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# SLOW AND STEADY SAVES THE WHALES: PREVENTING VESSEL STRIKES ON WHALES IN THE SANTA BARBARA CHANNEL

ANTHONY CUSATO\*

## INTRODUCTION

“While in the life the great whale’s body may have been a real terror to his foes, in his death his ghost becomes a powerless panic to a world.”<sup>1</sup> In the past, whales and humans (in boats) fought on the high seas. The humans fought for precious whale oil while the whales fought for their rights not to be murdered and turned into oil.<sup>2</sup> While those days are mostly long gone,<sup>3</sup> whales still face a serious threat of harm from humans in the form of vessel strikes, which is when a whale is struck by a vessel.<sup>4</sup> Vessel strikes are an issue of particular concern off the coast of Central and Southern California, in an area known as the Santa Barbara Channel.<sup>5</sup>

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<sup>1</sup> HERMAN MELVILLE, *MOBY DICK*, Ch. 69 (Project Gutenberg, 2017), <https://www.gutenberg.org/files/2701/2701-h/2701-h.htm> [<https://perma.cc/JU6Z-6GHM>].

<sup>2</sup> See generally *Commercial Fishers: Whaling*, SMITHSONIAN AM. HIST. MUSEUM, [https://americanhistory.si.edu/onthewater/exhibition/3\\_7.html](https://americanhistory.si.edu/onthewater/exhibition/3_7.html) [<https://perma.cc/FD6V-VD85>] (last visited Mar. 10, 2021).

<sup>3</sup> See INT’L WHALING COMM’N, RESOLUTION ON SPECIAL PERMITS FOR SCIENTIFIC RESEARCH (1986). Since 1986, commercial whaling is now illegal in the United States and many other countries. Exemptions for scientific research and sustenance whaling are available. Not all countries have stopped whaling. Japan continues whaling for “scientific purposes” and recently for commercial purposes. See *Japan Resumes Commercial Whaling After 30 Years*, BBC NEWS (July 1, 2019), <https://www.bbc.com/news/world-asia-48821797> [<https://perma.cc/KWN3-AFWG>]. Norway and Iceland have also continued whaling and fill out the top three, with Japan, in number of whales killed. See SANDRA ALTHERR ET AL., ANIMAL WELFARE INST., *FROZEN IN TIME: HOW MODERN NORWAY CLINGS TO ITS WHALING PAST* 8 (2016), <https://awionline.org/sites/default/files/uploads/documents/AWI-ML-NorwayReport-2016.pdf> [<https://perma.cc/83W4-MBJ8>].

<sup>4</sup> *Ship Strikes*, INT’L WHALING COMM’N, <https://iwc.int/ship-strikes> [<https://perma.cc/8LSY-JSCF>] (last visited Mar. 10, 2021). “Ship strikes” is another term used for a whale being struck by a vessel or ship. This Note will refer to these collisions as “vessel strikes.”

<sup>5</sup> Jesse Ryan, *Whales Are Facing a Big, Deadly Threat Along West Coast: Massive Ships*, WASH. POST (Mar. 18, 2019).

The Santa Barbara Channel is a key natural corridor for commercial shipping and whale migration.<sup>6</sup> Unfortunately, whales and commercial vessels come into contact too often and the results of these contacts are typically collisions resulting in the death of the whale.<sup>7</sup> This Note will look at the background of vessel strikes in the Santa Barbara Channel, the current measures taken to prevent them, and how additional steps can be taken to protect whale populations in the area. Although action has recently been taken by the United States government to reduce the frequency of vessel strikes on whales in the Santa Barbara Channel,<sup>8</sup> more action is necessary in order to protect whales.<sup>9</sup> A new plan centered around a mandatory vessel speed restriction zone will help reduce the frequency of vessel strikes on whales in the Santa Barbara Channel.

This Note will begin in Part I with a discussion of the background of the Santa Barbara Channel and vessel strikes in the Channel. This section will address the geography of the Santa Barbara Channel and why it is a heavy traffic corridor for ships and marine life. Then, in Part II, this Note will discuss the North Atlantic right whales and what has been done to protect them from vessel strikes on the East Coast. The North Atlantic right whales face similar issues with vessel strikes and there has been a more concentrated effort to reduce the frequency of those vessel strikes than in other areas of the country. This Note will look at the efforts made to protect the North Atlantic right whales as a key corollary for protections that should be applied to the Santa Barbara Channel. Then, in Part III, this Note will discuss the methods currently in place in the Santa Barbara Channel and why those methods are insufficient to properly address the issue of vessel strikes. In Part IV, this Note will discuss a new plan for reducing the frequency of vessel strikes in the Channel. The heart of the proposed plan is a permanent, mandatory vessel speed restriction zone in the Santa Barbara Channel. As part of the discussion

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<sup>6</sup> NOAA OFF. NAT'L MARINE SANCTUARIES, CHANNEL ISLANDS NATIONAL MARINE SANCTUARY CONDITION REPORT, 24–25, 39–40 (2016) [hereinafter CINMS CONDITION REPORT].

<sup>7</sup> See INT'L WHALING COMM'N, *supra* note 3; see also Leila Miller, *In the Santa Barbara Channel, an Underwater Sound System Tries to Keep Whales and Ships Apart*, L.A. TIMES (Aug. 16, 2019), <https://www.latimes.com/california/story/2019-08-14/in-the-santa-barbara-channel-an-underwater-sound-system-tries-to-keep-whales-and-ships-apart> [https://perma.cc/LE9M-W4YC].

<sup>8</sup> Tony Barboza, *Trying to Reduce Ship-Whale Collisions in Santa Barbara Channel*, L.A. TIMES (July 27, 2011), <https://www.latimes.com/local/la-xpm-2011-jul-27-la-me-adv-whale-lanes-20110727-story.html> [https://perma.cc/6F2J-YZ9X]. These efforts include moving shipping lanes and recommending voluntary vessel speed reductions.

<sup>9</sup> *Infra* Part III.

of the new plan, this Note will address jurisdiction over the Santa Barbara Channel, enforcement issues, and potential penalties.

## I. THE SANTA BARBARA CHANNEL

The Santa Barbara Channel (“the Channel”) is a natural channel formed by the Channel Islands (specifically the four northern most islands, sometimes referred to as the Santa Barbara Islands)<sup>10</sup> and the California mainland.<sup>11</sup> The Channel runs generally in an East to West direction, from Point Conception in Santa Barbara County to the City of Oxnard in Ventura County.<sup>12</sup> Due to its location between Southern and Central California, the Channel is an area of meeting ocean currents and mixing waters.<sup>13</sup> Strong upwellings in the Channel stir up nutrients in the water, promoting the growth of a rich and diverse food web.<sup>14</sup> This richness of food and nutrients makes the Channel an area of strong biological diversity and abundance.<sup>15</sup> Because of the importance of preserving the ecosystems of the Channel, the Channel Islands National Marine Sanctuary was established in 1980 to protect the area.<sup>16</sup> The ecological benefits of the Channel are especially important for whales that use the Channel as a migration route and feeding ground.<sup>17</sup>

Several species of large whales—including gray, blue, fin and humpback whales—frequently travel through the Channel when migrating.<sup>18</sup> Each year these whales migrate from the North Pacific, where they feed in the summer, down to the waters around Mexico in the winter to calf.<sup>19</sup> The migration route sends many whales through the Channel on both their northbound and southbound journeys, making them frequent visitors

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<sup>10</sup> See U.S. COAST GUARD, *Coast Pilot Guide* 7, at 321. Specifically: San Miguel Island, Santa Rosa Island, Santa Cruz Island, and Anacapa Island.

<sup>11</sup> See *Chart # 18720: Point Dume to Purisima Point*, NOAA OFF. COAST SURVEY, <https://charts.noaa.gov/PDFs/18720.pdf> [<https://perma.cc/2ZBJ-6WR3>]. A copy of this chart is provided in the Appendix as “Map 1” [hereinafter Map 1].

<sup>12</sup> *Santa Barbara Channel*, GOOGLEMAPS, <https://www.google.com/maps/@34.224701,-119.8960292,10z> [<https://perma.cc/V5PW-2RTS>] (last visited Mar. 10, 2021). A copy of this map display is provided in the Appendix as “Map 2.” This map can also be found by searching for “Santa Barbara Channel” in Google Maps and adjusting the frame to zoom out.

<sup>13</sup> M.C. Hendershott & C.D. Winant, *Surface Circulation in the Santa Barbara Channel*, 9 OCEANOGRAPHY 114, 114–15 (1996).

<sup>14</sup> See CINMS CONDITION REPORT, *supra* note 6, at 29.

<sup>15</sup> *Id.*

<sup>16</sup> *Id.* at 20.

<sup>17</sup> *Id.* at 39–40.

