



Long-Range Planning for a Green Transportation Program: The UCLA Experience

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1980's: Laying the Foundation

- 1987 Transportation Demand Management (TDM) plan outlined need for campus investment in alternative transportation to relieve congestion and enable campus growth by managing and reducing traffic demand
- Strategies concentrated on ridesharing but included other actions such as flextime and additional on-campus housing
- Set goal within 20 years of reducing peak hour vehicle trips by 25% below level which would have otherwise occurred
- Planned for 25% increase in parking inventory to meet anticipated increases in demand due to campus growth



1990's: Expanding Alternatives and Setting Limits on Growth

- Well-developed “alternative transportation” program emerged in 90's following actions outlined in 1987 plan: vanpool, carpool, campus shuttle
- Served as basis for growth limitation commitments in 1990 campus Long Range Development Plan (LRDP) process
- Campus entered voluntary agreement with City of Los Angeles to limit the number of trips to and from campus, with both daily and AM and PM peak period caps
 - Trip caps set using population growth projections and trip generation rates
 - Automated traffic monitoring system installed at all campus exits and entrances
 - Annual reports shared with city and neighbors
- Campus voluntarily capped number of parking spaces to be constructed
- Caps to be in place for 12 year LRDP horizon
- Campus contributed to city's Automated Traffic Surveillance and Control (ATSAC System) as campus growth impacted surrounding intersections



Millennial Reality Check

- Between 1990 and 2002 LRDPs, parking demand declined by 21% and peak hour vehicle trips by 27% below levels which would have occurred without TDM
 - Campus remained within both traffic and parking caps
- Parking inventory remained stable from 1990 to 2002 at 21,000 spaces
- In 2002 LRDP campus re-committed to both traffic and parking caps for another 10 years and committed to maintaining or improving its extensive TDM programs to meet or exceed the Air Quality Management District target of 1.5 Average Vehicle Rideship (AVR) for employees



2000s

- On-campus student housing expanded by more than 4,200 beds
- Parking Master Plan completed
 - Changes to parking policy requiring undergraduate student residents to demonstrate off-campus employment in order to be parked, reducing the need for student parking (2,500 fewer spaces needed)
 - New parking to be constructed for area-specific needs only; business cases for all proposed additions to inventory
- New TDM programs added:
 - Subsidized transit passes with the five agencies serving UCLA
 - New bicycle and walking programs
 - Campus expenditures for TDM top \$6M/year (15% of parking and enforcement revenues)



TDM Programs

Parking fees/citation revenues support a growing Alternative Transportation program:

- Carpools
 - 2,000 carpool permit participants
 - UCLA Exclusive Carpool Matching Program
 - 31% subsidy | 69% user fees
- Vanpools
 - 155 van routes, increasing to 166 over next 3 years
 - 1,620+ full-time and 750 part-time participants
 - 50% subsidy | 50% user fees



TDM Programs

- **Transit Pass Subsidies**
 - Santa Monica Big Blue Bus, Culver CityBus, Metro, LADOT, Santa Clarita Transit
 - 7,500 regular riders (20% of students and 14% of staff are regular users of transit subsidy program)
 - 50% subsidy; 50% user fees



