

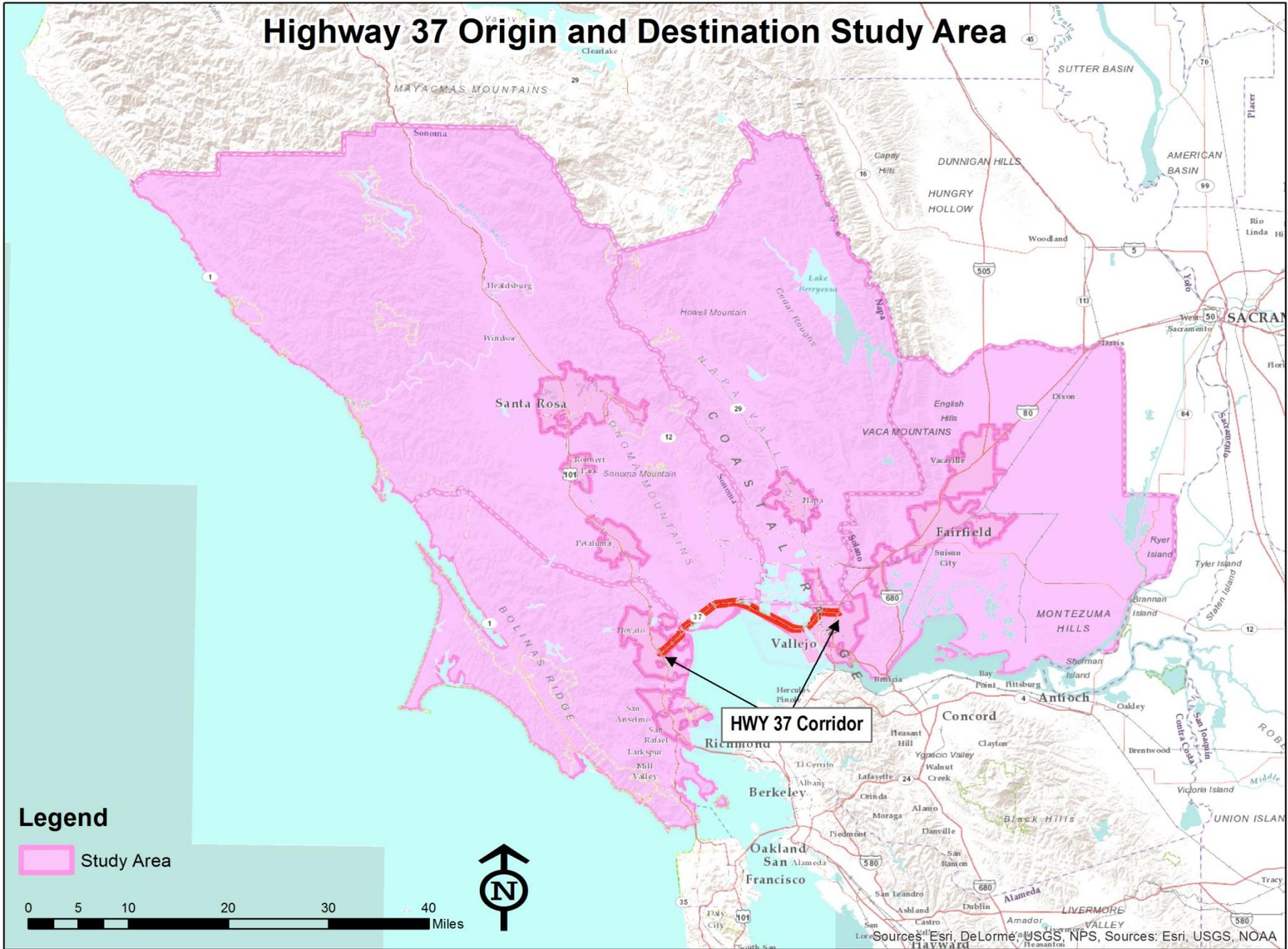
Highway 37 Origin and Destination Analysis – September 2014

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Highway 37 Origin and Destination Study Area