<sup>18</sup> *Id.*

<sup>19</sup> *Id.*

even though the whales do not actually reside in the Channel.<sup>20</sup> Whales are mammals that need to breathe air, so they are frequently on the surface, which puts them in the path of vessels that also travel through the Channel.<sup>21</sup>

The Channel is also a key shipping lane for commercial shipping on the West Coast. Thousands of commercial vessels travel through the Channel each year, primarily in route to and from the Port of Los Angeles and the Port of Long Beach.<sup>22</sup> These two ports are some of the busiest ports in the world with an estimated 4,000 vessel calls (arriving vessels) per year combined, approximately 9,000 total vessels going in and out of the ports each year, and around 3,700 vessels transiting the channel each year.<sup>23</sup> The Channel is important to shipping traffic because it saves vessels time when traveling along the West Coast.<sup>24</sup> The Ports of Los Angeles and Long Beach are not far from the Eastern edge of the Channel and going through the Channel is the most direct way into port when sailing along the coast.<sup>25</sup> Going around the Channel Islands into open water would be a longer trip for a vessel traveling along the West Coast, which means burning more fuel and adding costs.<sup>26</sup>

The high frequency of whales and vessels in the Channel is a dangerous combination. Collisions between vessels and whales is a widespread issue,<sup>27</sup> but the natural bottle neck of the Channel exacerbates the problem

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<sup>20</sup> See CINMS CONDITION REPORT, *supra* note 6, at 39–40.

<sup>21</sup> See *Cetaceans*, MARINE MAMMAL CTR., <https://www.marinemammalcenter.org/animal-care/learn-about-marine-mammals/cetaceans> [<https://perma.cc/R2A2-EJDU>] (last visited Mar. 10, 2021).

<sup>22</sup> See CINMS CONDITION REPORT, *supra* note 6, at 44.

<sup>23</sup> See *Port Facts FAQs: Facts at a Glance*, PORT OF LONG BEACH, <https://www.polb.com/port-info/port-facts-faqs/#facts-at-a-glance> [<https://perma.cc/273F-SUVL>] (last visited Mar. 10, 2021); *2018 Facts and Figures*, PORT OF LOS ANGELES, <https://www.portoflosangeles.org/business/statistics/facts-and-figures> [<https://perma.cc/5AY3-ETT2>] (last visited Mar. 10, 2021); CINMS CONDITION REPORT, *supra* note 6, at 44. Numbers for Channel transit are from 2017.

<sup>24</sup> *The Southern California Bight*, GOOGLE MAPS, <https://www.google.com/maps/@34.2256141,-119.2281435,8.31z> [<https://perma.cc/4SWJ-4M39>]. A copy of this map is provided in the Appendix as “Map 3”.

<sup>25</sup> *Id.*

<sup>26</sup> *Id.*

<sup>27</sup> The issue of vessel strikes is prevalent around the country. Vessel strikes on right whales along the East Coast have received the most attention. See *infra* Part II. Vessel strikes are also an issue around the San Francisco Bay Area, see *Protecting Whales from Vessel Strikes and Acoustic Impacts*, GREATER FARALLONES NAT'L MARINE SANCTUARY, <https://farallones.noaa.gov/eco/vesselstrikes/> [<https://perma.cc/4QZQ-ZDU2>] (last visited Mar. 10, 2021), the Seattle/Vancouver area, see generally Linda M. Nichol et al., *Risk of Lethal Vessel Strikes to Humpback and Fin Whales off the West Coast of Vancouver Island*,

in the area.<sup>28</sup> A conservative estimate of vessel strikes along the California coast between 2005 and 2010 was three whales per year.<sup>29</sup> That estimate only included endangered blue, fin, and humpback whales so it is likely below the actual amount.<sup>30</sup> Ten dead whales were attributed to vessel strikes along the California Coast in 2018.<sup>31</sup> Vessel strikes are a significant contributor to whale mortality, and often the information we have on these incidents is underestimating the severity of the problem.<sup>32</sup> A few whales per year getting struck by vessels may not sound like a lot, but to whale populations it is a substantial number.<sup>33</sup> Large whales are long lived, slow growing, and slow reproducing animals.<sup>34</sup> Considering that their numbers are already extremely depleted, losing even a few whales to vessel strikes can endanger the population as a whole.<sup>35</sup>

Primarily due to whaling in the 1800s and early 1900s, some of the whales that travel through the Channel are now considered threatened or endangered.<sup>36</sup> Blue whales, the largest animal in the world, and humpback whales, one of the most recognizable whales, are both frequent visitors to the Channel and are both listed as endangered.<sup>37</sup> Gray whales are the

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Canada, 32 ENDANGERED SPECIES RSCH. 373 (2017), Hawaii and Alaska. See LESLIE ABRAMSON ET AL., NOAA OFF. NAT'L MARINE SANCTUARIES, REDUCING THE THREAT OF SHIP STRIKES ON LARGE CETACEANS IN THE SANTA BARBARA CHANNEL REGION AND CHANNEL ISLANDS NATIONAL MARINE SANCTUARY: RECOMMENDATIONS AND CASE STUDIES, 19–27, 38–43 (2011).

<sup>28</sup> Ryan, *supra* note 5.

<sup>29</sup> J.V. Redfern et al., *Assessing the Risk of Ships Striking Large Whales in Marine Spatial Planning*, 27 CONSERVATION BIOLOGY no.2 292, 298 (2013).

<sup>30</sup> *Id.*

<sup>31</sup> See Ryan, *supra* note 5.

<sup>32</sup> JENNIFER BONE ET AL., BREN SCH. ENV'T SCI. & MGMT. UC SANTA BARBARA, VESSEL SPEED REDUCTION, AIR POLLUTION, AND WHALE STRIKE TRADEOFFS IN THE SANTA BARBARA CHANNEL REGION 10 (2016).

<sup>33</sup> See, e.g., Ladd M. Irvine et al., *Spatial and Temporal Occurrence of Blue Whales off the U.S. West Coast, with Implications for Management*, 9 PLOS ONE 1, 1 (2014). As of 2014, there were an estimated 2,500 blue whales along the West Coast. *Id.*

<sup>34</sup> See, e.g., *Species Directory: Gray Whale*, NOAA FISHERIES [hereinafter *Gray Whale*], <https://www.fisheries.noaa.gov/species/gray-whale> [https://perma.cc/FQ8N-JZ7E] (last visited Mar. 10, 2021).

<sup>35</sup> See, e.g., Irvine et al., *supra* note 33. Blue whale populations are sufficiently small to be negatively impacted by the loss of a few individuals per year. *Id.*

<sup>36</sup> *Environmental Conservation Online System (ECOS)*, U.S. FISH & WILDLIFE SERV., <https://ecos.fws.gov/ecp0/pub/SpeciesReport.do?groups=A&listingType=L&mapstatus=1> [https://perma.cc/GJ7P-4J2N] (last visited Mar. 10, 2021). Blue, fin, and humpback whales are listed as endangered species. See *id.*; see also SMITHSONIAN AM. HIST. MUSEUM, *supra* note 2.

<sup>37</sup> See *Species Directory: Blue Whale*, NOAA FISHERIES, <https://www.fisheries.noaa.gov/species/blue-whale> [https://perma.cc/5WK9-XUQB] (last visited Mar. 10, 2021); *Species Directory: Humpback Whale*, NOAA FISHERIES, <https://www.fisheries.noaa.gov/species>



most common whale in the Channel and were once endangered.<sup>38</sup> Thanks to conservation efforts, Eastern Pacific gray whales have rebounded nicely and are now considered stable.<sup>39</sup> Among the conservation efforts that have helped whale populations recover are the Marine Mammal Protection Act ("MMPA") and the Endangered Species Act ("ESA").<sup>40</sup> All whales in the exclusive economic zone of the United States (200 nautical miles offshore) are protected by the MMPA and the endangered species are additionally protected by the ESA.<sup>41</sup> These protections are important and have done a good job in helping whale populations recover but they do not adequately deal with the issues of vessel strikes. The issue of vessel strikes is difficult to control because vessel strikes are almost always accidents.<sup>42</sup> It is difficult for large container ships to see whales or avoid them even if they do see them.<sup>43</sup> The MMPA and ESA allow for a certain number of acceptable incidental takings (deaths) of protected species, which includes vessel strikes.<sup>44</sup> The protections of the MMPA and the ESA are rarely enforced for accidental vessel strikes, leaving a significant danger to whale populations largely unregulated.<sup>45</sup> It is expected that some vessel strikes will inevitably occur even with precautionary measures, but the frequency can be reduced and this Note will propose a plan to achieve that goal.

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/humpback-whale [<https://perma.cc/U8DZ-J9UM>] (last visited Mar. 10, 2021); CINMS CONDITION REPORT, *supra* note 6, at 39–40; *see also Species Directory: Fin Whale*, NOAA FISHERIES, <https://www.fisheries.noaa.gov/species/fin-whale> [<https://perma.cc/692F-5R9S>] (last visited Mar. 10, 2021). Fin whales are also frequent visitors to the Channel but are less recognizable than blues and humpbacks.

<sup>38</sup> *See Gray Whale*, *supra* note 34.

<sup>39</sup> *Id.*

<sup>40</sup> *See generally* Marine Mammal Protection Act of 1972 tit. I (regarding "Conservation and Protection of Marine Mammals"); Endangered Species Act of 1973 (ESA) §§ 9, 17 (2019).

