

Date of Hearing: March 28, 2023

ASSEMBLY COMMITTEE ON WATER, PARKS, AND WILDLIFE

Rebecca Bauer-Kahan, Chair

AB 953 (Connolly) – As Amended March 16, 2023

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

**SUMMARY:** Requires the Ocean Protection Council (OPC), on or before May 1, 2025, 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 May 1, 2025, 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, and the State Air Resources Board (CARB).
- 3) Requires the program to expand the Protecting Blue Whales and Blue Skies Program (existing program) and build upon other existing VSR programs.
- 4) Allows the program to include the following components:
  - a) A marketing program 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) Financial incentives to program participants based on a percentage of distance traveled by a participating vessel at 10 knots or less, to the extent that local, state, or federal funding is made available pursuant to an appropriation by the Legislature; and
  - f) Development of VSR zones along the coast that take into account protected marine mammal migration and breeding seasons, federal marine sanctuaries and state marine protected areas, shipping lanes, and any other relevant variables.
- 5) Authorizes OPC to impose additional qualifying criteria on program participants in order to receive financial incentives under the program, including, but not limited to, individual transit speeds, such as maximum speed in transit or maximum transit average speed.

- 6) Requires OPC to provide financial incentives upon appropriation by the Legislature.
- 7) Requires OPC to submit a report to the Legislature regarding the implementation of the program on or before December 31, 2026.
- 8) 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, “Efforts at the local level have done an incredible job protecting marine wildlife and improving air quality. The ongoing success of the *Protecting Blue Whales and Blue Skies* program has laid a solid foundation to build and expand upon at the statewide level. Air pollution, greenhouse gasses and whales aren’t confined to isolated parts of our coast, and neither should this program be limited to the San Francisco Bay and Southern California. [This bill] will protect our vulnerable ecosystems up and down the state, and keep California at the forefront of good environmental policy.”
- 2) **Background.** The main transport mode for global trade is ocean shipping: around 90 percent 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 percent of total greenhouse emissions and is responsible for approximately 30 percent of total global nitrogen oxide (NOx) emissions.<sup>1</sup> NOx are a family of poisonous, highly reactive gases that form when fuel is burned at high temperatures. NOx are air pollutants by themselves, and NOx

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<sup>1</sup> OECD. (n.d.). *Ocean Shipping and Shipbuilding*. Retrieved March 23, 2023, from [www.oecd.org/ocean/topics/ocean-shipping/](http://www.oecd.org/ocean/topics/ocean-shipping/)

react in the atmosphere to produce acid rain and smog.<sup>2</sup>

According to data from 2019 compiled by the World Shipping Council, the ports of Los Angeles (#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 (TEUs) transported through the ports.<sup>3</sup> Combined, the two ports would rank as #9 in the world. Compared with other ports in the United States by total tonnage in 2020, the ports of Long Beach (#6), Los Angeles (#9), Richmond (#32), and Oakland (#36) ranked highly.<sup>4</sup>

While any route from Asia to North America is among the world's busiest shipping lanes, routes out of major ports like Shanghai, Ningbo, or Shenzhen into other major ports like Los Angeles/Long Beach and New York City are some of the busiest. In addition, Pacific Ocean ports are most often used for North American exports to China. This includes Los Angeles and Long Beach.

*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.<sup>5</sup>

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. In 2016, the National Oceanic and Atmospheric Administration (NOAA) recognized 14 Distinct Population Segments (DPSs) of humpback whale under the ESA based on a status review with four DPS units recognized in the North Pacific, two of them staying endangered, one down listed to threatened, and one delisted. The West Coast stock of

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<sup>2</sup> U.S. EPA. (1999). *Nitrogen Oxides (NOx): Why and How They Are Controlled*. Retrieved March 23, 2023, from [www3.epa.gov/tncatc1/dir1/fnoxdoc.pdf](http://www3.epa.gov/tncatc1/dir1/fnoxdoc.pdf)

<sup>3</sup> World Shipping Council. (n.d.). *The Top 50 Container Ports*. Retrieved March 23, 2023, from [www.worldshipping.org/top-50-ports](http://www.worldshipping.org/top-50-ports)

<sup>4</sup> U.S. Army Corps of Engineers. (n.d.). *Waterborne tonnage for principal U.S. ports and all 50 states and U.S. territories*. Retrieved March 23, 2023, from <https://usace.contentdm.oclc.org/digital/collection/p16021coll2/id/7447>

<sup>5</sup> 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. Retrieved March 23, 2023, from [www.ncbi.nlm.nih.gov/pmc/articles/PMC5565115/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC5565115/).

humpback whales is comprised of the Central American DPS, listed as endangered, and the Mexico DPS, listed as threatened.

