Future of US Clean Drayage Programs

Harbors, Navigation, and Environment Seminar
American Association of Port Authorities

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Stabilize the Earth’s climate by reducing greenhouse gas emissions.
Safeguard human health from exposure to toxic chemicals and pollution.
Protect the world’s oceans from pollution and overfishing.
Preserve and restore biodiversity.
The Dangerous Health Costs of Diesel

• Emissions from diesel engines, the most common engines in freight, are estimated to shorten nearly 21,000 lives per year.

• Studies demonstrate that people who work around diesel equipment, including truck drivers, railroad workers and equipment operators are more likely to develop lung cancer than workers who are not exposed to diesel emissions.

• A recent report highlights climate and health impacts of black carbon, a product of incomplete combustion of fossil fuels and the most light-absorbing component of particulate matter.

• It is estimated that for every dollar spent on reducing freight-related pollution, health and productivity benefits would be between $3 and $8.
Port Drayage Programs

➢ Where we are
➢ Where we are going
➢ How we will get there
Top 20 US Container Ports by TEU
Current status

- About ½ of highest volume container ports have established a port drayage program
- Varied implementation practices
- Varied performance metrics and goals
- Inconsistent financial support
- Issues of transparency
- Unlevel playing field
## Comparison of drayage truck standards adopted at US Ports

<table>
<thead>
<tr>
<th>Model Year</th>
<th>LA/LB</th>
<th>CARB</th>
<th>SEA/TAC</th>
<th>OAKLAND</th>
<th>NY/NJ</th>
<th>HOUSTON</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port</td>
<td>Start Date</td>
<td>New(er) Trucks</td>
<td>Retrofit Trucks</td>
<td>Total Millions</td>
<td>Funding</td>
<td>Grant</td>
</tr>
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<td>------------</td>
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<td>----------------</td>
<td>--------------------------------------------------------------------------</td>
<td>-------------------------------------------------</td>
</tr>
<tr>
<td>Oakland</td>
<td>July 2009</td>
<td>200</td>
<td>800</td>
<td>$22</td>
<td>Port ($5 million); BAAQMD ($5 million); CARB ($10 million); EPA ($2 million)</td>
<td>Up to $50,000 for scrapping pre-94</td>
</tr>
<tr>
<td>Boston</td>
<td>Jan. 2012</td>
<td></td>
<td></td>
<td>$1.5</td>
<td>Port ($1 million); EPA/DERA ($500,000)</td>
<td>Up to $25,000 for 2007 or newer</td>
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<tr>
<td>Virginia</td>
<td>Jan. 2008</td>
<td>80</td>
<td>160</td>
<td>$3</td>
<td>Port ($445,000); EPA/DERA ($1.2 million)</td>
<td>Up to $6,000 for retrofit; 15/20k for 07 or newer</td>
</tr>
<tr>
<td>Baltimore</td>
<td></td>
<td></td>
<td></td>
<td>$3</td>
<td>EPA/DERA</td>
<td>Up to $15,000 for scrapping pre-03</td>
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<tr>
<td>Houston</td>
<td>Aug. 2009</td>
<td>50</td>
<td></td>
<td>$9</td>
<td>Port ($50,000); EPA/DERA ($9 million); TCEQ ($5 million)</td>
<td>Up to $50,000 for new truck</td>
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<tr>
<td>LA/LB</td>
<td>2007</td>
<td>2,100</td>
<td></td>
<td>$202</td>
<td>Port ($166 million); Other ($36 million)</td>
<td>Up to $50,000 for new truck</td>
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<tr>
<td>NY/NJ</td>
<td>May 2010</td>
<td></td>
<td></td>
<td>$28</td>
<td>Port ($21 million); EPA/DERA ($7 million)</td>
<td>Up to $60,000 for 04 or newer</td>
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<tr>
<td>Seattle</td>
<td>2009</td>
<td>269</td>
<td></td>
<td>$2</td>
<td>Port ($1.5 million); State DEP ($350,000)</td>
<td>Up to $5,000 for scrapping pre-94</td>
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<tr>
<td>Tacoma</td>
<td>Nov. 2011</td>
<td></td>
<td></td>
<td>$3</td>
<td>CMAQ ($2.5 million); State DEP ($400,000)</td>
<td>Up to $5,000 for scrapping pre-94 for 04 to 06 &amp; up to $30,000 for scrapping pre-94 for 07 or newer</td>
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<tr>
<td>Charleston</td>
<td>Sep. 2011</td>
<td>30</td>
<td></td>
<td>$3</td>
<td>Port/SCDHEQ ($2-$3 million)</td>
<td>Up to $5,000 for scrapping pre-94 for 04 or newer</td>
</tr>
</tbody>
</table>
The Future

- 2007+ models
- Transparency in performance metrics
- Higher dray rates to drivers
- Additional port support
- Inland ports
- Panama Canal
- Additional shipper/exporter support
- Incorporation of operational efficiencies
- Level playing field
- Mandate versus no mandate
Improvements in Heavy Duty Engine Standards
How we can get there

- Clean air strategy plans
- Truck registries
- Emission inventories
- Leverage existing tools
  - SmartWay Drayflechet model
  - IANA
Other Considerations

- Price of diesel
- Driver shortages
- Shale gas operations
- Availability of grant funds
- Clean air standards
- Congestion
- New engine standards
- New technologies

http://www.eia.gov/petroleum/gasdiesel/
Counties With Monitors Violating Primary 8-hour Ground-level Ozone Standards
0.060 - 0.070 parts per million
(Based on 2006 – 2008 Air Quality Data)
EPA will not designate areas as nonattainment on these data, but likely on 2008 – 2010 data which are expected to show improved air quality.

Notes:
1. No monitored counties outside the continental U.S. violate.
2. EPA is proposing to determine compliance with a revised primary ozone standard by rounding the 3-year average to three decimal places.
These final standards will achieve from nine to 23 percent reduction in emissions and fuel consumption from affected tractors over the 2010 baselines.
Cost per Ton for Issued Grants