

Hybrid Vehicle Ownership from the 2007/2008 Household Travel Survey

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Background on Survey

- Major Data Collection Effort
- About Once Every Decade
- When, Where, How, and Why People Travel
- Used to Update Travel Models
- Trend Analysis

Uses of Survey

- Describe existing travel patterns
- Causal explanation of travel patterns
- Travel Trend Analysis
 - Before & After Studies
- Development of predictive travel demand forecasting models

Household Travel Survey (HTS)

Basics

Two-stage survey

Recruitment Stage

Advance Letter

Request Participation

Obtain Basic Information about HH

Travel Data Retrieval Stage

Travel Diary for 24-hr Time Period

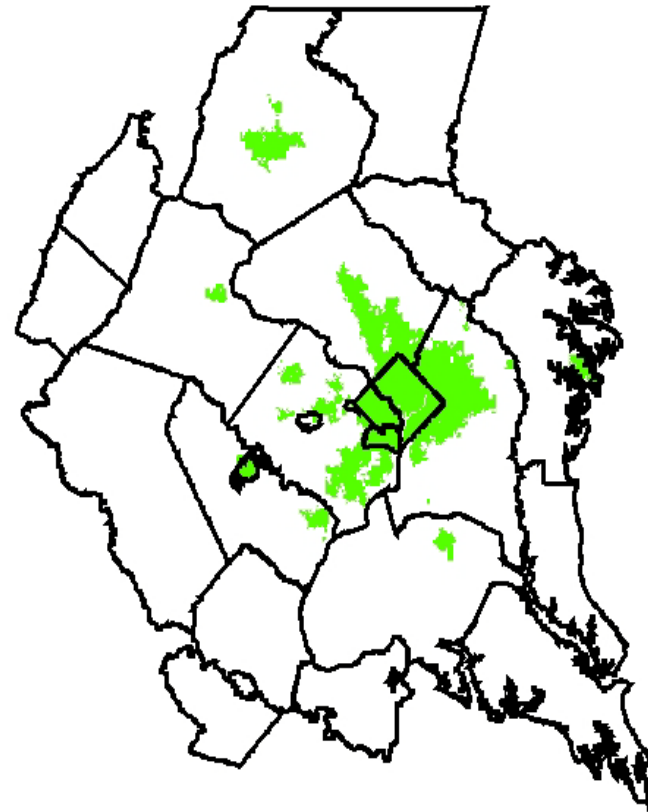
Retrieve Data on Daily Travel for each Household Member

Data Items Collected

- Household Characteristics
- Characteristics of Individual Household Members
- Characteristics of Vehicles Used by Household Members
- Information on Daily Trips and Activities
- Geocoding of Trip Origins and Destinations

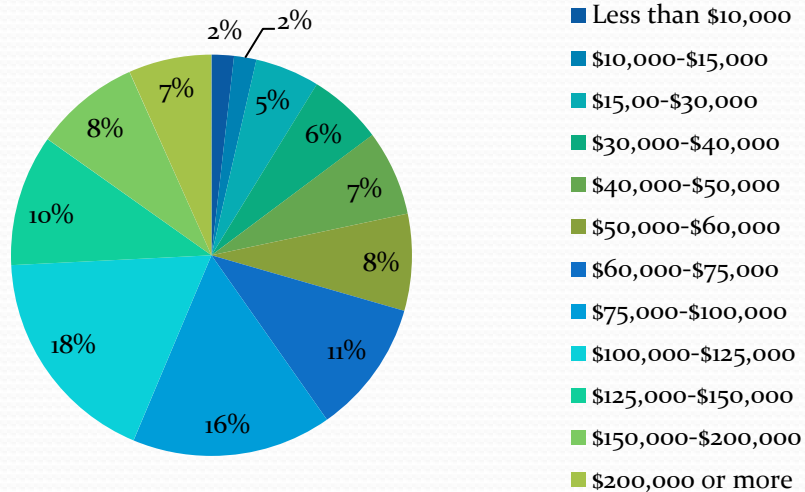
Sampling Plan

- 10,000 Randomly Selected Households in TPB Region and adjacent areas
- Ensure a sufficient number of samples in higher density, mixed use urban areas