Legend

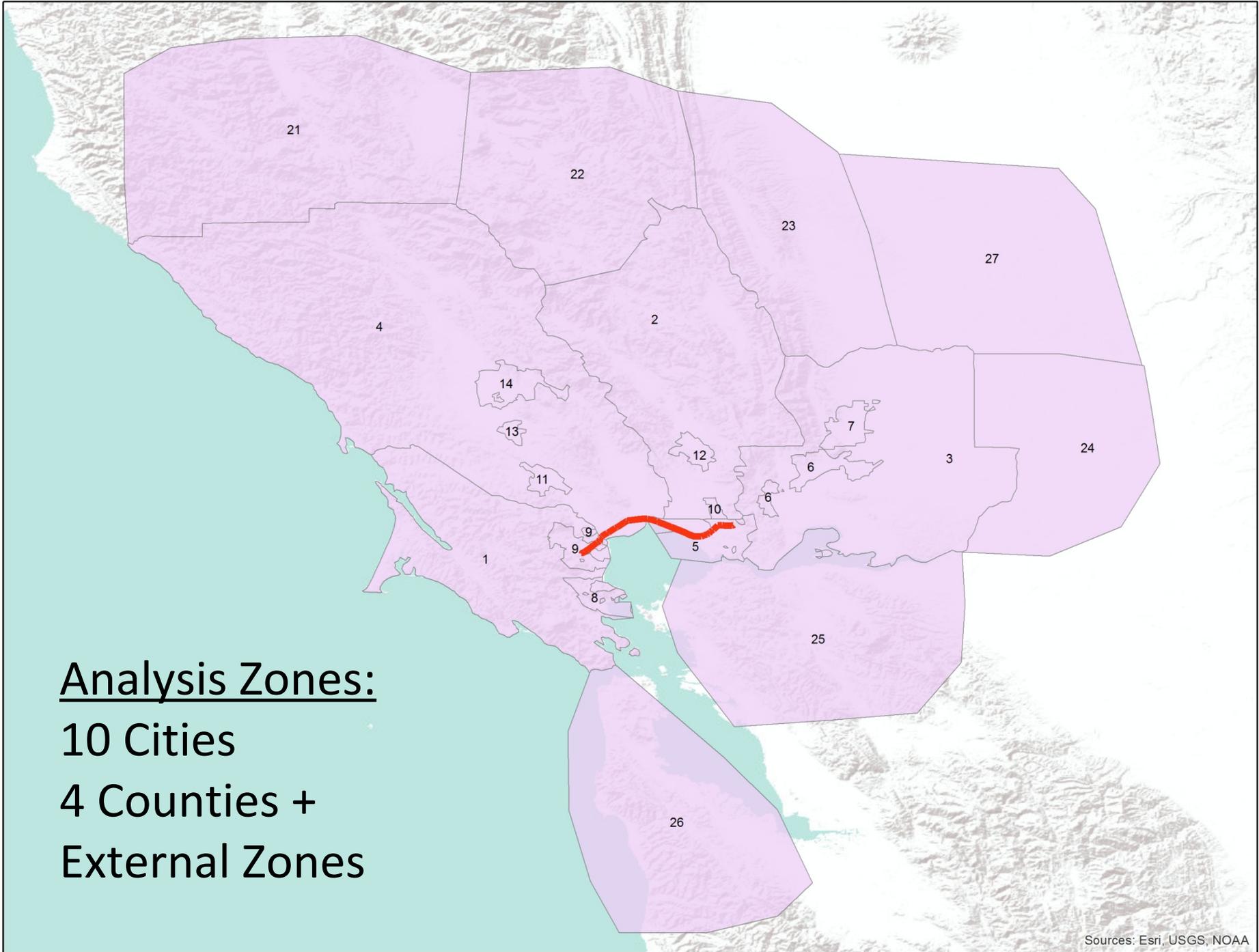
 Study Area

0 5 10 20 30 40 Miles



Getting the Data

- Procurement Process – Cost based on population and # of zones.
- Data Requested – Sub-regional trip tables, O/Ds for Hwy 37 travel, trip purpose, time of day, residence status.
- Define Study Period -AVG. Weekday – Sept. 2014
- Wait for Data - Verizon selected for North Bay Coverage



Analysis Zones:
10 Cities
4 Counties +
External Zones

Steps for Creating OD Pairs

- Assign device home and work location
 - Home zone assigned for where a device was between 9PM and 6AM during the study period.
 - Work zone assigned based on where device was located between 9AM – 5PM during the study period.
- Assign residence status
 - Resident, home location is in the study area.
 - Visitor, persons who were observed in the study area during the study period but which were assigned home locations outside of the study area.

Steps for Creating OD Pairs cont.

- Generate trips

- Trip End points (origins or destinations) assigned for device sightings for stationary devices (home, work, or other locations) or first or last sighting of device moving through the study area.
- Trips assigned to zones using end points.
- Trip purpose assigned based on trip end point definition (HBW, HBO, and NHB trips).
- Time period assigned using time stamp (AM Peak, PM Peak, Off Peak).

