

Marine Shipping Working Group Proposal
Safe Passage: Balancing the Needs of Humans, Whales and Ships in the Santa Barbara Channel Region
January 2014 CINMS SAC Meeting

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Introduction:

The marine shipping industry is a major contributor to the national economy and provides transportation for goods around the world. The Santa Barbara Channel region is heavily transited by large commercial vessels traveling into and out of the ports of Long Beach and Los Angeles (two of the nation's busiest ports). Traditionally, thousands of cargo ships transit through the Santa Barbara Channel region each year utilizing an internationally approved Traffic Separation Scheme (TSS) within the Santa Barbara Channel. Since 2009, many cargo ships have been bypassing the TSS and instead traveling on the south side (backside) of the Channel Islands. The presence of vessels and changes in traffic patterns in the Channel region presents four distinct, local management challenges including the potential for: ship strikes on endangered whales, air pollution and greenhouse gas emissions, navigation safety concerns, and conflicts with naval operations. Each of these issues is discussed in more detail in Appendix A.

Based on interviews with key stakeholders, we know that the leading agencies at the federal, state, and local level are interested in developing new strategies and solutions to address Marine Shipping concerns in the Santa Barbara Channel region. Local congressional members, including Lois Capps and Julie Brownley, have expressed interest in seeking collaborative solutions to address Marine Shipping issues also. This is a very timely opportunity to show "good government" and "community effort" by collaborating in a proactive manner to develop more sustainable solutions to a complex problem.

For more than six years, the Channel Islands National Marine Sanctuary Advisory Council (SAC) has been the local forum for community and stakeholder conversations about how to meet the needs of the shipping industry while also protecting human health, natural resources, and sensitive marine species such as endangered whales. This proposal builds on the previous SAC community work to reduce the risk of ship strikes in the region.¹ The SAC is now poised to develop advice regarding a comprehensive strategy to address marine shipping issues in the Santa Barbara Channel region. This proposal represents a departure from a single issue, piece-meal approach. Instead, an integrated and collaborative process is proposed.

Proposal:

To address each of the concerns listed above, the SAC's Conservation Working Group (CWG) requests that the SAC establish a Marine Shipping Working Group with the goal of making recommendations to:

- (1) Reduce the risk of ship strikes on endangered whales,
- (2) Decrease air pollution and greenhouse gas emissions,
- (3) Improve navigational safety and promote efficient maritime shipping throughout the region, and
- (4) Manage ship traffic to minimize Naval operation interruptions and reduce conflicts with other ocean users (e.g. fishing and whale watching concessionaires).

The concept of such a group is unanimously supported by the stakeholders initially interviewed by Kristi Birney, the SAC Conservation Representative and Chair, and the CWG (see Appendix A for more details). In addition, representatives also indicated that they would be interested in representing their organization and participating in a Working Group process (see Participation section below).

¹ Abramson, L., Polefka, S., Hastings, S., Bor, K. 2009. Reducing the Threat of Ship Strikes on Large Cetaceans in the Santa Barbara Channel Region and Channel Islands National Marine Sanctuary. Prepared and adopted by the Channel Islands National Marine Sanctuary Advisory Council. 73 pgs. On line at www.channelislands.noaa.gov

Why the SAC?

The SAC is an established policy forum with key players who have expertise and knowledge on this topic. In addition, the SAC structure and openness to the public offers a unique venue for the community to address issues and concerns related to Marine Shipping. The SAC has historically recognized that the physical and biological resources of the Sanctuary (including whales) ebb, flow, and move in ocean currents at a far larger scale than Sanctuary boundaries. Previous Working Groups and Subcommittees have addressed issues and provided guidance on a wide range of topics that extend beyond the physical boundaries of the Sanctuary. These groups have included: Subcommittee on Large Cetaceans and Shipping, Military Working Group, Ports and Harbors Working Group, and Water Quality Subcommittee. Each of these previous Subcommittees or Working Groups addressed issues that were not confined to the Sanctuary boundaries, recognizing that human activities taking place beyond the Sanctuary can adversely impact natural resources inside the Sanctuary.

Scope:

A new SAC-supported Working Group would build on progress and lessons learned from efforts by agencies, scientists, and industry, including implementation of recommendations identified in the [SAC's 2009](#) report and the Gulf of the Farallones and Cordell Bank National Marine Sanctuaries' 2012 [Joint Working Group \(JWG\)](#) recommendations to reduce the risk of ship strikes on endangered and other whales. The new Marine Shipping Working Group would explore an array of potential solutions, including those that utilize dynamic management, to address shipping issues in the region (one of the unfulfilled SAC 2009 recommendations).