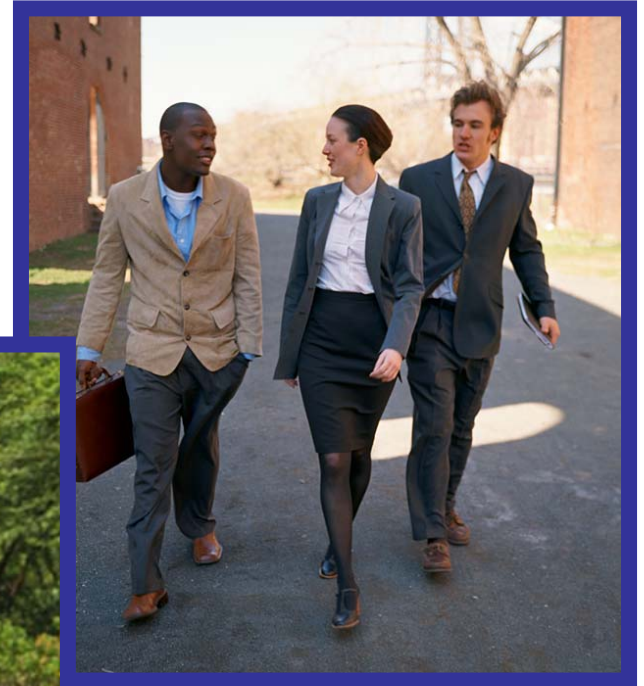
TDM Programs

- **Campus Shuttle Program**
 - Campus Express, Northwest Lunch Shuttle, CSO Evening Vans, Office of Students with Disabilities Van Service
 - IM Annual Shuttle Ridership | 333K Annual Shuttle Miles
 - Clean fuel compressed natural gas bus fleet supports on and near campus mobility
 - Over 50% of passengers are alternative transportation users
- **Commute Support Services**
 - Car-Share
 - Emergency Ride Home (ERH)
 - RideCard (discounted daily parking for TDM participants)



New TDM Strategies

- Increase zero impact modes
 - Bike Loaner Program
 - Guest House
 - Departmental Bikes
 - Bike Loaner Hubs
 - iWalk (partnership with Recreation)





Making the Campus More Bike and Walk Friendly

- Increased bike racks by 10%; integrated into new building plans
- Bike lockers at 6 campus locations
- Designated bike routes with “sharrows”
- Traffic calming strategies to make campus more pedestrian friendly
 - Speed bumps
 - LED ped signs at crosswalks



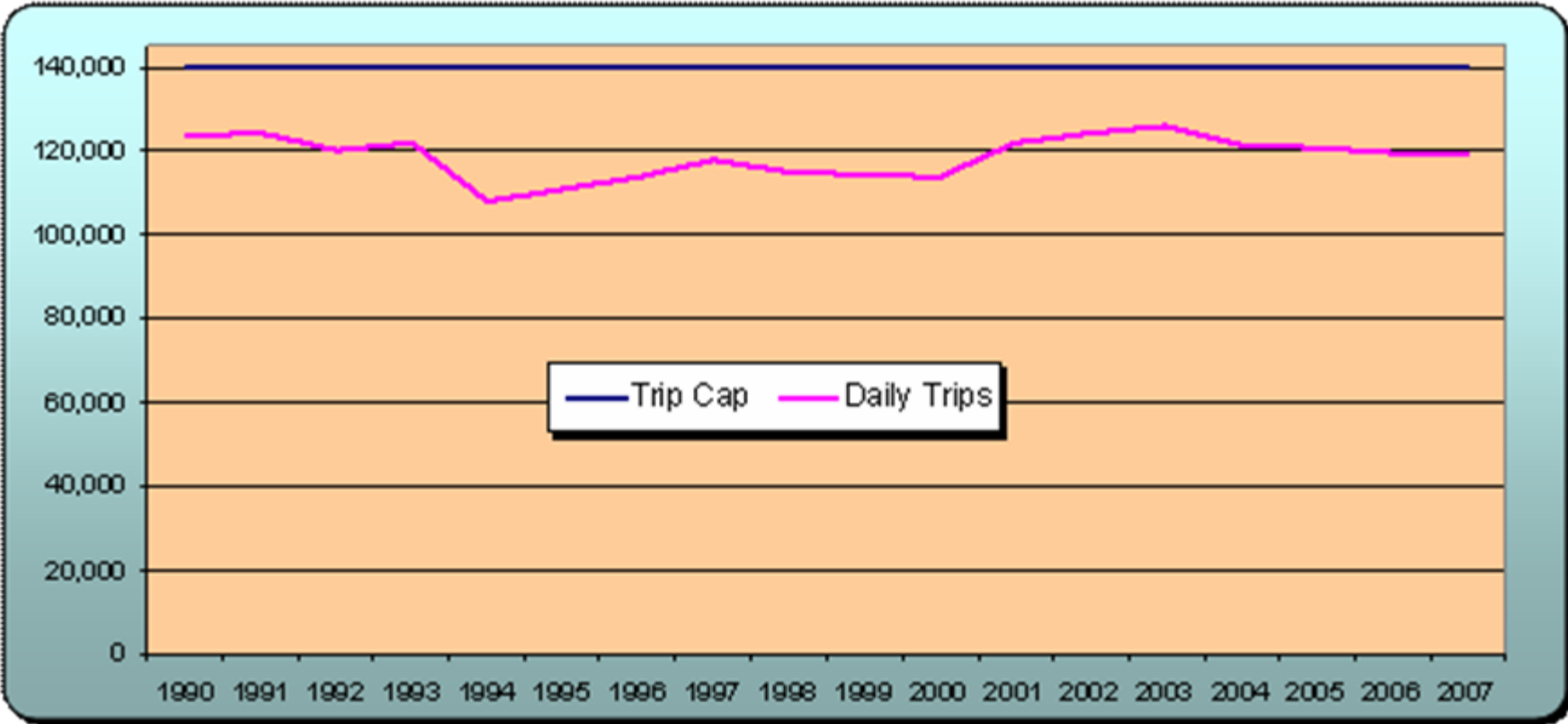
2008: How are we doing?