<sup>41</sup> Marine Mammal Protection Act of 1972 tit. I; Endangered Species Act of 1973 (ESA) §§ 9, 17 (2019).

<sup>42</sup> *See* David W. Laist et al., *Collisions Between Ships and Whales*, 17 MARINE MAMMAL SCI. no.1 35, 48 (2001) [hereinafter Laist et al. (2001)]; *see also* NOAA OFF. GEN. COUNS., *infra* note 163, at 52. Intentionally hitting a whale is a violation of the MMPA, and possibly the ESA, with significant penalties for both.

<sup>43</sup> Laist et al. (2001), *supra* note 42, at 48; *see also* INT'L MAR. ORG., STANDARDS OF SHIP MANEUVERABILITY, Resolution MSC.137(76), 5 (Dec. 4, 2002). According to the International Maritime Organization, the standards for ship stopping ability is fifteen ship lengths and up to twenty ship lengths for larger vessels. For large vessels, stopping distance can be quite long. For example, a 400-foot vessel with a stopping ability of fifteen lengths would need around 6,000 feet to come to a complete stop. Actual stopping distance needed depends on a lot of factors, but it is a considerable distance for any large vessel. *Id.*

<sup>44</sup> *See* BONE ET AL., *supra* note 32, at 20.

<sup>45</sup> *Id.*

## II. VESSEL STRIKES ON THE NORTH ATLANTIC RIGHT WHALE

When developing a plan to reduce vessel strikes on the West Coast, it is helpful to look at the efforts that have been taken to address a similar problem on the East Coast. North Atlantic right whales were one of the most heavily targeted whales when whaling was still prevalent in the United States.<sup>46</sup> Due to extensive whaling, the populations of right whales were reduced to dangerously low levels.<sup>47</sup> Since whaling bans in the North Atlantic have gone into effect the populations have recovered somewhat,<sup>48</sup> but right whales are still facing a human threat from vessel strikes.<sup>49</sup> From 1990 to 2012, an estimated twenty-three right whales were killed by vessel strikes.<sup>50</sup> Due to the fact there are only an estimated 400 North Atlantic right whales left, vessel strikes on right whales along the East Coast have received a good deal of attention in an effort to reduce their frequency.<sup>51</sup> Vessel strikes have been most prevalent around the Boston Harbor/Cape Cod area, where heavy shipping traffic crossed paths with the whales near their summer feeding grounds, and the coast of Northern Florida/Southern Georgia, where right whales breed and calf in the winter.<sup>52</sup> Right whales, like most large whales in the Northern Hemisphere, are migratory and spend the summer in the north feeding, before heading south in the winter to breed and calf.<sup>53</sup> To reduce the number of right whales struck by vessels, several measures were enacted by the National Marine Fisheries Service (“NMFS”), a division of the National Oceanic and Atmospheric Administration (“NOAA”).<sup>54</sup>

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<sup>46</sup> *Right Whales*, NAT’L GEOGRAPHIC, <https://www.nationalgeographic.com/animals/mammals/group/right-whales/> [https://perma.cc/6FM5-RQ8J] (last visited Mar. 10, 2021).

<sup>47</sup> Peter Corkeron et al., *The Recovery of North Atlantic Right Whales*, *Eubalaena Glacialis, Has Been Constrained by Human-Caused Mortality*, 5 ROYAL SOC’Y OPEN SCI. 1, 2 (2018).

<sup>48</sup> *Id.*

<sup>49</sup> *North Atlantic Right Whales and the Dangers of Vessel Strikes and Entanglement*, NOAA FISHERIES (Feb. 19, 2020), <https://www.fisheries.noaa.gov/feature-story/north-atlantic-right-whales-and-dangers-vessel-strikes-and-entanglement> [https://perma.cc/2PAM-HZP6].

<sup>50</sup> David W. Laist et al., *Effectiveness of Mandatory Vessel Speed Limits for Protecting North Atlantic Right Whales*, 23 ENDANGERED SPECIES RSCH. 133, 133 (2014) [hereinafter Laist et al. (2014)].

<sup>51</sup> *North Atlantic Right Whales and the Dangers of Vessel Strikes and Entanglement*, *supra* note 49.

<sup>52</sup> *Reducing Ship Strikes to North Atlantic Right Whales*, NOAA FISHERIES, <https://www.fisheries.noaa.gov/national/endangered-species-conservation/reducing-ship-strikes-north-atlantic-right-whales> [https://perma.cc/DRX8-WT8J] (last visited Mar. 10, 2021).

<sup>53</sup> *Species Directory: North Atlantic Right Whale*, NOAA FISHERIES, <https://www.fisheries.noaa.gov/species/north-atlantic-right-whale> [https://perma.cc/8VBP-U6K9] (last visited Mar. 10, 2021).

<sup>54</sup> *Reducing Ship Strikes to North Atlantic Right Whales*, *supra* note 52.



A. *Steps Taken to Prevent Vessel Strikes on Right Whales*

The primary action taken by NMFS to reduce the frequency of vessel strikes for North Atlantic right whales along the East Coast was the implementation of a set of seasonal mandatory vessel speed restriction zones for certain vessels.<sup>55</sup> Beginning in 2008, and continuing today, all vessels that are sixty-five feet or longer (the majority of these would be commercial vessels) are required to slow to ten knots (ten nautical miles per hour) or less in designated areas along the East Coast.<sup>56</sup> The primary regions for these restrictions are the Boston Harbor/Cape Cod area, the coast of the Carolinas, and the coast around Northern Florida/Southern Georgia.<sup>57</sup> Considering the migratory nature of right whales, the speed restriction zones are only in effect for times when whales would likely be present.<sup>58</sup> For example, the area around Cape Cod is under mandatory speed restrictions from January 1st to May 15th, and the calving areas around Florida and Georgia are under mandatory speed restrictions from November 15th to April 15th.<sup>59</sup> These speed restriction zones were enacted by NMFS/NOAA through federal regulation, codified as 50 C.F.R. § 224.105.<sup>60</sup>

In addition to the seasonal speed restrictions, NMFS has also recommended route adjustments in key right whale areas to reduce the likelihood of a vessel strike.<sup>61</sup> NMFS can also implement Dynamic Management Areas (“DMA”) at any time that advise vessels to avoid a specific area or slow to ten knots or less while in that area.<sup>62</sup> These DMAs are intended to be a somewhat real-time way to avoid vessel strikes based on the current location of migrating whales.<sup>63</sup> A new DMA would be communicated

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<sup>55</sup> *Id.*

<sup>56</sup> *Id.*; see also *Proposed Rule To Eliminate the Expiration Date Contained in the Final Rule To Reduce the Threat of Ship Collisions With North Atlantic Right Whales*, 78 Fed. Reg. 34024 (June 6, 2013) (codified as 50 C.F.R. § 224.105). The right whale speed restriction zones were originally set to expire in 2013, five years after implementation, until the sunset clause was removed.

<sup>57</sup> *Reducing Ship Strikes to North Atlantic Right Whales*, *supra* note 52.

<sup>58</sup> *Id.*

<sup>59</sup> *Id.*

<sup>60</sup> *Final Rule To Implement Speed Restrictions to Reduce the Threat of Ship Collisions With North Atlantic Right Whales*, 73 Fed. Reg. 60173 (Oct. 10, 2010) (codified as 50 C.F.R. § 224.105).

<sup>61</sup> *Reducing Ship Strikes to North Atlantic Right Whales*, *supra* note 52.

<sup>62</sup> *Id.*

<sup>63</sup> See, e.g., *Voluntary Vessel Speed Restriction Zone East of Boston to Protect Right Whales*, NOAA FISHERIES (Apr. 22, 2019). A DMA was implemented East of Boston to protect a group of right whales in the area.

to vessels through standard maritime communication and would be updated to show only active areas.<sup>64</sup> DMAs are voluntary, thus vessels are not obligated to reduce speed while passing through them.<sup>65</sup> The range of right whales does not end at the U.S. borders as some of the whales travel much farther north into Canadian waters for a summer feeding ground.<sup>66</sup> Right whales also face the threat of vessel strikes in Canada, particularly around the Gulf of St. Lawrence.<sup>67</sup> In order to reduce the frequency of vessel strikes on right whales in their waters, Canada has taken similar action in implementing vessel speed restriction zones.<sup>68</sup>

*B. The Effectiveness of the Right Whale Protections*

The vessel speed restriction zones along the East Coast have helped reduce the occurrence of vessel strikes.<sup>69</sup> In the first five years of the new seasonal vessel speed restriction zones, there were only two right whales deaths from vessel strikes.<sup>70</sup> While it is difficult to show conclusive results (due to a variety of factors including lack of reporting and difficulty in locating dead whales),<sup>71</sup> the findings from studies have shown that the speed restrictions are helpful and should remain in place indefinitely.<sup>72</sup> The changing of shipping lanes and the DMAs have also contributed to the decline in vessel strikes on right whales.<sup>73</sup> While helpful as part of the larger scheme of seasonal speed restrictions, DMAs and changes to shipping lanes are insufficient on their own to significantly impact the number of vessel strikes because of low participation in voluntary DMAs and the impracticality of significantly moving shipping lanes.<sup>74</sup> The measures taken in the North Atlantic to protect right whales are a good blueprint for a plan to reduce the frequency of vessel strikes in the Santa Barbara Channel.