Deliverables

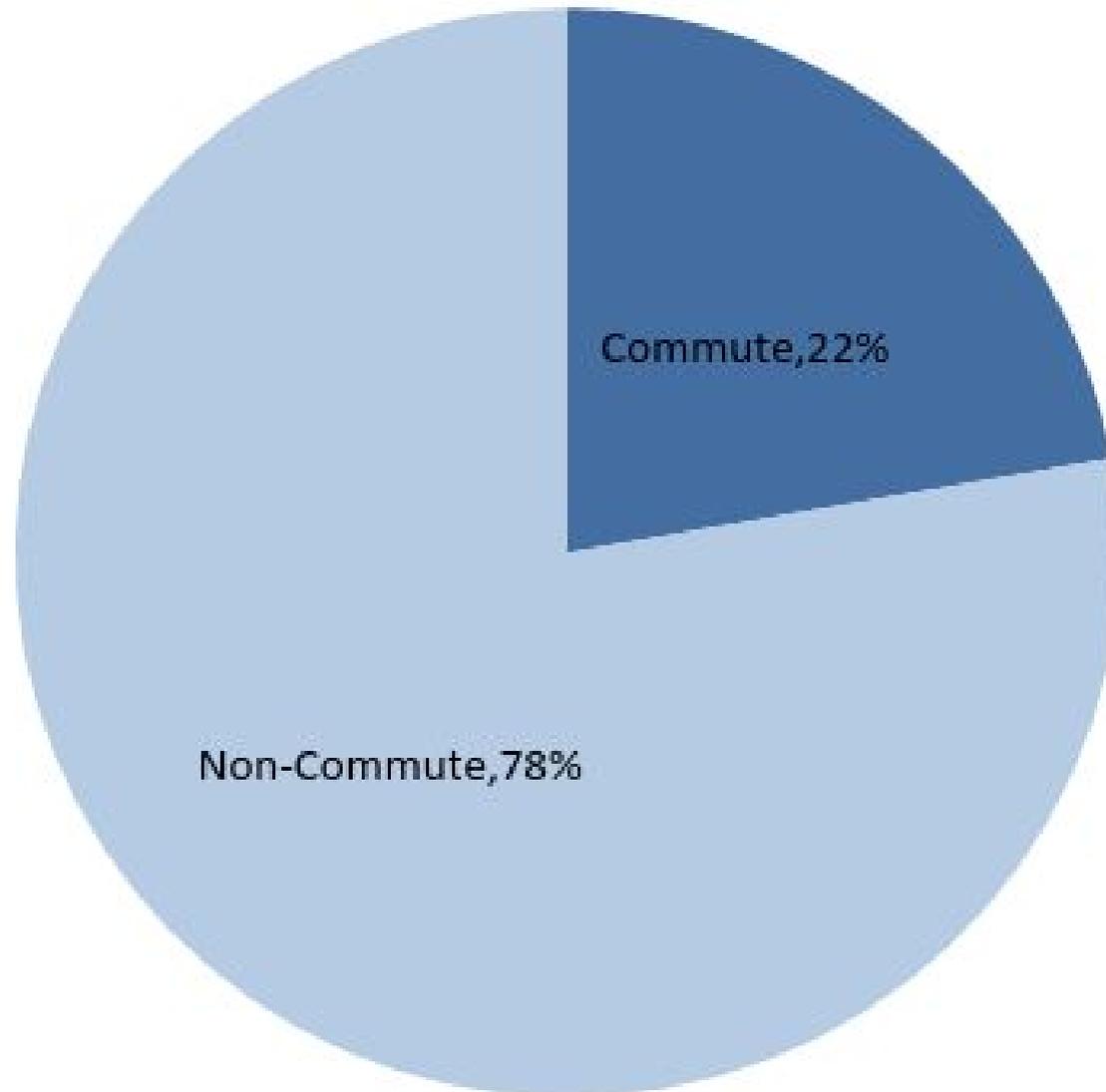
- Daily O/D Trip Matrix – All travel
- Peak Period O/D Trip Matrix – All travel
- Daily O/D Trip Matrix – Hwy 37 travel
- Peak Period O/D Trip Matrix – Hwy 37 travel
- Documentation
- Data Dictionary

Origin_Zone	Destination_Zone	Start_Date	End_Date	Residence Class	Purpose	Time_Of_Day	Count	Highway 37 Count
10	11	20140901	20140930	Resident	HBO	24hours	70.83	23.61
10	11	20140901	20140930	Resident	HBW	24hours	118.11	18.45469
10	11	20140901	20140930	Resident	NHB	24hours	23.11	3.555385
10	11	20140901	20140930	Visitor	NHB	24hours	23.31	11.655
10	12	20140901	20140930	Resident	HBO	24hours	3297.63	132.648
10	12	20140901	20140930	Resident	HBW	24hours	2962.58	31.40544
10	12	20140901	20140930	Resident	NHB	24hours	622.3	18.61581
10	12	20140901	20140930	Visitor	NHB	24hours	395.33	4.623743
10	13	20140901	20140930	Resident	HBO	24hours	44.18	11.045
10	13	20140901	20140930	Resident	NHB	24hours	12.33	4.11
10	14	20140901	20140930	Resident	HBO	24hours	139.67	16.2407
10	14	20140901	20140930	Resident	NHB	24hours	24.14	6.035
10	14	20140901	20140930	Visitor	NHB	24hours	32.8	8.945455
10	2	20140901	20140930	Resident	HBO	24hours	1681.86	82.42228
10	2	20140901	20140930	Resident	HBW	24hours	1407.96	24.19931
10	2	20140901	20140930	Resident	NHB	24hours	609.54	18.56467
10	2	20140901	20140930	Visitor	NHB	24hours	738.01	4.157803
10	21	20140901	20140930	Visitor	NHB	24hours	15.51	1.723333
10	22	20140901	20140930	Visitor	HBO	24hours	26.97	3.852857
10	23	20140901	20140930	Resident	HBO	24hours	41.43	4.603333
10	23	20140901	20140930	Resident	NHB	24hours	16.56	1.84
10	23	20140901	20140930	Visitor	HBW	24hours	23.09	0.962083
10	23	20140901	20140930	Visitor	NHB	24hours	13.87	1.541111

Summary Of Current Conditions and Samples Collected

- 33,000 vehicles per day at Sonoma – Solano county line.
- 40,000 vehicles per day in Novato
- 92,500 vehicles per day in Vallejo at junction with I-80.
- Approximately 66,000 daily trips tracked in Study Area during Sept. 2014.
- Approximately 2000 daily trips tracked moving through Hwy 37 corridor during Sept. 2014.
- AirSage applied expansion algorithms to estimate total travel through Highway 37 corridor.

