Daniel Rubins, Fehr & Peers
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
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

**Boundary Method**

**Origin-Destination (OD) Method**

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

California Climate Action Planning Conference
Comparison of Daily Vehicle Miles by Land Use Pattern

- 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
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

California Climate Action Planning Conference
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
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

---

California Climate Action Planning Conference