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<sup>64</sup> *Reducing Ship Strikes to North Atlantic Right Whales*, *supra* note 52.

<sup>65</sup> *Id.*

<sup>66</sup> *Species Directory: North Atlantic Right Whale*, *supra* note 53.

<sup>67</sup> *Protecting North Atlantic Right Whales from Collisions with Ships in the Gulf of St. Lawrence*, GOV. CAN., <https://www.tc.gc.ca/en/services/marine/navigation-marine-conditions/protecting-north-atlantic-right-whales-collisions-ships-gulf-st-lawrence.html> [<https://perma.cc/7DH4-P8YD>] (last visited Mar. 10, 2021).

<sup>68</sup> *Id.*

<sup>69</sup> See Laist et al. (2014), *supra* note 50, at 138.

<sup>70</sup> *Id.*

<sup>71</sup> See BONE ET AL., *supra* note 32, at 10.

<sup>72</sup> Laist et al. (2014), *supra* note 50, at 145.

<sup>73</sup> *Id.*

<sup>74</sup> *Id.* at 135, 140, 145.

### III. THE CURRENT STATE OF THE EFFORTS TO REDUCE VESSEL STRIKES IN THE SANTA BARBARA CHANNEL

#### A. *Voluntary Vessel Speed Reductions in the Channel*

Recently there has been an effort to reduce the speed of vessels in the Channel.<sup>75</sup> This effort has been a combination of the desires to reduce vessel strikes and to reduce emissions to help combat air pollution in the greater Los Angeles area.<sup>76</sup> There is currently more of an emphasis on reducing the emissions from ships and improving air quality, with the benefits to whales being only ancillary ones.<sup>77</sup>

One of the primary methods to reduce speeds in the Channel has been a speed reduction program (in conjunction with government agencies and non-profit organizations) called the Vessel Speed Reduction ("VSR") Program.<sup>78</sup> This program is based on similar programs from the Port of Los Angeles and the Port of Long Beach, in which vessels are offered a cash incentive in the form of a discount on docking fees in port in exchange for slowing down near the ports.<sup>79</sup> The VSR program takes the principles of voluntary slowdowns around the Ports of Los Angeles and Long Beach and applies them to the Channel in the hopes of improving air quality and reducing vessel strikes.<sup>80</sup> While the VSR program has a lot of potential and has helped reduce air pollution in the Channel area, it is not enough to make a major impact in reducing vessel strikes. Voluntary speed reduction programs are prone to low participation and have not had a major impact in protecting North Atlantic right whales.<sup>81</sup>

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<sup>75</sup> See *Slowing Ships Down for Cleaner Air and Whale Protection*, NAT'L MARINE SANCTUARIES (Aug. 4, 2014), <https://sanctuaries.noaa.gov/news/press/2014/pr080414.html> [<https://perma.cc/3D6H-9Y52>].

<sup>76</sup> See *Vessel Speed Reduction Initiative Fact Sheet*, SANTA BARBARA CNTY. AIR POLLUTION CONTROL DIST., <https://services.santabarbaraca.gov/CAP/MG109868/AS109872/AS109886/AS109887/AI113127/DO113128/2.PDF> [<https://perma.cc/P93R-D2HN>].

<sup>77</sup> *Id.*

<sup>78</sup> *Id.*

<sup>79</sup> See PORT OF L.A., VESSEL SPEED REDUCTION INCENTIVE PROGRAM GUIDELINES (last updated 2020), <https://kentico.portoflosangeles.org/getmedia/0e57c1fd-0997-424a-92f3-547f31713b11/VSR-Instruction-Guidelines-2020> [<https://perma.cc/3S6W-5EMA>]; *Port of Long Beach Green Flag Program Improves Air For 11 Years*, MARINE INSIGHT (last updated Dec. 7, 2020), <https://www.marineinsight.com/shipping-news/port-of-long-beach-green-flag-program-improves-air-for-11-years/> [<https://perma.cc/YS8X-DVY4>].

<sup>80</sup> *Vessel Speed Reduction Initiative Fact Sheet*, *supra* note 76.

<sup>81</sup> Laist et al. (2014), *supra* note 50, at 135.

*B. Moving Shipping Lanes in the Channel*

Another method that has been tried in order to reduce the number of vessel strikes in the Channel is adjusting the locations of the shipping lanes through the Channel.<sup>82</sup> In 2012, NOAA and the Coast Guard proposed, and the International Maritime Organization approved, to move the shipping lanes in the Channel one nautical mile north (towards the California mainland).<sup>83</sup> This action was taken in order to move the shipping lanes away from the Channel Islands because a study found that blue whales tended to congregate closer to the Islands to feed while in the Channel.<sup>84</sup> Regardless of where the shipping lanes are moved within the Channel, vessel strikes will remain an issue due to the geography of the area.<sup>85</sup> The natural bottleneck of the Channel creates close proximity between whales and ships no matter where the designated shipping lanes are.<sup>86</sup> While changes to the location of shipping lanes within the Channel are insufficient on their own to significantly reduce the frequency of vessel strikes, these changes can be helpful and can play an important part in protecting whales as part of a set of protections.<sup>87</sup>

*C. Whale Spotting and Tracking*

Tracking whales in and near the Channel is another method already in place in the Channel to help reduce the frequency of vessel strikes.<sup>88</sup> Giving vessels advance notice of the locations of whales in the area can help these vessels avoid the whales. One such way to notify vessels of whales in the area is Whale Alert, a phone app that tracks whale sightings in real time and plots them on a chart of the area.<sup>89</sup> This app also alerts users to speed restrictions, recommended routes, and DMAs for

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<sup>82</sup> See *Ship Strikes: Management*, CHANNEL ISLAND NAT'L MARINE SANCTUARY, [https://channelislands.noaa.gov/management/resource/ship\\_management.html](https://channelislands.noaa.gov/management/resource/ship_management.html) [<https://perma.cc/LK64-ADH3>] (last visited Mar. 10, 2021).

<sup>83</sup> *Id.*

<sup>84</sup> *Id.*

<sup>85</sup> Map 1, *supra* note 11 (image included in appendix).

<sup>86</sup> *Id.*

<sup>87</sup> See Laist et al. (2014), *supra* note 50, at 140.

<sup>88</sup> See *WhaleWatch*, NOAA FISHERIES, <https://www.fisheries.noaa.gov/west-coast/marine-mammal-protection/whalewatch> [<https://perma.cc/9PFT-V8Z5>] (last visited Mar. 10, 2021).

<sup>89</sup> See *Whale Alert*, NOAA FISHERIES, <https://www.fisheries.noaa.gov/resource/tool-app/whale-alert> [<https://perma.cc/UW9A-WTVB>] (last visited Mar. 10, 2021).

North Atlantic right whales.<sup>90</sup> An app like Whale Alert could be a helpful tool, but based on the app's current mediocre reviews it may need some improvements before it can be truly helpful in reducing vessel strikes.<sup>91</sup> Another method of locating whales in the Channel is acoustic listening stations.<sup>92</sup> These listening stations (basically underwater microphones) listen for the sounds of whales in the area.<sup>93</sup> Satellite tracking can also be a helpful tool for locating whales. If a whale has been tagged with a satellite tag, that tracking tag can be used to see if the whale is in the Channel.<sup>94</sup> A common problem for acoustic tracking and satellite tracking is: How can that information be relayed to vessels quickly and accurately? A method such as Whale Alert could be the answer but that has reliability and coverage concerns.<sup>95</sup> Until a solid method to relay location information to all vessels in real time is established and used by the vessels consistently, whale tracking techniques will not have a significant impact on reducing vessel strikes. Because changes to shipping lanes, voluntary speed reductions, and whale tracking are insufficient in reducing the frequency of vessel strikes in the Channel, a new plan is needed to curb the issue.

#### IV. A NEW PROPOSAL FOR THE SANTA BARBARA CHANNEL

##### A. *The Plan: Mandatory Vessel Speed Restrictions*

In order to make meaningful strides in reducing the number of vessel strikes in the Channel, mandatory vessel speed restrictions are necessary. In this proposed plan for the Channel, the key is a permanent and mandatory vessel speed restriction zone throughout the Channel. This proposal is similar to the measures taken to protect the North Atlantic right whales but with one key difference. Similar to the mandatory speed restriction areas in the Atlantic for right whales, all vessels sixty-five feet long or more will be required to slow to a speed of ten knots or less

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<sup>90</sup> *Id.*

<sup>91</sup> See *id.* *Whale Alert*, as of March 1, 2020, has a 3.0 rating on the Google Play Store. Conserve.io, *Whale Alert*, GOOGLE PLAY STORE, <https://play.google.com/store/apps/details?id=com.earthnc.whalealert> [<https://perma.cc/7W5Z-UNWY>] (last visited Mar. 10, 2021).