Approach:

The Working Group would explore, discuss, and evaluate options to address competing human uses of the ocean (e.g., military activities and commercial shipping) and impacts to Santa Barbara and the marine environment (e.g., air pollution and whale ship strikes) using a multi-stakeholder collaborative process. Stakeholders would utilize data sets, models (e.g. SeaSketch), and other tools available within the project budget. Collaborating with affected parties, the Working Group would explore solutions that evaluate ship routing options, incentives, and/or regulatory options to reduce ship speed. The Working Group would aim to find win-win solutions that offer the most logical approach for protecting whales, addressing human health issues, and fostering robust maritime commerce off Santa Barbara's coast in a more sustainable manner.

Participation:

The Marine Shipping Working Group would be supported by professional facilitation, the Sanctuary staff, and a California Sea Grant fellow.² Participants would serve as either Working Group members³ or technical experts.⁴ Participation in the Working Group could include (but would not be limited to) participation from the following SAC Members, outside experts, and other agencies:

Confirmed Participants:

- U.S. Navy, John Ugoretz
- NOAA Fisheries (NMFS), Elizabeth Petras and Jessica Redfern
- Marine Exchange of Southern California, Captain Kip Louttit
- Santa Barbara County Air Pollution Control District (APCD), Brian Shafritz and Mary Byrd
- Pacific Merchant Shipping Association (PMSA) (Shipping Industry), TL Garret
- Chamber of Shipping of America (Shipping Industry), Kathy Metcalf
- Cascadia Research (Scientific Community), John Calambokidis
- California Sea Grant, Phyllis Grifman and/or James Fawcett
- Environmental Defense Center (EDC) (Conservation Community), Kristi Birney

² Participation by some entities is dependent upon securing necessary funding.

³ Gulf of the Farallones and Cordell Bank JWG "members" included representatives from: Natural Resources Defense Council, Greenpeace, Pacific Marine Shipping Association, Chamber of Shipping, and others.

⁴ "Technical experts" included representatives from: U.S Coast Guard, NMFS, Southall Associates, Point Reyes Bird Observatory, Marine Mammal Commission, and others.

- Channel Islands National Marine Sanctuary (CINMS), Chris Mobley, Michael Murray, or Sean Hastings TBD (non-voting)

Possible Additional Participants:

- U.S. Coast Guard (USCG), Radiah Jones
- California Coastal Commission, Cassidy Teufel
- Channel Islands National Park (NPS), staff TBD
- Island Packers (Whale Watching and Island Concessionaire), Andrea Mills
- Education Seat and/or Sanctuary Education Team (SET) for technical support
- Additional participants may be identified including, but limited to:
 - Maersk and/or other shipping line representatives
 - Terminal operators and/or Port representatives

This list of names of ideal participants is based on initial consultation with agencies, organizations, or groups that took place during the convening assessment interviews. Each of the individuals listed above expressed interest in participating in a Working Group. However, a final membership and technical expert list will be presented at the March SAC meeting after confirming participation with each individual.

Proposed Outcomes:

The CWG proposes that the Marine Shipping Working Group aims to accomplish the following:

- Identify, collect, and review existing data;
- Review agency, industry, and stakeholder actions to date that have occurred in an effort to implement the 2009 SAC ship strike reduction recommendations;
 - Review existing table tracking progress on the SAC 2009 Ship Strike Report recommendations prepared by Kristi Birney.
 - Review the SET's evaluation of education and outreach outcomes from their Ship Strike and Large Cetaceans logic model (development of this evaluation is currently underway).
- Use the best available information, but also identify critical data gaps that should be addressed in an adaptive management approach in order to enhance confidence in the sustainability and validity of proposed management solutions;
- Identify solutions that address a variety of human uses (e.g. military activities, fishing, and commercial shipping) and potential impacts to the Santa Barbara region and the marine environment (e.g. air pollution and whale ship strikes), using an ocean planning tool (e.g. SeaSketch) as a supporting analysis tool;
- Prioritize options for ship routing within and outside the Santa Barbara Channel region for the geographic area spanning from Point Conception to the Ports of LA/Long Beach.⁵ Discussions might include options such as dynamic or seasonal routing, voluntary lanes, areas to be avoided, incentives for vessel speed reduction, and/or reconsideration of shipping lane adjustments as proposed by the USCG Port Access Route Study;
- Develop and issue a report with a suite of management recommendations that allows agency managers and the shipping industry to explore dynamic management and/or other management options;
- Integrate efforts by APCD, CINMS, and EDC to refine the incentive-based voluntary vessel speed reduction program; and
- Complete a work plan and timeline for implementing the SAC recommendations and identify potential funding sources.

