CHANNEL ISLANDS NATIONAL MARINE SANCTUARY ADVISORY COUNCIL

# Marine Shipping Working Group

## Management Options: Pros and Cons

For Discussion at the Marine Shipping Working Group Meeting on October 7th and 8th

This is a summary and synthesis of the Marine Shipping Working Group member discussion forums in SeaSketch and notes from a Marine Shipping Working Group webinar on August 11, 2015. The points below reflect the opinions, views and comments of individual working group members to date on the following management option topics: 1) Dynamic vs. Seasonal Management, 2) Vessel Speed Reduction (VSR), 3) Recommended Tracks vs. Traffic Separation Scheme (TSS), and 4) Routing South of the Channel Islands.

### 1. Dynamic vs. Seasonal Management

Seasonal management areas (SMAs) would involve a pre-determined time frame for a specific management strategy (e.g. VSR) to be observed. Dynamic management areas (DMAs) would depend on real time data, such as a specific number of whales observed in a certain area, to trigger management.
*Rationale*: Both seasonal and dynamic management allow for resource managers to determine the time of year where management strategies need to be in place to protect whales, rather than having a given strategy in place at all times. Right Whale SMAs on the east coast are effective at achieving the management goal of slowing vessels to 10 knots.
*Pros/Cons*:

- SMAs are easier to manage and are more precautionary than DMAs.
- DMAs are more effective at managing real time threat to whales.
- Not all ships have an English speaking watchstander on the bridge outside 25 miles from the Ports of LA/LB, making communication of real-time DMAs challenging.
- SMAs allow for more effective communication, as there is time to translate and distribute the request with enough time for the ships to plan and incorporate SMAs in to schedules.
- With both strategies, resource managers are able to lift management when it is not necessary, improving efficiency (more in DMAs than SMAs). SMAs may lead to some time periods where whales are present in lower densities but ships are still taking precautionary measures, leading to inefficiencies.
- DMAs require significant data collection and consistent communication/distribution of that data. This may require new technology or communications plans (data collection and transmission tools/methods). Data collection may be expensive.
- Recent evidence indicates that voluntary management without the use of incentives does not work.
- The Marine Exchange Vessel Traffic Services currently uses dynamic management effectively to coordinate the synchronization of ships in to and out of the port because they have access to necessary data and communications paths. Additionally, this is how the Navy and Air Force manage shipping traffic in the Sea Range to reduce interruptions of Naval and Air Force operations
- When used with VSR, an SMA is better than a DMA for air quality because it allows for advanced planning, so reduced speeds can be incorporated into schedules, rather than relying on speed up.

### 2. Vessel Speed Reduction

Recommended speed in a defined area, either managed seasonally or dynamically.
*Rationale*: VSR both reduces the risk of fatal ship collisions with whales and reduces emissions (NOx and greenhouse gases). The 2014 VSR Trial included 27 transits to 12 knots or less resulting in the following: estimated 50 percent reduction in the chance of a fatal ship strike on a whale; more than 16 tons of NOx emissions reductions from the participating ships, a more than 50 percent reduction from baseline emissions; and approximately 500 metric tons of regional greenhouse gas emission reductions, a more than 50 percent reduction from baseline.
*Pros/Cons*:

- VSR reduces the risk of fatal ship collisions with whales.
- VSR reduces emissions.

- Recent evidence suggests that voluntary VSR does not work due to low cooperation from ships.
- Incentivized VSR does work under certain conditions. Two examples: 1) Ports of Los Angeles and Long Beach have incentivized speed reduction (12 knots within 40 miles of the ports), which has resulted in compliance from a majority of ships; 2) success of the 2014 VSR Trial in the Santa Barbara Channel, which offered monetary incentives.
- Mandatory or incentivized VSR may encourage ships to use other routes (this can be both a pro and a con, depending on the assumptions used).
- For an incentivized transit, the funds would need to be identified and secured.
- Monetary incentives and good public relations incentives are both effective. However, not all carriers are driven by an environmentally conscious image so PR alone is not likely to gain support from the entire industry.
- VSR increases transit time for ships.
- Note: Specific speed matters to the discussion, both from a whale conservation and ship safety perspective. 12 knots may be a sweet spot for whale conservation, air quality, and safety of navigation.
- There may be ways to make VSR mandatory at some times and incentivized at others.
- VSR may result in a "speed up" when ships leave the VSR zone.

## 3. Recommended Tracks vs. Traffic Separation Scheme (TSS)

A recommended track is a route that has been specifically examined to ensure insofar as possible that it minimizes risks and along which ships are advised to navigate. A TSS separates opposing streams of vessel traffic, and segregates inshore traffic, by appropriate means—for example, separations lines or zones—and by the establishment of traffic lanes.

*Rationale*: Recommended tracks have been implemented in Monterey Bay National Marine Sanctuary to reduce the risk of collisions. The TSS in the Channel was altered to avoid high predicted densities of whales. Both have high compliance.

*Pros/Cons*:

- Once established, these routes may not be able to be changed as quickly as whale migratory routes may change.
- A recommended track does not go through a domestic rulemaking process. A TSS does.

## 4. Routing South of the Islands (Western Approach)

Organize traffic with the goal of optimizing the location of ships with respect to predicted whale densities.

*Rationale*: Routing can minimize interaction with whales and ships and has been successfully implemented in other programs with similar conservation goals.

*Pros/Cons*:

- In regards to current data, we have conflicting opinions:
    - A) Whale data is limited and there are questions as to whether it is sufficient to determine an optimal route south of the islands; versus
    - B) Whale data is sufficient to design an optimal route south of the islands that would minimize overlap of shipping traffic and whales.
- The shipping industry feels a western approach is not needed to improve navigational safety in this region at this time.
- A route would limit the area of vessel traffic, making room for the development of a more cost effective research program in this area (as it is limited in area).
- Organizing traffic south of the islands would make it easier to monitor and manage ships in that area.
- An established route south of the islands may either 1) cause more ships to transit south of the islands or 2) organize the traffic that is *already transiting south of the islands* in to a more predictable traffic pattern.
- Any increase in vessel traffic south of the Islands could have potentially negative impacts on the Navy's efforts to conduct its testing operations.
- There are not specific air quality benefits associated with routing south of the islands.