

Date of Hearing: March 19, 2024

ASSEMBLY COMMITTEE ON WATER, PARKS, AND WILDLIFE

Diane Papan, Chair

AB 2298 (Hart) – As Introduced February 12, 2024

SUBJECT: Coastal resources: voluntary vessel speed reduction and sustainable shipping program

SUMMARY: Requires the Ocean Protection Council (OPC), on or before January 1, 2027, in coordination with various specified entities, to implement a statewide voluntary vessel speed reduction (VSR) and sustainable shipping program. Specifically, **this bill:**

- 1) Requires OPC, on or before January 1, 2027, to implement a statewide voluntary VSR and sustainable shipping program (Program) for the California coast in order to reduce air pollution, the risk of fatal vessel strikes on whales, and harmful underwater acoustic impacts.
- 2) Requires OPC to coordinate with air pollution control districts and air quality management districts along the coast and consult with the federal Office of National Marine Sanctuaries, the federal Environmental Protection Agency, the United States Navy, the United States Coast Guard, and the State Air Resources Board (CARB).
- 3) Requires the program to expand the Protecting Blue Whales and Blue Skies Program (Existing Program).
- 4) Allows the Program to include the following components:
 - a) A marketing program to engage cargo owners and other commercial interests to promote voluntary VSR and sustainable shipping, and an acknowledgment of the Program's participants;
 - b) Data collection on ship speeds along the California coast in order to analyze the Program for future refinement, expansion, or both;
 - c) Data collection on underwater acoustic impacts or fatal vessel strikes on whales, to the extent data is available;
 - d) Data collection and consideration of the regional air quality impacts on the coast and the local air quality and other environmental impacts to disadvantaged communities from oceangoing vessel traffic;
 - e) Incentives to Program participants based on a percentage of distance traveled by a participating vessel at reduced speeds, including 10 knots or less, to the extent that local or federal funding is available;
 - f) Development of VSR zones along the coast that take into account navigational safety, protected marine mammal migration and breeding seasons, federal marine sanctuaries and state marine protected areas, shipping lanes, and any other relevant variable;
 - g) Seasonality of the Program; and

- h) Description of covered vessels.
- 5) Excludes ocean territories that are covered by a memorandum of understanding entered into before January 1, 2025 or covered by any other VSR program.
- 6) Limits the program to vessels 300 gross tons or greater.
- 7) Authorizes OPC to impose additional qualifying criteria on Program participants in order to receive incentives under the Program, including, but not limited to, individual transit speeds, such as maximum speed in transit or maximum transit average speed.
- 8) Requires OPC to submit a report to the Legislature regarding the implementation of the Program on or before December 31, 2027.
- 9) Clarifies that this Program is a voluntary action and not a regulation.
- 10) Makes findings and declarations related to shipping, air quality, and an existing voluntary program.

EXISTING LAW:

- 1) Establishes OPC, a cabinet-level entity chaired by the Secretary of the California Natural Resources Agency that is mandated to:
 - a) Coordinate activities of ocean-related state agencies to improve the effectiveness of state efforts to protect ocean resources;
 - b) Establish policies to coordinate the collection and sharing of scientific data related to coast and ocean resources between agencies; and
 - c) Identify and recommend changes in law to both the Legislature and the Governor (Public Resources Code § 35600).
- 2) Establishes CARB and air pollution control and air quality management districts with the primary responsibility for the control of air pollution from all sources other than vehicular sources (Health and Safety Code § 39500 *et seq.*, § 40000 *et seq.*).

FISCAL EFFECT: Unknown. This bill is keyed fiscal.

COMMENTS:

- 1) **Purpose of this bill.** This bill codifies and expands an existing voluntary VSR program. According to the author, “The Santa Barbara voluntary vessel speed reduction program (Existing Program) is a prime example of what happens when we prioritize public health, protect the marine ecosystem, and showcase the beneficial partnership between shipping companies, public health agencies, marine sanctuaries, and environmental organizations. (This bill) provides participating companies with the official endorsement of the State of California for their efforts to reduce emissions and protect whales. This invaluable state-level recognition will increase visibility, interest and support for conservation efforts along the California coast.”

