Results from 2017 Vessel Speed Reduction (VSR) Incentive Program

Board of Directors
Santa Barbara County
Air Pollution Control District

Our Mission: To protect the people and the environment of Santa Barbara County from the effects of air pollution.

Aeron Arlin Genet
Director / APCO

Mary Byrd, Community Programs Supervisor
March 15, 2018
2017 VSR Zones

2017 Vessel Speed Reduction Incentive-Based Program

2017 Vessel Speed Reduction Incentive Program Eligibility Map For Greater Farallones, Cordell Bank and Monterey Bay National Marine Sanctuaries

Legend:
- Vessel Speed Reduction Incentive Eligibility Zones
- 2017 VSR Zones
- IMO-approved Traffic Separation Scheme
- IMO-adapted Area To Be Avoided (ATSA)
- National Marine Sanctuary Boundary
- 40knot VSR Zone for Ports of LA/I/B

Santa Barbara County Air Pollution Control District
VSR 2017 Funding

- Incentives and Administrative Costs: $205,000
  - District: $40,000
  - Other funders: Ventura and Bay Area air districts, National Marine Sanctuary Foundation, Volgenau Foundation

- Emissions Calculations for VSR Zones and Study of Area between: $41,000
  - Shared by the three air districts
VSR 2017

- $1,000 incentive for slowing to 12 knots or less (each region)
- Additional $250 bonus for slowing to 10 knots (each region)
- Max incentive if ship slowed to 10 knots in both Zones: $2500

<table>
<thead>
<tr>
<th>2017 Program Numbers</th>
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<tbody>
<tr>
<td>Transit applications received</td>
</tr>
<tr>
<td>Shipping lines enrolled</td>
</tr>
<tr>
<td>Number of different vessels</td>
</tr>
<tr>
<td>Total number of transits enrolled</td>
</tr>
<tr>
<td>How many slowed to 10 knots or less</td>
</tr>
</tbody>
</table>
VSR 2017 Emissions Reductions

• Reduced 83.5 tons of smog-forming nitrogen oxides (NOx) and 2,630 metric tons of greenhouse gases (GHG)
  – 73.7 tons NOx and 2,327 metric tons of GHG reduced in Channel region
    (much longer speed-reduction zone)
Cost Effectiveness

- Approximately $3,000/ton of NOx reduced
- Includes both regions: incentives, administrative costs, and costs of calculations
- Does not include: staff time
  - NOAA
  - Air districts
Study of Area Between the VSR Zones

- Asked companies to try not to speed up in between
- 68 transits included both regions
- Compared with previous baseline speeds in the area between (approx. 200 nautical miles)
  - 40 vessels slowed down compared to previous baseline
  - 11 vessels traveled at same speed as baseline
  - 17 vessels sped up
- 75 percent either slowed down or did not speed up in between compared w/ historical speeds
## Snapshot: VSR Programs

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2016</th>
<th>2017</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Santa Barbara Channel</td>
<td>Channel and Outside Channel Islands</td>
<td>Channel region (both routes) and SF Bay Area</td>
</tr>
<tr>
<td></td>
<td>2 air districts,</td>
<td>2 air districts,</td>
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<td></td>
<td>1 national marine sanctuary,</td>
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<td></td>
<td>27 transits</td>
<td>50 transits</td>
<td>143 transits</td>
</tr>
<tr>
<td></td>
<td>Emission Reductions:</td>
<td>Emission Reductions:</td>
<td>Emission Reductions:</td>
</tr>
<tr>
<td></td>
<td>12.4 tons NOx</td>
<td>25.6 tons NOx</td>
<td>83.5 tons NOx</td>
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<tr>
<td></td>
<td>500+ metric tons GHG</td>
<td>1,000+ metric tons GHG</td>
<td>2,630 metric tons GHG</td>
</tr>
</tbody>
</table>
VSR 2017 Examples

- 100% success rates for participating transits

“K” Line (24 transits)

Yang Ming (26 transits)
VSR 2017 Examples

• New shipping company participant for 2017 Program: MSC (Mediterranean Shipping Company)
  – Slowed 28 transits
  – Provided voluntary whale sightings report
Takeaways

• Expansion successful
• Tracking specific vessels and transits
  – Emission reductions are real and specific to the vessels
  – Difficult to implement in an expanded program
  – Company fleet averages may be better for larger program
    • Impact on emission reductions calculations
Takeaways

- Not producing significant speed up in other areas
- Recognition is meaningful to shipping companies
- Blue Whales and Blue Skies Act
- Looking ahead

U.S. Congressman Alan Lowenthal discusses Blue Whales and Blue Skies Act (HR3682) at March 1st event
Contact Information

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