Management Options:

The 2009 Ship Strike report indicated that NOAA should explore a range of management options including but not limited to: incentives and mandate vessel speed reduction, Season Management Areas (SMAs), Dynamic Management Areas (DMAs), and Areas to be Avoided (ATBAs). Thus, the Working Group will be building on lessons

⁵ The Marine Shipping Working Group may decide to narrow the geographic region once discussions begin.

learned from the previous six years of efforts by agencies, industry, and researchers to implement the 2009 SAC Ship Strike Report recommendations. Building on this strong foundation, it is expected that discussion will focus on how strategies can be implemented rather than if a strategy should be explored.

For example, dynamic management has the potential to provide both resource managers and shipping companies with options and flexibility.⁶ Dynamic management is a tool that is adaptive and responsive in real-time and would be transformative as it would allow managers to consider the temporal and geographic components of whale ship strikes, air pollution, and Navy testing and training operations. Dynamic management is an approach for managing vessel routing in areas where whales are detected and actions might include: temporary re-routing, incentives for vessel speed reduction, giving mariners the option to either proceed at a reduced speed or route around the dynamic management area (DMA), or delay entry into a DMA.⁷ Under a DMA approach, ships could slow down when whales are present, or choose alternative routes that avoid whales and avoid conflicts with other ocean users (e.g. navy operations). Shipping companies would also be able to consider operational alternatives to address economic effects. A Dynamic management system builds on the best available data and a strong communication network is needed between managers and ship operators. No implementation recommendations are pre-determined at this time and this DMA example is used to illustrate the types of discussions that are expected to take place within the Working Group.

Funding and Support:

Financial support for the Marine Shipping Working Group is currently being pursued by EDC, CINMS, and APCD. Total project costs are estimated to be approximately \$180,000- \$200,000 for the following expenses:

- Meeting support (meeting venue, food, travel stipends)
- Ocean planning tool (development of a computer model, integration of existing data, development of analytics, staff support for utilizing tool)
- California Sea Grant Fellow (hosted by CINMS)
- Facilitation

At this time a “planning grant” of \$65,000 has been secured from the Santa Barbara Foundation. Upon confirmation that all of the key players will participate in the Working Group, there is an opportunity to go back to the Santa Barbara Foundation for the additional funding that is needed for this project. The Working Group would not commence working until all of the necessary funding is secured. EDC and our partners are also exploring other opportunities to partner and leverage the Santa Barbara Foundation “planning grant” and fill project funding needs. If your agency or organization is willing and able to provide additional or matching funds for this innovative project please contact Kristi Birney at kbirney@EnvironmentalDefenseCenter.com.

Timeline

It is expected that the Marine Shipping Working Group would need between 12 and 18 months to work through the process and draft a report. Another 6 months would be needed for final report adoption and development of an implementation work plan. Specific activities and timeline include:

Phase One (2014-2015):

- New SAC Marine Shipping Working Group established (February/March 2014).
- Project funding pursued and secured and membership finalized (February- May 2014).

⁶ It is expected that the Working Group will explore a range of management options during stakeholder discussions and negotiations. The Working Group has been selected to demonstrate the flexibility and potential options under a dynamic management approach. For example, should an additional voluntary shipping lane be identified on the south side of the Islands, managers could seasonally direct ship traffic away from areas of high whale concentrations or areas where naval testing operations are taking place. However, if whales are present inside and outside the Channel, or if ships disregard rerouting suggestions, incentives could be offered to get ships to slow down in the presence of whales.

⁷ Dynamic Management Areas (2004) White Paper <http://www.nero.noaa.gov/shipstrike/news/DMA%20July%202004.pdf>. Accessed December 16, 2013.

