



THE TIOGA GROUP

SACOG REGIONAL GOODS MOVEMENT STUDY *Trucking Overview*



**The Tioga Group • Economic & Planning Systems
Meyer, Mohaddes Associates • Jock O'Connell**

May 11, 2005

Study Objectives

- Developing a well-organized body of data and information on goods movement in the SACOG region.
- Understanding the role freight transportation plays in the broader economic development of the SACOG region and the surrounding NorCal Megapolitan Area.
- Documenting freight transportation and logistics trends relevant to SACOG's long-term planning responsibilities.
- Identifying and contacting public, private, and government freight transportation stakeholders to support the entire three-phase freight action plan development process.
- Linking the freight action plan with the SACOG/Valley Vision Blueprint transportation and land use study, the State GMAP, and other state and regional initiatives.

Key trucking questions

Understanding the context and purpose of a given truck movement requires answers to numerous questions

- Service truck or freight truck?
- Local truck or over-the-road truck?
- Whose name is on the trailer? On the tractor?
- How is the driver paid – hourly, trip, mile?
- What is the driver doing besides driving?
- What time and day is it?
- Why is the truck partly loaded or empty?
- Why is the truck parked there?
- How did the driver get the load?



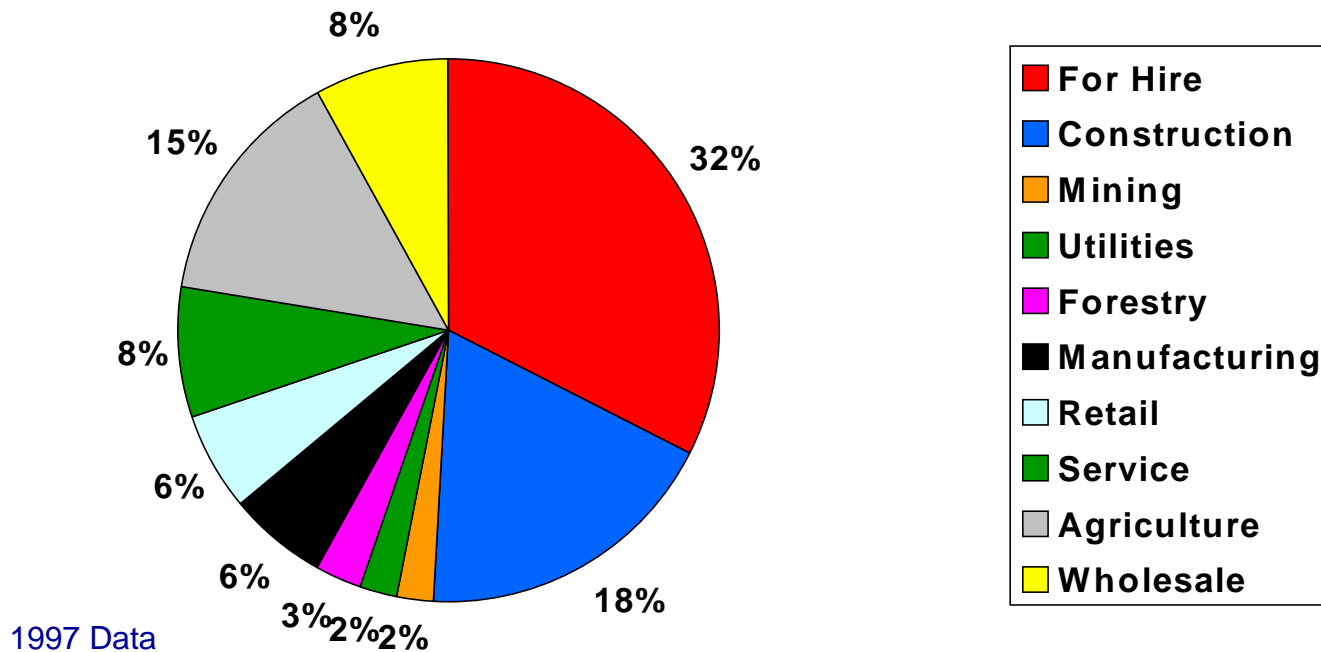
Trucking industry segments

- For-hire or private (proprietary)
- Shipment size – truckload, less-than-truckload (LTL), parcel
- Sub-segments – dump, heavy-haul, towing, agricultural, logging, tank, household goods
- Commodity hauled - freight: dry, temperature-controlled, gasoline, liquefied ammonia, feed, garbage, automobiles, household goods