*Impacts to marine species.* One of the most significant human effects on whales is collisions with vessels, which have been identified as a significant source of human-caused mortality for whale populations in the U.S. and around the world. Vessel collisions, also known as ship strikes, are relatively rare occurrences with low probability of detection, yet the resulting mortalities are problematic for long-lived, low fecundity whale populations.<sup>6</sup> 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.<sup>7</sup>

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.<sup>8</sup>

*Modeling vessel collisions on U.S. West Coast study.* A study by Rockwood, Calambokidis, and Jahncke (2017) estimated ship strike mortality for blue, humpback, and fin whales in U.S. West Coast waters. Mortality estimates from the study's models were far higher than current minimum estimates derived from stranding records and are closer to extrapolations adjusted for detection probabilities of dead whales. The most conservative model estimated ship strike mortality to be 17.94 individuals, 22 individuals, and 43.2 individuals per year for blue, humpback, and fin whales, respectively.<sup>9</sup>

Comparing across the study area, Rockwood, Calambokidis, and Jahncke found 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 (44.5 kilometers) 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 study authors 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.

*Existing voluntary 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

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<sup>6</sup> Ibid.

<sup>7</sup> 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*. Retrieved March 23, 2023, from <https://repository.library.noaa.gov/view/noaa/5015>

<sup>8</sup> NOAA Fisheries. (n.d.). *Marine Mammal Stock Assessment Reports by Species/Stock*. Retrieved March 23, 2023, from [www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessment-reports-species-stock](http://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessment-reports-species-stock)

incentivizes companies to incorporate sustainable shipping practices across their global supply chain.<sup>10</sup> The Protecting Blue Whales and Blue Skies 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 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.<sup>11</sup>

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 (see Figures 1 and 2). 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 percent 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.<sup>12</sup>

Since 2014, the existing program has achieved 526,211 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. 18 global shipping companies and 559 ships participated. In 2022, 23 companies participated, which represented 90 percent of all cargo traffic passing through the VSR zones. The program estimates a 35 to 50 percent reduction in ship strike risk in 2020 and 2021, which represent the proportional decreases in risk from participating vessels and not absolute estimates of mortality avoided.

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<sup>10</sup> California Marine Sanctuaries Foundation. (2022). *Protecting Blue Whales and Blue Skies VSR*. Retrieved March 23, 2023, from [www.bluewhalesblueskies.org/](http://www.bluewhalesblueskies.org/)

<sup>11</sup> Sanctuary Advisory Council Report to the Farallones and Cordell Bank National Marine Sanctuaries. (2012). *Vessel Strikes and Acoustic Impacts*. Retrieved March 23, 2023, from [https://nmssanctuaries.blob.core.windows.net/sanctuaries-prod/media/archive/protect/shipstrike/pdfs/strikes\\_acoustic.pdf](https://nmssanctuaries.blob.core.windows.net/sanctuaries-prod/media/archive/protect/shipstrike/pdfs/strikes_acoustic.pdf)

<sup>12</sup> 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*. Retrieved March 23, 2023, from <https://www.frontiersin.org/articles/10.3389/fmars.2022.833206/full>

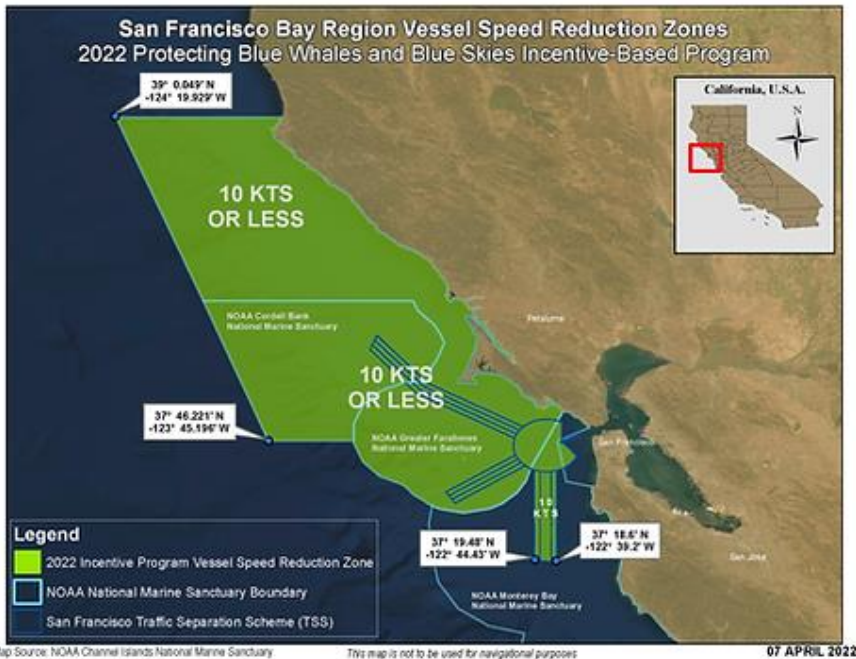


Figure 1. San Francisco Bay region VSR zones, 2022. Source: <https://www.bluewhalesblueskies.org/about>

