Smart Growth Compatibility with Goods Movement and Environmental Justice

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NEJAC’s Definition of GM

“.. distribution of freight by all modes of transportation including marine, air, rail, and truck. GM facilities include seaports, airports, and land ports of entry (border crossings), rail yards and rail lines, highways and high truck traffic roads, and warehouse and distribution centers..”
International Cargo ↑ 2-3X by 2020
Projected Growth Areas
Growth in U.S. Ports

- Almost all the U.S. ports are planning expansions to accommodate more imports
- California ports vital to Pacific Rim freight traffic
  - e.g. Los Angeles and Long Beach port complex
    - likely to increase throughput 2-3 times by 2020
## Port expansion (Los Angeles) - TEUs

<table>
<thead>
<tr>
<th>Year</th>
<th>In-bound</th>
<th>Out-bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>2.6 M</td>
<td>2.2 M</td>
</tr>
<tr>
<td>2010</td>
<td>4.0 M</td>
<td>3.7 M</td>
</tr>
</tbody>
</table>
Increasing Port-Related NOx Emissions
(South Coast Air Basin, 2005 & 2020)

(Tons /Day)

Port-related
On-road Trucks
Gasoline Vehicles
Off-road Equipment
Industrial Sources

2005
2020
NOx from Goods Movement
(without new strategies)

2005
- 1,080 tons/day
- Trucks*
- Ships
- Locomotives
- Harbor Craft
- Cargo Equipment

2020
- 720 tons/day
- Trucks*
- Ships

* Includes TRUs
## 2005 Health Impacts from Goods Movement

<table>
<thead>
<tr>
<th>Case</th>
<th>Cases/Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Premature death*</td>
<td>2,400</td>
</tr>
<tr>
<td>Hospital admissions (heart)</td>
<td>830</td>
</tr>
<tr>
<td>Hospital admissions (lung)</td>
<td>2,000</td>
</tr>
<tr>
<td>Acute bronchitis</td>
<td>5,100</td>
</tr>
<tr>
<td>Asthma/other respiratory</td>
<td>62,000</td>
</tr>
<tr>
<td>Absences/restricted days</td>
<td>4.4 million</td>
</tr>
</tbody>
</table>

*Uncertainty range is 720 to 4,100 deaths/year*
Ports—Increased Cancer Risk
Ports of Los Angeles & Long Beach*

Year 2002

<table>
<thead>
<tr>
<th>Lifetime Risk (chances/million)</th>
<th>People impacted</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;500</td>
<td>50,000</td>
</tr>
<tr>
<td>&gt;200</td>
<td>400,000</td>
</tr>
<tr>
<td>&gt;100</td>
<td>1 million</td>
</tr>
<tr>
<td>&gt;10</td>
<td>&gt;2 million</td>
</tr>
</tbody>
</table>

*2005 ARB Study
Rail Yards—Increased Cancer Risk
Roseville Rail Yard*

Year 2000

<table>
<thead>
<tr>
<th>Lifetime Risk (chances/million)</th>
<th>People impacted</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-500</td>
<td>20,000</td>
</tr>
<tr>
<td>10-100</td>
<td>150,000</td>
</tr>
</tbody>
</table>

*2004 ARB Study
Ethnicity Distribution

Within 3 miles of LA/LB Ports: 40% White, 20% African American, 20% Asian, 20% Hispanic

L.A. County: 50% White, 30% African American, 10% Asian, 10% Hispanic

Statewide: 40% White, 20% African American, 20% Asian, 20% Hispanic
BNSF Railroad plans at Gardner, Kansas

RR main line from California to Chicago goes through Gardner

- Plans:
  - New intermodal facility (300 acres)
  - New distribution center facility (1000 acres)
  - 2000 additional truck trips a day at start
  - 5000 additional truck trips a day at “build-out”
  - Little discussion of diesel health effects at public meetings in Gardiner
Key Recommendations of NEJAC

- Communities’ capacity and effectiveness to engage & influence decision making
- Identify and prioritize areas/communities maximally exposed or likely to be impacted
- Guidance on land-use decisions to separate sensitive receptors and sources
- Incentives, Funding mechanisms, Regulatory actions, and research
Importance of Land-Use
photos by Andrea Hricko, USC
Truck on 710 Freeway
Take Home Message

- Land-use decisions are critical
- Internalize cost of mitigation to all projects
- Technology cannot solve all problems
- Incentives / Regulation – area specific
- New funding mechanisms
- Political will
- Public participation