Heavy Truck Uses

- Only about a third of the heavy-duty trucks are used in for-hire trucking (e.g. hauling other people's goods for pay)
- Two-thirds of the heavy-duty trucks are used by private firms (hauling their own goods), service industries, or government














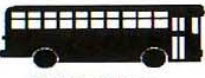

















Truck types & classifications

- Straight truck vs. tractor/trailer combinations
- Trailers vs. semi-trailers, singles vs. doubles
- Service (work) truck versus freight truck
- Body type and auxiliary equipment
- Size (gross weight): SAE Class 1 through 8
- Axle configuration: FHWA Class 1-15
- Fuel type: diesel, gasoline, propane, CNG
- Cab: conventional, COE; day cab, sleeper, integral sleeper

SAE Class 1-8 Gross Vehicle Weight Classifications

CHNL 2006-06535/dgc

 Minivan  Utility van  Multi-purpose  Full-size pickup	<p>CLASS 1 6,000 lb & less</p>	 Bucket  City delivery  Large walk-in	<p>CLASS 5 16,001 to 19,500 lb</p>
 Minivan  Utility van  Full-size pickup  Step van	<p>CLASS 2 6,001 to 10,000 lb</p>	 Beverage  Single-axle van  School bus  Rack	<p>CLASS 6 19,501 to 26,000 lb</p>
 Walk-in  Conventional van  City delivery	<p>CLASS 3 10,001 to 14,000 lb</p>	 Refuse  Furniture  City transit bus  Medium conventional	<p>CLASS 7 26,001 to 33,000 lb</p>
 Conventional van  City delivery  Large walk-in	<p>CLASS 4 14,001 to 16,000 lb</p>	 Dump  Cement  Heavy conventional  COE sleeper	<p>CLASS 8 33,001 lb & over</p>

Medium-duty truck body types



School Bus



Cube



Ambulance



Shuttle Bus



Motor Home



Rolloff



Service



Snow Removal



Landscaping Dump



Flatbed



Utility



Stake



Heavy-duty (Class 6-7) truck body types



Four prevalent vehicle combinations

Straight truck



3 axle tractor with tandem axle semi-trailer ("semi")



2 axle tractor with two single axle semi-trailers ("doubles")



