SR 710 North Study

Technical Advisory Committee Meeting No. 14 – February 19, 2014

Stakeholder Outreach Advisory Committee Meeting No. 10– February 20, 2014

Agenda

- Public Outreach Activities
- Project Report and Environmental Studies Documentation Update
  - Recap of TAC No. 13 and SOAC No. 9
  - Update on Preliminary Engineering and Environmental Technical Studies

Ground Rules

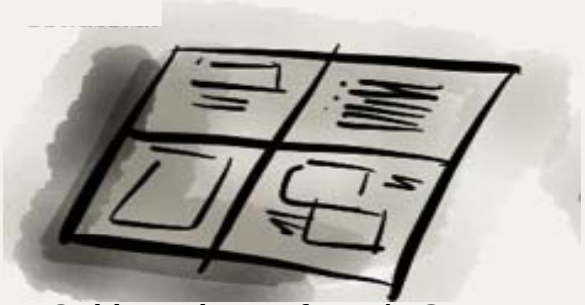
- Q&A after each section of the presentation
- Focus questions on information presented
- General comments and Q&A at the end

Public Outreach Activities

Public Participation Program during Circulation of Draft EIR/EIS

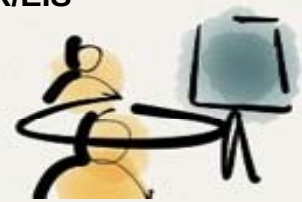
Public Hearing Information Video

Information Fact Sheet



Guide to the Draft EIR/EIS

Public Hearings



Elected Official Briefings

Community Events and Stakeholder Briefings

Project Report and Environmental Studies Documentation Update

Recap of TAC No. 13 and SOAC No. 9

- Public Outreach Activities
- Project Report and Environmental Studies Documentation Update
  - Recap of previous TAC/SOAC meetings
  - Value Analysis (VA) Study discussions
  - Update on Preliminary Engineering/Environmental Technical Studies

Feedback Received During TAC No. 13/ SOAC No. 9

Value Analysis (VA) Study Discussion

- How does the VA Study fit into the Environmental Document?
- Are impacts to vehicle emissions during construction included in the VA Study?
- Is health risk assessment (HRA) being conducted now? Was this part of VA study?
- How serious is the idea of reversible lanes on Fair Oaks Avenue in South Pasadena?
- Consideration for emergency response for reduced diameter tunnel?
- What are the emergency-type amenities for tunnel design?

Feedback Received During TAC No. 13/ SOAC No. 9

Preliminary Engineering / Environmental Technical Studies Update

- Will air quality impacts be evaluated at the freeway portals?
- How were the origin-destination models generated?
- Are SCAG 2035 future projects included in the traffic model?
- What would be the highest and lowest amount for the toll?
- How would the excavated soils be removed? Will they be covered during transport?
- Could you provide us information on planned outreach activities? When is the next ACC meeting?

Fact Checks

How Will Dust Generated During Construction be Controlled?

Fact – Excavated material from the LRT and freeway tunnel will be transported by trucks using existing freeways, and possibly by rail from the south portal area.

Fact – All trucks and rail cars transporting materials will be covered to reduce particulate emissions during transportation on paved public roadways.

Fact – Exposed soil will be sprayed with water or other dust control measures to reduce emissions of and deposition of particulate matter.

Fact – The Project will adhere to SCAQMD regulations during construction.

Port Truck Volumes

- **Claim – The Freeway Tunnel Alternative will be used by several hundred thousand port trucks.**
- Fact – Less than 1% of the traffic coming through the tunnel will be Port trucks, as confirmed by separate models for the SR 710 North and I-710 South studies.

See TAC Presentation No. 8

Update on Preliminary Engineering and Environmental Technical Studies

Preliminary Engineering Update

- Addressing Metro and Caltrans comments
- Developing tunnel drainage system
- Developing stage construction overview
- Developing construction schedule & equipment needs
- Coordinating with environmental team for technical studies
- Developing cost estimates and cost-benefit analysis

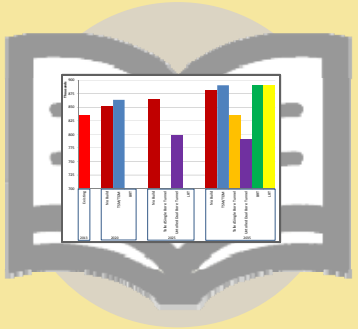
Environmental Study Update

Environmental Technical Studies

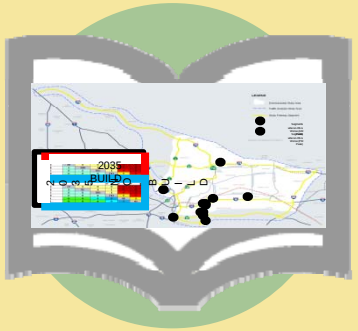
- Revising several studies based on Caltrans/Metro comments
  - Paleontological Resources, Drainage, Location Hydraulic Study, Stormwater, Geologic Hazards, Preliminary Geotechnical Report, Hazardous Materials, Wetland Resources, Biological Resources, Draft Relocation Impact Report, Archaeological Survey Report
- Draft technical studies in review by Metro and Caltrans:
  - Energy, Visual Impact Assessment, Noise, Vibration, Economic and Fiscal Impacts
- Remaining draft technical studies in progress
  - Community Impact, Air Quality, Health Risk, Traffic, Cultural Resources, Section 4(f)
- Incorporating refinements to design to minimize impacts
- Preparing sections of the Draft EIR/EIS

Technical Studies Update - Transportation Analysis

Travel Demand Modeling (SCAG/SR 710 North)



Traffic Analysis (Level of Service)



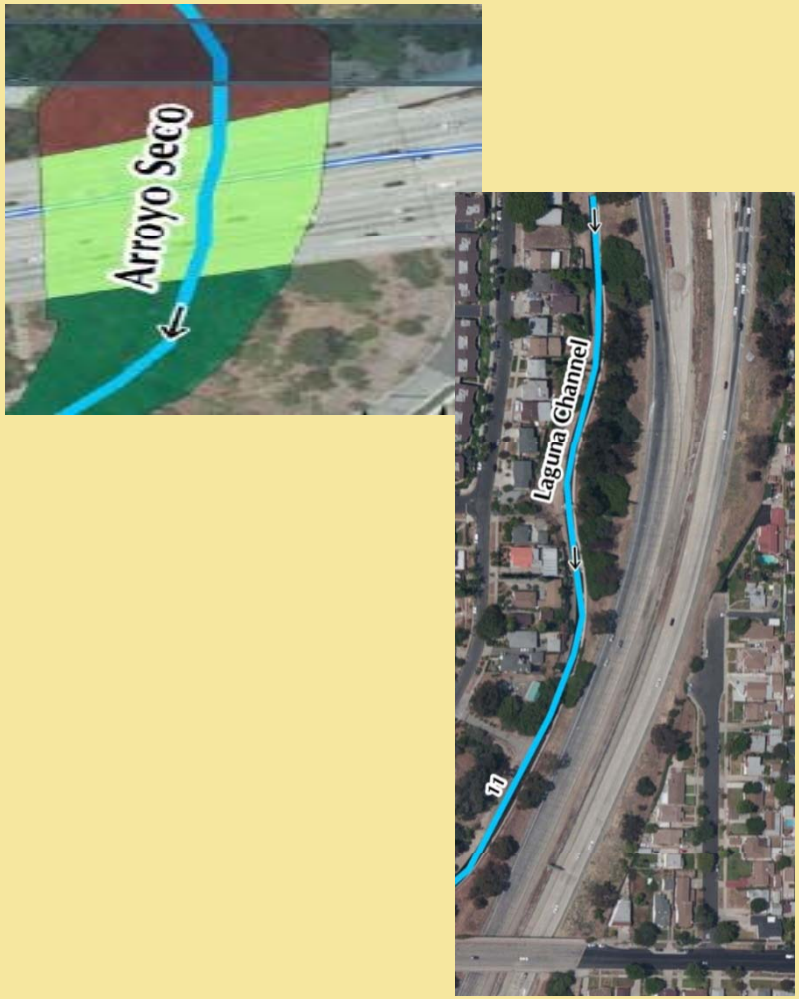
Environmental Analysis (Air, Noise, Energy)

Technical Studies Update – Water Quality

- Total disturbed area ranges from 20-80 acres
- Evaluating Best Management Practices for each alternative
  - Biofiltration swales
  - Gross solid removal devices
  - Tree box filters

Technical Studies Update – Biological Resources

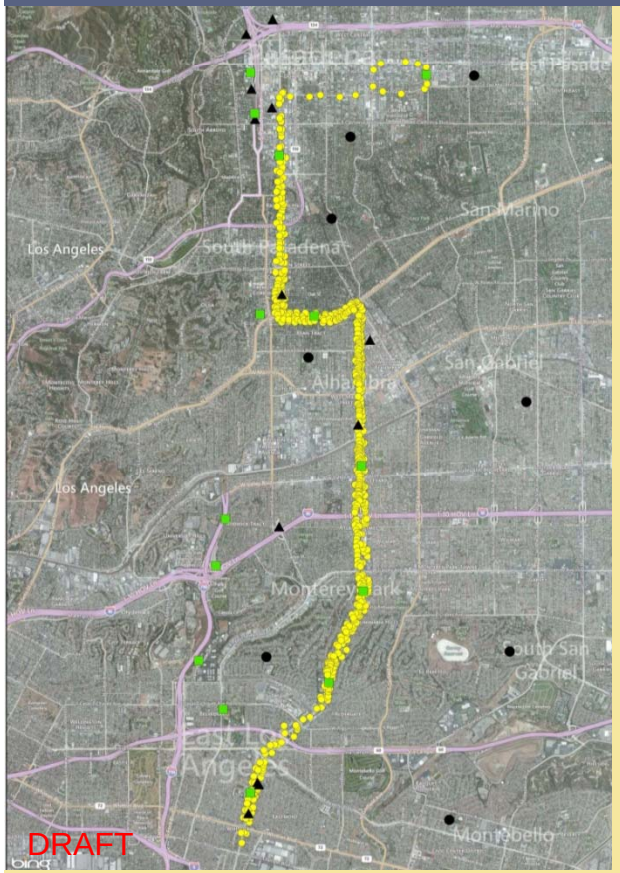
- No federal or State listed species identified in study area
- Limited jurisdictional waters identified in study area