- Working Group convenes (May-July 2014).
 - Working Group reviews existing data sets, modeling options, and other tools for data analysis.
 - An ocean planning tool (e.g. SeaSketch) is selected, populated, and analytics are created for data evaluation.
 - Marine Shipping Working Group members and subject matter experts provide guidance on data to include in the ocean planning tool and, where necessary, provide additional data for inclusion.
- Marine Shipping Working Group members engage in face-to-face and/or online discussions and utilize the ocean planning tool (e.g. SeaSketch) to explore a variety of solutions. Facilitation could be used to help with the meeting process and/or substantive discussions. (May 2014- June 2015).
 - We anticipate the Marine Shipping Working Group would hold 6-8 meetings with some combination of in-person and online meetings.
- Marine Shipping Working Group selects a suite of potential management actions (June 2015).

Phase Two (2015):

- Marine Shipping Working Group develops a comprehensive report (including a timeline) with a reasonable range of solutions to address local impacts and solutions to explore ship routing options and incentives for vessel speed reduction (July-December 2015).
- Work plan and strategies are developed for possible approaches for implementing report recommendations (January-December 2015).

Vessel Speed Reduction (VSR) Pilot:

Concurrently, but as a separate effort from the Marine Shipping Working Group, APCD, CINMS, and EDC staff will be working to determine the optimal structure for a VSR pilot project. This Pilot is being pursued for its potential benefits to air quality and additional co-benefits to whale conservation. Should funds become available for this effort it will include: using approximately \$20,000 of grant funding to financially incentivize a small number of ships (working with either one operator or several operators) to reduce speeds while transiting the Santa Barbara region during whale season (June- October). Lessons learned from this VSR pilot study can be used to determine: 1) how to implement a full scale VSR initiative for the Channel, and 2) how to integrate the VSR initiative into the Marine Shipping Working Group process. The agencies will work with industry on the rollout of the VSR incentive program. Technical advice, updates and lessons learned from this effort will be shared with the Working Group. In addition, lessons learned from the pilot will be used to strengthen proposals for additional VSR funding at the State level to implement a full VSR initiative.

Proposed Next Steps:

1. SAC approval of the Working Group process, general membership (specific members and technical experts to be determined by March meeting), and project proposal.
2. Kristi Birney, in partnership with the Executive Committee and CINMS staff, will prepare a report suggesting a process design for the Working Group which may include: an approach for sharing and/or obtaining data, a process timeline, techniques for breaking an impasse and handling conflicts, protocol to assist participants in securing approval from supervisors/constituents/clients not at the table, and protocols including the identification of a facilitator should one be needed.

SAC Next Steps:

This section outlines the general role the SAC will have over the life of the Marine Shipping Working Group.

- Authorize Working Group formation.
- Provide feedback/approval of Working Group process details.
- Receive periodic progress reports from the Working Group. This will allow for SAC questions and feedback to be addressed and incorporated along the way.

- SAC members will keep their constituencies informed about the Working Group progress along the way, reporting back with concerns, questions, or ideas.
- SAC provides a forum for sharing information along the way to a larger public and or media audience.
- Final approval of Working Group recommendations before they are officially given to the CINMS and shared with other agencies and groups. It is anticipated that the Working Group will be asking the SAC to approve final recommendations that would need to be distributed by the CINMS to other relevant agencies and organizations.

Appendix A

Appendix A provides background and support material for the Marine Shipping Working Group and includes the following topics:

- Relevance
- Issues
- Benefits
- Issues for Consideration

Relevance:

The CWG recently completed a review of the SAC's 2009 recommendations. This review showed that much effort has been put forward and a variety of different strategies have been employed to reduce the risk of lethal whale strikes. However, current policy strategies, such as voluntary vessel speed reduction notices, education and outreach, and adaptive management have failed to achieve voluntary compliance with ship speed recommendations. A review of cooperation with speed advisories found that less than 1% of ships traveled significantly slower than the requested voluntary speed of 10 knots.⁸ The Working Group may be interested in reviewing why the program was not successful with industry representatives participating in the Working Group.⁹ Short of regulation and lawsuits, collaborating with affected parties to explore solutions that organize ship traffic and reduce ship speed offers the most logical approach for protecting whales and addressing human health issues.