Three axle straight truck coupled to a two axle full (pull) trailer

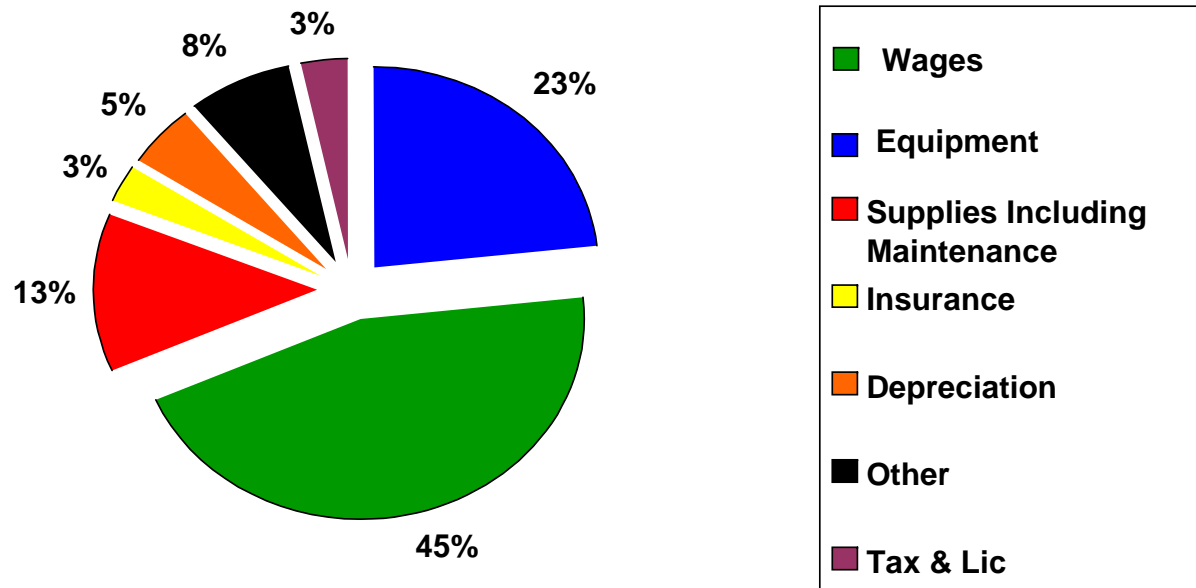


Vehicle Type and Dispatch Pattern Examples

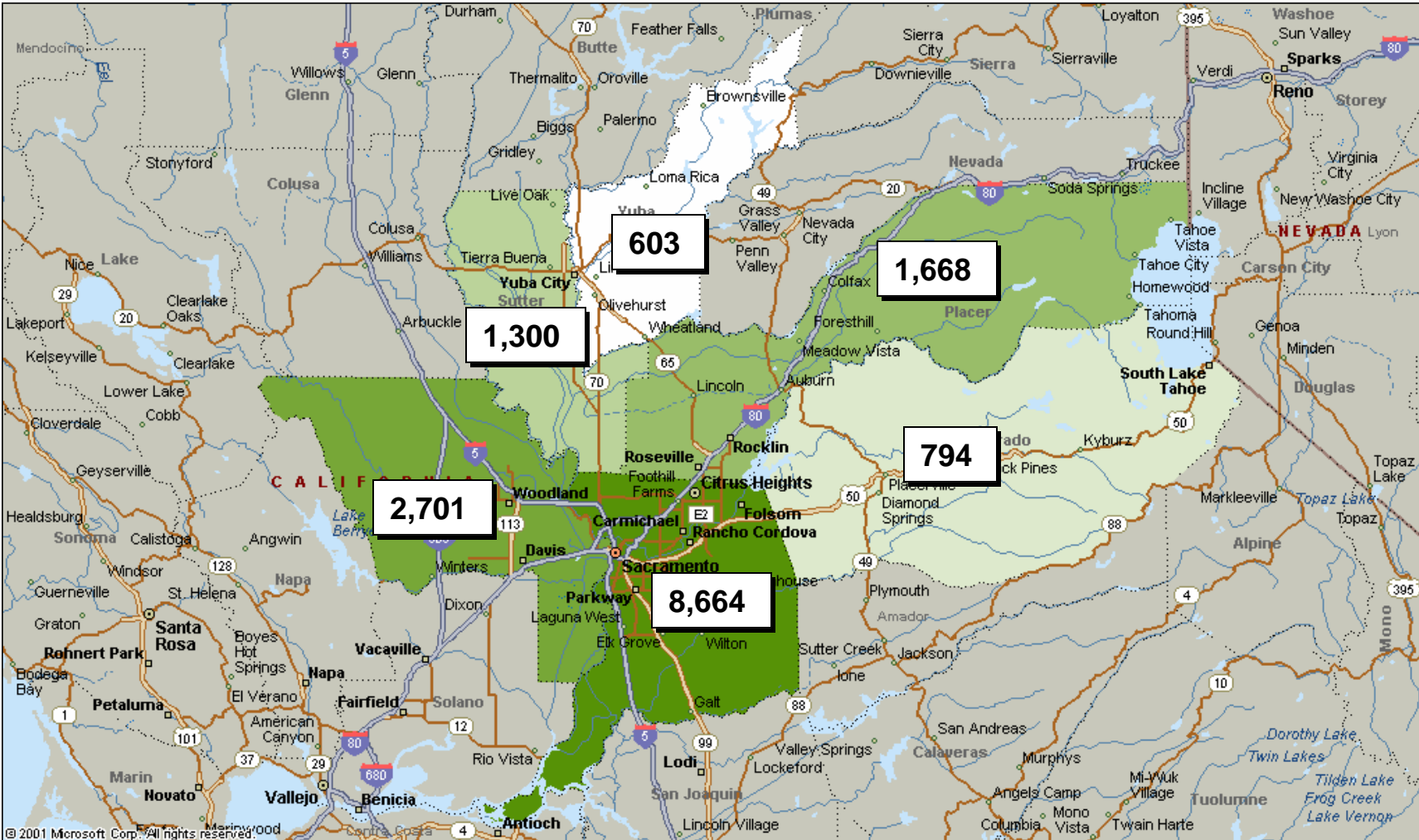
Vehicle Type (Examples)	Dispatching Pattern (Examples)					
	Delivery and empty return	Descending Load	Out empty back loaded	Delivery and Empty Positioning	Long Haul Single Driver	Long Haul Team Drivers
2-axle van	Carpet Delivery	Office Supplies	Recycling Collection	–	–	–
3-axle truck	Sand & Gravel	Gasoline Delivery	Solid Waste	–	–	Expedited
28' tractor-trailer	Factory to Warehouse	Private multi-stop	Private multi-stop	Contract Carrier	Regional LTL	Expedited LTL
53' tractor-trailer	Factory to Warehouse	Private multi-stop	Household Goods	Commercial Truckload	Commercial Truckload	Commercial Refrigerated