Hwy 37 Observed Trips - Trip Purpose

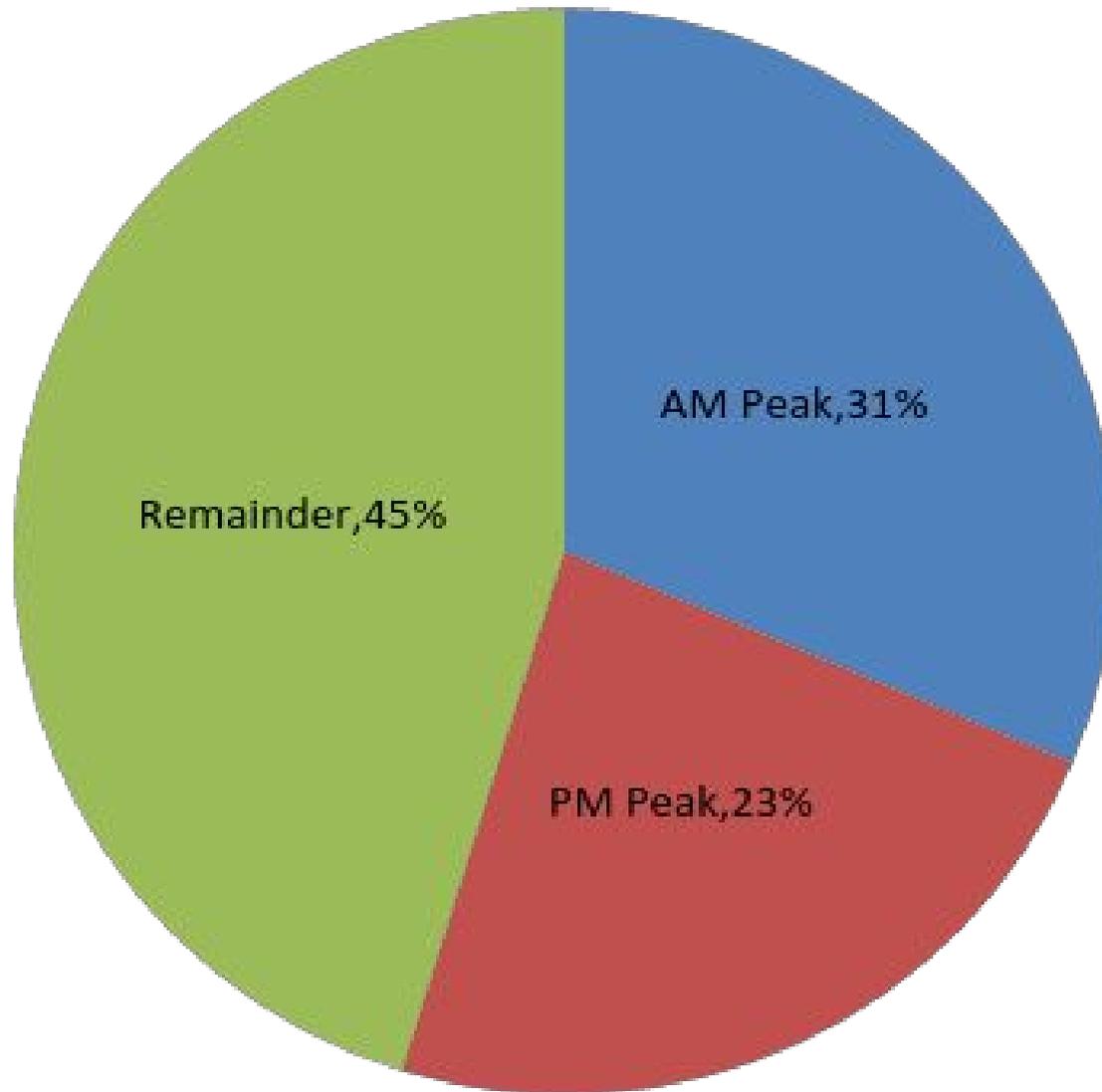


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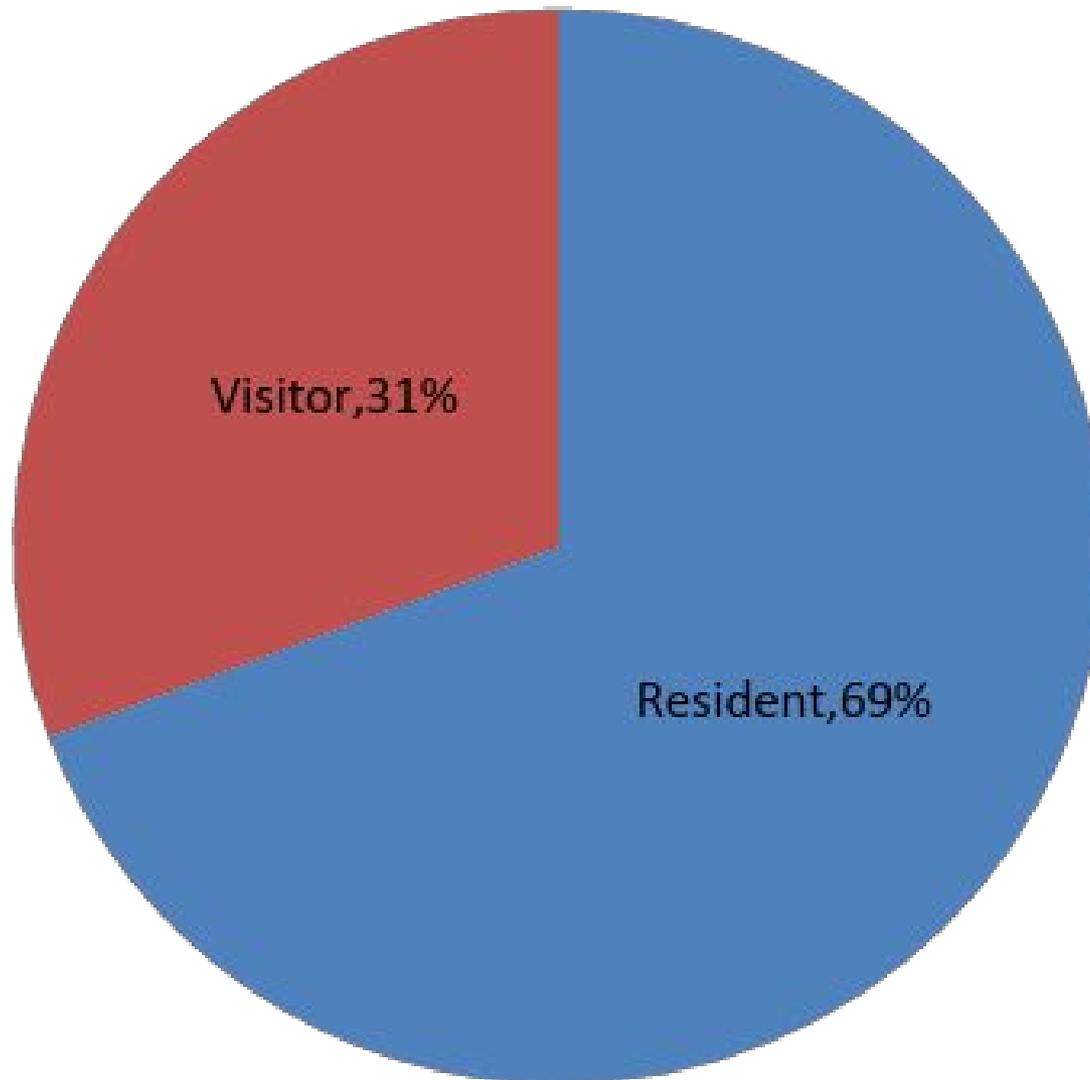