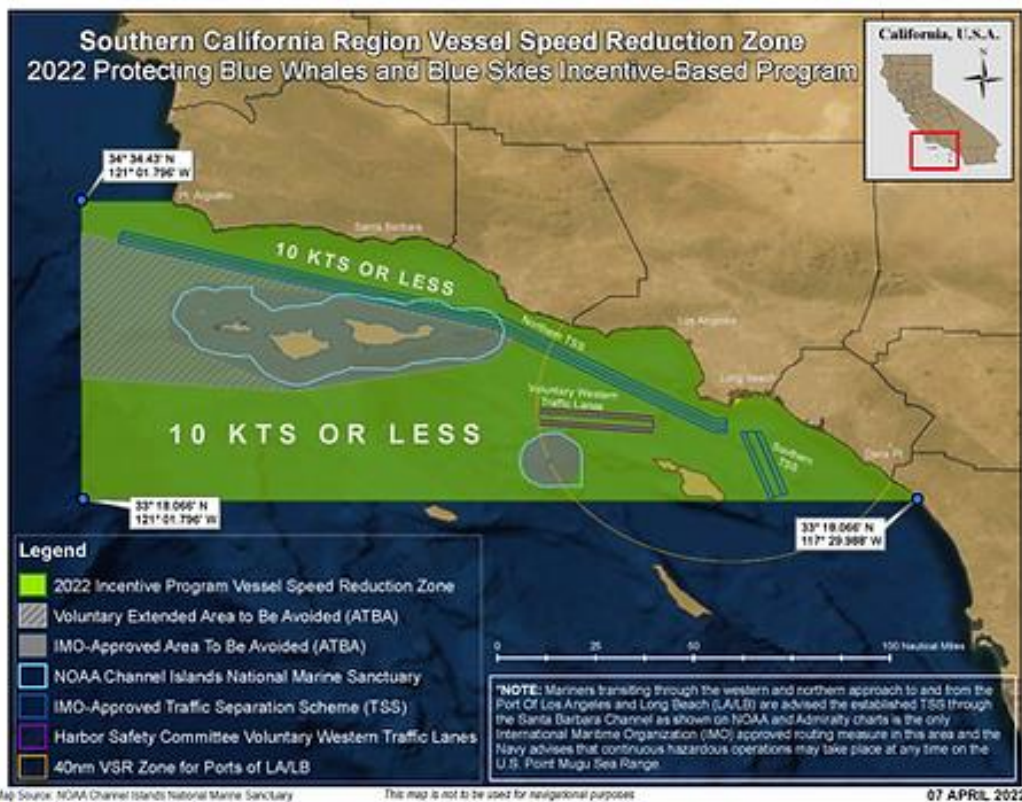


Figure 2. Southern California region VSR zone, 2022. Source: <https://www.bluewhalesblueskies.org/about>

*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, and the whale species considered here are not listed under the California

Endangered Species Act. 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.<sup>13</sup> NOAA rejected a petition to do the same in California waters in April 2022.<sup>14</sup>

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 percent 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.<sup>15</sup>

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.

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.

- 3) **Suggested committee amendment.** The U.S. Coast Guard is the lead federal maritime law enforcement agency and the only agency with both the authority and capability to enforce national and international law on the high seas, outer continental shelf, and inland from the U.S. Exclusive Economic Zone to inland waters. One of U.S. Coast Guard’s major operational missions programs is marine transportation system management. *The committee may wish to require that the U.S. Coast Guard be included in the organizations with which OPC would consult with when implementing the provisions of this bill.*
- 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

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<sup>13</sup> NOAA Fisheries. (n.d.). *Reducing Vessel Strikes to North Atlantic Right Whales*. Retrieved March 23, 2023, from [www.fisheries.noaa.gov/national/endangered-species-conservation/reducing-vessel-strikes-north-atlantic-right-whales](http://www.fisheries.noaa.gov/national/endangered-species-conservation/reducing-vessel-strikes-north-atlantic-right-whales)

<sup>14</sup> Coit, J. (April 2022). *NOAA Fisheries response to Center for Biological Diversity petition*. Retrieved March 23, 2023, from [https://www.biologicaldiversity.org/campaigns/boat\\_strikes/pdfs/CA-whales-ship-speed-petition-denial-2022-04-07.pdf](https://www.biologicaldiversity.org/campaigns/boat_strikes/pdfs/CA-whales-ship-speed-petition-denial-2022-04-07.pdf)

<sup>15</sup> Morten, J.; Freedman, R.; Adams, J.D. et al. (2022).

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.** SB 69 (Wiener), 2019-20 Session, 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. Required CARB to provide financial incentives to program participants based on the percent of distance traveled by a participating vessel through a vessel speed reduction zone at 10 knots or less, and allowed CARB to impose additional qualifying criteria. 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 Coastkeeper Alliance  
 California Marine Sanctuary Foundation  
 Central Coast Clean Cities Coalition  
 Central Coast Climate Collaborative  
 Environmental Action Committee of West Marin  
 Humboldt Baykeeper  
 Los Angeles Waterkeeper  
 Monterey Bay Air Resources District  
 Monterey Waterkeeper  
 Orange County Coastkeeper  
 Russian Riverkeeper  
 San Diego Coastkeeper  
 San Diego County Air Pollution Control District  
 San Luis Obispo County Air Pollution Control District  
 Santa Barbara Channelkeeper  
 Santa Barbara County Green Business Program  
 Santa Barbara; County of  
 Sierra Club California  
 The Otter Project  
 Ventura County Regional Energy Alliance  
 Wildcoast

### **Opposition**

None on file

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