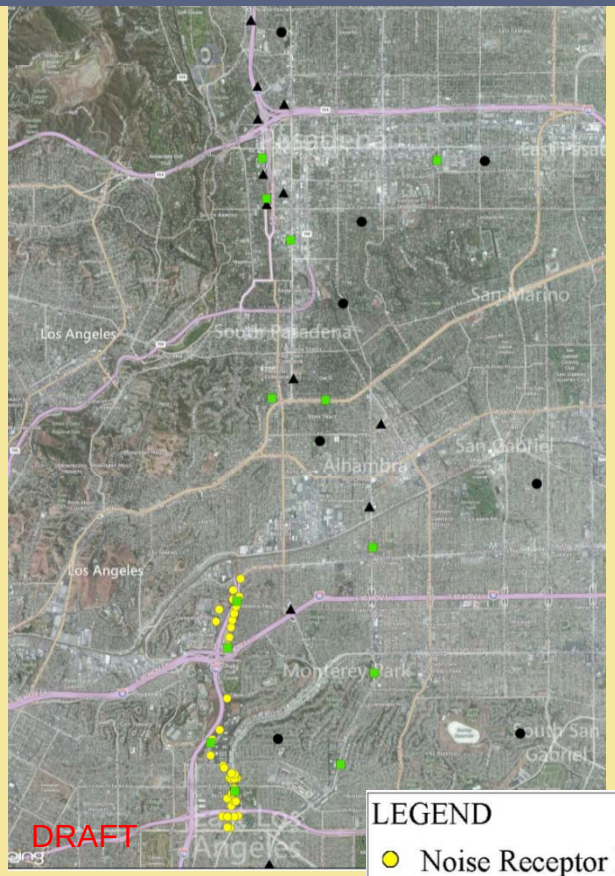
Technical Studies Update – Noise

- Monitored 25 sites (long term)
  - 24 hour measurement
- Monitored 135 sites (short term)
  - 10-15 minute measurement
- Monitored 10 schools (short term)
  - Determine interior/exterior levels
- Modeling 820 receptors throughout the study area

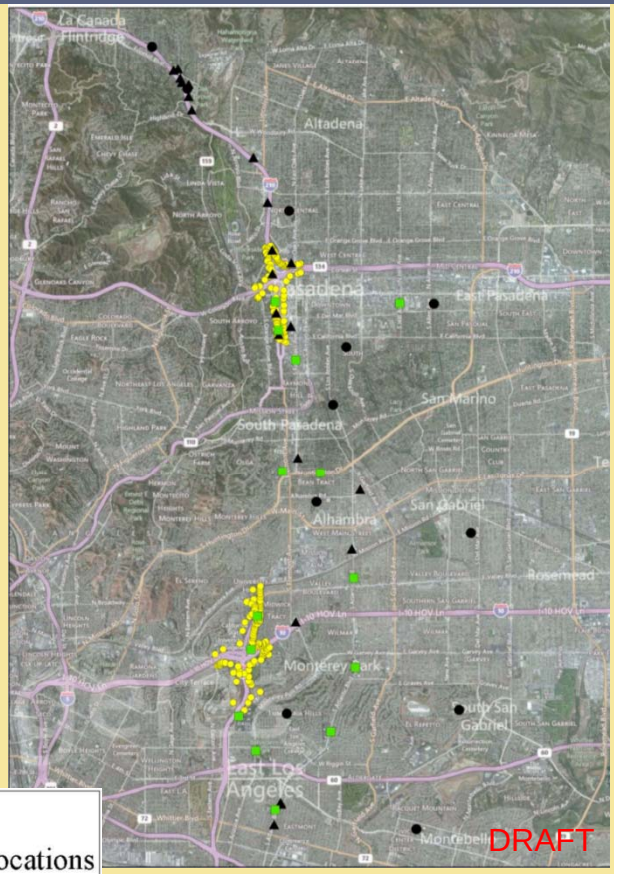
Technical Studies Update – Noise



BRT



LRT



Freeway Tunnel

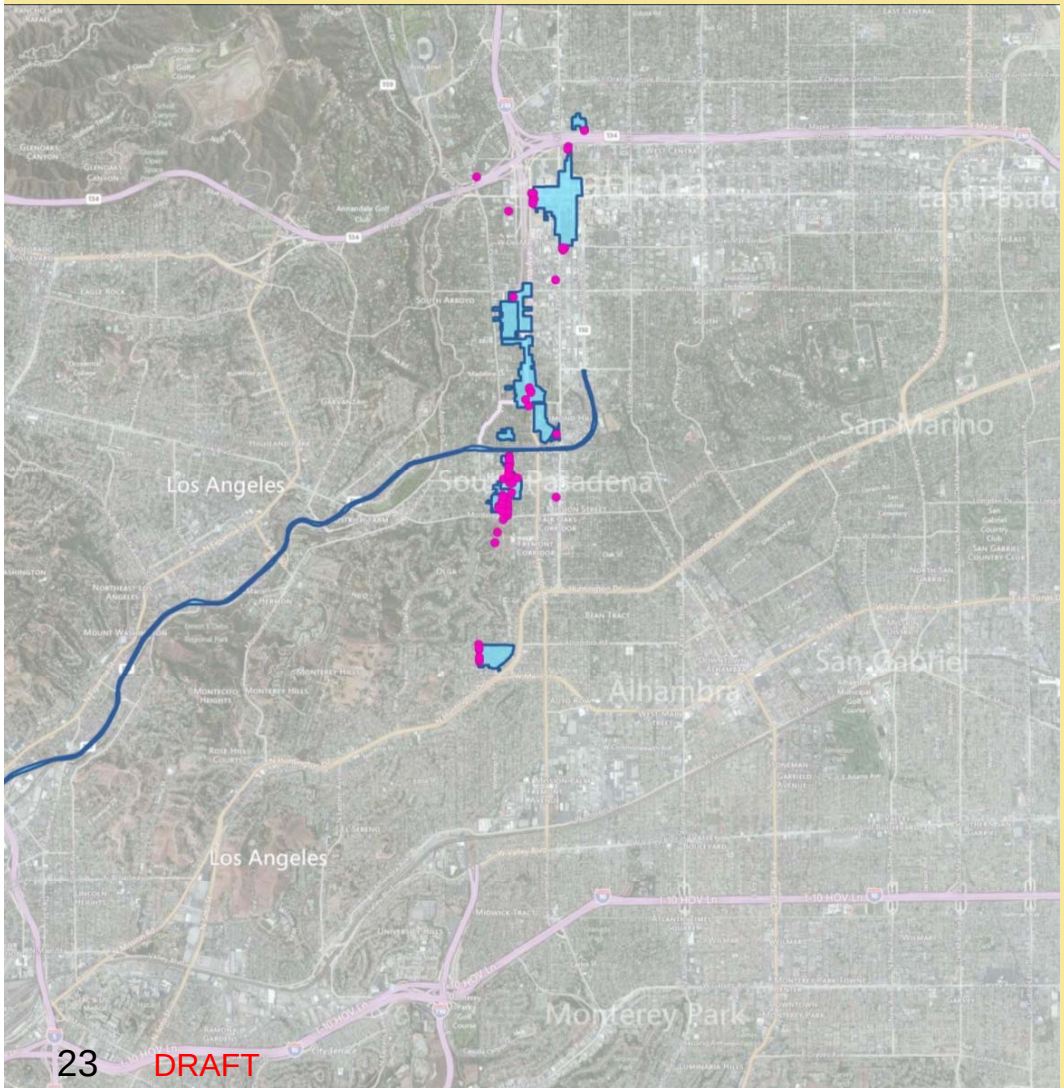
LEGEND

- Noise Receptor Locations
- Long-term, 24-hour, Monitoring Locations
- School Monitoring
- Neighborhood Noise Monitoring Locations

Technical Studies Update – Cultural Resources

- 35 National Register listed resources in area of potential effect (APE)
- 54 National Register eligible resources in APE
- 11 designated historic districts in APE
- 1 National Register eligible road bridge
- Over 350 additional resources being evaluated