From July through November 2013, Kristi Birney and Sarah Pierce carried out more than 15 stakeholder interviews, reaching more than 20 individuals, to determine the level of interest in using a SAC Working Group as the forum for discussing the issues and challenges that marine shipping presents in the Santa Barbara Channel region. A memo summarizing the results of these interviews can be found in Appendix B. The interviewees expressed unanimous support for development of a formal SAC Working Group (e.g., Marine Shipping Working Group). Stakeholders identified the following issues or concerns that they would want addressed by this Working Group:

- Risk of whale ship strikes
- Air pollution from shipping in the Santa Barbara region
- Conflicts with other ocean users (i.e. naval operations) and concerns about navigational safety

Issues:

Thousands of cargo ships transit the Santa Barbara Channel region each year and some have recently rerouted outside (or backside) of the Channel Islands. Current traffic pattern data¹⁰ indicate that approximately 50% of ships are using the Santa Barbara Channel Traffic Separation Scheme (TSS) with the remaining 50% traveling on the backside of the Islands, through the Point Mugu Sea Range, where the Navy conducts missile testing and training exercises. This presents four distinct local challenges:

- (1) Whales and Ship Strikes: Ship strikes are a primary threat to recovering endangered whales. In 2007, four blue whales were struck and killed by cargo ships in a three-week period inside the Santa Barbara Channel. Since that time, on average, up to four dead whales wash ashore in our region (Point Conception to Ports of LA/Long Beach) annually as a result of ship strikes. Scientists estimate up to 10

⁸ Megan F. McKenna, Stephen L. Katz, Christopher Condit & Shaun Walbridge (2012): Response of Commercial Ships to a Voluntary Speed Reduction Measure: Are Voluntary Strategies Adequate for Mitigating Ship-Strike Risk?, Coastal Management, 40:6, 634-650

⁹ In discussions with the shipping industry, it was noted that some of the reasons that notifications were not followed included: the distance covered under the notice, notification issues with arriving transpacific vessels, manpower issues while the crew prepares for port arrival/departure, and vessel scheduling demands.

¹⁰ Marine Exchange of Southern California and Vessel Traffic Service of Los Angeles and Long Beach. Prepared by Kip Louttit 9/18/2013 for the Channel Islands Sanctuary Advisory Council Meeting September 20, 2013

times more strikes go undetected.¹¹ Blue whale populations are not recovering at expected levels and scientists believe that ship strikes are a primary reason for this slow recovery.¹²

- (2) Air Quality and Greenhouse Gases: Ships account for more than 50% of ozone-forming nitrogen oxides (NOx) in Santa Barbara County. Reducing ship emissions could help the County attain the state ozone standard, which it is not in compliance with now. In addition, ships emit greenhouse gases (GHG) and other air pollutants which negatively affect air quality and human health. While there are existing regulations and air quality programs in place designed to make progress towards meeting the National Ambient Air Quality Standards (NAAQS) under the Clean Air Act, these may not be sufficient for meeting more stringent state standards. Additional measures may be necessary to meet state standards. Under existing regulations, any affected source must do their fair share to reduce both criteria pollutants and greenhouse gas emissions. It is noted that it is the responsibility of the appropriate agencies, not the SAC to carry out these regulations. It is a reasonable expectation that the Working Group would compare the relative benefits of different alternative strategies or develop new approaches for air quality improvements, but would not be responsible for carrying out regulations.

- (3) Navigational Safety: Cargo ships traditionally traversed the Santa Barbara Channel region using internationally designated shipping lanes (TSS).¹³ However, in 2009, many of the cargo ships started bypassing the TSS within the Santa Barbara Channel, and instead traveling on the backside of the Channel Islands outside of any internationally recognized TSS. The US Coast Guard conducted a Port Access Route Study (PARS) that recommended a TSS be established on the backside of the islands for vessel safety. This recommendation was never pursued at the international or federal level. However, with the assistance of the U.S. Coast Guard and Marine Exchange, vessels traveling on the backside of the Islands have been monitored and are notified of any threats when they transit the area. There have been no reported instances of near vessel warnings, or accidents since the rerouting of vessels began in 2009.

Within the Santa Barbara Channel, the PARS study also concluded that the width of the Channel's TSS could be reduced by one nautical mile and navigational safety would be maintained while also reducing ship interaction with whales. This TSS modification went into effect in June of 2013.

- (4) Interruption of Naval Operation and Conflict with Existing Users: Cargo ships traveling on the backside of the Channel Islands can interrupt Navy operations. The Maritime Industry, through the Marine Exchange, has been cooperating with the Navy to avoid conflicts. The established communication system has been in place and working since 2009. Other than some delays, there have been no cancellations of Navy operations due to a vessel transiting the range.

Benefits:

The CWG believes that a new Marine Shipping Working Group would bring new partnerships together, provide a comprehensive view of the issues listed above, and explore management options that could provide win-win solutions including the following community benefits:

¹¹ Williams, R., S. Gero, L. Bejder, J. Calambokidis, S.D. Kraus, D. Lusseau, A.J. Read, and J. Robbins. 2011. Underestimating the damage: interpreting cetacean carcass recoveries in the context of the Deepwater Horizon/BP incident. *Conservation Letters* 4: 228-233.

