MCAS Discussion Draft on the District's website for a 30-day review period in the March/April 2021 timeframe. During the 30-day review period, staff will present an overview of the MCAS Discussion Draft at various community forums and will facilitate one virtual MCAS Workshop. Staff anticipates to return to the Board with a Draft MCAS document following the review period in the May 2021.

RECOMMENDATION:

Receive staff's informational presentation and status update on the development of the District's Maritime Clean Air Strategy.

FISCAL IMPACT:

Funds associated with the preparation of District plans and technical work referenced in this item are budgeted for in the current fiscal year and are funded through the District's Maritime Industrial Impact Fund. 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 Goals.

- A Port that the public understands and trusts.
- A Port with a healthy and sustainable bay and its environment.
- A Port with a comprehensive vision for Port land and water uses integrated to regional plans.

- A Port that is a safe place to visit, work and play.

DISCUSSION:

I. Background on the AB 617 Program and the District's MCAS

In 2018 CARB established the Community Air Protection Program (or AB 617 Program) to focus on reducing people's exposure to air pollutants in the state's most impacted communities. In September 2018, the SDAPCD nominated the Portside Community to be included in the AB 617 Program, which includes portions of Barrio Logan, Logan Heights, Sherman Heights, and West National City. The Portside Community includes the working waterfront between the Tenth Avenue Marine Terminal (TAMT) and the National City Marine Terminal (NCMT) (Attachment A -Portside Community Boundaries). The Portside Community was designated by CARB for air monitoring in October 2018, and for a Community Emission Reduction Plan (CERP) in December 2019. According CARB's Community Air Protection Blueprint (2018), each community emission reduction program should define actions to be achieved within five years and include an implementation schedule that includes immediate and annual actions over the five-year timeframe.

The SDAPCD is responsible for implementing the AB 617 Program and relies on the AB 617 Steering Committee to help guide its efforts. The AB 617 Steering Committee was established in October 2019 and currently includes 28 members, half of which are local community residents. The remaining members include representatives from public agencies, industry, non-governmental organizations, public health experts, and other pertinent stakeholders. The AB 617 Steering Committee meets monthly and typically has between 30 and 50 people in attendance.

Shortly after SDAPCD initiated the AB 617 Program in late 2018, the Board of Port Commissioners expressed a desire for the District to serve a leading role in emission reduction efforts for the San Diego region. In June 2019, the Board adopted Resolution 2019-084 that authorized staff to update the District's 2007 Clean Air Program to align with State programs and to develop district-related plans and projects. At that hearing, the Board also expressed an interest in establishing emission reduction targets. Acknowledging the complexity of emission reduction efforts, particularly on District tidelands, the Board directed staff to do additional research to better understand and inform future emission reduction targets for the District.

In March 2020, the Board supported the following approach to update the District's 2007 Clean Air Program, which also known as the Maritime Clean Air Strategy (or MCAS) (Attachment B - Maritime Clean Air Strategy Approach):

Inventory and Operations: Compile an inventory of maritime-related emission sources and explain how the following seven sectors operate at the District:

1. Cargo Handling Equipment;
2. Commercial Harbor Craft;
3. Drayage Trucks;
4. District Fleet;
5. Maritime Industrial Uses (Shipyards);
6. Ocean Going Vessels; and
7. Rail

Background and Context: Summarize existing regulatory requirements and previous voluntary efforts

to reduce emissions for the seven sectors listed above. Review CARB's forthcoming zero and near-zero emission regulations for the six maritime-related mobile source categories to ensure that the District and its tenants are well positioned to comply with these requirements when they go into effect.

Research and Analysis: Assess the current state of technologies, fuels, and other strategies that can be employed to reduce emissions from mobile and stationary sources identified in the inventory. Include an assessment of commercial availability, operational capabilities, and high-level cost estimates of various emission reduction strategies.

Projects, Strategies and Scenarios: Based on the preceding efforts, identify potential groupings of emission reduction projects and strategies that combine all seven maritime-related sectors. Combine the various projects and strategies into potential scenarios to better understand the costs and timing of District's emission reduction efforts, in a holistic, comprehensive, and integrated manner.