Technical Studies Update – Cultural Resources

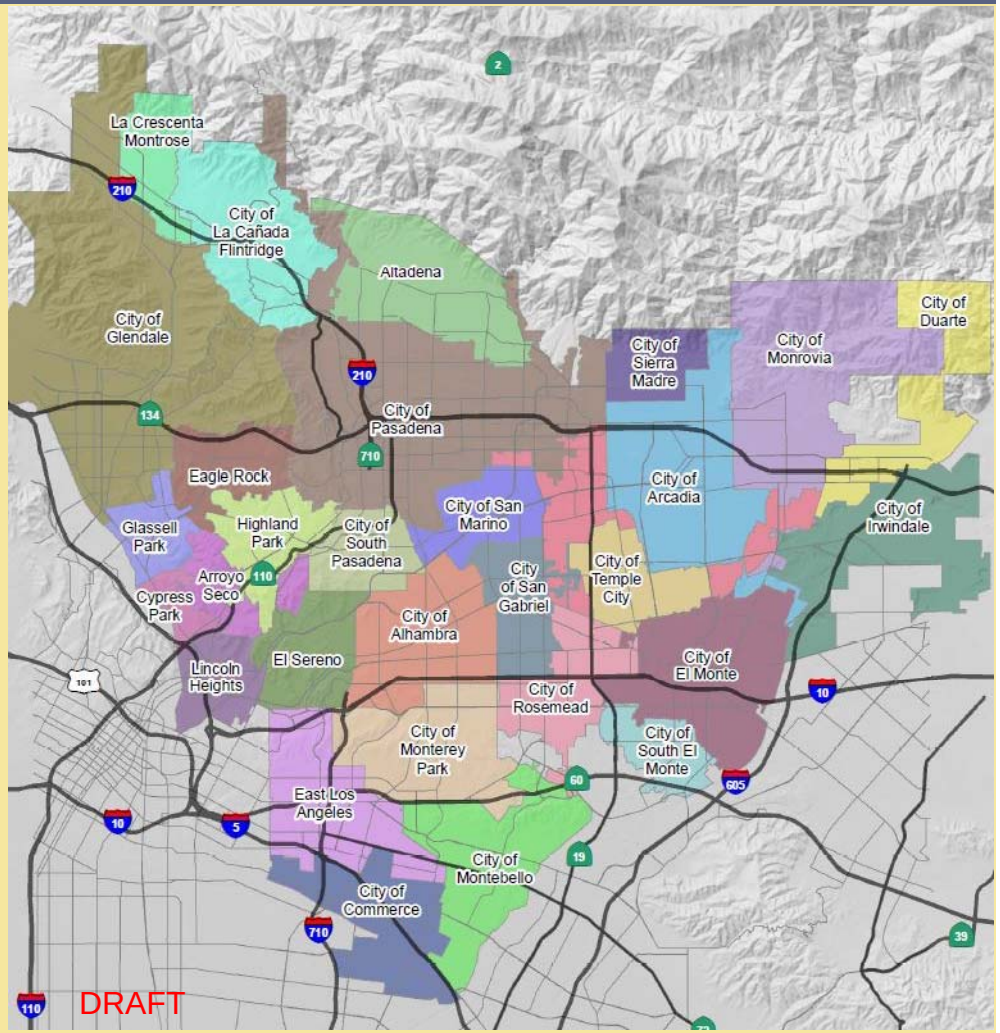


LEGEND

- National Register Properties
- Historic Districts

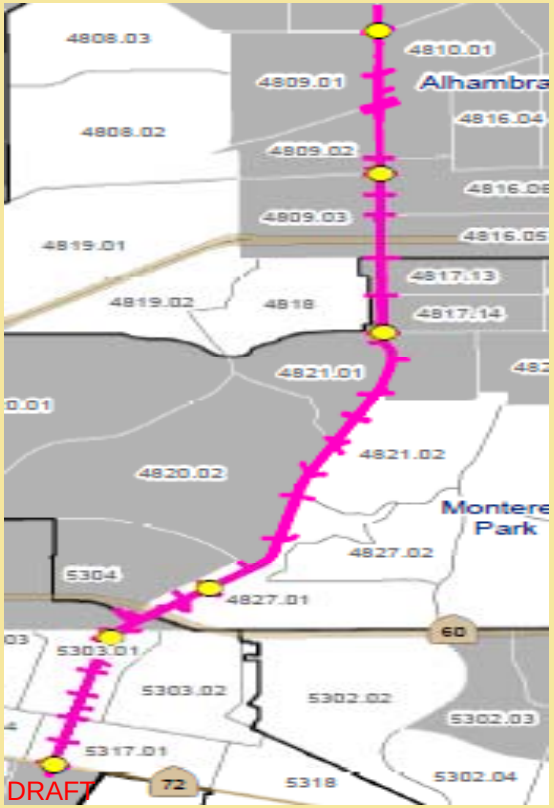
Technical Studies Update – Community Impact Assessment

- Completed 30 Community Profiles for cities and communities within the study area
- Establishes baseline for evaluating impacts



Technical Studies Update – Community Impact Assessment

- Identified demographic characteristics within the study area based on 2010 Census
- Began evaluating potential property and community effects



CEQA/NEPA Process

- Technical Study review/approval
- Draft EIR/EIS review/approval
- Draft EIR/EIS circulated for public review
  - Documents available to public via website and public libraries
  - Notices will be sent to those that have requested updates
- Public Hearings held during public review

CEQA/NEPA Process

- Comments on Draft EIR/EIS will be accepted during public review period
  - Written comments (letters and comments submitted via Draft EIR/EIS website)
  - Verbal comments from public hearing (Spanish and Mandarin interpreters will be available)
  - Comments should address substantive concerns on the technical analysis provided in the EIR/EIS

CEQA/NEPA Process

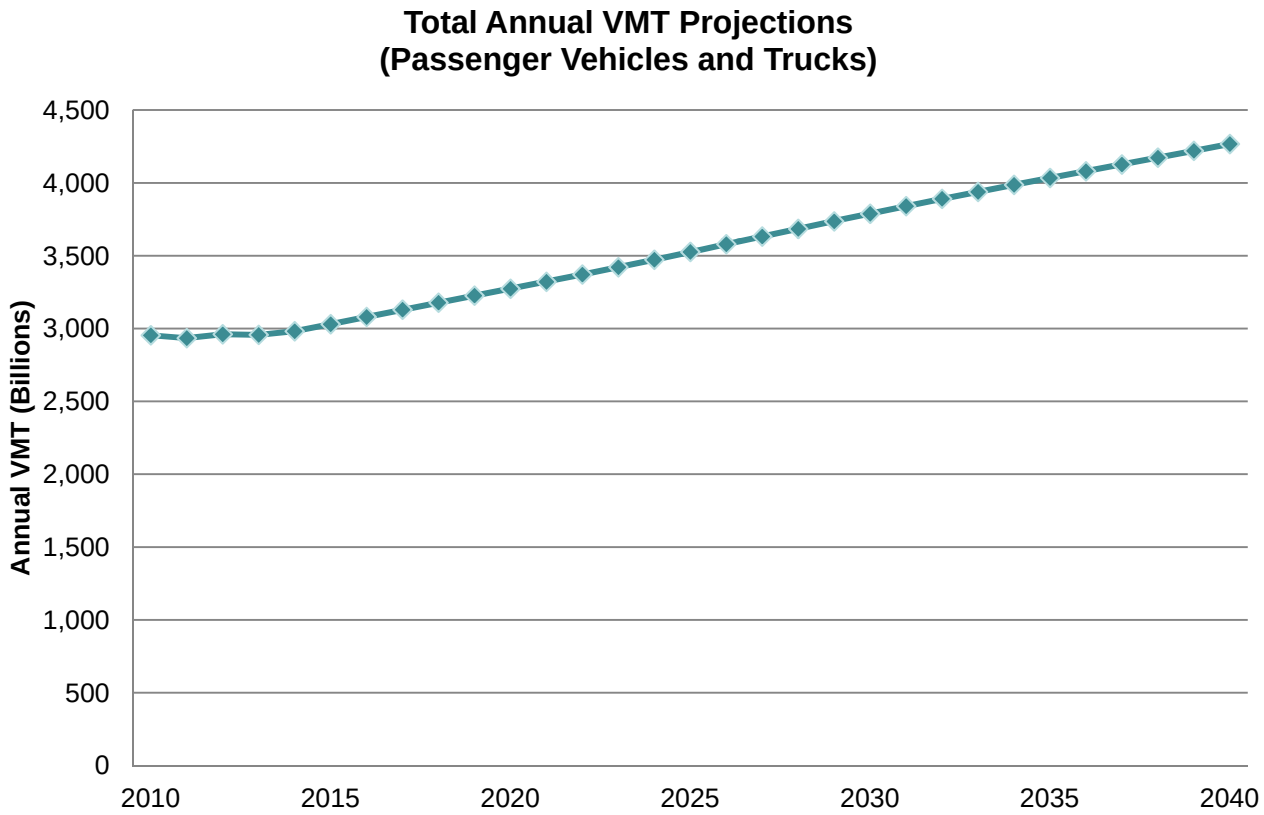
- Final EIR/EIS
  - Response to Comments
  - Identification of Preferred Alternative
- Final EIR/EIS distributed
- Notice of Determination (CEQA)
- Record of Decision (NEPA)

Vehicle Miles Traveled (VMT) Growth: Research, Forecasts and Trends

VMT – What are the Forecasts?

VMT Growth – What is the Forecast for the Nation?

- U.S. DOE forecasts energy production, consumption, technology and market trends every year.
- 2013 report shows a projected increase in VMT through 2040.



