Planning for Sustainable Transportation: the Metropolitan Washington Region

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What is the TPB?

- The National Capital Region Transportation Planning Board (TPB)
- Responsible for long-range transportation planning for the TPB planning area
  - Approximately 3500 mi²
  - Over 5 million people and 3 million jobs
- Major industries include professional and business services, education and health services, and federal government
What are the Key Roles of the TPB?

• The TPB is a Federally Designated Metropolitan Planning Organization (MPO)

• The key roles of an MPO include:
  • Federally required planning process
  • Forum for regional coordination among state and local jurisdictions
  • Technical resources for regional decision-making

• The TPB is responsible for coordinating planning and funding for the region’s transportation system.

• The TPB is currently developing a plan to identify the top ten to fifteen regional transportation priorities
Regional Planning in the Metropolitan Washington Area

• Decision-making is quite decentralized
  – Land-use: Mostly local government
  – Transportation: State/local government, regional transit agency, private entities

• The TPB and its host agency MWCOG provide forums for regional collaboration

• Encourage decision-makers to “think regionally, act locally”
  – Successful examples include regional activity centers and development around Metrorail stations
What is the Constrained Long Range Plan (CLRP)?

Subject to federal regulatory requirements:

• 20-30 year planning horizon
• NOT a wish list
  – Only includes projects for which funding is “reasonably expected to be available”
  – Reflects the region’s priorities
• Projects must be in the CLRP in order to qualify for federal funds
• CLRP must “conform” to regional air quality goals
The TPB Vision: A Policy Framework

- Approved in 1998
- Policy framework that guides region’s transportation investments

Goals include:
- Provide a range of transportation options
- Reduce auto-dependency
- Increase transit use
- Coordinate land use and transportation
- Maintain the existing system

Policy Goals, Objectives, and Strategies

Policy Goal 1
This Washington metropolitan region’s transportation system will provide reasonable access at reasonable cost to everyone in the region.

Objectives:
1. A comprehensive range of choices for users of the region’s transportation system.
2. Accurate, up-to-date and understandable transportation system information which is available to everyone in a timely and user-friendly format for both visitors and residents, regardless of mode of travel or language of the traveler.
3. Safe and reasonable access to public, intermodal and freight modalities for everyone with special accessibility needs.
4. Convenient bicycle and pedestrian access.

Strategies:
1. Plan, implement, and maintain a fully integrated, multi-modal, regional transportation system.
2. Plan and implement a user-friendly system that encourages the use of transit and provides innovative pricing and information.
3. Make the region’s transportation facilities safer, more accessible, and less intimidating for all users.

Policy Goal 2
This Washington metropolitan region will develop, implement, and maintain an interconnected transportation system that enhances quality of life and promotes a growing economy and workforce throughout the entire region, including a healthy regional core and dynamic regional activity centers with a mix of jobs, housing and services in a walkable environment.

Objectives:
1. Establish a strong regional core.
2. Developing strong regional activity centers within a walkable range.
3. A fully integrated, multi-modal transportation system which provides convenient access including improved mobility with reduced reliance on the automobile between the regional core and regional activity centers, reinforcing existing transportation connections and creating new connections when appropriate.
4. Improved intermodal mobility with reduced reliance on the automobile within the regional core and between activity centers.
5. Efficient and safe movement of people, goods, and commerce, while minimizing adverse impacts on residents and the environment.

The Vision 10th Anniversary Edition
National Capital Region Transportation Planning Board | Metropolitan Washington Council of Governments

Approved in 1998
Policy framework that guides region’s transportation investments
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Transportation and Land Use Planning

**Macro Level: Scenario Planning**
Looking at regional transportation, land-use, and climate change scenarios for 2030 and 2040.

**Micro Level: Transportation/Land-Use Connections (TLC) Program**
Assist jurisdictions to implement changes at the local level.
Scenario Planning: CLRP Aspirations Scenario

**Land Use Shifts**
- Concentrating projected growth in activity centers and existing/planned transit stations
- Consistent review and refinement by planning directors

**Regional VPL Network**
- Address congestion through pricing of new and/or existing lanes
- Provide alternatives through enhanced transit

**Supportive Transit**
- Use menu of transit options from past scenarios
- Connect activity centers
CLRP Aspirations Scenario: Regional BRT Network

Previously Proposed Transit
- Major CLRP Transit Projects
- RMAS Projects
- New Suburban BRT Station
- New Urban BRT Station
- Intermodal Transfer station to Metrorail or state commuter rail services (Suburban Stations only)
Scenario Planning: “What Would it Take?” (WWIT) Scenario

What would it take to meet non-sector specific greenhouse gas (GHG) reduction goals looking at the three major factors that impact GHG emissions from the transportation sector?