Trucking industry issues

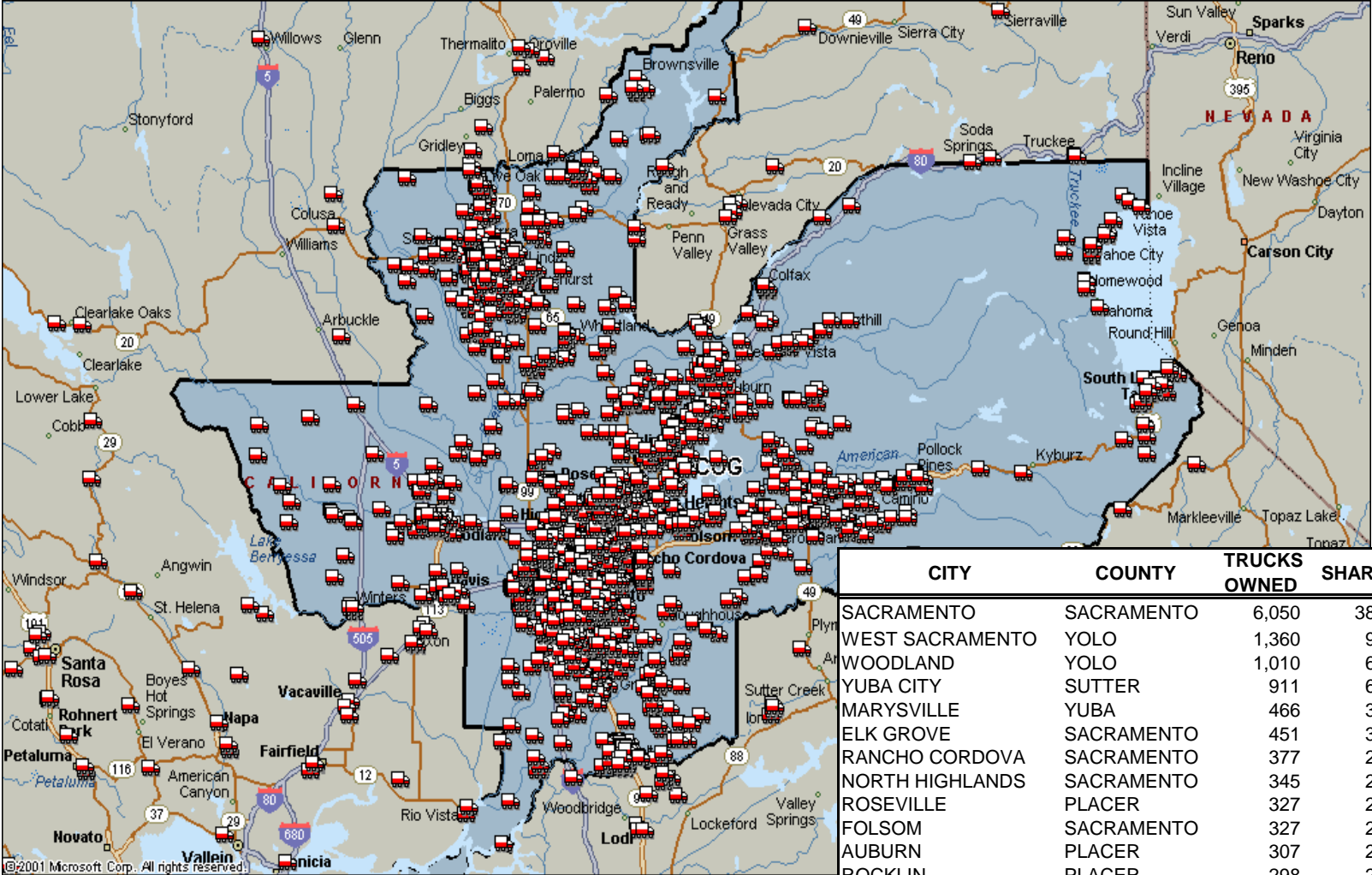
- Severe and worsening shortage of qualified drivers
- Rising fuel, labor, safety, insurance, and environmental costs
- Flat or declining productivity
- Ease of entry, rate of exit
- Upward pressure on rates