- We are still within traffic and parking caps
- Campus which used to have 5,000 student wait list has had no wait list for student parking since 2004
- Employee AVR is 1.6 and combined campus AVR including students is 2.82
- Between 1990 and 2007, employee drive-alone rate reduced from 69% to 55% (compared to 75% in L.A. overall)
- Campus traffic is now below 1990 levels despite significant campus growth



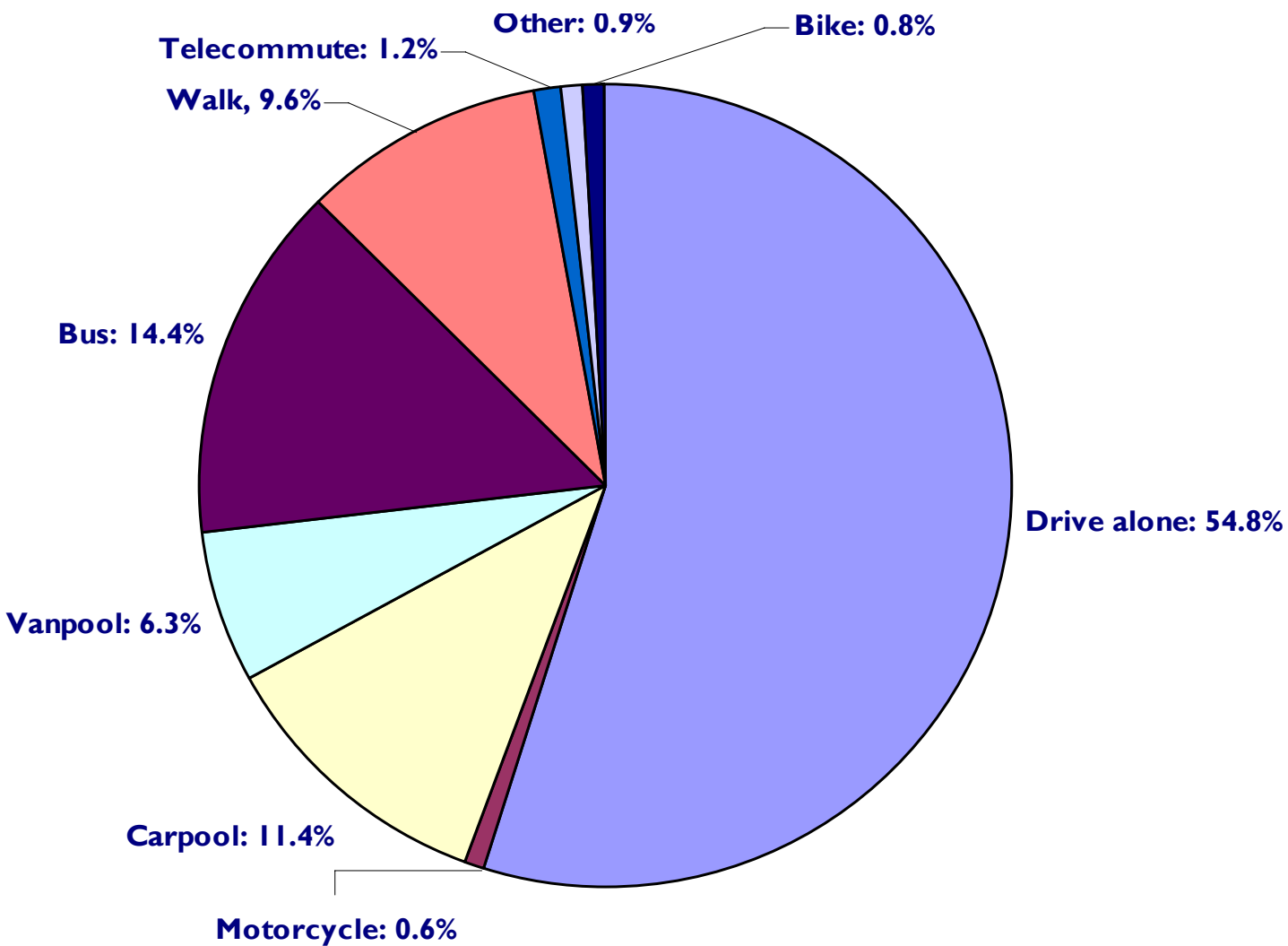
Campus Traffic Cordon Count Average

Daily Trips (24 Hour Day) 10 Year Historical Trend