¹² Berman-Kowalewski, M., F.M.D. Gulland, S. Wilkin, J. Calambokidis, B. Mate, J. Cordaro, D. Rotstein, J. St. Leger, P. Collins, K. Fahy, and S. Dover. 2010. Association between blue whale (*Balaenoptera musculus*) mortality and ship strikes along the California coast. *Aquatic Mammals* 36: 59-66

- Reduced Risk of Whale Strikes: Improved protection for whales through rerouting and/or slowing ships down when whales are present reduces the probability of lethal strikes.¹⁴ The Santa Barbara Channel is a critical feeding ground for several endangered baleen whale species including humpback, blue, and fin whales. The Channel region also has some of the highest densities of ship traffic. The co-occurrence of ships and whales in space and time elevates the risk of vessel strikes, and possible whale mortality. Improved protection in known feeding areas in and around the Channel Islands could help rebuild whale populations and improve ocean health. In addition, protecting whales is important for supporting the local whale watching industry and tourism which contributes to an ocean based economy.
- Improved Air Quality: Engines of large ships have reduced power demands at lower speeds, so reducing ship speeds will reduce emissions of NOx, particulates, air toxics, Black Carbon, and greenhouse gases. Reducing vessel speed to 12 knots will reduce shipping NOx and GHG emissions by more than 50%. One of the economic benefits to slowing ships down is moving Santa Barbara County closer to attaining the state ozone standard, which it is currently out of compliance with. Reduced emissions from ships would also positively impact local businesses which could find it difficult to meet stricter and stricter air regulations that will result if the County cannot reduce pollution from marine shipping. One factor to consider is that if a vessel increases speed, above its normal transit speed, to make up lost time, the benefits of slowing down may be lost due to the exponential relationship between energy consumption and vessel speed. However, speed reduction could still substantially reduce the local NOx load along the length of the Channel and enhance Santa Barbara County's efforts to come into compliance with the state ozone standard.
- Minimize Interruption of Navy Operations, Reduced Conflict with Other Ocean Users, and Improved Navigational Safety: Organizing and/or coordinating ship traffic can help minimize interruption of Navy operations and may reduce navigational safety concerns. The lack of a TSS on the backside of the Islands is viewed as a navigational safety concern by some stakeholders interviewed during the convening assessment. Cancellation of naval testing operations is costly to taxpayers and can reduce military readiness. As discussed above, the Maritime Industry, through the Marine Exchange, is cooperating with the Navy to avoid conflicts and a communication system has been established between the two entities. It is expected that the Working Group would create an opportunity for the shipping industry, the Marine Exchange, and the Navy to educate other stakeholders about this system.

Issues for Consideration:

During the CWG interviews, stakeholders identified several issues for consideration and further discussion including: Emission Control Area (ECA) air quality regulations and future ship routing patterns, and the implementation of recommendations. Each of these issues is discussed in more detail below:

- ECA Air Quality Regulations: It was noted by several stakeholders that the International Maritime Organization (IMO)-approved ECA air quality regulations for North America may result in a change to ship routing patterns, and there is uncertainty about how the shipping industry will respond to these new regulations. The ECA, enacted in 2012, aims to reduce air pollution from ships along the North American coastline. Regulations become more stringent over time and, in 2015, fuel sulfur content will be limited to 0.1% for any ship traveling within 200 nautical miles of the mainland coast. In 2015, the ECA fuel standard will match California's current fuel standard which extends 24 nautical miles from the mainland coast and shores of the Channel Islands. The IMO international regulations for Marine Vessels, and the established North American ECA, also aim to reduce NOx emissions. Engine standards that have been in place since 2011 reduce NOx emissions by 30%, and the new engine standards currently scheduled for

¹⁴ Vanderlaan, ASM, Taggart, CT, Serdynska, AR, Kenney, RD, and MW Brown. 2008. Reducing the risk of lethal encounters: vessels and right whales in the Bay of Fundy and on the Scotian Shelf. *Endangered Species Research*. 4:283-297. and Vanderlaan AMS, Taggart CT. 2009. Efficacy of a voluntary area to be avoided to reduce risk of lethal injury based on vessel speed. *Marine Mammal Science* 23: 145-156.

implementation in 2016 will reduce vessel NOx emissions by 80%. The NOx standards apply only to newly installed engines, so the high levels of NOx in the Channel from the existing fleet will not be reduced from these regulations for a number of years. In addition, there is a chance the ECA 2016 implementation date may be delayed five years. A new SAC Working Group would provide a venue for engaging industry representatives in discussions about current and future ship routing patterns. This proactive approach could enhance stakeholder and agency understanding of shipping industry routing plans in advance of the ECA regulation going into effect.