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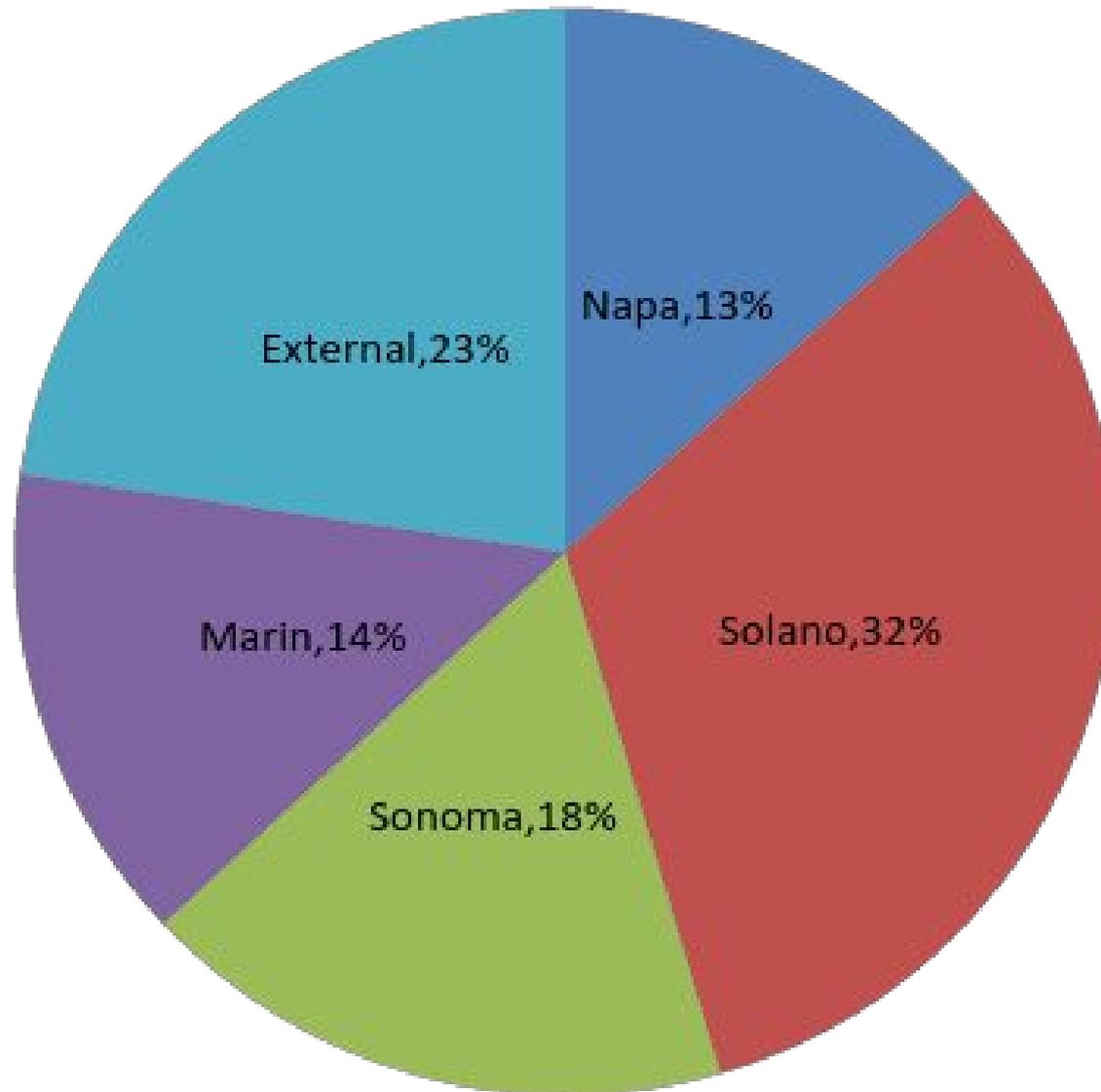
HWY 37 Observed Trips - Time of Day