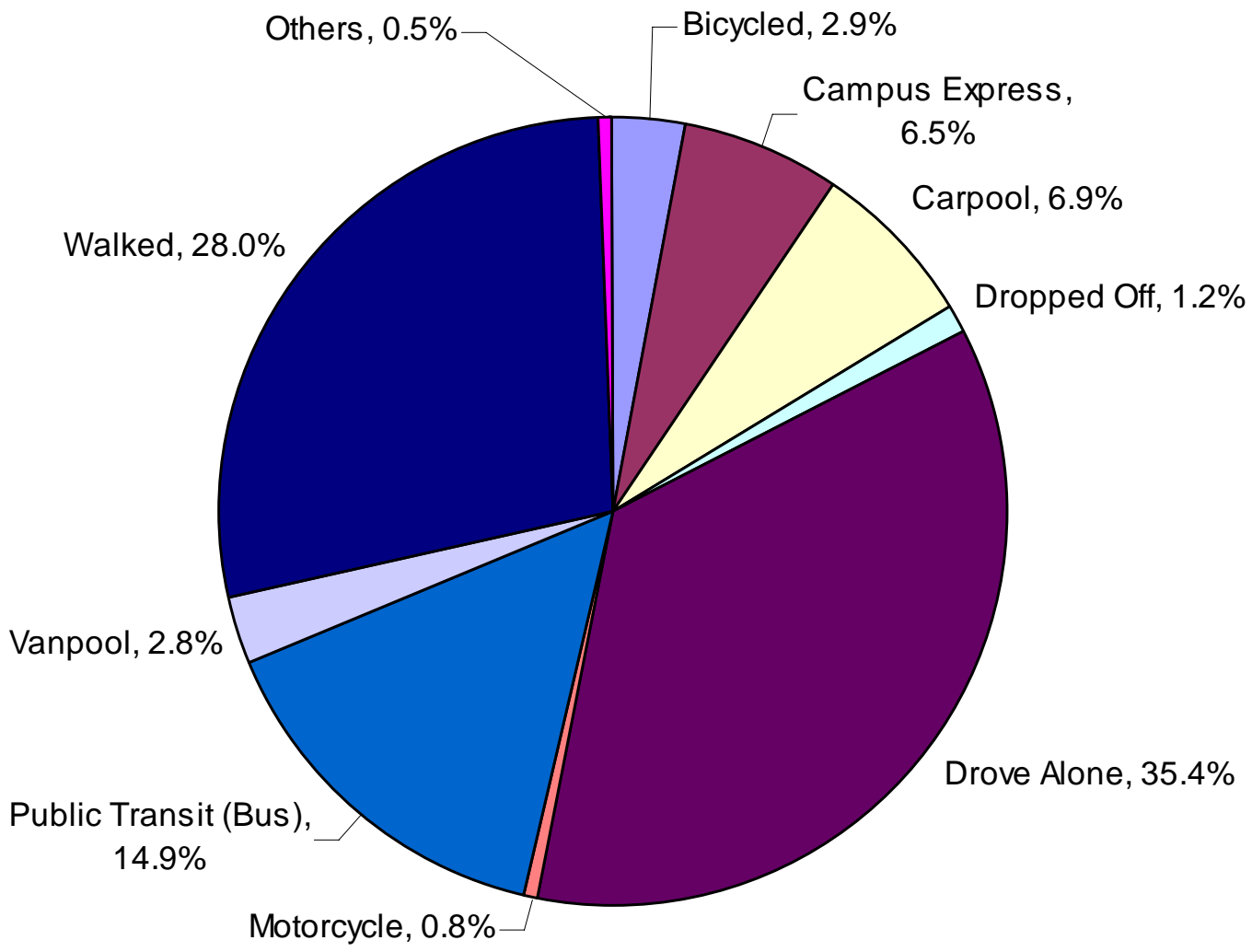
2007* *UCLA Employee Mode Split*



* Includes student employees; AVR = 1.6



2007* UCLA Total Campus Mode Split



* Includes student employees; AVR = 2.82



1.88 Million Annual Trips Saved due to TDM and On-Campus Housing

Program	Participants	Annual Trips Saved
Employee Carpool	973	137,512
Student Carpool	1,022	39,621
Vanpool	1,600*	591,258
Campus Shuttle	1,000,000**	193,000
Transit Subsidy	7,500/23,000***	333,389
Bicycling	1,351	148,233
On-Campus Housing	9,374****	445,035