- Implementation of Recommendations: During the interview process several stakeholders raised questions about how recommendations would be implemented. The SAC Charter clarifies that a Working Group provides advice to the SAC, which in turn provides guidance regarding Sanctuary management to the Sanctuary Superintendent. In turn, the Superintendent is committed to sharing SAC advice with all relevant agencies that could implement the advice. The SAC is not a decision making body and there is no guarantee that recommendations will be implemented. However, it is anticipated that the Working Group will use a consensus building approach to develop recommendations that are mutually beneficial. Exploring win-win solutions could address multiple issues, benefit multiple stakeholders, and result in recommendations that agencies or other sectors may be interested in implementing. For example, the Gulf of the Farallones and Cordell Banks National Marine Sanctuaries' JWG Report indicates that implementation of recommendations is being pursued in partnership between different Working Group members such as NOAA and the U.S. Coast Guard. Additionally, the JWG effort has resulted in collaboration between the shipping industry and NOAA, with the shipping industry providing funding for the development of a whale identification poster, an iPhone/iPad Whale Spotter application, and additional whale data collection. A new Marine Shipping Working Group will provide a venue for the identification of specific needs for the Santa Barbara Channel region and strengthen partnerships (i.e. between NOAA, the U.S. Coast Guard, the Navy, or the shipping industry) that could address these needs.

Appendix B

Convening Assessment Memo Comprehensive Planning Approach for Marine Shipping in the Santa Barbara Channel Region November CINMS SAC meeting

Prepared by Kristy Birney, SAC Conservation Representative, and Sarah Pierce, Bren School 2013 Graduate

December 10, 2013

Introduction

During July through November 2013, a variety of stakeholder groups were interviewed to determine the level of interest in using a SAC Working Group as the forum to discuss issues and challenges marine shipping presents in the Santa Barbara Channel region. Appendix A has a full list of groups and agencies that were interviewed.

The interviews were framed in such a way so that stakeholders could address the following topics: Issues and Interests; Information and Needs; Participation; and Process Needs. See Appendix B for a full list of interview questions and the background information that was provided to each stakeholder.

This memo outlines general responses from the stakeholders. It does not discuss the position of any party. Responses are summarized below under the following categories:

- Issues
- Interest, Information, and Needs
- Other Issues for Consideration
- Process
- Proposed Next Steps

Issues:

Stakeholders were asked to identify the range of issues around ship routing in the Channel Islands region.

The following issues were identified by stakeholders:

- Whale strikes
- Underwater noise effects
- Emissions and air quality
- Ship to ship collisions
- Oil spills and hazardous discharges
- Ballast water discharges
- Impacts to sensitive or endangered species
- Safe vessel passage across the Santa Barbara Channel Traffic Separation Scheme (TSS)
- Navigational safety on the back side (south side) of the Channel Islands
- Conflicts with other ocean users
- Conflicts with naval testing operations
- Economic impacts to shipping industry

Several issues were identified by multiple stakeholders including: navigational safety concerns with interruption of Navy testing operations and conflict with other users, ship strikes on endangered whales, production of air emissions, impacts to costal water quality, and economic impacts to shipping industry. However, several stakeholders clarified that the overall volume of daily ship traffic the backside (south side) of the Channel Islands is fairly low and spread over a wide area. As a consequence traffic routing on the backside of the Channel Islands does not necessarily present a high threat to navigational safety and several stakeholders indicated that the relatively risk of a ship to ship collisions or oil spills is low.

Interest, Information, and Needs:

Stakeholders were asked to identify the interest, information, and financial needs for each individual or organization to participate in a facilitated, meaningful discussion to identify and evaluate potential solutions to the issues mentioned above.

Interest in Participation

- All stakeholders interviewed indicated that a new SAC Working Group would be the right forum for discussing concerns and issues around marine shipping. All stakeholders expressed either support or interest in participating in a SAC Working Group to discuss a comprehensive approach to addressing marine shipping issues and concerns.