<sup>92</sup> See Miller, *supra* note 7.

<sup>93</sup> *Id.*

<sup>94</sup> See *WhaleWatch*, *supra* note 88. See also *Tracking Technology: The Science of Finding Whales*, NOAA FISHERIES (Feb. 1, 2017), <https://www.fisheries.noaa.gov/feature-story/tracking-technology-science-finding-whales> [<https://perma.cc/DB2C-DCBG>].

<sup>95</sup> See Conserve.io, *supra* note 91.

while transiting the Channel.<sup>96</sup> Unlike the speed restriction areas in the Atlantic, the Channel speed restriction area will not be a seasonal zone. The speed-restriction zone in the Channel will be permanent and year-round. A permanent speed restriction is necessary because of the volume of ship traffic and because whale traffic through the Channel is not truly season dependent.<sup>97</sup> While most large whales in the Pacific seasonally migrate, they are not all in the Channel at the same times.<sup>98</sup> Gray whales are typically in the Channel from November to May, while blue, fin, and humpback whales are most prevalent in the Channel from June through November.<sup>99</sup> While there are times of the year when fewer whales are present,<sup>100</sup> it is not worth the risk of vessel strikes to have the speed restrictions be seasonal. In addition to gray, blue, fin, and humpback whales, there are other whale species and marine mammals in the Channel that are in danger of being struck by vessels, such as sperm whales, orcas, and porpoises.<sup>101</sup> The combination of a steady flow of vessel traffic and the presence of marine mammals in the Channel for most of the year makes it necessary to implement a permanent speed restriction zone in order to ensure the safety of the whales and other marine mammals.

The voluntary speed reductions already in place in the Channel are a great step in the right direction, but they are not a large enough step to make the type of impact needed to protect whales. The speed restrictions would need to be mandatory because voluntary speed reductions programs are too unstable.<sup>102</sup> Voluntary programs hinge on participation of those involved, and other whale protection voluntary speed restrictions have been prone to low participation.<sup>103</sup> A negative fluctuation in participation numbers could negate any progress made toward whale protections if it results in even a small increase in the number of vessel strikes.<sup>104</sup> If some vessels are still going through the Channel at high speeds, there remains an unacceptable risk to whales in the area.

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<sup>96</sup> See *Reducing Ship Strikes to North Atlantic Right Whales*, *supra* note 52.

<sup>97</sup> See *Ship Strikes: Overview*, CHANNEL ISLANDS NAT'L MARINE SANCTUARY, [https://channelislands.noaa.gov/management/resource/ship\\_strikes.html](https://channelislands.noaa.gov/management/resource/ship_strikes.html) [https://perma.cc/WRH5-S5MR] (last visited Mar. 10, 2021).

<sup>98</sup> *Id.*

<sup>99</sup> *Id.*

<sup>100</sup> *Id.*

<sup>101</sup> *Id.*

<sup>102</sup> See Laist et al. (2014), *supra* note 50, at 140.

<sup>103</sup> *Id.*

<sup>104</sup> See Corkeron et al., *supra* note 47, at 2.



In addition to being too unstable and widespread, another potential issue with the voluntary speed reductions is that they are premised on reducing emissions from ships, meaning that any increased protections for whales are only an ancillary benefit.<sup>105</sup> While reducing emissions is a noble cause, the whales that travel through the Channel need to be given more attention and more protection. A mandatory speed reduction would help put whale conservation in the forefront and would also help reduce emissions.<sup>106</sup> Under the proposed plan, vessels will be slowing down, protecting whales while at the same time reducing emissions from these vessels.<sup>107</sup> The mandatory speed restrictions would save the local ports and non-profit organizations money that is currently used as an incentive for boats that slow down voluntarily.<sup>108</sup> That saved money could be put toward other conservation and air quality improvement programs, thereby helping to improve air quality in the area even more. The same benefits of lowering emissions from incentive based voluntary speed reductions in the Channel will be achieved through mandatory speed restrictions for whale protection.

The American Pilots' Association ("the Association") has raised a legitimate concern about mandatory speed restrictions that bears discussion.<sup>109</sup> The Association points out that operating large vessels at slow speeds in certain conditions could pose a safety risk to the vessel and crew because large vessel are more difficult to steer and control at slower speeds.<sup>110</sup> The safety of the crew should not be taken lightly, and this Note acknowledges that certain conditions would prevent a vessel from adhering to a mandatory speed restriction.<sup>111</sup> Fortunately, this issue has been addressed in the regulations designating the speed restriction areas along the East Coast.<sup>112</sup> The regulations allow for a vessel to deviate from the speed restrictions in order to ensure the safety of the vessel and crew.<sup>113</sup> Any such deviation must be noted in the ship's logbook and endorsed by

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<sup>105</sup> See *Vessel Speed Reduction Initiative Fact Sheet*, *supra* note 76.

<sup>106</sup> *Id.* Slowing down benefits both air quality and whale protection. It is simply a question of priorities as to which will be the primary benefit.

<sup>107</sup> *Id.*

<sup>108</sup> *Id.*; see also note 79, *supra*, and accompanying text.

<sup>109</sup> See American Pilots' Association Comments on the Final Environmental Impact Statement on Ship Strike Reduction Measures 2 (Sept. 29, 2008), [http://www.americanpilots.org/document\\_center/Activities/Comments\\_on\\_Final\\_EIS\\_for\\_Right\\_Whale\\_Rule\\_9\\_29\\_08.pdf](http://www.americanpilots.org/document_center/Activities/Comments_on_Final_EIS_for_Right_Whale_Rule_9_29_08.pdf) [<https://perma.cc/R4KD-AF8Z>].

<sup>110</sup> *Id.*

<sup>111</sup> *Id.*

<sup>112</sup> 50 C.F.R. 204.105(c) (2013).

<sup>113</sup> *Id.*

the master of the vessel.<sup>114</sup> The safety concerns of the Association also apply to vessels operating in the Channel, thus a similar provision would need to be included in the plan for the Channel's vessel speed restriction zone.

*B. The Economics of Slowing Down*

A main argument against mandatory speed restrictions is the financial burden to vessels resulting from a slowdown.<sup>115</sup> Vessels that slow-down will reach port later and in doing so may lose some money, partially due to increased overhead costs from operating longer.<sup>116</sup> Possible financial strains on the shipping industry from a slowdown include additional overhead and operating costs, missing scheduled delivery times, missing tidal windows to enter/exit ports, and increased times required to have (and pay) harbor workers to account for delays.<sup>117</sup> The shipping industry is right, there is a cost to slowing down.<sup>118</sup> However, the cost to the industry is relatively small. In the cost/benefit analysis for the right whale vessel speed restrictions, the cost to the shipping industry from the mandatory slowdowns was \$23.8 million in direct costs with an estimated \$15.8 million in indirect costs, for a combined total of \$39.6 million.<sup>119</sup> Forty million dollars (rounding up for convenience) per year may seem like a steep price for whale protection, but when considered in light of the total value of the East Coast shipping industry it is quite small. The value of the East Coast shipping industry is estimated at \$399.3 billion, as of 2009.<sup>120</sup> The \$40 million cost for the speed restriction zones is 0.001% of the total value of the of the industry. When the cost is presented against the total annual value of the industry, it is clear that speed restriction zones for right whale protections have a very limited impact on the shipping industry and seems like a small price to pay for protecting an endangered species.<sup>121</sup>

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<sup>114</sup> *Id.*

<sup>115</sup> See generally NATHAN ASSOCIATES, INC., ECONOMIC ANALYSIS OF NORTH ATLANTIC RIGHT WHALE SHIP STRIKE REDUCTION RULE (Dec. 2012), [https://media.fisheries.noaa.gov/dam-migration/right\\_whale\\_2012\\_economic\\_impact\\_and\\_scoping\\_study\\_report.pdf](https://media.fisheries.noaa.gov/dam-migration/right_whale_2012_economic_impact_and_scoping_study_report.pdf) [<https://perma.cc/3GPS-C8N4>]. This economic analysis was created by Nathan Associates, Inc. on behalf of NOAA.

<sup>116</sup> *Id.*

<sup>117</sup> *Id.* at 13–14.

<sup>118</sup> *Id.* at 15.

<sup>119</sup> *Id.* at 15, 19.

<sup>120</sup> *Id.* at Part 2, 17.

<sup>121</sup> See NATHAN ASSOCIATES, INC., *supra* note 115, at 17.

A similar analysis can be used to assess the cost of a speed restriction zone in the Channel. While exact numbers are difficult to obtain, a recent study has produced some helpful estimates.<sup>122</sup> This study proposed a couple different plans *and* did include a vessel speed restriction, although on a seasonal basis.<sup>123</sup> The estimated cost to the shipping industry from a vessel speed restriction, among other things, would be in the range of 0.0003% to 0.0006% of the total value of the Los Angeles/Long Beach ports.<sup>124</sup> That number is a hypothetical estimate, but it is an order of magnitude smaller than the impact to East Coast shipping from vessel speed restrictions.<sup>125</sup> A permanent vessel speed restriction will have a higher cost than a seasonal one so the impact on the shipping industry will likely be higher than the estimated impact from the aforementioned study.<sup>126</sup> The annual value of the Port of Los Angeles and the Port of Long Beach combined is around \$417 billion, so even though the plan proposed by this Note will put more of a burden on the shipping industry than the seasonal right whale speed restrictions, it will likely have a similarly minimal impact.<sup>127</sup> The cost of a few thousandths of a percent of the shipping industry's annual value is far outweighed by the benefits of protecting the several species of whales in the Channel.