Source: 2013 Annual Energy Outlook; Reference Case Tables, Table 7: Transportation Sector Key Indicators and Delivered Energy Consumption, US Energy Information Administration, U.S. Department of Energy (DOE), http://www.eia.gov/forecasts/aeo/

Factors that Influence VMT

Factors that Influence VMT

1. Price of fuel
2. Fuel economy (mpg)
3. Population growth
4. Demographic shifts (elderly)
5. Changes in travel behavior (e.g. young people driving less)
6. Land use patterns/smart growth
7. Use of alternate modes (e.g. transit, bikes)

1. Price of Fuel

Fuel Price and VMT

Numerous studies have shown that as gasoline prices rise, consumers respond by:

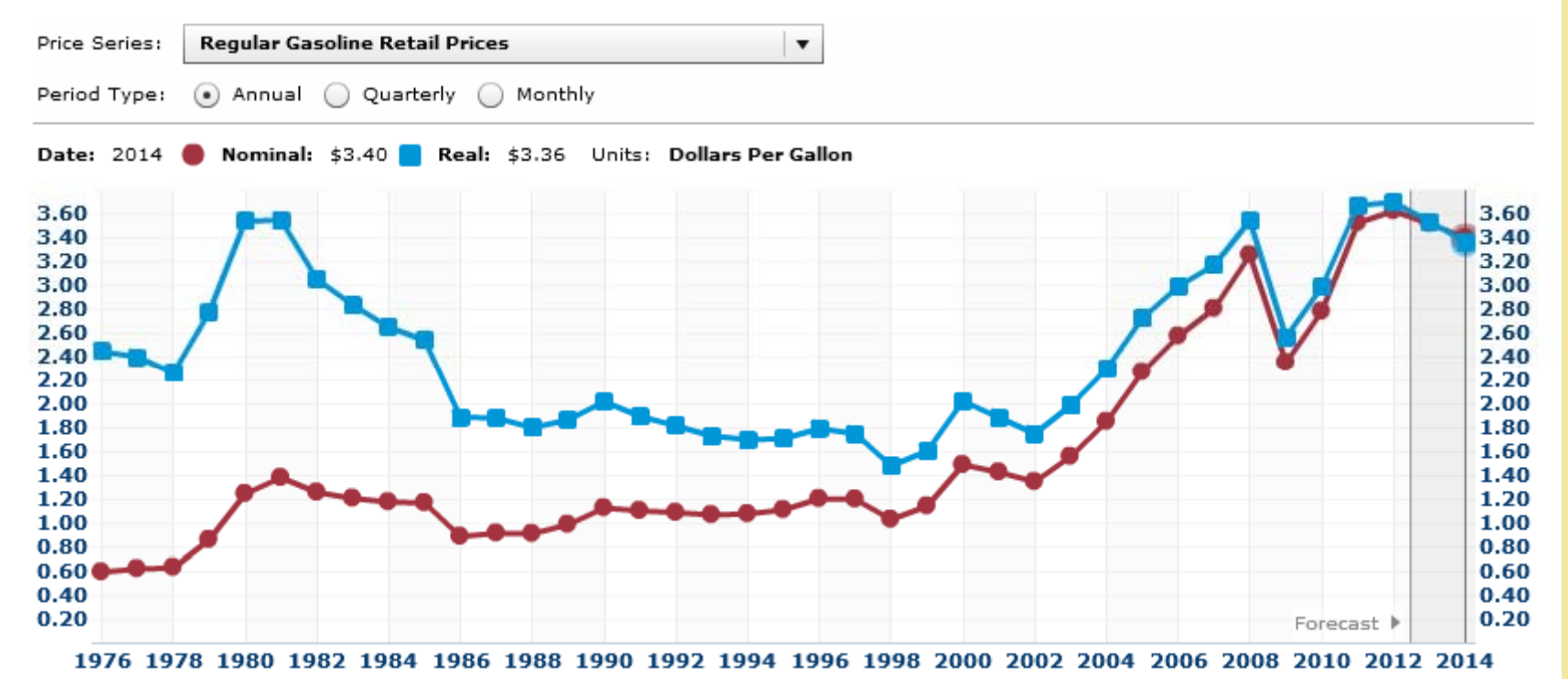
- Short Term:
  - Driving less (⇩ VMT),
  - Reducing speeds (to ⇧ fuel-efficiency),
  - Switching modes (transit, bike, carpool)
- Long Term:
  - Purchasing more fuel-efficient cars,
  - Changing work/home location

Fuel Price and VMT

- The elasticity of VMT with respect to the price of gasoline is historically found to fall between ~ - 0.1 and - 0.3. This means that for every 1% increase in the price of fuel, VMT can be expected to fall by about 0.1% – 0.3%.
- Sensitivity to fuel price varies by income, demographics, geography, etc
- Some research has shown that drivers are becoming less sensitive to fuel price changes than they were historically (one study found -0.03 to -0.08 for 2001 to 2006)

Source: Gillingham, K. 2010. "Identifying the Elasticity of Driving: Evidence from a Gasoline Price Shock in California", Stanford University.
http://trid.trb.org/view/2010/M/1111793

Inflation-Adjusted Gasoline Prices – 2013 Dollars



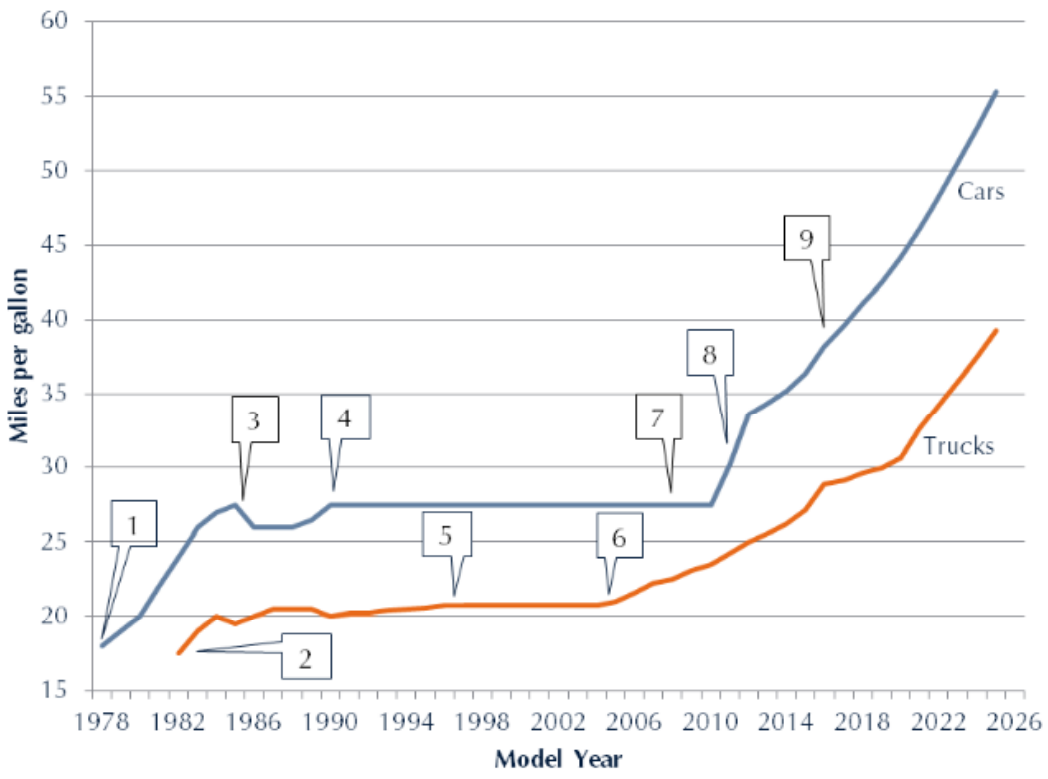
Source: U.S. Energy Information Administration, http://www.eia.gov/forecasts/steo/realprices/

2. Fuel Economy

Rising Fuel Efficiency

- Rising fuel costs will be offset by > 50% ⇧ in fuel-efficiency through 2025
- New CAFE standards will lower the cost of driving per mile
- NHTS and EPA estimated a 10% increase in travel as a result of the MY 2017 – 2025 CAFE standards

FIGURE 1: Fuel economy standard for passenger vehicles from MY1978-2025.



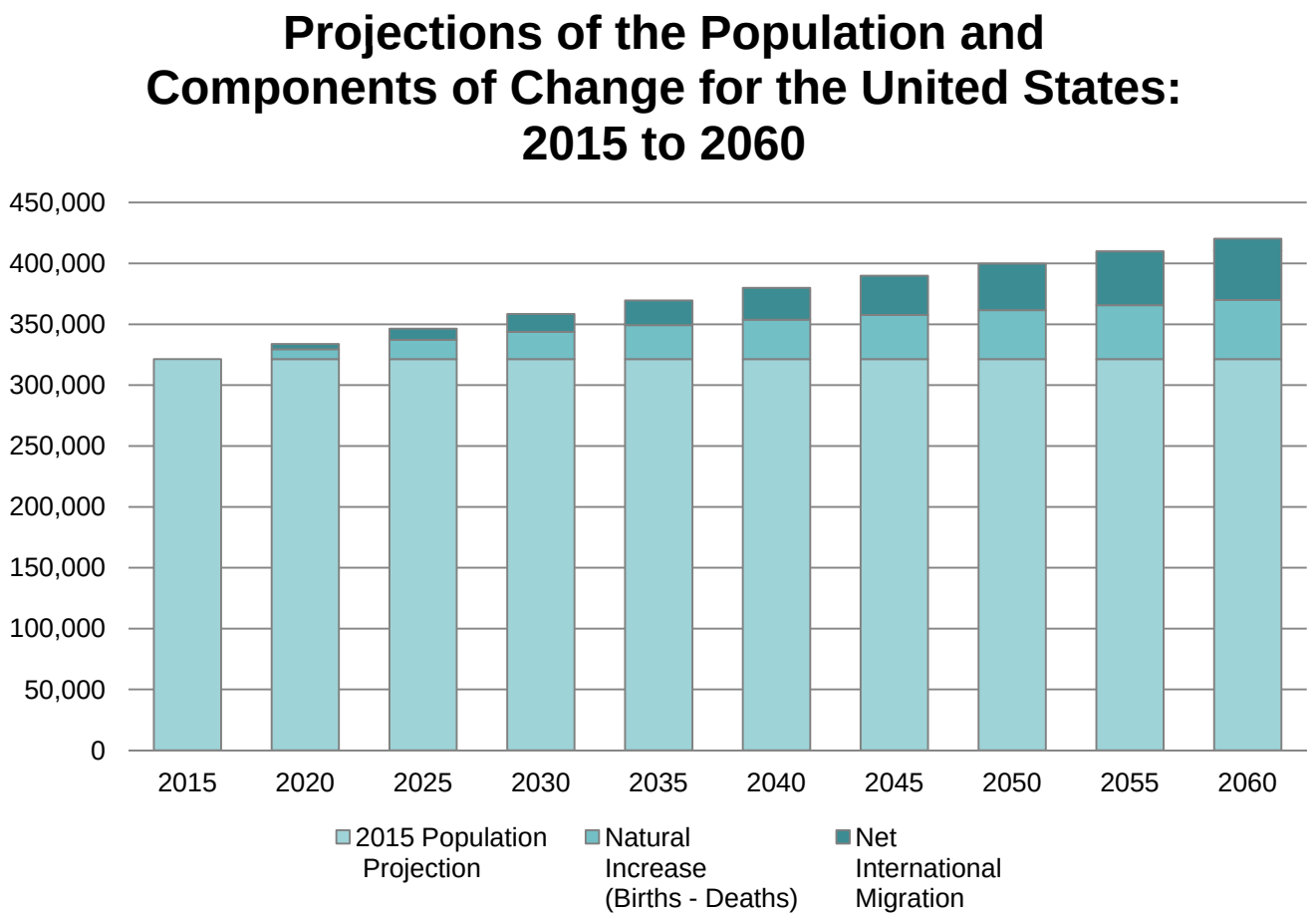
Source: NHTSA Summary of Fuel Economy Performance, NHTSA MY2017-2025 Factsheet