Goals and/or Reduction Targets: Based on the inventories, regulatory framework, analyses, and emission reduction scenarios compiled within the MCAS, collaborate with a broad range of stakeholders to identify ambitious and realistic goals that includes aggressive emission reduction targets, for the Board's consideration.

In addition to directing staff to update the District's MCAS, the Board also expressed support for region's broader clean air actions that were being advanced as part of the AB 617 Program. To help develop emission reduction strategies that could be included in both the AB 617 CERP and the District's MCAS, the Steering Committee established the AB 617 Truck Subcommittee and the AB 617 Port Subcommittee, as summarized below.

- AB 617 Truck Subcommittee: The purpose of this subcommittee was to discuss the technological and institutional obstacles to greater electrification of truck fleets, particularly trucks serving the District's cargo terminals. The goal of the subcommittee is to compile useful information about the truck fleets and the distances they routinely travel and to identify potential solutions that can facilitate a shift away from fossil fuels while protecting truck drivers from unsustainable burdens.

The Truck Subcommittee met twelve (12) times between May and July 2020 and included representatives from San Diego Association of Governments (SANDAG), Caltrans, SDG&E, Teamsters Local Union No. 542 and SDAPCD staff. Other attendees from CARB, Volvo Lights, TransPower, Electreon, and UC Davis participated in certain meetings covering specific topics (Attachment D - AB 617 Truck Subcommittee Meeting Summary Table).

- AB 617 Port Subcommittee: Acknowledging that the District was in the process of developing the MCAS, the purpose of this subcommittee was to identify projects and strategies related to trucks, cargo handling equipment, and the ship sectors that could be incorporated into the AB 617 Draft CERP as early action items.

The Port Subcommittee met eight (8) times in June and July 2020 to produce a set of recommendations that addressed emissions along the working waterfront. Representatives from NASSCO, Pasha Automotive Services, U.S. Navy and the Teamsters Local Union No. 542 served on the Port subcommittee. Other meeting

attendees included representatives from CARB, Caltrans, ILWU, Industrial Environmental Association (IEA), and the Greenlining Institute (Attachment E - AB 617 Port Subcommittee Meeting Summary Table).

These two subcommittees were facilitated by District staff and the Environmental Health Coalition (EHC) and helped produce the early action strategies that were considered by the Board on July 14, 2020. At that meeting, the Board directed staff to advocate for the following three emission reduction strategies be included in the AB 617 CERP, as early actions²:

- Develop a short-haul on-road electric truck pilot program for one or more routes to/from District tidelands;
- Identify and prioritize higher-emitting cargo handling equipment to be replaced and/or upgraded with zero and near-zero cargo handling equipment at the TAMT; and
- Prioritize projects and investments in accordance with CARB's anticipated At-Berth Regulation.

These three items were further developed and refined by the AB 617 Truck and Port Subcommittees before being included in the in the Portside Community's AB 617 Draft CERP. The AB 617 Draft CERP was considered by the San Diego Air Pollution Control Board on November 18, 2020, so that SDAPCD staff could get started on implementing some early emission reduction strategies under the authority of SDAPCD. The accompanying staff report acknowledged that the District, the U.S. Navy and the local shipyards also made early commitments to reduce emissions under their authorities and that those commitments were included in the AB 617 Draft CERP. (Attachment C - SDAPCD's 11.18.21 Staff Report on the AB 617 CERP). The San Diego Air Pollution Control Board unanimously approved SDAPCD's early emission reduction strategies and directed the Air Pollution Control Officer to complete the AB 617 CERP. The AB 617 Draft CERP can be accessed via the following link provided below:

https://www.sandiegocounty.gov/content/dam/sdc/apcd/PDF/AB_617/Portside%20Environmental%20Justice%20DRAFT%20CERP%20Oct%202020.pdf

The SDAPCD is scheduled to complete the AB 617 CERP over the next couple of months and bring it back to the San Diego Air Pollution Control Board³ for approval in May 2021. Following approval by the San Diego Air Pollution Control Board, CARB is scheduled to take action on the Portside Community's Final AB 617 CERP in the summer or fall of 2021. Port staff will remain actively engaged in finalizing the AB 617 CERP and will work to ensure that the District's MCAS will include information that supports and complements the emission reduction strategies identified in the AB 617 CERP.