Trucks by county



Truck fleet locations



CITY	COUNTY	TRUCKS OWNED	SHARE	CUMULATIVE SHARE
SACRAMENTO	SACRAMENTO	6,050	38%	38%
WEST SACRAMENTO	YOLO	1,360	9%	47%
WOODLAND	YOLO	1,010	6%	54%
YUBA CITY	SUTTER	911	6%	59%
MARYSVILLE	YUBA	466	3%	62%
ELK GROVE	SACRAMENTO	451	3%	65%
RANCHO CORDOVA	SACRAMENTO	377	2%	68%
NORTH HIGHLANDS	SACRAMENTO	345	2%	70%
ROSEVILLE	PLACER	327	2%	72%
FOLSOM	SACRAMENTO	327	2%	74%
AUBURN	PLACER	307	2%	76%
ROCKLIN	PLACER	298	2%	78%
GALT	SACRAMENTO	296	2%	80%
ALL OTHERS		3,205	20%	20%
SACOG TOTAL		15,730	100%	100%

Trucks use major highways and arterials



Trucking data cautions

- Traffic passing counts are useful, but do not convert to either freight flows or trips.
- Trips are not the same as freight flows – a complete trip may include empty or “stem” miles.
- Freight flow data do not translate into VMT, trips, passing counts, or local truck flows.
- Commodity data is typically proprietary, and commodities “disappear” into LTL, mixed freight, or Freight-All-Kinds (FAK) classifications.
- Freight bill and customer data is proprietary.
- Trip data usually is not viewed as proprietary.

Logistics trends

Shippers continually adjust logistics and shipping strategies to balance cost and service.

- “Just in time” and “lean” logistics, time-specific pickup and delivery
- Global sourcing and distribution, very long supply chains
- Greater customization, more products (SKU’s), smaller shipments, and more shipment consolidation
- Information substituted for inventory and speed of transit
- Land values traded off for transport costs



