

San Francisco  
2008

## 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 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.
- Transportation Director, Cities for Climate Protection Campaign-U.S., 1996-2000.
- Directs parking policy & TDM, Bicycle and Pedestrian Plans, Carsharing programs. Active in Universal Access TOD, BRT, and funding.

## Growing Cooler: Addressing Climate Change through VMT Reduction

### 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?

# Growing Cooler: Addressing Climate Change through VMT Reduction

## 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.

# Growing Cooler: Addressing Climate Change through VMT Reduction

## 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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## Growing Cooler: Addressing Climate Change through VMT Reduction



### 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

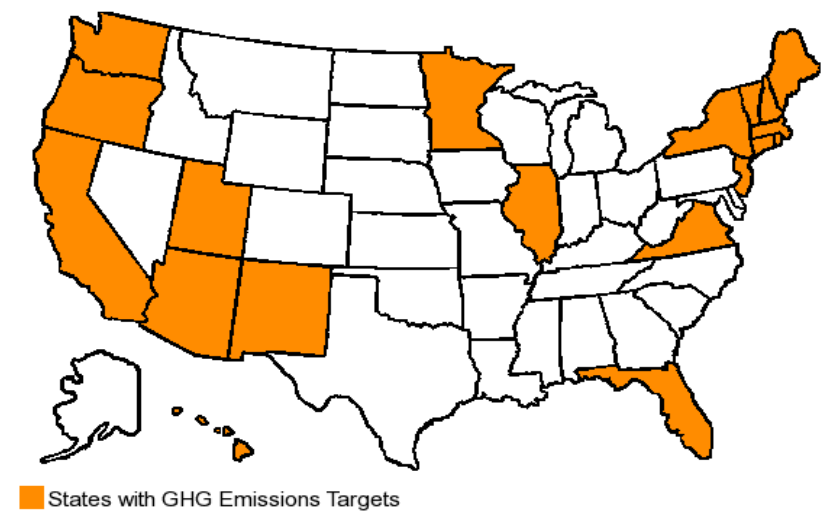
## Growing Cooler: Addressing Climate Change through VMT Reduction

### Jerry Walters presentation:

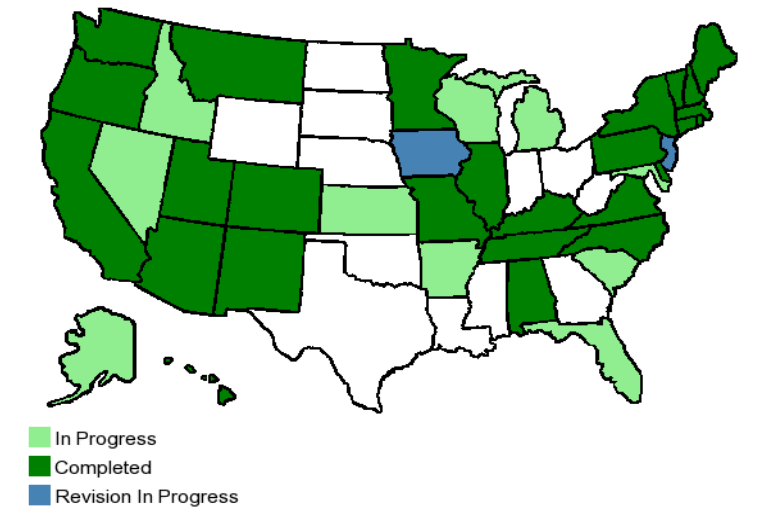
- Societal and legal imperatives related to GHG
- “Growing Cooler” strategies for addressing the climate and energy challenge
- How transit, TOD and compact development affect transit ridership and VMT

## State GHG Actions

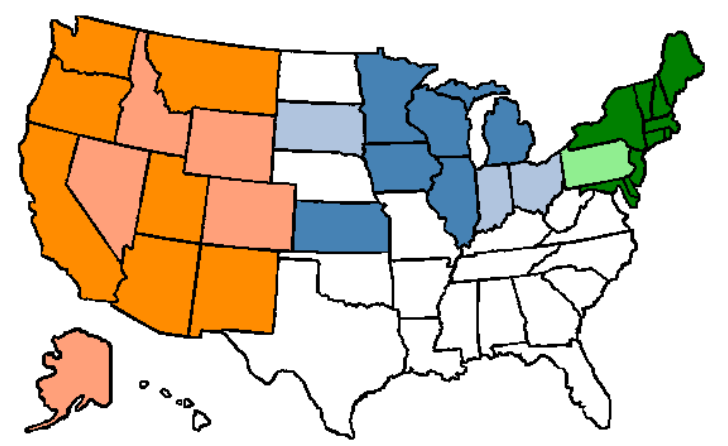
### GHG Emissions Targets (19 States)