II. Emission Reduction Strategies and Projects Currently Underway

One of the goals of the MCAS is to provide a framework that assists with the evaluation and prioritization of emission reduction projects associated with the maritime activity year over year. Based on District specific assets, inventories, and operations, as well as current and future business needs, the MCAS will serve as a resource to help the Board identify ambitious emission reduction goals in the near-term (three to five years) and mid-term (five to ten years). It will also serve as a guide and a resource for current and future tenants and other maritime operators that do business with the District. Finally, the MCAS will include suggestions to strengthen stakeholder engagement and ideas for addressing equity as emission reduction projects are identified, prioritized, and advanced. While there is still much work to be done, staff has continued to work with a broad range of

stakeholders to make progress on several strategies and projects since the July 2020 Board meeting.

Based on the Truck and Port Subcommittee work that was completed last summer, staff has found the subcommittee structure allows for a sustained, transparent, and meaningful exchange of ideas. As such, District staff asked the AB 617 Steering Committee to establish the MCAS Subcommittee on September 29, 2020. Beginning in October 2020, the MCAS Subcommittee has been meeting every two weeks and includes 16 member that represent the following agencies and groups:

- District staff
- Mothers Out Front
- Greenling Institute
- Environmental Health Coalition
- Local residents
- SDAPCD
- Caltrans
- CARB
- NCMT Operator
- Pacific Tugboat
- UC San Diego PhD Student

Meeting attendance typically ranges between 19 and 21 attendees and has also included representatives from the San Diego Port Tenant's Association (SDPTA), SANDAG, and Mitsubishi Cement Corporation. (Attachment F - AB 617 MCAS Subcommittee Meeting Summary Table). To date, the MCAS Subcommittee meetings have focused on reviewing data from the District's air emissions inventory, maritime and freight related operations along the working waterfront, current and forthcoming regulatory requirements, as well as ZE and NZE technologies and costs. In conjunction with the subcommittee work completed over the summer, the MCAS subcommittee has yielded a variety of emission reduction strategies and projects in six of the seven sectors, as described below:

1. Cargo Handling Equipment

Cargo handling equipment (CHE) is used to support terminal activities and move cargo on and off ocean-going vessels (OGVs), harbor craft, rail, and trucks. A wide range of CHE types operate at the District due to the diversity of cargo handled at each maritime terminal, which ranges from large containers, to dry bulk, to passenger activity. Equipment operates at each of the Port's three terminals: NCMT, TAMT, and CST.

Although CHE emissions are a relatively small portion of the District's total air emissions (about 3% according to the 2016 Maritime Air Emissions Inventory), all the CHE emissions occur on terminal. The 2019 CHE Inventory determined that more DPM, NOx and CO2e emissions were generated at TAMT than at NCMT and CST and identified 20 pieces of CHE that may be good candidates for upgrades and replacements over the next 5 years. If these 20 pieces of CHE were replaced with Zero and/or Near Zero alternatives, NOx could be reduced by 89% and DPM could be reduced by 80%. Acknowledging that the District does not own or operate the CHE at TAMT, the following draft strategies and reduction targets are being considered for inclusion in the MCAS:

- Facilitate upgrading and/or replacing diesel emitting CHE with Zero Emission CHE at the District's marine terminals. District staff will encourage the use of ZE technology and will help assess the feasibility of ZE equipment when it is scheduled to be updated. If electric cargo handling equipment is not feasible, District staff shall demonstrate the

constraints to zero emission equipment implementation.

- Reduce cargo handling equipment DPM emissions by 80% and NOx by 89%⁴
- Meet reduction goals by 2025.
- For demonstration equipment and pilots, incorporate feedback from end users, such as the ILWU, Teamsters, and stevedores.

Grant funding from SDAPCD's 2019 Clean Air for All Program has been tentatively awarded for five pieces of CHE at TAMT. District staff is in conversations with several tenants at TAMT on potential

2. Commercial Harbor Craft

Commercial harbor craft (CHC) include a variety of vessel and boat types that serve many functions within and near San Diego Bay, including crew and supply boats, charter fishing vessels, commercial fishing vessels, ferry and excursion vessels, pilot vessels, towboats or push boats, tug boats, barges, and work boats.