1. 1978-1985: Congress sets car standard (1978-1985)
2. DOT sets truck standard to max feasible (1979-1996)
3. DOT decreased car standard (1986-1989)
4. DOT sets car standard to 27.5 mpg (1990-2010)
5. Congress freezes truck standards at 20.7 mpg (1997-2001)
6. Bush Admin issues new truck targets (2005-2007)
7. EISA changes CAFE to footprint standard (2008-present)
8. Obama Admin issues new car & truck standards (2012-2016)
9. Obama Admin issues new car & truck standards (2017-2025)

3. Population Growth

Increasing Population - Nation

- The nation's total population is forecast to increase to 420.3 million by 2060 (accounts for births, deaths, and net immigration)

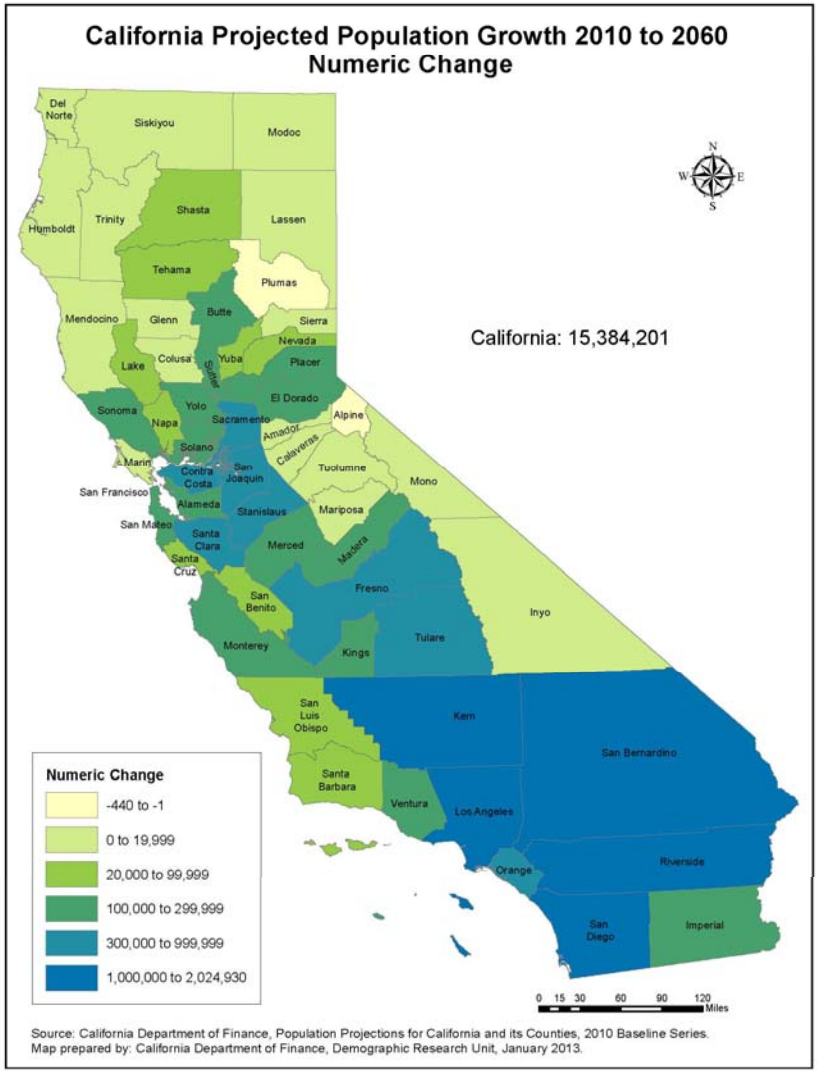


Source: Source: U.S. Census Bureau, Population Division; Release Date: December 2012, http://www.census.gov/population/projections/files/summary/NP2012-T1.xls

Increasing Population - CA

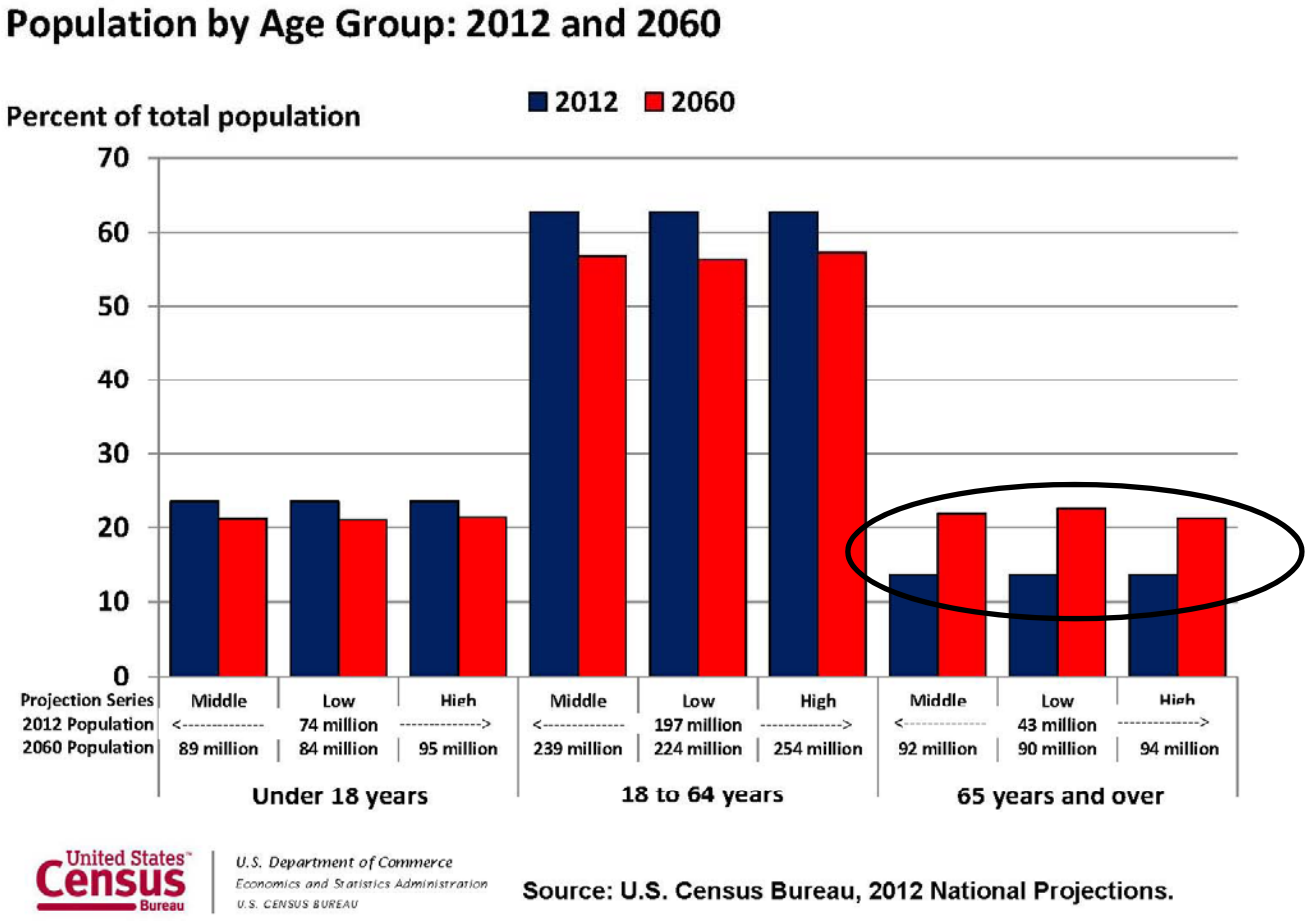
- CA population expected to grow 41.2% (15.4 million people) from 2010 to 2060.
- Southern CA will lead the State's growth - SCAG region will add 4 million residents by 2035.
- CA not projected to age as rapidly as other states (immigration).