Another counterargument to a claim of excessive financial burden on the shipping industry from mandatory speed restrictions is the concept of slow steaming. Vessels have been slowing down in select situations in order to save fuel for many years.<sup>128</sup> This slow steaming idea was most widespread in 2008 and 2009 when the financial crisis caused fuel prices to skyrocket.<sup>129</sup> As discussed above, speed restrictions have a cost associated

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<sup>122</sup> See generally Sarah B. Gonyo et al., *An Economic Analysis of Shipping Costs Related to Potential Changes in Vessel Operating Procedures To Manage the Co-occurrence of Maritime Vessel Traffic and Whales in the Channel Islands Region*, 177 OCEAN & COASTAL MGMT. 179 (2019).

<sup>123</sup> See *id.* at 180.

<sup>124</sup> *Id.* at 185.

<sup>125</sup> *Id.*

<sup>126</sup> *Id.* Restricting vessel speeds at all times will have a larger financial burden than a seasonal restriction because more vessels will be affected.

<sup>127</sup> Adie Tomer & Joseph W. Kane, *The Top 10 Metropolitan Port Complexes in the U.S.*, BROOKING INST. (July 1, 2015); see also NATHAN ASSOCIATES, INC., *supra* note 115, at 17.

<sup>128</sup> See Lee Hong Liang, *The Economics of Slow Steaming*, SEATRADE MAR. NEWS (Oct. 7, 2014).

<sup>129</sup> Peter Tirschwell, *Slow-Steaming Hardly an Emissions Silver Bullet*, J. COM. (May 1, 2019), [https://www.joc.com/maritime-news/container-lines/slow-steaming-hardly-emissions-silver-bullet\\_20190501.html?destination=node/3606071](https://www.joc.com/maritime-news/container-lines/slow-steaming-hardly-emissions-silver-bullet_20190501.html?destination=node/3606071) [<https://perma.cc/HNC7-93HK>].

with them but it is not a total loss.<sup>130</sup> Slowing down will help prevent vessel strikes while at the same time saving the vessels some money on fuel and reducing their emissions.<sup>131</sup>

A shipping industry argument against slow steaming to save money on fuel and reduce emissions from vessels is that slowing down will cause interference with liner schedules.<sup>132</sup> A schedule delay may create a need for shipping lines to add another ship to the liner schedule, which would result in more emissions and more fuel consumption than there would be with a normal schedule at a normal speed.<sup>133</sup> While this argument is valid on a global scale, it is largely irrelevant to this particular issue. The Channel is approximately seventy nautical miles long,<sup>134</sup> as a vessel would traverse it, so a slowdown would likely only cost a vessel a couple of hours in travel time. Average vessel speed in the Channel is around fourteen knots.<sup>135</sup> At that speed, the journey of seventy nautical miles through the Channel will take approximately five hours. When vessel speed is reduced to ten knots, sailing through the Channel will take about seven hours. Based on that math, the vessel speed restrictions will only cost the vessels traveling through the Channel about two hours in travel time on average.<sup>136</sup> This delay is longer than the average delay time from the right whale speed restrictions (twenty-two minute delay on average), but a relatively minor delay is very unlikely to affect global schedules in any major way.<sup>137</sup>

### C. *Jurisdiction, Implementing, and Enforcing the Proposed Plan*

Before discussing implementation and enforcement of the proposed plan, it is important to identify who has jurisdiction over the Channel

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<sup>130</sup> See NATHAN ASSOCIATES, INC., *supra* note 115, at 17.

<sup>131</sup> See Liang, *supra* note 128.

<sup>132</sup> See Mark Szakonyi, *Container Lines: Mandatory Slow-Steamming Would Hurt More than Help*, J. COM. (Sept. 18, 2019).

<sup>133</sup> *Id.*

<sup>134</sup> BONE ET AL., *supra* note 32, at 10; see also Map 1, *supra* note 11 (also included in the Appendix).

<sup>135</sup> See Gonyo et al., *supra* note 122, at 183.

<sup>136</sup> This math is a very rough approximation of the time required to transit the Channel. It is more of an illustration of how small a delay from a speed restriction would be, rather than an exact calculation. See generally NATHAN ASSOCIATES, INC., *supra* note 115. The delays experienced due to the right whale speed reduction zones varied based on vessel type.

<sup>137</sup> *Id.* at 5.

and who has the authority to implement vessel speed restrictions. The Channel is entirely within the territorial waters of the United States (within twelve nautical miles of the baseline).<sup>138</sup> The State of California has jurisdiction over state waters (three nautical miles from the baseline)<sup>139</sup> but this Note will assume that the issues addressed occur in federal waters. Therefore, the U.S. government has jurisdiction over waters of the Channel.<sup>140</sup> For the right whale seasonal speed restrictions, NOAA/NMFS cite to its rulemaking power, granted to it by Congress through the MMPA and ESA, as the authority to impose vessel speed restrictions in its territorial waters.<sup>141</sup> The United States would also have port state authority over most of the vessels because it is unlikely that any vessel traveling through the Channel is not coming from or heading to a U.S. port.<sup>142</sup> Even if a vessel is not heading to a U.S. port while in the Channel, that vessel is still required to follow natural resource regulations under the doctrine of innocent passage.<sup>143</sup> For the sake of simplicity, this Note will assume that all vessels traveling through the Channel are making a port call in the United States. For all jurisdictional questions and issues in the Note, consider the United States the port state of all vessels in the Channel and remember that the Channel is in the territorial waters of the United States.

Similar to the vessel speed restrictions in place on the East Coast for right whales, the speed restrictions in the Channel would need to be implemented through either federal regulations or federal statute.<sup>144</sup> Federal regulations from NOAA are the mostly likely route, but a federal

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<sup>138</sup> *U.S. Maritime Limits & Boundaries*, NOAA OFF. COAST SURV., <https://nauticalcharts.noaa.gov/data/us-maritime-limits-and-boundaries.html> [https://perma.cc/Z2YY-ZYF3] (last visited Mar. 10, 2021).

<sup>139</sup> Jonathon Gurish, *Overview of California Ocean and Coastal Laws With Reference to the Marine Environment*, CAL. OCEAN PROT. COUNCIL 11, [http://www.opc.ca.gov/webmaster/ftp/pdf/docs/Overview\\_Ocean\\_Coastal\\_Laws.pdf](http://www.opc.ca.gov/webmaster/ftp/pdf/docs/Overview_Ocean_Coastal_Laws.pdf) [https://perma.cc/2846-8N8U] (last visited Mar. 10, 2021).

<sup>140</sup> See *U.S. Maritime Limits & Boundaries*, *supra* note 138.

<sup>141</sup> See 73 Fed. Reg. 60173, at 60182 (Response to Comment 8); see also 16 U.S.C. § 1832 (1994); 16 U.S.C. § 1540 (1981).

<sup>142</sup> See 73 Fed. Reg. 60173, at 60182 (Response to Comment 8).

<sup>143</sup> See United Nations Convention on the Law of the Sea, Dec. 10, 1982, pt. II, § 3, art. 19(2), art. 21(1).

<sup>144</sup> See MAEVE P. CAREY, CONG. RSCH. SERV., IF10003, AN OVERVIEW OF FEDERAL REGULATIONS AND THE RULEMAKING PROCESS 1 (2019), <https://crsreports.congress.gov/product/pdf/IF/IF10003> [https://perma.cc/GE8G-XCGS]. Federal regulations have the same legal effect as a statute from Congress. NOAA has implemented the right whale speed restrictions through regulations. See 50 C.F.R. 204.105 (2013).

statute would work just as well, if Congress were so inclined.<sup>145</sup> Implementing the plan as a federal regulation is the most straightforward route and would give the plan legal effect once enacted.<sup>146</sup> As the new rules are implemented, the affected parties (the vessels that transit the Channel) will need to be properly notified through the standard forms of maritime communication and notice.<sup>147</sup>

Some may say that any legal action is only as good as the enforcement mechanism. A plan without any teeth could be considered more of a suggestion than an actual mandate, so enforcement is a critical part of the speed restriction plan. A government agency will have to enforce the proposed plan, but the question is which one will do it? The regulations that create the speed restriction zone are likely to be promulgated by NOAA/NMFS, therefore they would be primarily responsible for enforcement of the vessel speed restrictions.<sup>148</sup> Although the duty of enforcement naturally falls to NOAA/NMFS, they typically bring in a variety of other federal and state agencies to help with enforcement.<sup>149</sup> To assist NOAA/NMFS in enforcing the speed restrictions, there are several other government agencies available.<sup>150</sup> One option is the United States Coast Guard. The Coast Guard assists in enforcing the rules in place to protect right whales in the Atlantic and assists in enforcing the rules around the Channel Islands National Marine Sanctuary.<sup>151</sup> Another option is the California Department of Fish and Wildlife (“CDFW”). CDFW assists in regulating the Channel Islands National Marine Sanctuary and is already

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<sup>145</sup> See CAREY, *supra* note 144, at 1.