Hwy 37 Daily Travelers, Residence Status - Sept. 2014



County Share of Trip Origins, Hwy 37, Avg. Weekday, Sept. 2014



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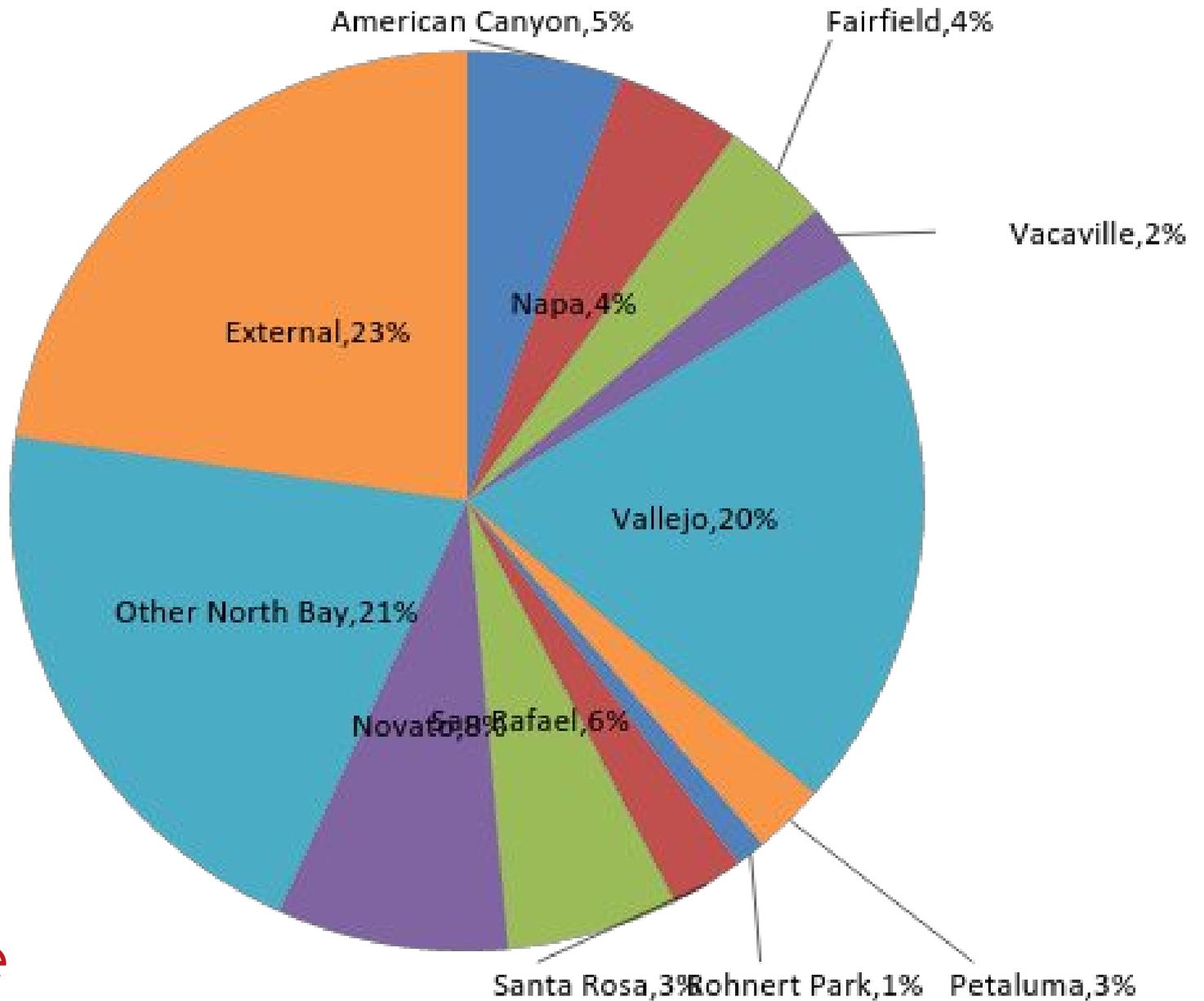
