Health and Transportation
Washington State Department of Transportation

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Air Quality, Noise, Energy Policy Manager
Overview

Current framework

Past and ongoing efforts

Trends we are watching

Future needs
Current Framework

Governor Inslee commitment to healthy communities

• Results Washington

• WSDOT Strategic Plan and Results WSDOT
Past and Ongoing Efforts

SR 520 Health Impact Assessment (2009)

- Required by state legislature
- City/County Public Health Department, Clean Air Agency collaborated with WSDOT
- 4 categories of recommendations
  1. Construction management  
     *(reduce construction pollution)*
  2. Transit, bicycling and walking  
     *(reduce air pollution)*
  3. Landscaped lids and green spaces
  4. Design features  
     *(reduce vehicle pollution from entering lake)*
## Health Impact Assessment Recommendations

### Construction Period

<table>
<thead>
<tr>
<th>RECOMMENDATIONS</th>
<th>ACTIONS</th>
<th>HEALTH RELATED EFFECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Reduce construction related pollution</td>
<td>- Less polluting vehicles and equipment operating in area</td>
<td>- Reduce asthma exacerbation and respiratory disease risk factors</td>
</tr>
<tr>
<td></td>
<td>- Less construction during peak travel times</td>
<td>- Decrease cardiovascular disease risk factors</td>
</tr>
<tr>
<td></td>
<td>- Increased transit opportunities</td>
<td>- Decrease cancer risk factors</td>
</tr>
</tbody>
</table>

### Transit, Bicycling and Walking

<table>
<thead>
<tr>
<th>RECOMMENDATIONS</th>
<th>ACTIONS</th>
<th>HEALTH RELATED EFFECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Increase and improve transit service</td>
<td>- More frequent transit service with improved accessibility</td>
<td>- Reduce asthma exacerbation and respiratory disease risk factors</td>
</tr>
<tr>
<td></td>
<td>- Decreased roadway congestion and time spent in single occupancy vehicle</td>
<td>- Decrease cardiovascular disease risk factors</td>
</tr>
<tr>
<td></td>
<td>- Reduced emissions and improved air quality</td>
<td>- Decrease cancer risk factors</td>
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<tr>
<td></td>
<td>- More alternatives to vehicle use available</td>
<td></td>
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<tr>
<td></td>
<td>- Increased mobility options</td>
<td></td>
</tr>
</tbody>
</table>
Exhibit 8. MSAT Emissions Analysis—Daily Project Emissions of Criteria Pollutants (tons per day)

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Acrolein</th>
<th>Benzene</th>
<th>1,3-Butadiene</th>
<th>Formaldehyde</th>
<th>Naphthalene</th>
<th>POM</th>
<th>DPM</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008 Existing</td>
<td>0.00026</td>
<td>0.01752</td>
<td>0.001368</td>
<td>0.004353</td>
<td>0.000263</td>
<td>2.49E-06</td>
<td>0.0152</td>
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<tr>
<td>2030 No Build</td>
<td>0.00013</td>
<td>0.00990</td>
<td>0.000705</td>
<td>0.002236</td>
<td>0.000183</td>
<td>1.35E-06</td>
<td>0.0135</td>
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<tr>
<td>2030 Preferred Alternative</td>
<td>0.00012</td>
<td>0.00934</td>
<td>0.000658</td>
<td>0.002020</td>
<td>0.000179</td>
<td>1.33E-06</td>
<td>0.0132</td>
</tr>
</tbody>
</table>

Exhibit 6. Summary of Construction Air Quality Effects by Area

<table>
<thead>
<tr>
<th>Area</th>
<th>Peak Year</th>
<th>CO</th>
<th>VOC</th>
<th>NOX</th>
<th>PM10</th>
<th>PM2.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evergreen point Bridge and Eastside Transition Areas</td>
<td>2012</td>
<td>65.9</td>
<td>8.4</td>
<td>105.9</td>
<td>15.7</td>
<td>7.8</td>
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<tr>
<td>West Approach Area</td>
<td>2014</td>
<td>24.1</td>
<td>3.3</td>
<td>37.5</td>
<td>8.2</td>
<td>3.4</td>
</tr>
<tr>
<td>Portage Bay Bridge Area</td>
<td>2014</td>
<td>23.3</td>
<td>3.2</td>
<td>34.4</td>
<td>7.8</td>
<td>3.2</td>
</tr>
<tr>
<td>Montlake Interchange and Bascule Bridge Areas</td>
<td>2014</td>
<td>16.4</td>
<td>2.3</td>
<td>23.1</td>
<td>13.7</td>
<td>4.1</td>
</tr>
<tr>
<td>I-5 Interchange Area</td>
<td>2017</td>
<td>24.6</td>
<td>3.3</td>
<td>27.1</td>
<td>6.0</td>
<td>2.6</td>
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</table>
Past and Ongoing Efforts

WSDOT- WA Department of Health (DOH) Partnership

- Leadership team for CDC grant to reduce chronic disease: *Communities Putting Prevention to Work Program*

- WSDOT and DOH received US Council on Active Aging Award for the [Active Community Environments Program](#) that helped pass Complete Streets policies across the state

City of SeaTac’s Safe & Complete Streets Plan is example of grant program work.
Past and Ongoing Efforts

- Practical Design
  - Multimodal solutions and stakeholder engagement
- Safe Routes to Schools
  - Improve conditions schools
- Bicycle Safety Education Program Partnership
  - Bike and pedestrian training for adults and teen drivers
- Pedestrian and Bicycle Safety Program
  - Improve risk locations and fund bike share programs
- Research
  - Promote understanding of connections between pedestrian investment, land use, transit, and VMT
- Sustainability Program
  - Conserve fuel and reduce emissions
Trends We are Watching

Washington

- Obesity rates, esp. for young people
- Increasing bike/pedestrian to traffic crashes
- Aging population projected to increase

National

- Increase in children walking to school
- Vehicle pollution and morbidity/mortality
- Related work by FHWA
A holistic approach to health:…DOTs across the country are already leaders in the well-established topics of safety and air quality, but this white paper focuses in particular on two emerging topics: active transportation and access to healthy destinations.

- FHWA Statewide Transportation Planning for Healthy Communities (2014)
Future Needs

• **Analytical tools** to evaluate connections between transportation and health

  *Example: Evaluate connection between transportation choices and health outcomes*

• **Policy/procedural mechanisms** for incorporating health into planning, project development, construction, and for addressing funding constraints

  *Example: Improve connections between HIA methods and outcomes to NEPA/ regulatory requirements and process that addresses similar issues*

• **Clarify role of state DOT** and partner agencies to promote health

  *Example: health departments, transit agencies, community stakeholders*

• **Educate public health professionals** about transportation planning and project development processes

  *Example: Help frame feedback to support transportation project decision-making*