1,888,048

*Includes Westwood Transportation Network

**Boardings

***Average number of participants based on annual trips taken

****Includes undergraduate residents only



Our Future: Setting Limits on Greenhouse Gas Emissions

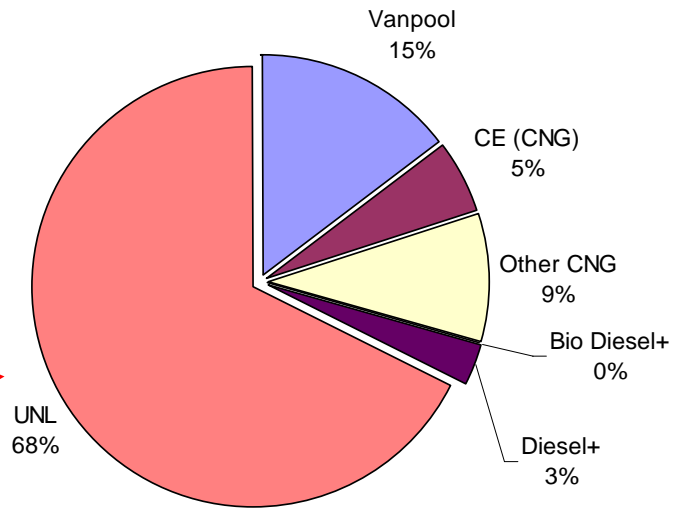
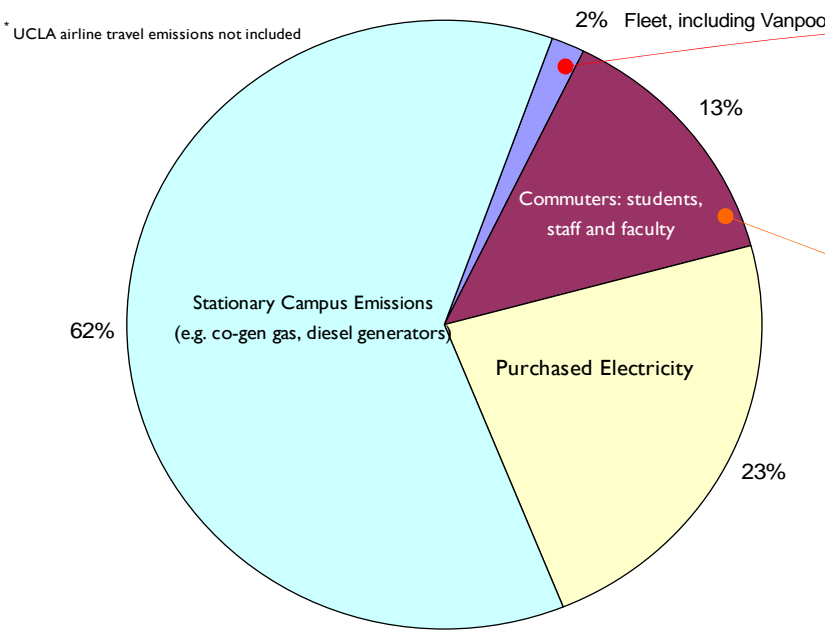
- University of California 2007 Policy on Sustainable Practices, pursuant to the California Global Warming Solutions Act of 2006, calls for reducing GHG emissions to 2000 levels by 2014 and to 1990 levels by 2020



