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Board Agenda Item

TO: Air Pollution Control District Board

FROM: Aeron Arlin Genet, Air Pollution Control Officer 

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SUBJECT: Results from the 2018 Vessel Speed Reduction Incentive Program

RECOMMENDATION:

Receive and file an update on the 2018 Vessel Speed Reduction incentive program.

BACKGROUND:

Large ships transiting off the coast of Santa Barbara County are a major source of air pollution. Ships are currently using lower-sulfur fuel, which reduces emissions of sulfur dioxide, particulate matter, and air toxics. However, use of low-sulfur fuel does not significantly decrease emissions of nitrogen oxides (NOx). NOx is involved in the formation of ozone, a principal component of smog. Reducing NOx emissions is a priority for the District so that Santa Barbara County can attain and maintain state and federal ozone standards. Over the long term, international rules will require cleaner engines on newly built ships, which will bring about NOx reductions from the marine shipping sector. However, it will take 10-20 years to phase out the older, dirty engines, and in the meantime, the marine shipping sector continues to be the largest source of NOx within the County.

Decreasing ship speeds reduces emissions of multiple pollutants, including NOx, and simultaneously reduces the risk of fatal ship strikes on whales. In recent years, the District and partners have implemented voluntary Vessel Speed Reduction (VSR) incentive programs for immediate air quality and whale protection benefits. The program began as a VSR Trial in 2014, where ships were asked to slow down to 12 knots or less in the Santa Barbara Channel. The program grew in 2016 to include the region south of the Channel Islands, and the 2017 program again expanded to include speed-reduction zones in the San Francisco Bay Area.

DISCUSSION:

The 2018 VSR program was similar to our previous VSR programs in that it was a collaborative effort involving Santa Barbara, Ventura, and Bay Area air districts, as well as federal, state, and nonprofit organizations. The Program ran between July 1 and November 15, 2018, and focused on companies with container ships and Ro-Ro ships (roll-on, roll-off carriers) since these vessel types represent the majority of transits in our region and typically travel in the VSR regions at higher speeds. This time of year coincides with the typical high ozone season and peak whale abundance during migration.

Program Changes

The 2018 VSR Program was different from previous programs in several ways, as outlined below.

Change in target VSR speed: Shipping companies were asked to voluntarily slow vessels to 10 knots or less for a financial award. Previous programs requested companies to slow vessels to 12 knots, and provided bonuses for slowing to 10 knots or less. Program partners decided to set the VSR target speed at 10 knots to be consistent with the whale protection advisories issued by the marine sanctuaries in both the Santa Barbara Channel and the San Francisco Bay regions. Furthermore, additional emissions reductions are achieved when speeds are reduced from 12 knots to 10 knots.

Fleet-based incentive awards: The financial awards were based on the percent of distance that all of the vessels in a company's fleet traveled at a speed of 10 knots or less. Previous programs based incentive payments on individual transits. As noted in a June 2018 presentation to your Board, changing to a fleet-based approach encourages companies to slow down more vessel transits overall in the region. The new fleet-based approach was also paired with tiered recognition levels, offering higher tier awards to those companies with a higher fleet participation rate. This approach also builds a foundation for a larger recognition program, with more emission reduction benefits.

A larger program, with more funding: Funding for the incentives, which includes the administrative costs to the California Marine Sanctuary Foundation for overseeing payments to the shipping companies, totaled \$275,000, a larger amount than in previous years. The District contributed \$35,000 to the 2018 program. Overall, three air districts, four national marine sanctuaries and four non-profit organizations helped coordinate the 2018 program:

- Air Districts
 - Santa Barbara County Air Pollution Control District
 - Ventura County Air Pollution Control District
 - Bay Area Air Quality Management District

- National Marine Sanctuaries
 - Channel Islands National Marine Sanctuary
 - Greater Farallones National Marine Sanctuary
 - Cordell Bank National Marine Sanctuary
 - Monterey Bay National Marine Sanctuary

- Non-profit Organizations
 - Volgenau Foundation
 - California Marine Sanctuary Foundation
 - National Marine Sanctuary Foundation
 - Environmental Defense Center

Results and Awards

Twelve shipping companies participated in this year's program, and these companies represent approximately 75% of all of the containership and Ro-Ro traffic in the area. This year, companies in the Santa Barbara Channel successfully slowed down to 10 knots or less for over 31,000 nautical miles, which is a 10,000 nautical mile increase compared to 2017.

Shipping companies received financial awards at different tiers based on the percent of distance that the vessels in their fleet travelled at a speed of 10 knots or less. The four award tiers were Bronze (i.e., 10%-25% of their distance traveled at 10 knots or less), Silver (25-50%), Gold (50-75%), and Sapphire (75-100%). In the Santa Barbara Channel, \$198,000 of incentive funds were awarded; and in the Bay Area, \$44,000 of incentive funds were awarded. Below is the recognition earned by each participating shipping company:

Bronze

- CMA-CGM (Santa Barbara region)
- ONE (Santa Barbara region)

Silver

- Maersk (both regions)
- CMA-CGM (Bay Area)
- Cosco (Bay Area)
- ONE (Bay Area)
- Yang Ming (Bay Area)
- Evergreen (Santa Barbara region)
- Hapag-Lloyd (Santa Barbara region)
- GALI (Santa Barbara region)

Gold

- K-Line (both regions)
- NYK Ro-Ro (both regions)
- Hyundai Glovis (both regions)
- Cosco (Santa Barbara region)
- Evergreen (Bay Area)
- Hapag-Lloyd (Bay Area)

Sapphire

- Mediterranean Shipping Company (both regions)
- GALI (Bay Area)

With this year's larger program and a new fleet-based approach, the methodology for calculating emission benefits has changed and emission benefits are in the process of being quantified and vetted. More information on the emission reductions for the 2018 program will be provided during the Board presentation.

An awards ceremony was held on March 6 at the Banning's Landing Community Center near the Ports of Los Angeles and Long Beach, to honor the twelve shipping companies that participated. The program partners are currently discussing the 2018 results and preparing for a 2019 program. During the awards ceremony, attendees provided updates on VSR legislative efforts. On the federal side, Representative Alan Lowenthal's office (47th Congressional District of California) informed the group that the Blue Whales and Blue Skies Act (HR 3682), a program to recognize voluntary VSR efforts, was planned for reintroduction in the current legislative session with an expanded region to include the Santa Barbara Channel and other parts of the California coastline. In California, Scott Weiner (CA Senate District 11) recently introduced the Ocean Resiliency Act (SB 69). This bill includes a state-led program on voluntary vessel speed reduction in the Santa Barbara Channel and the San Francisco Bay Area.

The program partners are currently reviewing the 2018 VSR results and preparing for a 2019 program.

FISCAL IMPACTS

The program was funded through several sources, including a California Air Resources Board Supplemental Environmental Program, administered by the Ventura County Air Pollution Control District (\$165,000). Other contributors included the Volgenau Foundation (\$40,000) and the Bay Area Air Quality Management District (\$35,000). The District contributed \$35,000 to the 2018 program, as identified in the Board-adopted budget for FY 2017-18. The District also provided staff resources to monitor vessel activities and design and implement the 2018 program. The District has not allocated funding for financial incentives for the 2019 program; however, staff time will continue to be dedicated to help coordinate the program. We will return to your Board with an update once the 2019 program is finished.