Pop Quiz!!!

How many miles did Californians drive in August 2012 on state highways?

a) 1.6 trillion miles  
b) 1.6 billion miles  
c) 16 billion miles  
d) 16 million miles

How many miles does a household travel during a typical day?

a) 10 to 20 miles  
b) 30 to 40 miles  
c) 40 to 60 miles  
d) 60 to 100 miles
Overall Transportation Approach

- Forecasting On-Road Transportation GHG Emissions
- Quantifying GHG Emissions Reductions
- Control vs. Effectiveness
- No “Silver Bullet”
- Broad Approach Needed

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Community-wide Transportation GHG Emissions

- What tools are available?
  - Regional travel demand model
  - Local travel demand model
  - Non-model “Accounting Methods”

- What forecast method should be used?
  - Best-validated model
  - Reasonable results
Community-wide Transportation

**Legend:**
- City Limits/Study Area
- Internal to Internal (I) VMT
- Internal to External (II) VMT
- External to External (XX) VMT
- One-Half Internal to External (IX) VMT

**Boundary Method**

**Origin-Destination (OD) Method**
Case Study
Case Study

Comparison of Daily Vehicle Miles by Land Use Pattern

Vehicle Miles Traveled Generated Per Household

- Unincorporated Yolo County in 2005 SACSIM Model: 83
- Low Density (San Ramon, CA): 76
- SACOG Region in 2005 SACSIM Model: 52
- Entire Yolo County in 2005 SACSIM Model: 49
- Transit Village (Rockridge, Oakland, CA): 35
- Urban Center North Beach, San Francisco, CA: 15
- Metro Center (Manhattan, NY): 6

Existing Location/Area
Best Management Practices Framework

- Primary Categories
  - Land Use / Location
  - Neighborhood / Site Enhancement
  - Parking Policy / Pricing
  - Transit System Improvements
  - Commute Trip Reduction Program
  - Roadway Pricing Management
  - Vehicle Technology

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BMP Framework: A Starting Place

- Peer Reviewed
  - Land Use / Location
  - Some Transit System Improvements
- Published Data
  - Parking Policy / Pricing
  - Roadway Pricing Management
- Case Studies
  - Commute Trip Reduction Program
  - Neighborhood / Site Enhancements
Overall Transportation Approach:

*Control vs. Effectiveness*

- Inverse relationship
- Common approaches
  - Focus only on those items that can be directly controlled
  - or -
  - Assume regional/state agencies will fix transportation issues
Overall Transportation Approach:

Control vs. Effectiveness

- Municipal Operations
- Neighborhood / Site Enhancement
- Parking Policy / Pricing
- Commute Trip Reduction
- Transit System Improvement
- Road Pricing Management
- Land Use / Location
- Vehicle Technology

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Overall Transportation Approach:

*Broad Approach Needed*

- Local jurisdiction control
  - General Plans
  - Local Ordinances
- Tier from regional and state actions
  - Sustainable community strategy
  - Regional transportation plans
  - Transit plans
  - Vehicle/fuel technology
- Many strategies are needed for a meaningful reduction in VMT/GHG
- Potential conflicts hindering private action