<sup>146</sup> See Administrative Procedures Act 5 U.S.C. §§ 553(b)–(d) (1966). To establish the speed restriction as a regulation, NOAA would first give notice of the proposed rule, then provide a time for public comment and response, and then publish the final rule in the Federal Register with a statement of the rule’s basis and purpose. The rule would then go into effect at least thirty days after publication in the Federal Register.

<sup>147</sup> Gregory Silber et al., *Compliance with Vessel Speed Restrictions to Protect North Atlantic Right Whales*, PEERJ 1, 3 (2014).

<sup>148</sup> *Enforcement*, NOAA FISHERIES, <https://www.fisheries.noaa.gov/topic/enforcement> [https://perma.cc/J2JU-HD5M] (last visited Mar. 10, 2021).

<sup>149</sup> See *Cooperative Enforcement*, NOAA FISHERIES, <https://www.fisheries.noaa.gov/topic/enforcement#cooperative-enforcement> [https://perma.cc/B75T-K658] (last visited Mar. 10, 2021). NOAA can get other federal agency or state agency help for enforcement through Cooperative Enforcement Agreements or Joint Enforcement Agreements.

<sup>150</sup> See *Management: Enforcement*, CHANNEL ISLAND NAT’L MARINE SANCTUARY, <https://channelislands.noaa.gov/management/resource/enforcement.html> [https://perma.cc/K6A7-GZHP] (last visited Mar. 10, 2021).

<sup>151</sup> *Id.*; see also *Missions: Maritime Law Enforcement, Living Marine Resources*, U.S. COAST GUARD, [https://www.mycg.uscg.mil/Missions/maritime\\_prevention/](https://www.mycg.uscg.mil/Missions/maritime_prevention/) [https://perma.cc/B69E-KLWE] (last visited Mar. 10, 2021).



enforcing many fisheries and other regulations in the area.<sup>152</sup> The National Parks Service (“NPS”) is also in the area to assist in enforcement because the Channel Islands themselves are a National Park.<sup>153</sup> The best option for enforcing the speed restrictions in the Channel is a collaborative effort with NOAA/NMFS, the Coast Guard, CDFW, and NPS. All of these agencies have an assortment of other responsibilities, so a collaborative effort is the best way to ensure that the speed restrictions are enforced and to ensure that no one agency’s resources are spread too thin.

In order to enforce the mandatory vessel speed reductions and to ensure vessels are in the designated shipping lanes, we will need to know where a ship is and how fast it is going. Fortunately, there is already a system in place to track vessel location and speed.<sup>154</sup> This system is called the Automatic Identification System (“AIS”) and it is required on most commercial vessels.<sup>155</sup> The AIS system broadcasts location, speed, and heading information for the vessel automatically to designated “listening” stations.<sup>156</sup> With this system, it is relatively easy to keep track of what vessels are up to while transiting through the Channel in real time.<sup>157</sup> Utilizing the AIS system to monitor vessel activity in the Channel is an efficient way to monitor compliance and eases the burden on the agencies tasked with enforcing the vessel speed restrictions by reducing the need for onsite enforcement.<sup>158</sup>

An important consideration when discussing enforcement of the speed restriction zone is the penalties available if a vessel is caught speeding. A penalty for speeding could be either punitive or nonpunitive, depending on the situation.<sup>159</sup> Nonpunitive action could include radio contact with vessels in violation or written warning letters and a punitive

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<sup>152</sup> See *Cooperative Enforcement*, *supra* note 149; *Management: Enforcement*, *supra* note 150; see also *Contact the Marine Region*, CAL. DEP’T FISH & WILDLIFE, <https://wildlife.ca.gov/Regions/Marine/Contact> [<https://perma.cc/Z7ZD-CJ75>] (last visited Mar. 10, 2021). CDFW has Marine Region offices on either side of the Channel (San Luis Obispo and Los Alamitos) and in the middle of the Channel (Santa Barbara).

<sup>153</sup> *Channel Islands National Park, California*, NAT’L PARKS SERV., <https://www.nps.gov/chis/index.htm> [<https://perma.cc/W5N7-HVNG>] (last visited Mar. 10, 2021); see also *Management: Enforcement*, *supra* note 150.

<sup>154</sup> *Automatic Identification System Overview*, U.S. COAST GUARD NAVIGATION CTR., <https://www.navcen.uscg.gov/?pageName=aismain> [<https://perma.cc/RG6H-GSWG>] (last visited Mar. 10, 2021).

<sup>155</sup> *Id.*

<sup>156</sup> *How AIS Works*, U.S. COAST GUARD NAVIGATION CTR., <https://www.navcen.uscg.gov/?pageName=AISworks> [<https://perma.cc/99CK-37GQ>] (last visited Mar. 10, 2021).

<sup>157</sup> *Id.* AIS information is updated about every sixty seconds.

<sup>158</sup> *Id.*

<sup>159</sup> See Silber et al., *supra* note 147, at 3–5.

action would be a notice of violation and a fine.<sup>160</sup> Nonpunitive measures have shown only minimal increases in compliance for right whale speed restriction zones, so nonpunitive enforcement is likely only feasible for a first offense.<sup>161</sup> In enforcing the right whale speed restriction zones, punitive actions, such as fines, had the greatest effect on increasing compliance.<sup>162</sup> Outside of some first-offense warnings, fines will be necessary to ensure maximum compliance with the speed restrictions in the Channel.

Under the NOAA Office of Enforcement, Civil Administrative Enforcement schedule, violations of right whale vessel speed restrictions fall under two categories, depending on whether the action is under the ESA or the MMPA.<sup>163</sup> Under both the ESA Schedule and the MMPA Schedule, a vessel speed violation is considered a Level IV offense.<sup>164</sup> A vessel speed violation should be charged under the ESA Schedule unless circumstances warrant charging it under the MMPA.<sup>165</sup> Since several of the whales that use the Channel are endangered or threatened, such as blues, fins, and humpbacks, the penalties should generally follow the ESA Schedule.<sup>166</sup> The MMPA Schedule is still available if circumstances arise that require its use, such as a violation that imperils non-endangered or non-threatened marine mammals.<sup>167</sup> When assessing a penalty under the ESA Schedule, the fine amount depends on a matrix consisting of the gravity of the offense and the level of culpability.<sup>168</sup> The levels of culpability include strict liability, negligent, reckless, and intentional.<sup>169</sup> Given that the base level of culpability is strict liability, unknowingly violating the speed restrictions will result in some sort of administrative punishment.<sup>170</sup> For a Level IV, strict liability offense, the ESA Schedule provides for a range of action, from a written warning to the statutory maximum fine of \$1,686 for unknowingly committing the violation.<sup>171</sup> For other levels of culpability, the ranges of punishments are from a \$5,000 minimum fine for negligent actions imperiling a threatened species to a \$52,596 fine (the statutory

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<sup>160</sup> *Id.*

<sup>161</sup> *Id.* at 11.

<sup>162</sup> *Id.*

<sup>163</sup> NOAA OFF. GEN. COUNS., ENF'T SECTION, POLICY FOR THE ASSESSMENT OF CIVIL ADMINISTRATIVE PENALTIES AND PERMIT SANCTIONS, 52, 58 (July 24, 2019).

<sup>164</sup> *Id.*

<sup>165</sup> *Id.* at 52, n.69.

<sup>166</sup> *Id.* at 52; see also *Environmental Conservation Online System (ECOS)*, *supra* note 36.

<sup>167</sup> See NOAA OFF. GEN. COUNS., *supra* note 163; see, e.g., *Gray Whale*, *supra* note 34.

<sup>168</sup> NOAA OFF. GEN. COUNS., *supra* note 163, at 27.

<sup>169</sup> *Id.*

<sup>170</sup> *Id.*

<sup>171</sup> *Id.*

maximum) for intentionally imperiling an endangered species.<sup>172</sup> The MMPA Schedule is very similar to the ESA Schedule except that the there is no strict liability and a lower statutory maximum fine.<sup>173</sup>

## CONCLUSION

In order to protect whales in the Santa Barbara Channel from vessel strikes, a new plan centered around a permanent and mandatory vessel speed restriction zone is needed. The Channel is a natural bottleneck, bringing whales and vessels in the Channel dangerously close together; and whales and vessels together in the same area is not a good combination.<sup>174</sup> When whales and vessels do come together the result is often a vessel strike, killing or severely injuring the whale.<sup>175</sup> The Channel is regularly used by tens of thousands of whales and thousands of vessels each year, further increasing the potential for a vessel strike.<sup>176</sup> In order to reduce the frequency of vessel strikes in the Channel, all vessels over sixty-five feet in length will be required to slow to ten knots or less while transiting the Channel.<sup>177</sup>

The plan proposed by this Note hinges on a permanent and mandatory vessel speed restriction zone in the Channel because that is the most effective way to reduce the frequency of vessel strikes. A seasonal restriction zone, like the ones on the East Coast implemented to protect right whales, will be inadequate in the Channel because the presence of whales and other marine mammals are not truly seasonal.<sup>178</sup> A seasonal restriction would only partially address the issue of vessel strikes in the Channel. The speed restrictions have to be mandatory because voluntary restrictions have been shown to be ineffective due to low participation.<sup>179</sup> Additional protection measures can be a helpful supplement to mandatory speed restrictions, but are unlikely to have a significant impact on their own in the absence of mandatory speed restrictions.<sup>180</sup>

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<sup>172</sup> *Id.*

<sup>173</sup> *Id.* at 28.