The District's 2016 Maritime Air Emissions Inventory estimated that CHC accounted for approximately 36% of total NOx emissions and 49% of total DPM emissions bay-wide. However, because a lot of these emissions occur away from the shoreline during transit, they are not expected to be a major driver of health risk. Most NOx and DPM emissions (approximately 65%) are attributed to tugboats, ferries, and excursion vessels.

Although CARB established minimum engine compliance standards for various CHC in 2007 and 2011, there have been relatively few strategies to reduce CHC-related emissions. However, given that ferries and tugs account for the vast majority of CHC emissions, Port tenants have been pioneering the advancement of zero and near zero emission technologies.

The Crowley E-Tug Project is aiming to be the first all-electric tug in North America, and it is expected to significantly advance battery-electric technology with the long-term potential to eliminate exhaust emissions from harbor craft. The Crowley Maritime Corporation (Crowley) is a District tenant that is proposing to design, build and demonstrate a new all-electric tugboat (E-Tug) in partnership with the District, SDAPCD, CARB, SDG&E, MARAD, and several technology developers. District staff is providing ongoing technical support to Crowley for this project, which includes working with them to ensure there is adequate landside infrastructure and battery storage space. The total cost of the Project is estimated to be \$18 million and funding is being pursued from several federal, state and local sources. To date, Crowley has been tentatively awarded \$750,000 from the U.S. Maritime Administration (MARAD) and \$8.1 million from SDAPCD/CARB's 2019 Clean Air for All Campaign.

Vessels that have predictable routes are good candidates for all-electric technologies, as this allows for ease of planning range and charging schedules. For this reason, ferries present another opportunity for electrification, which is another potential strategy that will be further evaluated in the MCAS.

3. Drayage Trucks:

Heavy-duty trucks travel between NCMT and TAMT and local and regional destinations. At TAMT, trucks mainly consist of refrigerated container trucks, dry bulk and unibody trucks to move dry bulk (e.g., cement, bauxite, and fertilizers) and multi-purpose general cargo (e.g., windmill parts), as well as other miscellaneous deliveries. At NCMT, trucks mainly consist of car carriers, along with some flatbeds and trailers to move project (general) cargo, and material (parts) deliveries for automobile

services.

Based on the District's Truck Survey that was completed in April/May 2020, staff identified two existing routes that seemed promising for electrification. The first was a five-mile route between TAMT and the National City Distribution Center, which results in approximately 130 refrigerated container trips a week. The second was 30-mile route from TAMT to Otay Mesa to transport dry bulk product that typically results in approximately 1,000 trips quarterly (one vessel arrives every three months). Truck related emissions made up approximately 8% of NOx and 2% of DPM of the District's 2016 Maritime Air Emissions Inventory.

However, reducing emissions associated with heavy duty trucks has been identified as a high priority by nearby residents and other community stakeholders. In addition, CARB's Advanced Clean Fleets rule is an upcoming regulation that has a goal of reaching a zero emission trucks and buses for California fleets by 2045. Governor's Newsom's recent Executive Order (N-79-20) reinforces California's push towards zero emission requirements for drayage trucks by 2035.

To better position the District as a leader in zero emission on-road truck technology, the District is committed to implementing an on-road zero emission truck pilot program (ZE Truck Beta Project), with timebound, measurable targets, as described below:

- Develop and implement a short-haul on-road electric truck pilot program to/from District tidelands for one or more routes.
- Develop a short-haul on-road electric truck pilot program to/from District Tidelands for one or more routes that seeks to displace between 3,000 and 10,000 diesel vehicle miles traveled (VMT) annually or more, and yields the corresponding emission reduction benefits, during pilot program implementation.
- Install EV charging in conjunction with the above pilot(s).
- Develop a short-haul electric truck pilot program and seek to secure environmental approvals and entitlements within an 18 to 24-month period.
- Seek to implement the pilot program for a period between one and two years.