1. The composition of the fleet
   - Fuel efficiency, heavy/light duty split

2. The fuel we put in our fleet
   - Gasoline, diesel, alternative fuels (electricity, ethanol, biofuels)

3. How we use our fleet
   - Trip lengths, purpose, and mode, vehicle occupancy, congestion
WWIT Scenario: Impact of Fuel Economy Standards

- **CAFE 27.5 (pre EISA 2007)**
  - 32% cumulative reduction

- **CAFE 54.5 by 2025**
  - 12% remaining cumulative reduction

- **COG Goals**
## WWIT Scenario: Impact of Short-term Regional/State/Local Strategies

<table>
<thead>
<tr>
<th>Category</th>
<th>Example Strategies</th>
<th>Reduction (%) off BAU</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Increase transit and</td>
<td>Implement kiosks, feeder buses and circulators, real-time bus information, bus</td>
<td>-0.3%</td>
</tr>
<tr>
<td>bike/ped use</td>
<td>priority, free transfers, bike stations, improved bike/ped access to transit, bike</td>
<td></td>
</tr>
<tr>
<td></td>
<td>sharing</td>
<td></td>
</tr>
<tr>
<td>2. Pricing</td>
<td>Implement parking impact fees, pay-as-you drive insurance, parking cash-out subsidies</td>
<td>-1.5%</td>
</tr>
<tr>
<td>3. Improve operational</td>
<td>Promote eco-driving (public education campaign), incident management, traffic signal</td>
<td>-1.8%</td>
</tr>
<tr>
<td>efficiency</td>
<td>optimization, idling reduction</td>
<td></td>
</tr>
<tr>
<td>4. Reduce travel</td>
<td>Expand telecommuting, carpooling and vanpooling, car-sharing</td>
<td>-0.3%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>-3.9%</strong></td>
</tr>
</tbody>
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# WWIT Scenario: Impact of Long-term Regional/State/Local Strategies

<table>
<thead>
<tr>
<th>Category</th>
<th>Example Strategies</th>
<th>Reduction (% off BAU)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Increase transit use</td>
<td>Major transit expansion, such as the Dulles Rail line, and park and ride lots at rail stations</td>
<td>-0.15%</td>
</tr>
<tr>
<td>2. Increase bike/ped use</td>
<td>Accelerated completion of the TPB Bicycle and Pedestrian Plan</td>
<td>-0.3%</td>
</tr>
<tr>
<td>3. Pricing</td>
<td>Variable pricing of new and existing freeway and select arterial lanes</td>
<td>-0.25%</td>
</tr>
<tr>
<td>4. Reduce travel</td>
<td>Land use strategy encouraging concentrated growth in activity centers and around transit</td>
<td>-0.15%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>-0.85%</strong></td>
</tr>
</tbody>
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# Air Quality Conformity and Transportation

## Changes from 2011 CLRP to 2012 CLRP for Forecast Year 2020

<table>
<thead>
<tr>
<th>Land Activity and Travel</th>
<th>Emissions based on 2011 Vehicle Fleet</th>
<th>Emissions based on 2008 Vehicle Fleet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Households</td>
<td>VOC: -0.5%</td>
<td>VOC: +12.8%</td>
</tr>
<tr>
<td></td>
<td>NOx: -0.4%</td>
<td>NOx: -1.05%</td>
</tr>
<tr>
<td>Transit Trips</td>
<td>PM$_{2.5}$: +3.0%</td>
<td>PM$_{2.5}$: -1.04%</td>
</tr>
<tr>
<td>Vehicle Trips</td>
<td>Pre NOx: -0.8%</td>
<td>Pre NOx: -1.12%</td>
</tr>
<tr>
<td>VMT</td>
<td></td>
<td></td>
</tr>
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The Transportation/Land-use Connections (TLC) Program

Regional Clearinghouse ([www.mwcog.org/tlc](http://www.mwcog.org/tlc))
- Web-based source of information about local and national transportation and land-use coordination

Technical Assistance Program
- Focused consultant assistance available to local jurisdictions working on innovative, plans and projects integrating transportation and land-use
- The TLC Program has funded 56 projects at $1.7 million
TLC Project Recommendations

• Converting an auto-oriented corridor into a multimodal, pedestrian friendly environment in Falls Church, Virginia.

• Complete streets improvements around the Prince George’s Plaza Metrorail Station in Maryland.

• Pedestrian safety and access improvements around Farragut Square in the District of Columbia.
TPB Support for Sustainable Transportation

- Commuter Connections program
- TPB Regional Bicycle and Pedestrian Plan
- Complete Streets Policy (adopted May 2012)
- Seek federal discretionary grants for bus priority projects, bike-sharing, and rails station access projects
- Greenhouse gas reduction strategies
Trans-Atlantic Learning Opportunities

Comparison of approaches to:

• Institutional collaboration between different levels of government
• Involvement of stakeholders from both the public and private sectors
• Adoption of national vehicle emissions and fuel economy standards