<sup>174</sup> See Map 1, *supra* note 11 (included in Appendix); see also *Ship Strikes*, *supra* note 4.

<sup>175</sup> See *Ship Strikes*, *supra* note 4.

<sup>176</sup> See CINMS CONDITION REPORT, *supra* note 6, at 44.

<sup>177</sup> *Supra* Section IV.A.

<sup>178</sup> See *Ship Strikes: Overview*, *supra* note 97.

<sup>179</sup> See Laist et al. (2014), *supra* note 50, at 135.

<sup>180</sup> *Supra* Part III.

While this plan will likely not sit well with some vessels and shipping interests,<sup>181</sup> the need to protect threatened and endangered species of whales should outweigh the costs of slowing ships down through the Channel. Shipping interests have accepted mandatory speed reductions in the Atlantic (albeit on a seasonal basis)<sup>182</sup> and should be prepared for a similar requirement in the Pacific. The financial burden on the shipping industry is minimal compared to the value of the industry and the benefits to whale protection far outweigh the costs.<sup>183</sup>

Mandatory and permanent vessel speed restrictions may seem like a drastic measure given how relatively infrequent vessel strikes are, but they are absolutely necessary to protect whale populations.<sup>184</sup> Whales are vulnerable creatures and humans have slaughtered shocking numbers of whales in the past. The United States may no longer kill whales for commercial gain, but humans still pose a significant threat to these depleted whale populations. As long as large ships are at sea there is a chance of a whale being struck and killed by a vessel. In order to reduce the frequency and likelihood of vessel strikes in the critical whale habitat of the Santa Barbara Channel, a permanent mandatory vessel speed restriction zone is imperative and must be implemented to protect the precious gentle giants that we share the ocean with. If a large vessel wants to sail through the Channel, it will have to do so at ten knots or less. While a speed restriction zone should be implemented as quickly as possible, vessels should keep it slow and steady as she goes. Because slow and steady saves the whales.

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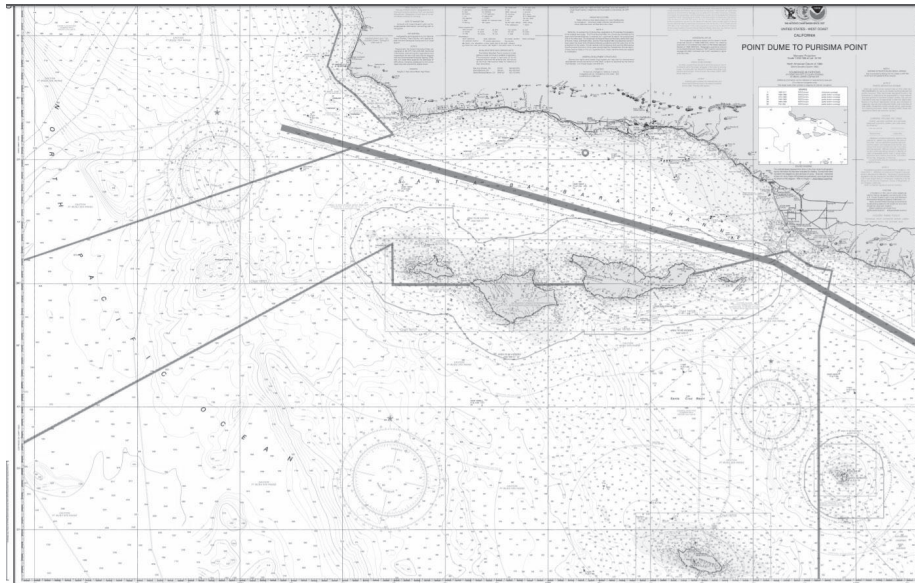
<sup>181</sup> *Supra* Section IV.B.

<sup>182</sup> See *Reducing Ship Strikes to North Atlantic Right Whales*, *supra* note 52.

<sup>183</sup> See NATHAN ASSOCIATES, INC., *supra* note 115, at 17.

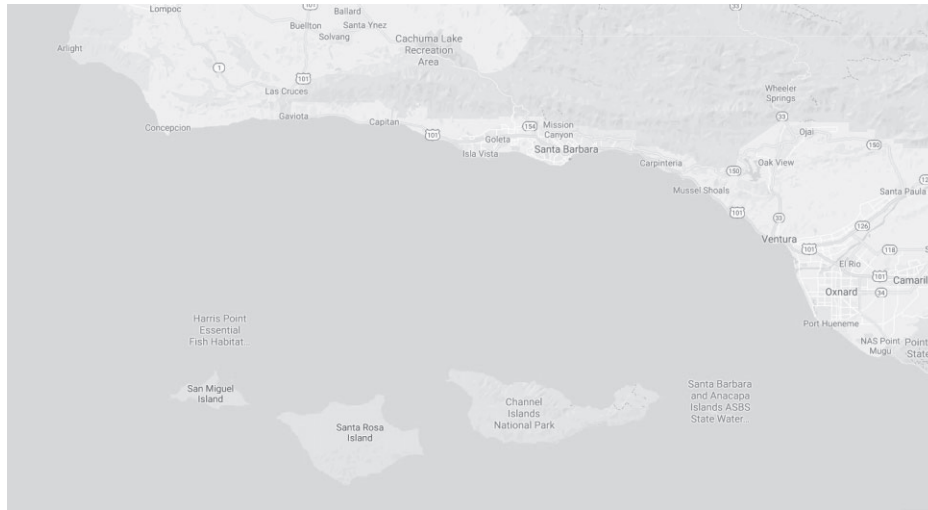
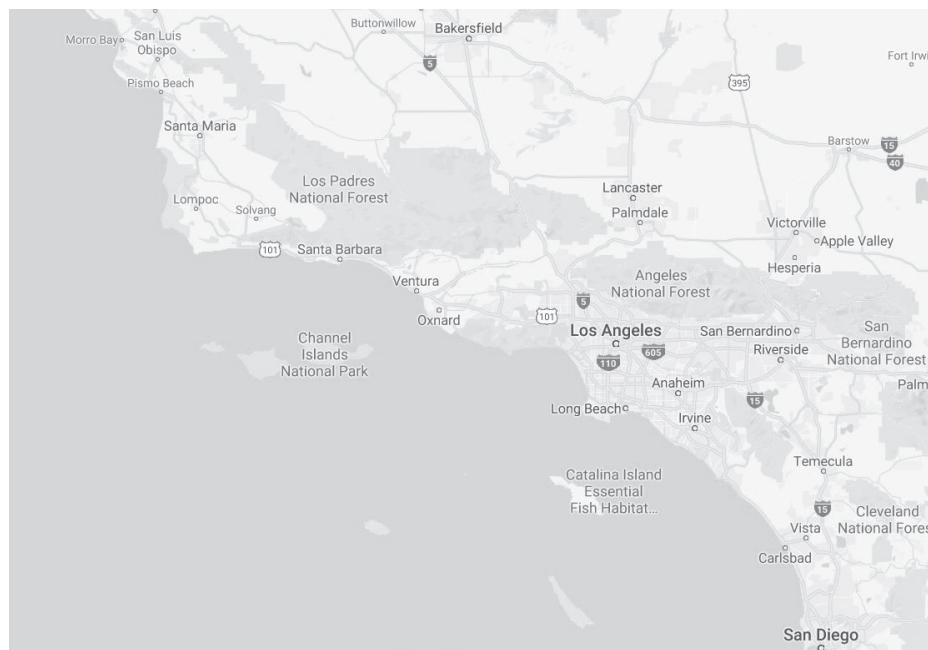
<sup>184</sup> See Redfern et al., *supra* note 29, at 298. Vessel strikes in the Channel are conservatively estimated at three per year. *Id.*

## APPENDIX

MAP 1: NOAA OFFICE OF THE COAST SURVEY, CHART# 18720 POINT DUME TO PURISIMA POINT<sup>185</sup>

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<sup>185</sup> See *supra* note 11.

MAP 2: GOOGLE MAPS, THE SANTA BARBARA CHANNEL<sup>186</sup>MAP 3: GOOGLE MAPS, THE SOUTHERN CALIFORNIA BIGHT<sup>187</sup><sup>186</sup> See *supra* note 12.<sup>187</sup> See *supra* note 24.