- 2) **Background.** The main transport mode for global trade is ocean shipping: around 90% of traded goods are carried by oceangoing ships. As demand for global freight increases, maritime trade volumes are set to triple by 2050. According to the Organisation for Economic Co-operation and Development (OECD), shipping represents 2.9% of total greenhouse emissions and is responsible for approximately 30% of total global nitrogen oxide (NO_x) emissions.¹ NO_x are a family of poisonous, highly reactive gases that form when fuel is burned at high temperatures. NO_x are air pollutants by themselves, and NO_x react in the atmosphere to produce acid rain and smog.²

According to data from 2019 compiled by the World Shipping Council, the ports of Los Angeles (ranked #17 in the world) and Long Beach (#22) are some of the largest container ports in the world by total number of containers in twenty-foot equivalent units transported through the ports.³ Combined, the two ports would rank as #9 in the world.

Whales. The cold, productive ocean waters off the coast of California are host to many ocean species, including several whale species. Though some types of whales are spotted year round, most populations of large whales typically gather in large numbers from May through November to feed on krill and small crustaceans.

The Eastern North Pacific stock of blue whales (*Balaenoptera musculus*) ranges from the Gulf of Alaska to the eastern tropical Pacific, with the West Coast as one of the most important feeding areas during summer and fall. Estimates of blue whale abundance in the eastern North Pacific have been stable in recent years. Along the U.S. West Coast, one humpback (*Megaptera novaeangliae*) stock is currently recognized as having distinct feeding areas in California/Oregon and northern Washington/British Columbia. Humpback abundance in both these areas has increased steadily through the 1990s and 2000s. Humpbacks also face significant mortality from entanglement with fishing gear. Fin whale (*Balaenoptera physalus*) population levels are less understood. Fin whales appear to be recovering, though current estimates are still well below 1974 estimates and even more significantly depleted from pre-whaling levels.⁴

All three whale species are listed as endangered under the federal Endangered Species Act (ESA) with associated take protections. Additionally, marine mammals have legal protection under the federal Marine Mammal Protection Act (MMPA), making the take of marine mammals illegal. These three whale species are not listed under California's Endangered Species Act.

Impacts to marine species. One of the most significant human effects on whales is collisions with vessels in the U.S. and around the world. Vessel collisions, also known as ship strikes,

¹ OECD. (n.d.). *Ocean Shipping and Shipbuilding*. www.oecd.org/ocean/topics/ocean-shipping/

² U.S. EPA. (1999). *Nitrogen Oxides (NO_x): Why and How They Are Controlled*. www3.epa.gov/ttnca1/dir1/fnoxdoc.pdf

³ World Shipping Council. (n.d.). *The Top 50 Container Ports*. www.worldshipping.org/top-50-ports

⁴ Rockwood, R.C.; Calambokidis, J.; and Jahneke, J. (2017). *High mortality of blue, humpback and fin whales from modeling of vessel collisions on the U.S. West Coast suggests population impacts and insufficient protection*. PLoS One. www.ncbi.nlm.nih.gov/pmc/articles/PMC5565115/.

are relatively rare occurrences with low probability of detection, yet the resulting mortalities are problematic for long-lived, low fecundity whale populations.⁵ On the West Coast, ship strikes of blue, humpback, and fin whales are estimated to cause more than 80 mortalities per year, with ship strike mortality thought to be the number one killer of blue and fin whales and the second greatest cause of death for humpback whales along the West Coast.⁶

The human-caused mortality limit (also known as Potential Biological Removal) for U.S. waters is set by the NOAA National Marine Fisheries Service (Fisheries) at 4.1, 29.4, and 80 for blue, humpback, and fin whales, respectively, as detailed in Marine Mammal Stock Assessment Reports from 2021.⁷ The most conservative model in a 2017 study estimated ship strike mortality to be 17.94 individuals, 22 individuals, and 43.2 individuals per year for blue, humpback, and fin whales, respectively.⁸

The study also revealed that the majority of West Coast strike mortality occurs in California waters from Bodega Bay south and tends to be concentrated in a band approximately 24 nautical miles offshore and in designated shipping lanes leading to and from major ports. Risk is highest in the shipping lanes off San Francisco and Long Beach, but only a fraction of total estimated mortality occurs in these proportionally small areas. As a result, solely focusing conservation efforts within these areas is likely insufficient to address overall strike mortality. The authors of the study recommend combining shipping lane modifications and re-locations, ship speed reductions, and creation of ‘Areas to be Avoided’ by vessels in ecologically important locations to address this significant source of whale mortality.

The OPC, in its 2020–2025 Strategic Plan, identified developing a statewide whale and sea turtle protection plan by 2022 with a target of zero mortality as a priority. To accomplish this goal, the OPC notes the following under Objective 3.3, Target 3.3.5: “With [C]ARB, coastal air districts, ports, and the National Marine Sanctuary Program, develop a permanent, statewide, Vessel Speed Reduction Program that incentivizes the shipping industry to prevent whale strikes, reduce coastal air pollution, and minimize marine noise pollution.” This bill effectively codifies this element of the OPC strategic plan.