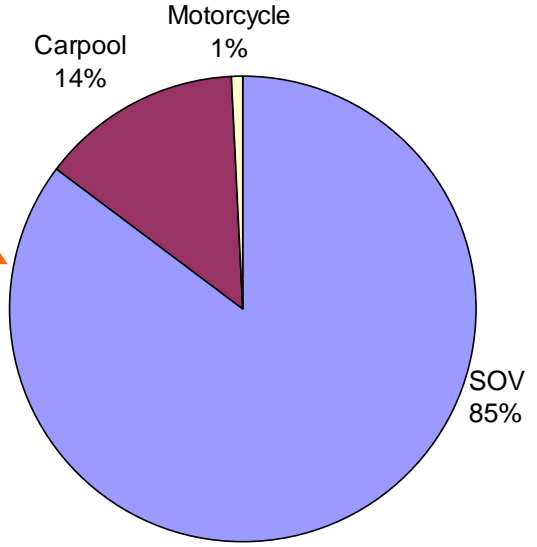
UCLA's Greenhouse Gas Emissions

- Where are we now?

UCLA 2007 CO2 Emissions by source



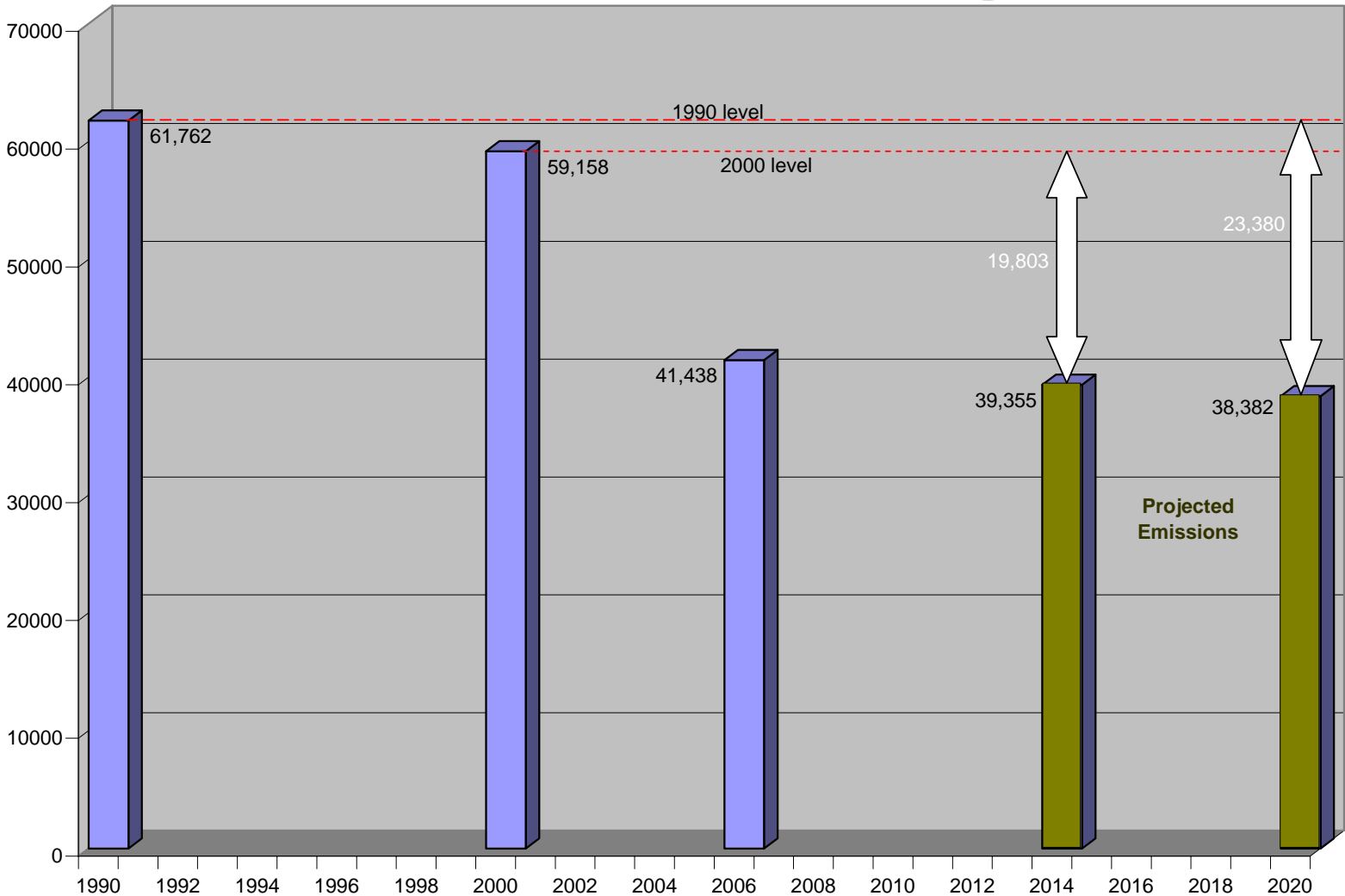
CO₂ Emissions by Fleet by Fuel Type



CO₂ Emissions by Commuters by Mode



UCLA Transportation Emissions will Help Campus Reach California Global Warming Solutions Act Targets

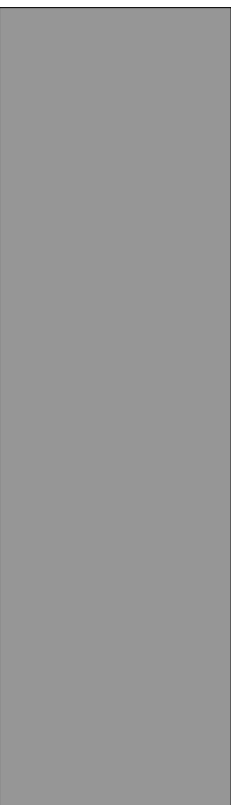




Using Emissions Calculations to Determine Where Best to Aim Resources

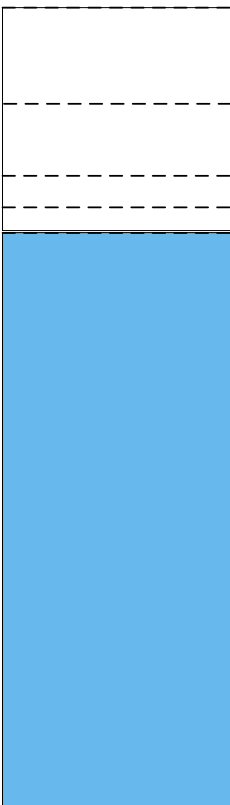
Est. Commute Emissions Without UCLA TDM Programs

~51,000 Metric Tons of CO2



Commute Emissions With UCLA TDM Programs

~41,438 Metric Tons of CO2



CO2 Emissions Saving Sources By Program (Metric Tons)

Cost per Metric Ton of CO2 Saved/Not Emitted

Vanpool	4,448	\$393
Transit Subsidy	3,826	\$319
Carpool	1,052	\$177
Bicycling	66	\$1,812

CO2



***This concludes the American
Institute of Architects Continuing
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