### 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, fee 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

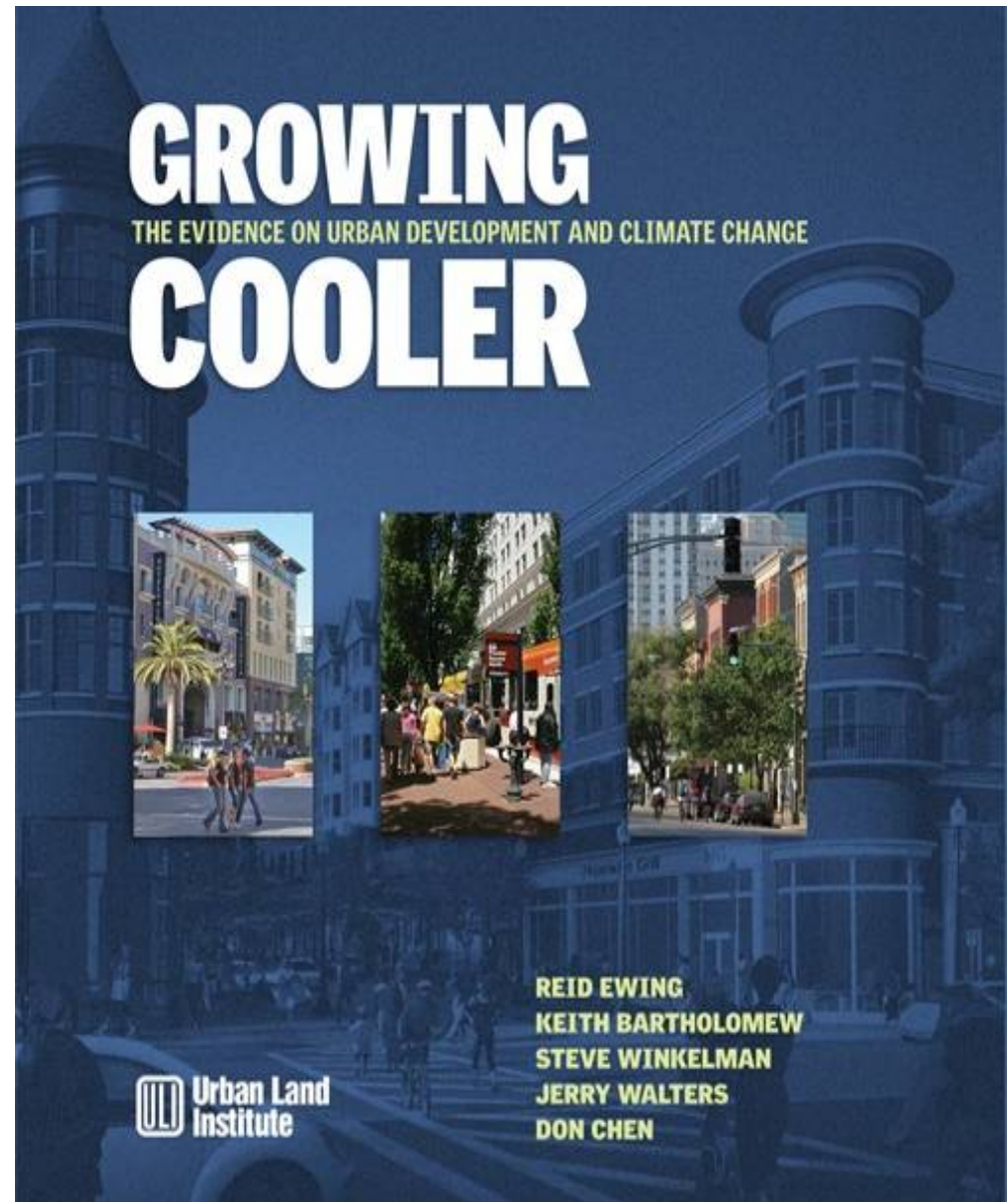
- MPO's create "sustainable" land use plans that meet GHG targets.
- RTP funding decisions consistent with sustainable land plan
- CEQA exemptions and streamlining for projects that conform to regional plans, even if in conflict with local plans.



## 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



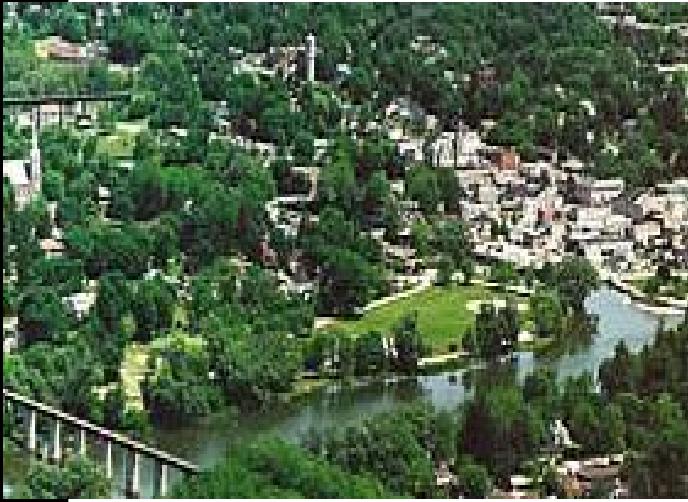
# Market for Reduced-VMT Development

- 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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