Existing Program. Ship speed reductions allow whales and other marine mammals additional time to maneuver to avoid approaching ships. The Protecting Blue Whales and Blue Skies program is a voluntary VSR program along the coast of California which incentivizes companies to incorporate sustainable shipping practices across their global supply chain.⁹ The Existing Program has been operating in Southern California since 2014, expanded to the San Francisco Bay area in 2017, and now includes coordination between the Bay Area Air Quality Management District (Bay Area AQMD), the Santa Barbara County Air Pollution Control District (Santa Barbara County APCD), the Ventura County Air Pollution Control

⁵ Ibid.

⁶ Carretta, J.V.; Muto, M.M.; Wilkin, S.; Greenman, J.; Wilkinson, K., et al. (2015). *Sources of human-related injury and mortality for U.S. Pacific west coast marine mammal stock assessments, 2009–2013*. <https://repository.library.noaa.gov/view/noaa/5015>

⁷ NOAA Fisheries. (n.d.). *Marine Mammal Stock Assessment Reports by Species/Stock*. www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessment-reports-species-stock

⁸ Ibid.

⁹ California Marine Sanctuaries Foundation. (2022). *Protecting Blue Whales and Blue Skies VSR*. www.bluewhalesblueskies.org/

District (Ventura County APCD), the National Marine Sanctuary Foundation, Channel Islands National Marine Sanctuary, Cordell Bank National Marine Sanctuary, Greater Farallones National Marine Sanctuary, Monterey Bay National Marine Sanctuary, Environmental Defense Center, and Volgenau Foundation. By creating seasonal and predictable slow speed zones, this program is intended to protect endangered whales, reduce fuel use and regional greenhouse gas emissions, and improve air quality and human health outcomes. Reduction of marine noise impacts is an additional factor that is less well-studied.¹⁰

The Existing Program runs each year from mid-May to mid-November to coincide with peak air pollution levels and whale feeding and migration. The program covers two geographic regions, one along the Southern California coast and one outside the San Francisco Bay Area. The Protecting Blue Whales and Blue Skies team independently verifies cooperation rates, quantifies the benefits of participation, and provides financial incentives and positive public recognition of program participants. Enrolled companies whose vessels traveled at least 50% of their total distance within the VSR zones at 10 knots or less received financial awards, which ranged from \$1,500 to \$50,000 depending on fleet size and were scaled to higher levels of cooperation. Incentive-based programs have been shown to be more successful at achieving voluntary cooperation with slow speed requests than voluntary requests without incentives.¹¹

Since 2014, the Existing Program has achieved over 1.1 million slow speed miles and has seen increased cooperation from its participants every year. In 2021, over two-thirds of participants' transits within the VSR zones were at the requested 10 knots or less and cooperation continues to grow. Eighteen global shipping companies and 559 ships participated. In 2022, 23 companies participated, which represented 90% of all cargo traffic passing through the VSR zones. The program estimates a 44% reduction in ship strike, which represent the proportional decreases in risk from participating vessels and not absolute estimates of mortality avoided.

Regulatory versus voluntary approach. There are limits to the state's ability to regulate ship speeds in coastal waters. The Department of Fish and Wildlife (DFW) does not regulate shipping vessels. Along certain zones of the East Coast of the United States, the federal government requires ships to reduce speeds to 10 knots or less during seasonal periods within designated endangered species areas, such as for North Atlantic right whales.¹² NOAA rejected a petition to do the same in California waters in April 2022.¹³

¹⁰ Sanctuary Advisory Council Report to the Farallones and Cordell Bank National Marine Sanctuaries. (2012). *Vessel Strikes and Acoustic Impacts*. from https://nmssanctuaries.blob.core.windows.net/sanctuaries-prod/media/archive/protect/shipstrike/pdfs/strikes_acoustic.pdf

¹¹ Morten, J.; Freedman, R.; Adams, J.D. et al. (2022). *Evaluating Adherence with Voluntary Slow Speed Initiatives to Protect Endangered Whales*. *Frontiers in Marine Science*.