Informational Needs

- Although some data gaps were identified, stakeholders appear to have enough data to move forward with a Working Group process.
- SeaSketch, an ocean planning platform, was identified as a possible tool that could be used to integrate data and allow working group members to compare different options and evaluate tradeoffs between options in an open stakeholder forum.
- There is an existing whale habitat model, developed by the Southwest Fisheries Science Center, NOAA Fisheries Service, that assesses the risk of ship strikes to humpback, blue, and fin whales from alternative ship routing in Southern California.
 - Model predictions for humpback and fin whale densities reflect the best existing available data. However, the model is missing some existing blue whale data. It was noted that if existing blue whale data was integrated, an updated analysis would more accurately reflect blue whale habitat in the Santa Barbara Channel region.

Data sources that were identified include:

- AIS data
- Marine Exchange
- Scripps HARPS for noise data
- PARS study
- Whale siting data
 - Naturalist Corps reporting
 - Aerial Survey Data
 - Whale Spotter App
- Air quality data
- Southwest Fisheries Science Center (habitat modeling and ship based whale surveys)

Data gaps that were identified include:

- Whale densities (by species and location) on the backside (south side) of the Channel Islands
- Real-time whale sighting data
- Drivers for shipping industry routing decisions
- Night-time location and behavior of whales
- Whale response to vessel speed and close approach
- Whale sighting data from shipping industry
- Vessels without AIS¹⁵

Financial Needs

¹⁵ There are vessels that do not transmit AIS data including: smaller vessels, Department of Defense, and Coast Guard vessels do not usually transmit AIS for national security reasons. If only AIS data is used then these vessels would not be included in the study.

- Some stakeholders identified that they would need financial assistance for staff time and/or travel expenses. Others noted that as long as the goals of the working group were in line with their organization's mission, they would most likely not need financial support.
- Several stakeholders noted that additional funding might be needed for data analysis (i.e. evaluation of AIS data or integration of existing whale data).

Other Issues for Consideration:

- Emission Control Area (ECA) air quality regulations and future traffic pattern routes in 2015
- Voluntary Western Approach Traffic Separation Scheme
 - organizes ship traffic into and out of the Ports of Long Beach and LA
- Working Group jurisdiction
- Implementation of recommendations

Process:

Stakeholders were asked to assist with defining a process for moving forward.

- Establishing a timeline was identified as important and stakeholders suggested timeframes ranging from one to two years for completing a final report and wrapping up the Working Group process.
- In general, stakeholders suggested that hiring a facilitator could be beneficial but may not be necessary.
- Grant funding to support a Working Group was identified as being helpful.¹⁶

Proposed Next Steps:

Based upon stakeholder feedback, the Conservation Working Group (CWG) believes that the issues around ship routing in the Channel Islands region are sufficiently framed to permit meaningful discussion between stakeholders. Interviewees expressed support for developing a formal SAC working group (e.g., Marine Shipping SAC Working Group) that would discuss challenges that ship routing inside and outside the Santa Barbara Channel presents to our community. Solutions may be explored to: 1) reduce conflicts with other ocean users and improve navigational safety, 2) reduce the risk of whale strikes, and 3) improve air quality in the Santa Barbara region.

Next, the CWG will utilize the input from stakeholder interviews to develop a full project proposal outlining the Scope, Participation, Proposed Outcomes, Deliverables, and Funding for a Marine Shipping SAC Working Group. This proposal will be circulated over the next two months with individual stakeholders that were interviewed to get feedback and input on the full proposal. Feedback will be assimilated into a final proposal that will be presented to the SAC for consideration during the January 2014 meeting.

¹⁶ Grant funding is being investigated and pursued to support the Working Group including funds for: meeting support including facilitation, development of an ocean planning tool for integration of data and science, a Sea Grant fellow to assist with running and organizing the Working Group and work product development, and funding for stipends to offset travel costs.

Appendix A (Convening Assessment Memo):

Agencies and Organizations Interviewed:

- NOAA Fisheries Service
 - West Coast Region
 - Southwest Fisheries Science Center
- U.S. Coast Guard
- Santa Barbara County Air Pollution Control District
- Channel Islands National Marine Sanctuary
- National Parks Service
- California Coastal Commission
- Cascadia Research
- Marine Exchange
- Island Packers
- Navy
- Ocean Conservancy
- Shipping Industry
- Sea Grant
- Captain Aschemeyer, Former Executive Director, Marine Exchange