Source: Jan 2013 "New Population Projections: California to Surpass 50 million in 2049", CA Dept. of Finance.



4. Demographic Shifts

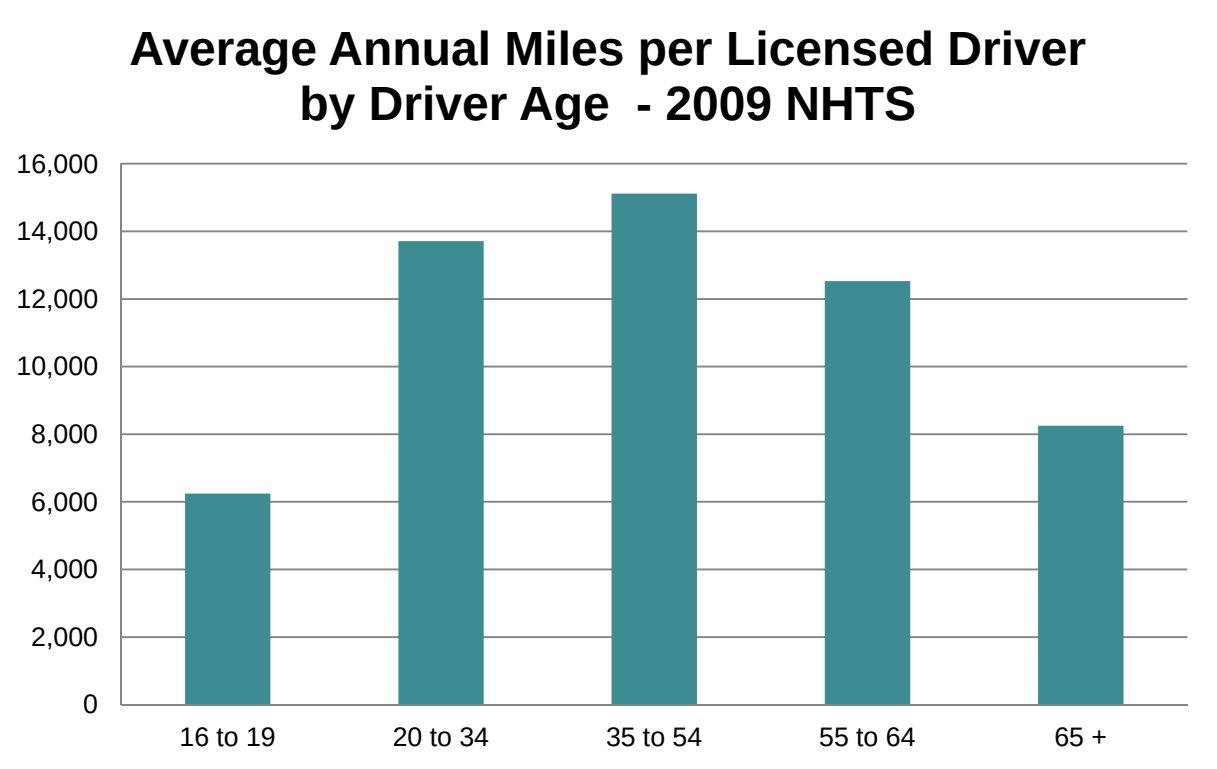
Demographic Shifts – Aging Population



United States Census Bureau | U.S. Department of Commerce, Economics and Statistics Administration, U.S. CENSUS BUREAU

Source: U.S. Census Bureau, 2012 National Projections.

Demographic Shifts – Elderly Drive Less



Source: Summary of Travel Trends, 2009 National Household Travel Survey; US DOT
http://nhts.ornl.gov/2009/pub/stt.pdf

5. Changes in Travel Behavior

Trends in Licensing by Age Group

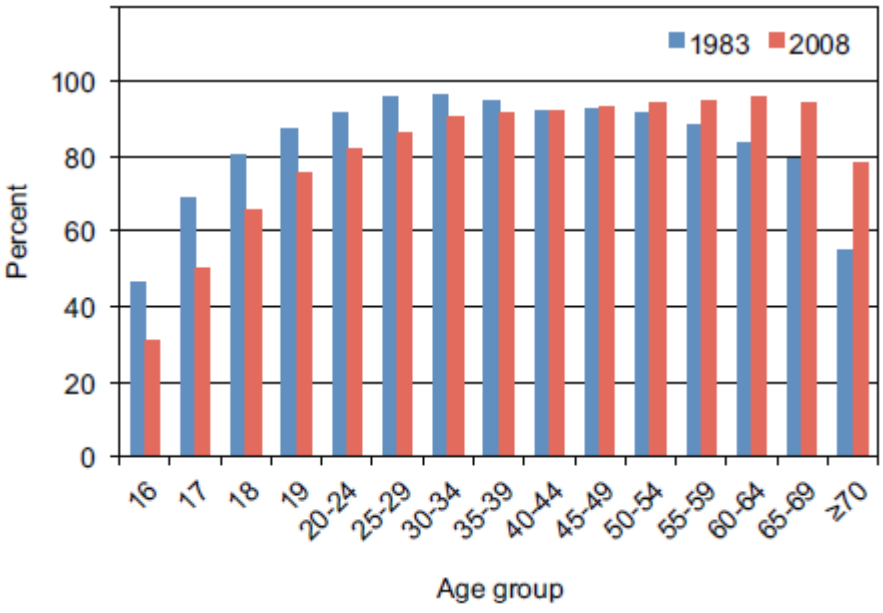


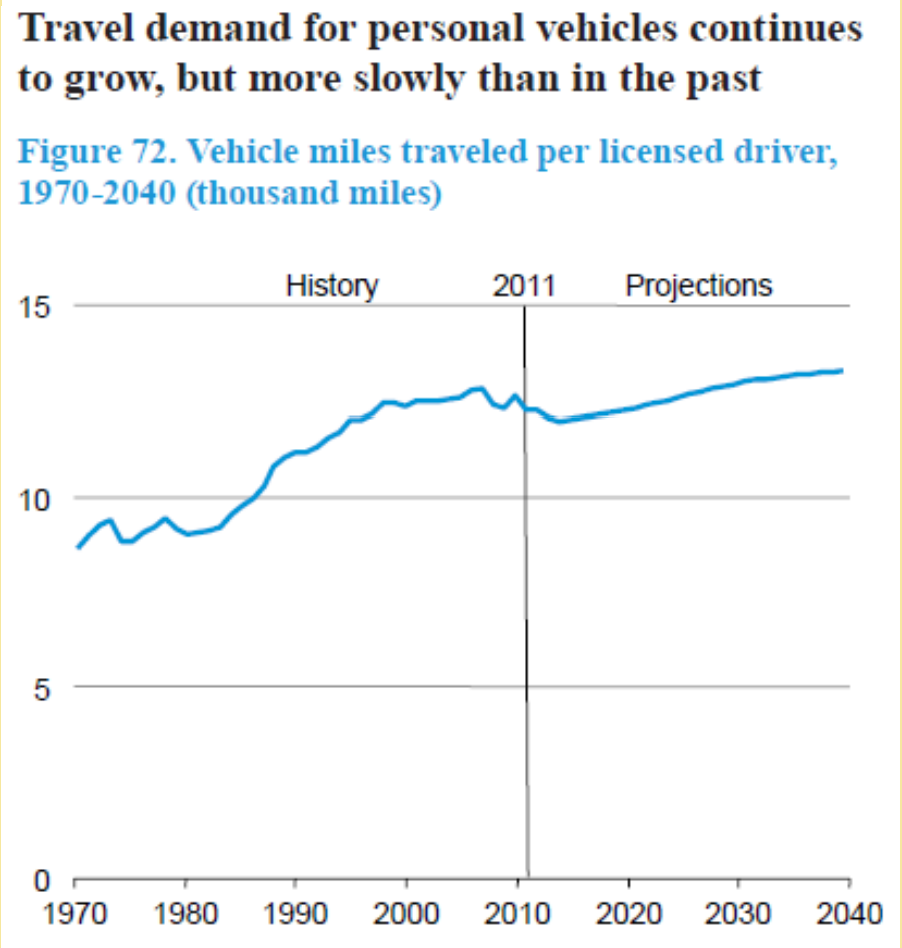
Figure 1. Licensed drivers as a percentage of their age-group population.

The percentage of young adults with a driver's license has been decreasing while the percentage of old adults has been increasing.

Source: *Sivak, M. and Schoettle,. B., June 2011. "Recent changes in the age and composition of U.S. Drivers: Implications for the extent, safety, and environmental consequences of personal transportation", University of Michigan Transportation Research Institute.*

VMT Per Licensed Driver - Growth Forecast

- 2013 Annual Energy Outlook Report also shows a projected increase in VMT per licensed driver through 2040.