<https://www.frontiersin.org/articles/10.3389/fmars.2022.833206/full>

¹² NOAA Fisheries. (n.d.). *Reducing Vessel Strikes to North Atlantic Right Whales*.

www.fisheries.noaa.gov/national/endangered-species-conservation/reducing-vessel-strikes-north-atlantic-right-whales

¹³ Coit, J. (April 2022). *NOAA Fisheries response to Center for Biological Diversity petition*.

https://www.biologicaldiversity.org/campaigns/boat_strikes/pdfs/CA-whales-ship-speed-petition-denial-2022-04-07.pdf

However, some incentive-based VSR efforts have been successful in achieving high levels of cooperation with slow speed requests. For example, the Ports of Los Angeles and Long Beach, which administer emissions focused, year-round incentive-based VSR efforts within 40 nautical miles of the ports, have sustained funding and record cooperation rates of about 90% each year with their 12 knots or less speed reduction requests. These port-based incentive programs achieve the same or higher levels of compliance shown to be accomplished by mandatory VSR regulations implemented on the east coast.¹⁴

A December 2022 court decision in the U.S. District Court, Northern District of California, requires NOAA Fisheries and the U.S. Coast Guard to conduct a new endangered species consultation that accounts for the impacts of shipping lane designations to California ports on ship strikes (*Center for Biological Diversity v. NOAA Fisheries*). The agencies also must consider measures proven to reduce those impacts.

- 3) **Suggested committee amendment.** *The committee may wish to adopt amendments to update the figures presented in the findings and declarations (amendment 1) as well as extend the reporting deadline by an additional year.*

Amendment 1:

(b) Every year, the world's largest container ships and auto carriers make thousands of transits along the California coast, with an estimated ~~120~~ **185** tons per day of nitrogen dioxides, an ozone precursor, being emitted ~~within 100 nautical miles of the~~ **along** coast. These emissions negatively affect the public health of coastal communities and cause some areas of the coast to be in nonattainment with the national ambient air quality standards for ozone and particulate matter.

(d) Since its inception, through ~~2021~~ **2023**, the Protecting Blue Whales and Blue Skies Program has provided small incentives and publicity to program participants and has achieved ~~526,211~~ **over 1.1 million** slow speed miles, a reduction of more than ~~2,300~~ **4,400** tons of nitrogen oxides, a reduction of over ~~76,000~~ **150,000** metric tons of regional greenhouse gas emissions, and an estimated ~~50~~ **44** percent decreased risk of whale strikes during prime migration season in the affected coastal areas.

Amendment 2:

- (f) (1) On or before December 31, ~~2027~~ **2028**, the council shall submit a report to the Legislature regarding the implementation of the program.
- (2) The report required in paragraph (1) shall be submitted in compliance with Section 9795 of the Government Code.
- (3) Pursuant to Section 10231.5 of the Government Code, the requirement for submitting a report imposed by paragraph (1) is inoperative on December 31, ~~2031~~ **2032**.

¹⁴ Morten, J.; Freedman, R.; Adams, J.D. et al. (2022).

- 4) **Arguments in support.** Several air quality districts and numerous environmental organizations write in support, stating that creating a statewide voluntary VSR program will reduce air pollution, the risk of fatal vessel strikes on whales, and harmful underwater acoustic impacts. A statewide program will provide publicity to participants, collect data on program benefits, and may support financial incentives to participants to the extent funding is available.
- 5) **Double referral.** This bill is also referred to the Assembly Natural Resources Committee.
- 6) **Related legislation.** AB 953 (Connolly) of 2023, was substantially similar to this bill and would have implemented a statewide voluntary VSR and sustainable shipping program. AB 953 was held in Senate Appropriations.

SB 69 (Wiener) of 2019, among other provisions, would have required CARB, in coordination with affected local air districts along the coast and in consultation with the federal Office of National Marine Sanctuaries and the U.S. Navy, to develop and implement a voluntary vessel speed reduction incentive program for the Santa Barbara Channel and San Francisco Bay area regions to reduce air pollution, the risk of fatal vessel strikes on whales, and harmful underwater acoustic impacts, as specified, with a report due by December 31, 2022. SB 69 was held in Assembly Appropriations.

REGISTERED SUPPORT / OPPOSITION:

Support

Bay Area Air Quality Management District (Co-Sponsor)
Santa Barbara County Air Pollution Control District (Co-Sponsor)
Ventura County Air Pollution Control District (Co-Sponsor)
California Air Pollution Control Officers Association
Central Coast Clean Cities Coalition
County of Santa Barbara
Environmental Defense Center
Monterey Bay Air Resources District
Oxnard Harbor District/port of Hueneme
Pacific Environment
Pacific Merchant Shipping Association
Sacramento Clean Cities Coalition
San Diego County Air Pollution Control District
San Luis Obispo County Air Pollution Control District

Opposition

None on file

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