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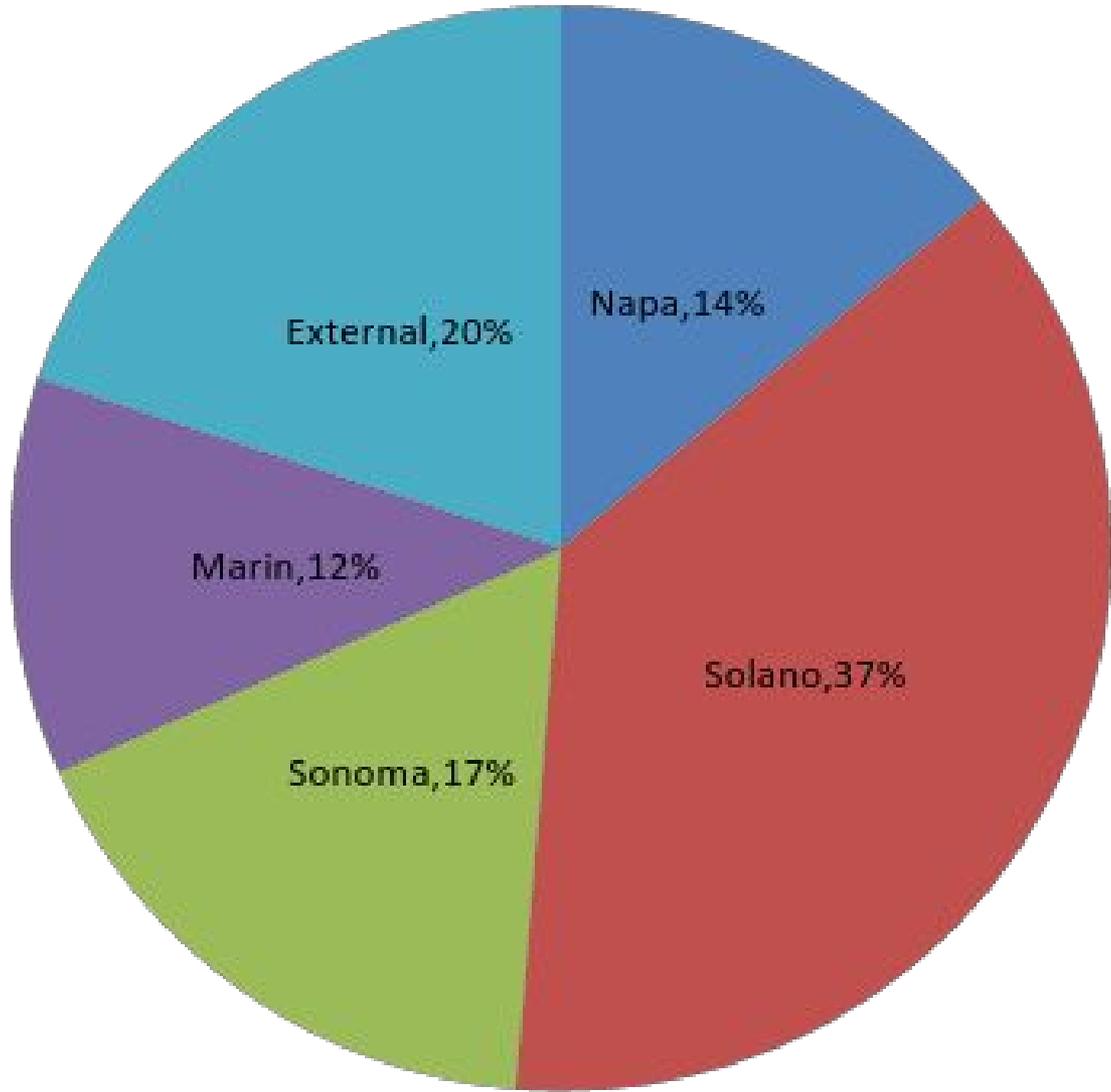
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Hwy 37 - Trip Origin Average Weekday (Sept. 2014)