In addition, the District is currently working with several other public agencies to help reduce truck-related emissions and to advance ZE trucks in the larger San Diego region, which are summarized below:

Harbor Drive 2.0 (2019): At the December 10, 2019 Board meeting, staff presented the Harbor Drive 2.0 Concept that called for a connected flexible freight and transit haul road providing enhanced connectivity between NCMT, TAMT and regional freeways. By providing more efficient movement of freight, HD 2.0 also incentivizes freight trucks to avoid entering neighborhoods like Barrio Logan and National City, enhancing the quality of life for neighborhood residents and improving public safety. On October 6, 2020, the Board authorized the District to enter into a memorandum of understanding (MOU) between the District, SANDAG, and Caltrans to further advance the Harbor Drive 2.0 Concept, including completing additional design work, identifying the lead agency responsible for the environmental work, negotiating cost sharing agreements and funding mechanisms, and integrating the project into SANDAG's South Bay to Sorrento Comprehensive Multimodal Corridor Plan (CMCP).

Medium- and Heavy-Duty (MD/HD) Zero Emission Vehicle Infrastructure Blueprint Planning Grant: In partnership with the District, the Metropolitan Transit System (MTS), the North County Transit District (NCTD), Caltrans District 11, and the County of San Diego, SANDAG has applied to the California Energy Commission for a \$200,000 MD/HD ZEV Infrastructure planning grant. Through

regional collaboration, the MD/HD ZEV Blueprint will build upon regional work to date to identify major MD/HD corridors, emerging ZEV charging and fueling technologies, criteria for potential infrastructure locations, workforce development needs, grid and resiliency considerations, and near term implementable projects and pilots, as well as long term efforts. Implementation of the MD-HD ZEV Blueprint will improve air quality in the region and directly benefit the AB 617 Portside Community.

- Zero-Emission Drayage Truck and Infrastructure Pilot Project: The SDAPCD is partnering with Duran Freight Corporation to support the large-scale deployment of 50 on-road, ZE Class 8 drayage and regional haul trucks in the San Diego region⁵. The goals of the application include (1) testing multiple regional routes, (2) bringing benefits to multiple underserved communities, and (3) pioneering an electrified route between California and Mexico. The District understands that Duran Freight calls to its marine terminals an average of two to three times a month, and District staff is currently exploring ways to partner with and support SDAPCD on this grant application. CARB and the California Energy Commission (CEC) have allocated up to \$40 million in grant funding towards this program and the grant application is due on February 15, 2021.

4. District Fleet:

The District-owned vehicle fleet includes various passenger cars, light-duty trucks, and heavy-duty trucks that are owned and operated by the District. Historically, the District-owned fleet has not been included in previous maritime air emissions inventories because it is comprised of mostly Harbor Police and General Services vehicles that are not maritime dependent. In addition, it constitutes just a small fraction of the District's emissions inventory, representing just 0.2% of District-wide greenhouse gas emissions in 2016. However, its included in the District's MCAS because it is one of the few sectors that the District has direct control over, and it provides the District an opportunity to lead by example.

According to the 2019 District Fleet inventory, the District's fleet is comprised of 189 on-road vehicles, including 145 powered by gasoline, 13 hybrid vehicles, one electric passenger vehicle, 20 diesel vehicles and 10 vehicles that run on compressed natural gas. Beginning in 2018, all 20 diesel vehicles have been using renewable diesel, which reduces greenhouse gas emissions but does not reduce localized criteria pollutants, such as NOx and DPM. While potential mid- and long-term goals for the District's fleet are still under discussion, District staff is advancing the following projects:

- Zero Emission Solid Waste Truck: On January 15, 2021, the District's Department of General Services applied to the SDAPCD to replace an existing 2005 diesel refuse truck with a new BYD all electric Class 6 Refuse truck. The total cost of the new ZE Class 6 Refuse Truck is \$400,000 and the requested grant amount is for \$320,000.
- District Fleet Charging Infrastructure: District staff is applying to the San Diego Gas & Electric (SDG&E) Power Your Drive for Fleets Program to help offset charging infrastructure costs by an estimated \$1 million to 1.5 million. This is a rate payer funded program administered by SDG&E to advance transportation electrification for medium- and heavy-duty fleet vehicles. If approved, SDG&E will pay for the electrical infrastructure upgrades necessary to support charging fleet vehicles. To be eligible for the program, the District will need to procure at least two electric medium- and/or heavy-duty vehicles and submit an electric vehicle transition plan.
- Six Electric Pickup Trucks: The District's Department of General Services has signed a letter of intent to purchase six (6) electric pick-up trucks from Lordstown Motors Endurance Trucks.

