HEALTH IMPACT ASSESSMENT AND TRANSPORTATION DECISION-MAKING: ENVIRONMENTAL NEXUS

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The logo for the NAEP is a globe, Planet Earth, but simultaneously the flame red of the Sun, the Wave representing the dynamics of change, the seasons, of Man's actions and impact.
NAEP

Mission & Vision

Intelligence & Imagination

Multidisciplinary

Dedication

Best Practices

Code of Ethics
Environmental Partnership

Photos Source: http://www.myphilanthropedia.org/blog/2011/10/
What is NEPA???

- National Environmental Policy Act of 1969
  - Provides decision-makers with information gained through an Environmental Assessment (EA) or Environmental Impact Statement (EIS) on potential known and unknown impacts of a proposed federally funded project including:
    - Environmental
    - Sociopolitical
    - Economic
  - Emphasis on public involvement
  - Requires an impact evaluation on a range of possible alternatives

Graphic Source: [http://gilawatershedpartnership.com/who_we_are](http://gilawatershedpartnership.com/who_we_are)
Health Impacts

Inspector Clouseau-Style Accountability: Health Impacts in NEPA Practice

- Noise and Vibration – Threshold Criteria
- Air Quality (CO, NOₓ, SO₂, VOCs, PM₂.₅)
  - Clean Air Act
  - US EPA Standards
- Water Quality
  - Clean Water Act
  - Water Pollution Control Act
  - Safe Drinking Water Act

Photo Source: http://boston.com/community/blogs/rock_the_schoolhouse/2011/10/
Health Impacts in NEPA Practice Continued…

- Risk Exposure
  - Hazardous/Special Waste (CERCLA, RCRA)
  - Electromagnetic Effects - Intensity/Duration
- Construction Impacts - All of the Above
- Health Risk Assessment for Chemicals
  - Lead
  - Asbestos
  - PCBs
- Causal-link of diesel exhaust
  - Respiratory Disease (i.e. asthma)
  - Cardiovascular Disease

## Transportation Options & Environmental Justice

<table>
<thead>
<tr>
<th><strong>Adverse Effects</strong></th>
<th><strong>Benefits</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Air and water pollution</td>
<td>□ Decrease in travel time</td>
</tr>
<tr>
<td>□ Soil contamination</td>
<td>□ Improved air quality</td>
</tr>
<tr>
<td>□ Destruction/disruption of man-made and/or environmental resources</td>
<td>□ Expanded employment opportunities</td>
</tr>
<tr>
<td>□ Adverse impacts on community cohesion or economic vitality</td>
<td>□ Better access to transit options</td>
</tr>
<tr>
<td>□ Noise and vibration</td>
<td>□ Improved quality of transit service</td>
</tr>
<tr>
<td>□ Effects on property values</td>
<td>□ Increased property values</td>
</tr>
</tbody>
</table>

Source: FTA Circular 4703.1, dated August 15, 2012
Advancing Social Equity Through NEPA

- Executive Order 12898 of 1994: Environmental Justice (EJ)
  - Focus on minority and lower income populations
  - Community Outreach
  - Disproportionately High and Adverse Impacts
  - Equity in Investment

- Presidential Memorandum: Follow-up
  - Directs federal agencies to include EJ in existing laws such as NEPA

- Title VI, Civil Rights Act of 1964
  - Prohibits discrimination based upon race, color, national origin, disability, sex, and age

Photo Source: http://www.discdesign.com/COS/socialequity.html
Promoting Health Benefits Through NEPA

- Transit-oriented development
  - Improved access
  - Multi-modal options
    - Bicycling
    - Walking
    - Riding
- Place-based community spaces
  - Sense of place
  - Improved quality of life
- Restoring/preserving historic and cultural heritage
  - National Historic Preservation Act (Section 106)
  - USDOT Act of 1966 (Section 4(f))

## Steps in HIA & EIA

<table>
<thead>
<tr>
<th>Health Impact Assessment</th>
<th>Environmental Impact Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Screening</td>
<td>1. Initiating Project</td>
</tr>
<tr>
<td>2. Scoping</td>
<td>2. Scoping</td>
</tr>
<tr>
<td>4. Recommending Changes to Mitigate Health Effects</td>
<td>4. Recommending Measures to Mitigate Impacts</td>
</tr>
<tr>
<td>5. Reporting</td>
<td>5. Preparing Environmental Assessment or Environmental Impact Assessment</td>
</tr>
</tbody>
</table>
# NEPA Process: Public Involvement

## National Environmental Policy Act (NEPA) EIS Process Timeline

### EIS Process

<table>
<thead>
<tr>
<th>Year One</th>
<th>Year Two</th>
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</thead>
<tbody>
<tr>
<td><strong>Section 106</strong></td>
<td><strong>Section 4(f)</strong></td>
</tr>
<tr>
<td>SCOPING</td>
<td>IDENTIFY RESOURCES</td>
</tr>
<tr>
<td>PURPOSE AND NEED</td>
<td>FEASIBLE &amp; PRUDENT AVOIDANCE ALTERNATIVES</td>
</tr>
<tr>
<td>DEVELOP ALTERNATIVES</td>
<td>IMPACTS/MEASURES TO MINIMIZE HARM</td>
</tr>
<tr>
<td>EVALUATE ALTERNATIVES</td>
<td>DEVELOP FINAL MITIGATION MEASURES</td>
</tr>
<tr>
<td>DEIS COMPLIANCE PERIOD</td>
<td>DRAFT MEMORANDUM OF AGREEMENT</td>
</tr>
<tr>
<td>DEVELOP FINAL EIS</td>
<td>FINAL MOA</td>
</tr>
<tr>
<td>Public Meeting</td>
<td>Draft 4(f) Evaluation</td>
</tr>
<tr>
<td>Notice of Intent</td>
<td>Final 4(f) Evaluation</td>
</tr>
<tr>
<td>Project Initiation</td>
<td>Record of Decision</td>
</tr>
</tbody>
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### Notes:

* Section 106 includes formal consultation with consulting parties throughout process.
* Section 4(f) can be expedited via de minimis procedures if minimal impact to resource.

Timelines for all processes can be shortened, depending on complexity of project issues.

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*Graphic Source: Ronald Deverman, HNTB Corporation*
US EPA Initiatives

- On-line Assessment Tools
  - EJ View
  - EJ Screen
  - NEPAssist
  - Eco-Health Relationship Browser

- Plan EJ 2014
  - Cross-Cutting Strategies – EJ and Children’s Health

- Kenneth Olden
  - New Director of EPA’s National Center for Environmental Assessment
  - Former Director of National Institute of Environmental Health Sciences and National Toxicology Program
Transportation Research Board: Health Considerations in Transportation Decision-Making

- Public Health and Transportation Policy Linkages
- Health Costs of Transportation Investment
- Community-Based Research – Highways and Health Relationships
- Place-making and Healthy Communities
- Transportation Planning and the HIA