Growing Cooler: Addressing Climate Change through Demand/VMT Reduction

Rail~Volution 2008
Growing Cooler: Addressing Climate Change through Demand/VMT Reduction

- Transportation sector accounts for 1/3 of US GHG emissions. VMT is a major component.

- “Growing Cooler” describes how land use and transportation strategies can reduce VMT to address climate change.

- What specific steps are communities taking to reduce driving impacts and GHG?
  - Boulder
  - Berkeley
  - Melbourne
Boulder, CO - Growing Cooler: Transportation in Service of Climate Action

Tracy Winfree

- Director of Transportation for city of Boulder, Colorado
- Directs policy/planning, design, construction and operations and maintenance of a multimodal transportation system
- Has almost 20 years of transportation experience ranging from local community-based project design and implementation, budget management, regional coalition building, and development of overarching policy guidance
Growing Cooler: Addressing Climate Change through VMT Reduction

Tracy Winfree’s presentation:

- “Boulder, CO - Growing Cooler: Transportation in Service of Climate Change”
- Setting the context and making the Climate Connection
- Policy evolution, project and program implementation, measuring progress, challenges / lessons learned
Berkeley, CA - Growing Cooler: Climate Action Plan Development

Matt Nichols

- Principal Transportation Planner for City of Berkeley, California, 2002-present.


- Directs parking policy & TDM, Bicycle and Pedestrian Plans, Carsharing programs. Active in Universal Access TOD, BRT, and funding.
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Matt Nichols presentation:

- Berkeley, CA Climate Action Plan: Transportation & Land Use
- Critical review of GHG Inventory and Project Reduction methodology
- Strategies for funding and implementation
- Balancing Pragmatism, Vision, and Fear?
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Paul Kearsley

• General Manager - City Development, City of Whitehorse in Melbourne, Australia.

• 20 years experience in local government/private sector in Melbourne and Cairns, Australia and in Seattle, Washington.

• Experience in land use/policy/strategic planning, transportation planning, sustainability and TOD policy development.
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Paul Kearsley presentation

• "Leave your car keys at home"

• Transport in Melbourne and City of Whitehorse

• Role of Whitehorse in sustainable transport, e.g. TravelSmart program

• Importance of community involvement you can have the best policies
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Jerry Walters

- Principal and chief technical officer with Fehr & Peers, transportation consultants
- Directs integrated land use/transportation research and planning for public entities and real estate development interests throughout US
- Co-author of ULI publications “Growing Cooler – Evidence on Urban Development and Climate Change”, and “Mixing it Up” on impact reduction through successful mixed-use development
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Jerry Walters presentation:

- Societal and legal imperatives related to GHG

- “Growing Cooler” strategies for addressing the climate and energy challenge

- How transit, TOD and compact development affect transit ridership and VMT
Building Livable Communities with Transit

State GHG Actions

GHG Emissions Targets (19 States)

Climate Action Plans (38 States)

Regional Initiatives (32 states)
Legislated Targets*

• By 2020, reduce GHG to 1990 levels
• By 2050, reduce GHG emissions by 50% to 80% below 1990 levels
  ➢ E.g. reduce VMT by 15% in 2020 and up to 90% in 2050 compared to a BaU scenario

* CA AB32, WA SB6001
Incentive Programs

- Grants, free reductions, streamlining for brownfield and TOD (Prop 1C)
- General Plan conformance with Blueprints
- Technical assistance for local planning and mitigation
- Local taxing authority for ped/bike facilities
Legal Challenges

• CA: Attorney General sued major projects for not considering GHG impacts.
  ➢ AG comment letters on visible projects.

• WA: possible removal of categorical exemption for transportation system plans and corridor studies.
SB 375

- MPO's create "sustainable" land use plans that meet GHG targets.

- RTP funding decisions consistent with sustainable land plan

- CEQA exemptions and streamlining for projects that conform to regional plans, even if in conflict with local plans.
Federal and NEPA Setting

• The US Supreme Court: climate change a serious problem for the US and the world

• US Ninth Circuit Court: climate change should be considered a cumulative impact of development

• NEPA requires that potential mitigations be discussed

• US Senate likely to reconsider GHG reduction bill in 2009
Vehicle and fuel advances not sufficient

Integrated transportation/land use strategies are essential part of the solution
Market for Reduced-VMT Development

- New/Redevelopment 25% (67% by 2050)
- Compact Market Share 60%
- VMT Reduction for Compact 30%

Other factors:
- Independent source rules for greenfields
- Transit multiplier effects
- Reduced household energy use
VMT Elasticities

- Population: 0.92
- Real per capita income: 0.53
- Highway lane miles: 0.57
- Population density: – 0.18
- Transit revenue miles: – 0.05
- Real fuel price: – 0.17
7D factors that influence trip generation

- **Density** dwellings, jobs per acre
- **Diversity** mix of housing, jobs, retail
- **Design** connectivity, walkability
- **Destinations** regional accessibility
- **Distance to Transit** rail, bus proximity
- **Development Scale** critical mass
- **Demographics** family size, income
Typical Trip Reduction at TOD, MXD, Infill

TOD 44%  MXD 37%  Infill: 36%
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