- **27 Passenger Vehicle Chargers:** District staff continues to install passenger vehicle charging infrastructure throughout the tidelands. By the end of calendar year 2021, a total of 27 level 2 passenger vehicle charging stations will be installed and operational at the following locations:
 - Convention Center: Eight (8) EV Chargers for passenger vehicles.
 - South Embarcadero Park: Seven (7) EV Chargers for passenger vehicles.
 - Pepper Park in National City: Twelve EV Chargers for passenger vehicles.

5. Shipyards

The California Coastal Act mandates that coastal-dependent industrial facilities, such as shipyards, be prioritized over other development that does not rely on the coast to operate. The District has codified the importance of this industrial use in the Port Act. The four shipyards presently operating on tidelands are District tenants and operate independently within their leaseholds.

Shipyards and their associated maritime industrial uses are highly regulated by federal, state, and local government agencies due to some of their operations unavoidably causing pollutants to be released into the atmosphere. The most common activities that emit air pollutants include welding, vessel painting, abrasive blasting, and carpentry. Additionally, some internal combustion engines are used in load handling and lifting activities that support movement of materials and supplies used in shipbuilding and repair. To further reduce emissions associated with ship building and repair, the District's four shipyards have voluntarily committed to implement following strategies in the AB 617 CERP, which will also be reflected in the District's MCAS:

- Recognize that portable air compressors on site will be powered by ZEV or Tier 4 engines. NASSCO, BAE Systems, and HII will implement this policy by May 1, 2021 and the shipyards will report their progress and achievements to the AB 617 Steering Committee annually.
- Promote best practices for reducing diesel, Volatile Organic Compounds (VOC) and other ship repair activities. Provide training on best practices for ship repair contractors and conduct a minimum of three training or outreach events per year from 2021 through 2025.
- Reduce emissions from shipyard employee transportation. Continue ongoing programs and partnership with SANDAG iCommute to promote and increase participation in alternative transportation.

District staff is scheduled to meet with all of the shipyards over the next few weeks to determine if there are any additional strategies, resources, and/or information that could be included in the District's MCAS to help them further reduce emissions. District staff is currently discussing grant opportunities with one shipyard to potentially replace and/or upgrade some pieces of equipment with zero and/or near zero emission alternatives.

6. Oceangoing Vessels

Ocean-going vessels (OGVs) are used to transport goods and people to and from domestic and international ports. Emission sources from OGVs include propulsion engines, auxiliary engines, and auxiliary boilers. Propulsion engines are used to propel the ship and are usually either medium-speed diesel (MSD) or slow-speed diesel (SSD) and release emissions while in transit. Auxiliary engines are typically used when the vessel is at berth to keep and there is not the ability to use shore power.

According to the 2016 Maritime Air Emissions Inventory, OGV's were responsible for approximately

49% of NOX emissions and 38% of DPM emissions bay-wide. Emissions from auxiliary engines that occur while the vessel is at-berth result in higher health risk impacts than when the vessel is in transit because at-berth emissions are stationary. CARB amended the that At Berth Regulation (or Shore Power Rule) in August 2020 to apply to Roll-on/Roll-off Vessels (or auto carriers) starting in 2025. The following strategies will help address vessel emission

- Prioritize investments in shore power and other technologies to reduce vessel hoteling emissions while vessels are at berth.
- Work to secure funding in 2021 to install a second shore power system at the CST prior to regulatory requirements.
- Evaluate potential modifications to the District's current VSR Program and identify emission reduction estimates.

The District has also applied for federal designation of a short sea project between the District, Port of Bellingham, and Southern Oregon that would reduce emissions and truck congestion. If designated, the Port will be eligible to apply for grants for zero emissions equipment and other infrastructure that would support this emissions-reducing effort.

7. Rail

Rail locomotives carry freight cargo between the District and regional destinations. Freight rail service at the District is provided exclusively by Burlington Northern Santa Fe (BNSF) Railway and the railroad has access onto both Tenth Avenue Marine Terminal (TAMT) and National City Marine Terminal (NCMT). The railroad also has switch yards adjacent to the terminals where rail cars can be decoupled to be added to other trains.