Hwy 37 Travel - Trip Origin Average Weekday - Sept. 2014



Country Share of Trip Origins, Hwy 97, Sept. 2014

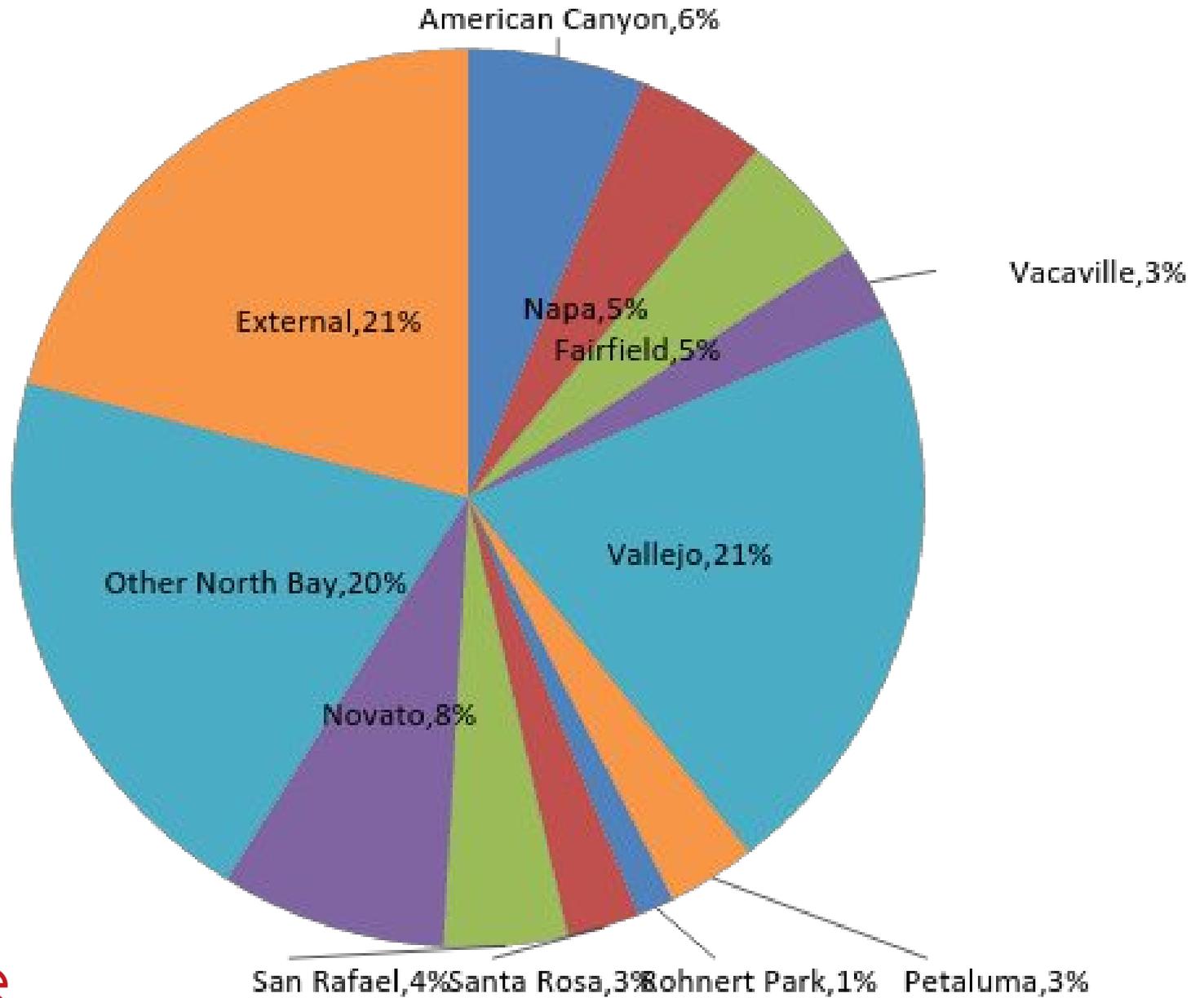


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Hwy 37 - Trip Destination Average Weekday (Sept: 2014)



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Highway 37 - AirSage Sample, 15 Highest Travel Flows

Rank	ORIGIN	DESTINATION	ESTIMATED TRIPS
1	East Bay	Vallejo	2692
2	Vallejo	East Bay	2356
3	Vallejo	American Canyon	2225
4	American Canyon	Vallejo	1992
5	Other Solano	Vallejo	1803
6	Southern Sonoma County/Sonoma Valley	Novato	1703
7	Vallejo	Other Solano	1620
8	Novato	Southern Sonoma County/Sonoma Valley	1576
9	Vallejo	Fairfield	1389
10	SF/Peninsula	Southern Sonoma County/Sonoma Valley	1371
11	Napa	Vallejo	1349
12	Fairfield	Vallejo	1251
13	Southern Sonoma County/Sonoma Valley	Vallejo	1220
14	Southern Sonoma County/Sonoma Valley	East Bay	1171
15	East Bay	Southern Sonoma County/Sonoma Valley	1160

 Estimated travel occurs on 2 lane section of HWY 37 west of Mare Island.

Limitations

- Sample based on data from one wireless service provider (Verizon).
- Biased towards mobile device users – locations logged each time a device interacts with the mobile network.
- No O/D data received for areas of Marin county outside of Novato and San Rafael (possible cell service, or service provider penetration rate issue).



Questions?

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