Source: 2013 Annual Energy Outlook; US Energy Information Administration, U.S. Department of Energy (DOE) http://www.eia.gov/forecasts/aeo/

6. Land Use Patterns / Smart Growth

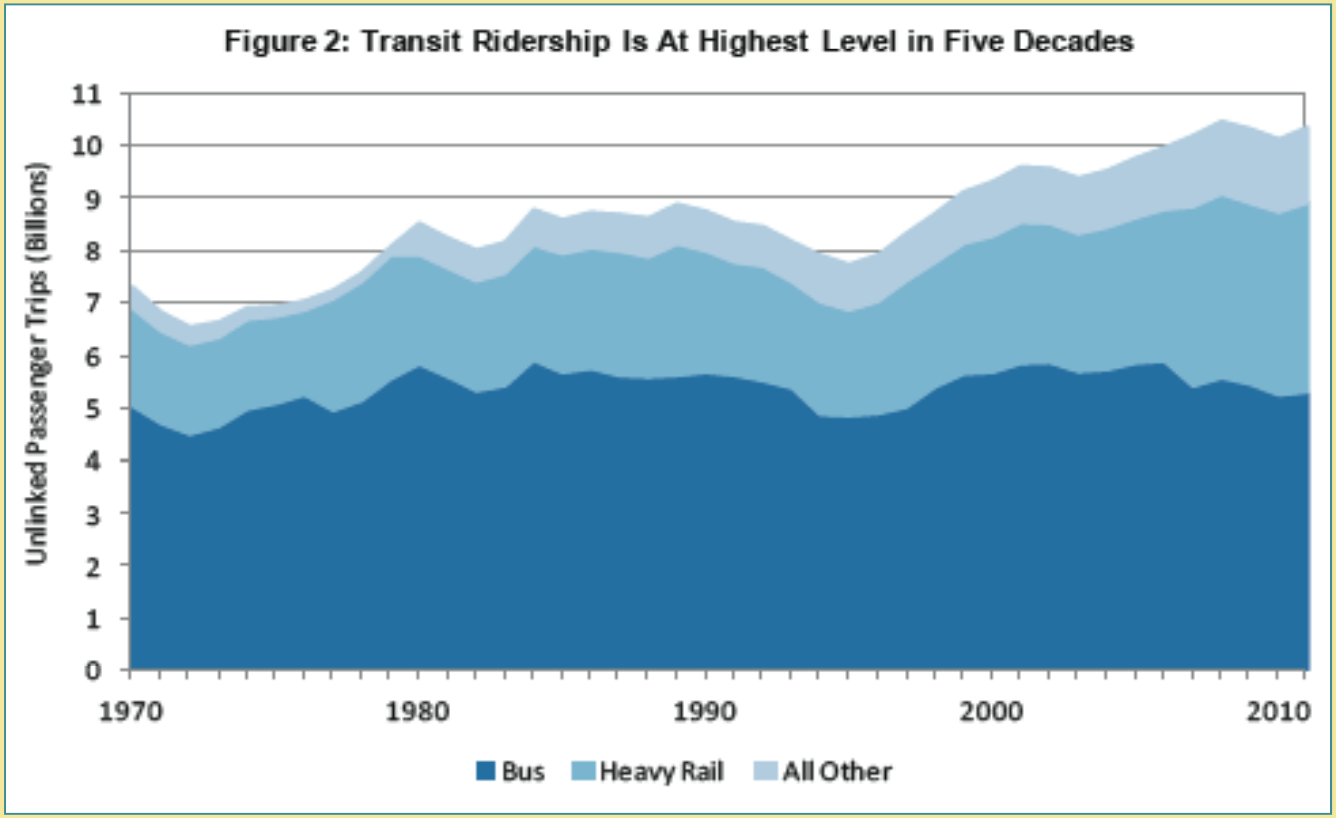
Trend Toward Urbanization

- The nation's urban population increased by 12.1% from 2000 to 2010, outpacing the overall growth rate of 9.7%.
- Urban areas now account for 80.7% of the U.S. population, up from 79% in 2000. Rural areas continued to decline as a percentage of the national population.
- The nation's most *densely* populated urbanized area is Los Angeles-Long Beach-Anaheim, Calif., with nearly 7,000 people per square mile.

Source: U.S. Census, 2012. "Growth in Urban Population Outpaces Rest of Nation"
http://www.census.gov/newsroom/releases/archives/2010_census/cb12-50.html

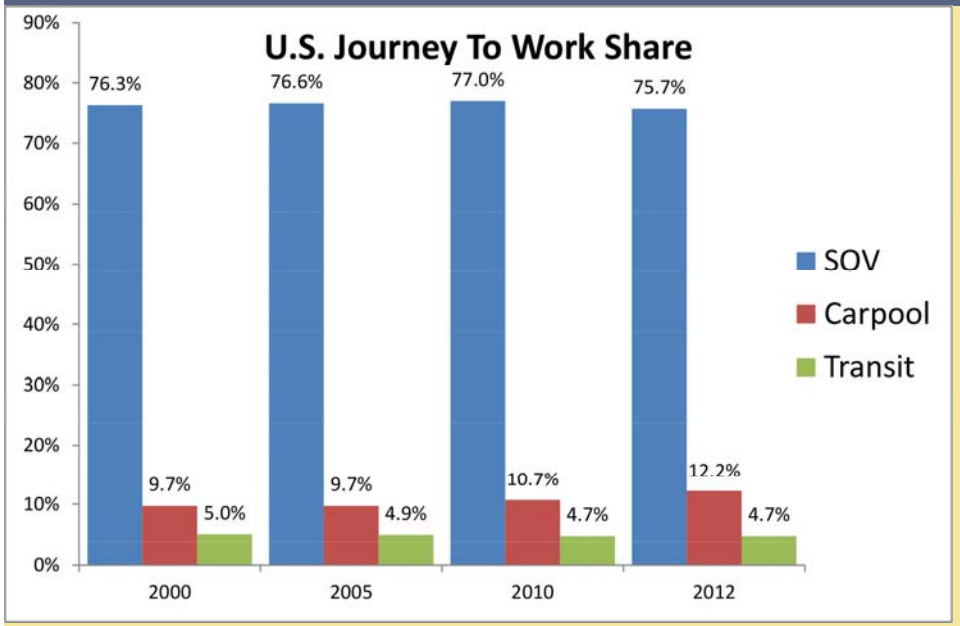
7. Use of Other Modes

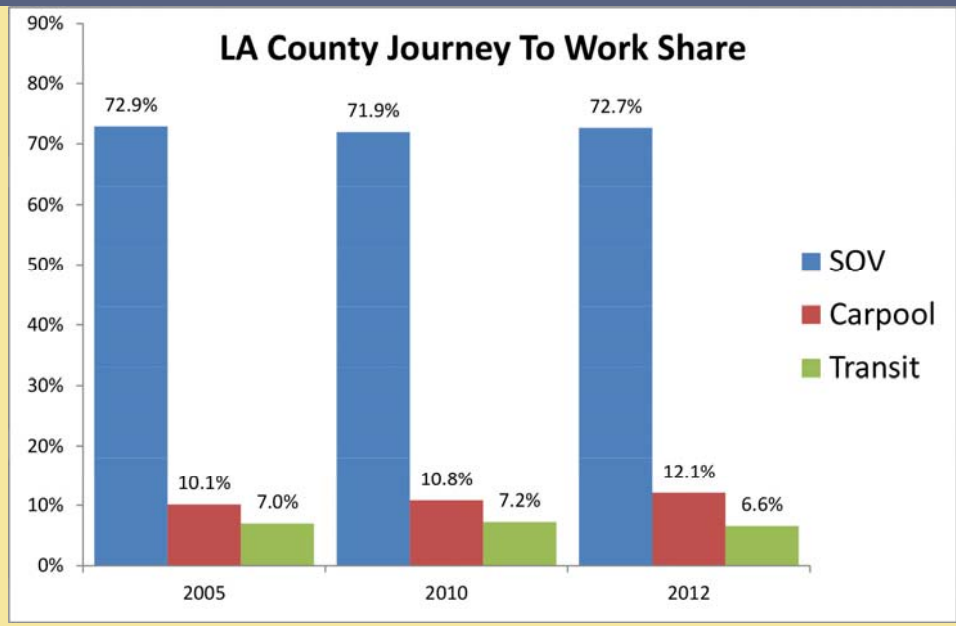
Public Transit Use on the Rise



Source: 2012 Public Transportation Fact Book, American Public Transportation Fact Book, http://www.apta.com/resources/statistics/Pages/transitstats.aspx

Commute Mode Share Trends





Source: 2000 Decennial Census & 2005, 2010, and 2012 American Community Survey, http://factfinder2.census.gov/

VMT – Data & Trends

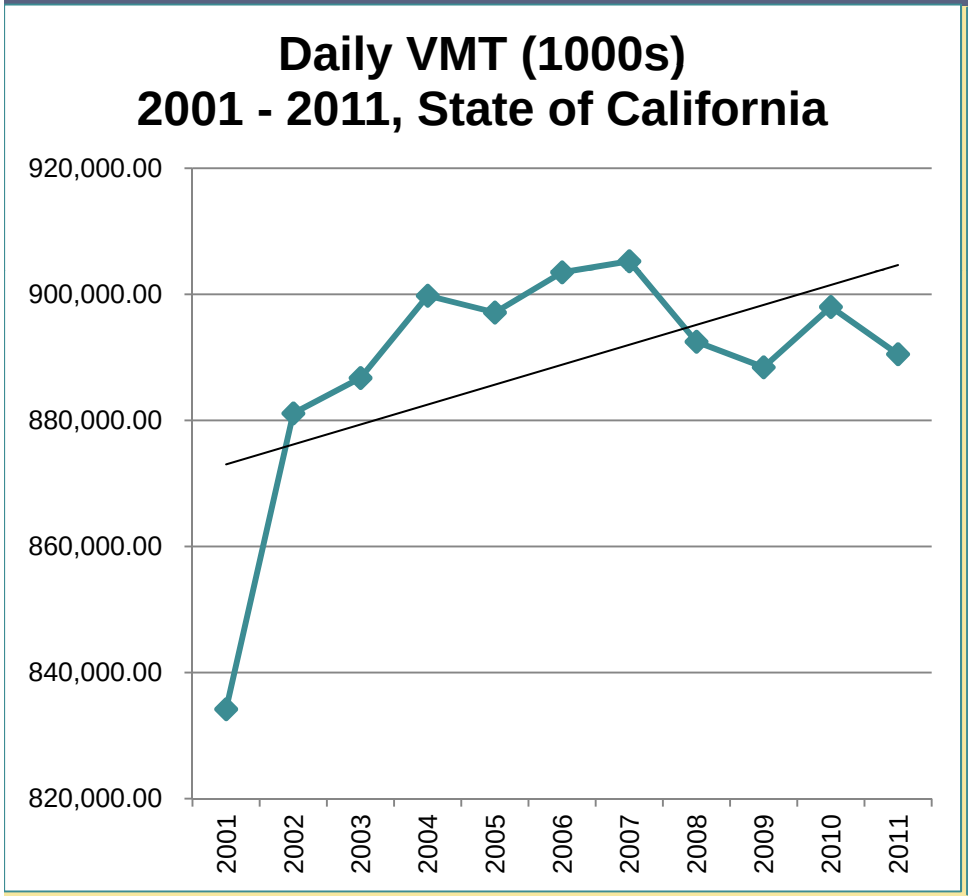
VMT Growth – What are the Past Trends in CA?