District staff is currently evaluating potential technologies that may help BNSF reduce emissions associated with rail activity, including Tier 4 Single Engine Switchers, Full Battery Electric Switchers, and Dual Engine CNG/Diesel Switchers. The estimated emission reductions and costs of these options, as well any near-term opportunities to implement them, will be included in the MCAS.

III. Next Steps

In addition to any Board direction on this item, staff plans to prepare an MCAS Discussion Draft document and post it on District's website for a 30-day comment period in the March/April 2021 timeframe to provide the general public with an opportunity to review the MCAS. During this time, staff will conduct additional community outreach to the Barrio Logan Community Planning Group, the AB 617 Steering Committee, the SDPTA's Environmental Committee and other organizations and forums. In addition, staff will facilitate one virtual MCAS Workshop to solicit input and feedback on the MCAS Discussion Draft. These efforts will be memorialized in a Public Participation Plan that will be made available on the District's website. Additionally, the MCAS Subcommittee will continue to meet over the next two months to identify emission reduction goals that are bold and aggressive that can be attained in way that promotes and advances maritime businesses and operations.

Following completion of the public engagement phase, staff anticipates returning to the Board with draft MCAS in May 2021 (Attachment G - MCAS and AB 617 CERP Timeline). Staff will remain actively engaged in the development of the Portside Community's AB 617 CERP and will continue to collaborate with stakeholders on various ZE/NZE project opportunities.

General Counsel's Comments:

The Office of the General Counsel reviewed this agenda 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 presentation 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.

Equal Opportunity Program:

Not applicable.

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Attachments:

Attachment A - Portside Community Boundaries

Attachment B - Maritime Clean Air Strategy Approach

Attachment C - AB 617 Truck Subcommittee Meeting Summary Table

Attachment D - AB 617 Port Subcommittee Meeting Summary Table

Attachment E - SDAPCD's 11.18.21 Staff Report on the AB 617 CERP

Attachment F - AB 617 MCAS Subcommittee Meeting Summary Table

Attachment G - MCAS and AB 617 CERP Timeline

END NOTES

¹ Please note that Assembly Bill 423 that was signed into law in 2019, which requires the governance of the SDAPCD to change in March 2021 from the San Diego County Board of Supervisors to an 11-member board consisting of two county supervisors, six council members or mayors from specified cities, and three public members.

² In addition to the three items that the Board directed staff to try to get included in the AB 617 CERP, several other preliminary project ideas were also shared at the July 2020 Board meeting. These items were identified as requiring further consultation and coordination with multiple stakeholders to implement and included: Pepper Park expansion, the Harbor Drive Multimodal Corridor Study (December 2019) improvements, Short-haul electrification pilots with the cities of San Diego and National City, Feasibility analyses to support cargo handling equipment and truck fleet electrification; and Electric truck parking and charging stations in the San Diego region. The SDAPCD staff continues to work with lead agencies and other affected stakeholders to incorporate these ideas into the AB 617 CERP.

³ Please note that Assembly Bill 423 was signed into law in 2019, which requires the governance of the SDAPCD to change in March 2021 from the San Diego County Board of Supervisors to an 11-member board consisting of two supervisors, six council members or mayors from specified cities, and three public members.

⁴ The AB 617 Draft CERP emission reduction estimates were based preliminary estimates, which included CARB modeling defaults for several pieces of equipment. The preliminary estimate identified 28 pieces of equipment to upgrade and identified a 92% reduction in DPM and a 78% reduction in NOx. The District has since updated its inventory based on actual hours used in 2019 and will be targeting an 80% reduction in DPM and an 89% reduction in NOx. This correction has been vetted through the AB 617 MCAS Subcommittee and will be incorporated into the next version of the AB 617 CERP.

⁵ The CARB/CEC December 17, 2020 ZE Drayage Truck and Infrastructure Pilot Project workshop emphasized that the purpose of this solicitation is to deploy 50 on-road zero-emission Class 8 trucks in a single fleet along with necessary infrastructure to assess the ability of fleets and the electrical grid to recharge or refuel large numbers of trucks daily at a single location. Port staff determined this solicitation was not a good fit for the Port of San Diego to pursue on its own because customers operating at the TAMT and NCMT rely a variety of smaller sized fleets to meet their operational needs.