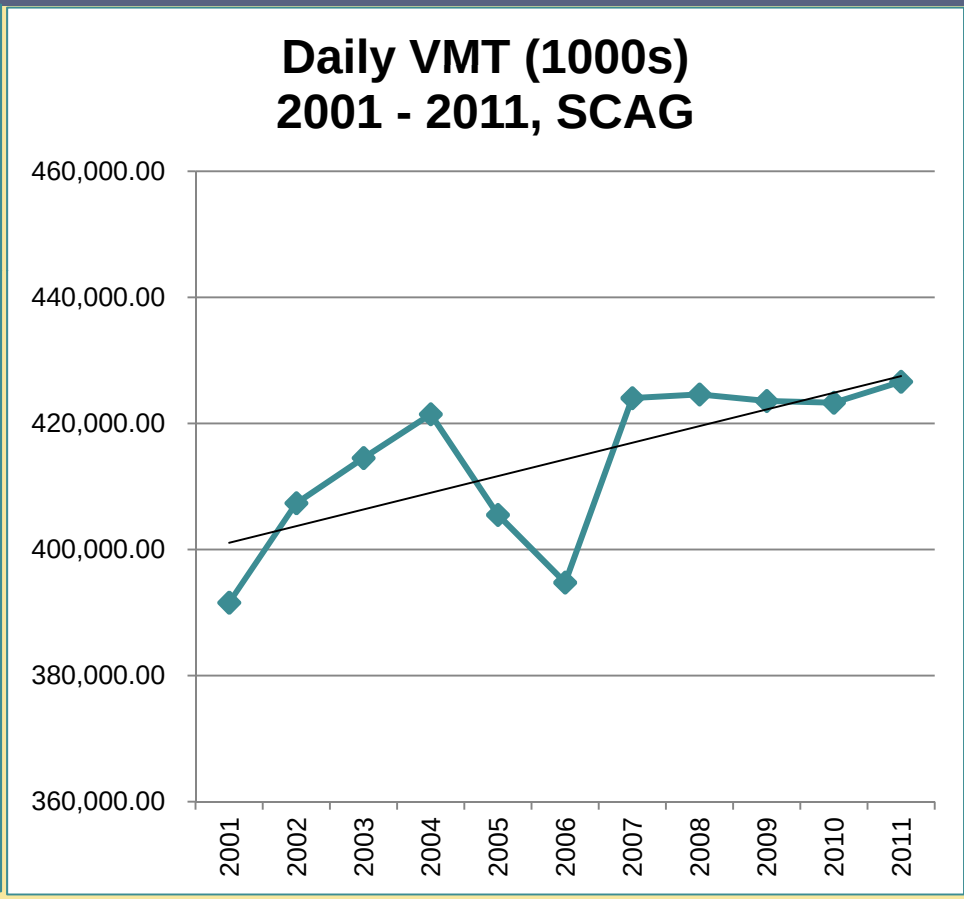
Though fluctuations occur, VMT is still rising overall

	Daily VMT (1000s)						
	2001	**2003**	**2005**	**2007**	**2009**	**2011**	**% change 2001 - 2011**
State of California	834,187.18	886,728.15	897,111.44	905,246.06	888,424.87	890,501.31	6.8%
SCAG	391,568.07	414,514.19	405,487.26	424,012.91	423,558.78	426,615.82	9.0%
Los Angeles County	211,476.55	218,668.54	217,767.44	218,027.04	214,236.85	214,458.14	1.4%

Source: Caltrans Public Road Data
http://www.dot.ca.gov/hq/tsip/hpms/datalibrary.php

VMT Growth – What are the Past Trends in CA?



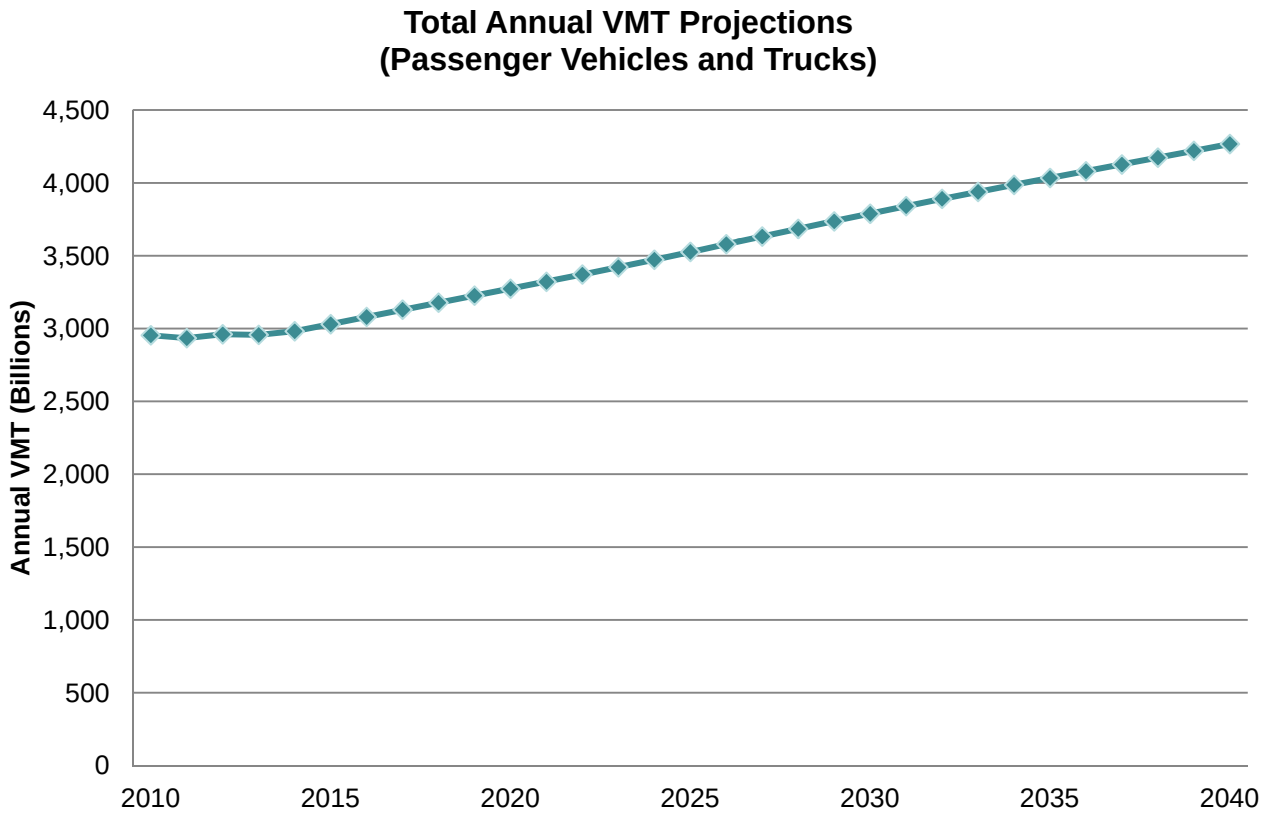


Source: Caltrans Public Road Data
http://www.dot.ca.gov/hq/tsip/hpms/datalibrary.php

Conclusions

VMT Growth – What is the Forecast for the Nation?

- U.S. DOE forecasts energy production, consumption, technology and market trends every year.
- 2013 report shows a projected increase in VMT through 2040.



Source: 2013 Annual Energy Outlook; Reference Case Tables, Table 7: Transportation Sector Key Indicators and Delivered Energy Consumption, US Energy Information Administration, U.S. Department of Energy (DOE), http://www.eia.gov/forecasts/aeo/

Total VMT Growth – What Accounts for the Forecast?

- Increasing Population
  - *Births + Immigration*
  - *VMT Per Capita vs. Total VMT*
- Rising Vehicle Fuel Efficiency
  - *Lowers the cost of driving*
- Projected Increase in Real Disposable Personal Income
  - *Offsets fuel price increases and lowers percent of income spent on fuel*

VMT Growth - What can we Conclude?

- VMT is influenced by a complex interplay of a variety of factors.
- Current trends and research do support decreases in VMT *per capita.*
- However, long-term *total* VMT is still forecast to increase.
- Research is consistent with SCAG model predictions.

Next Steps

Next Steps

- Continue to Evaluate Performance of Build Alternatives
- Continue with Technical Studies
- Continue with Preliminary Engineering and Reports
- Continue Preparation of the Draft Environmental Document
- Expected release of Draft EIR/EIS - Spring 2014

Tentative Meeting Dates for TAC/SOAC

2014 TAC/SOAC Meeting Schedule:

- May 14/15
- July 9/10
- October 8/9

Open Discussion