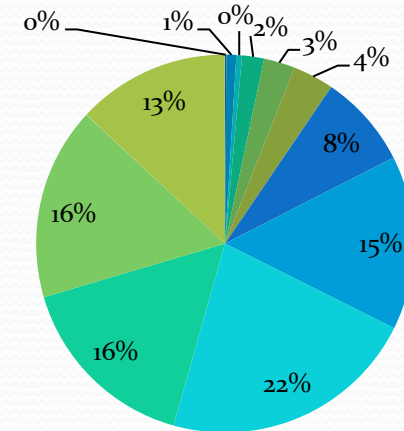


Household Income Distributions

Household Income Distribution



Household Income Distribution of Hybrid Owners



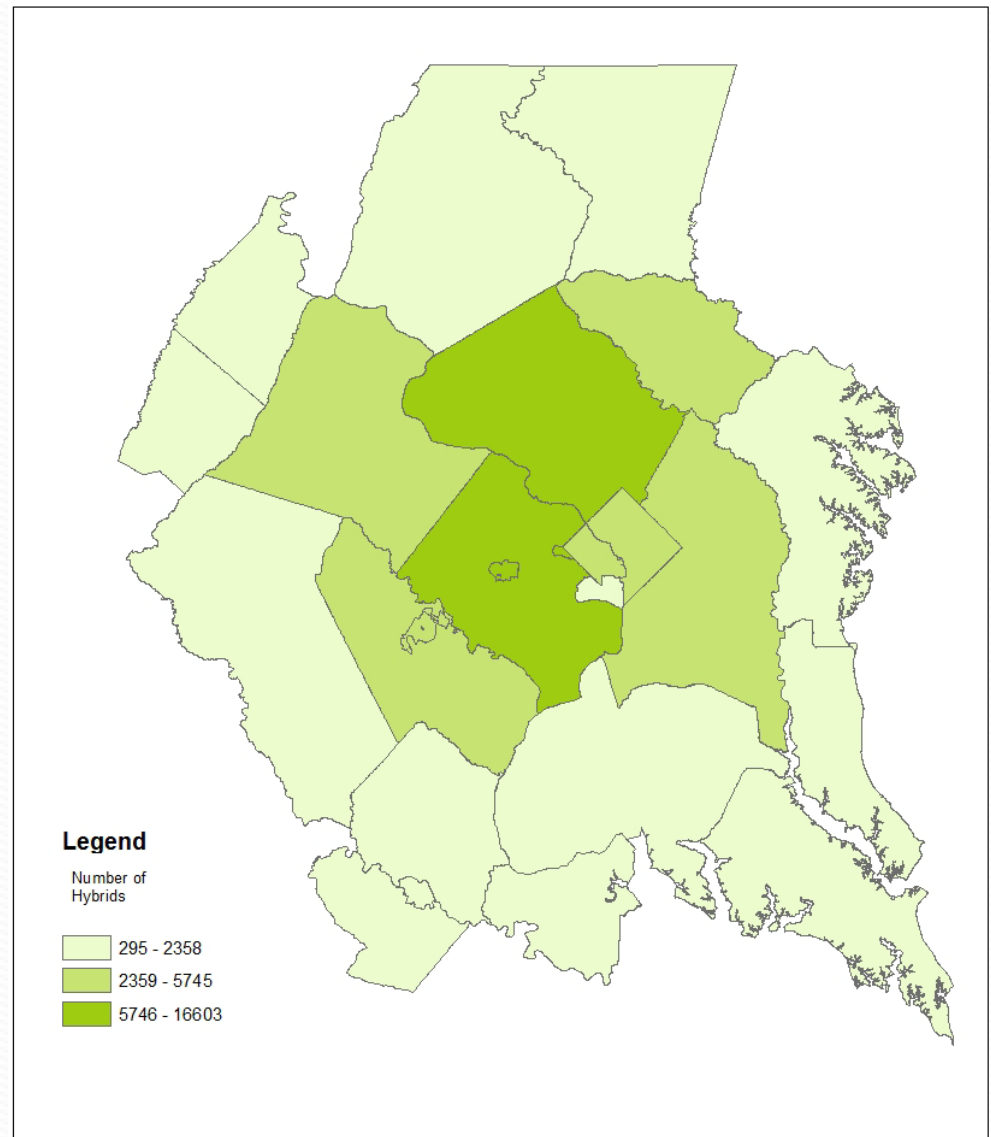
Median household income for Washington, DC MSA in 2007: \$83,200

Source: 2007 American Community Survey (1 year estimate)

Hybrid Count of Household Vehicles by Jurisdiction

Higher concentration in Montgomery and Fairfax Counties

Higher percentages in Spotsylvania, Stafford, King George, etc. drop away in terms of magnitude

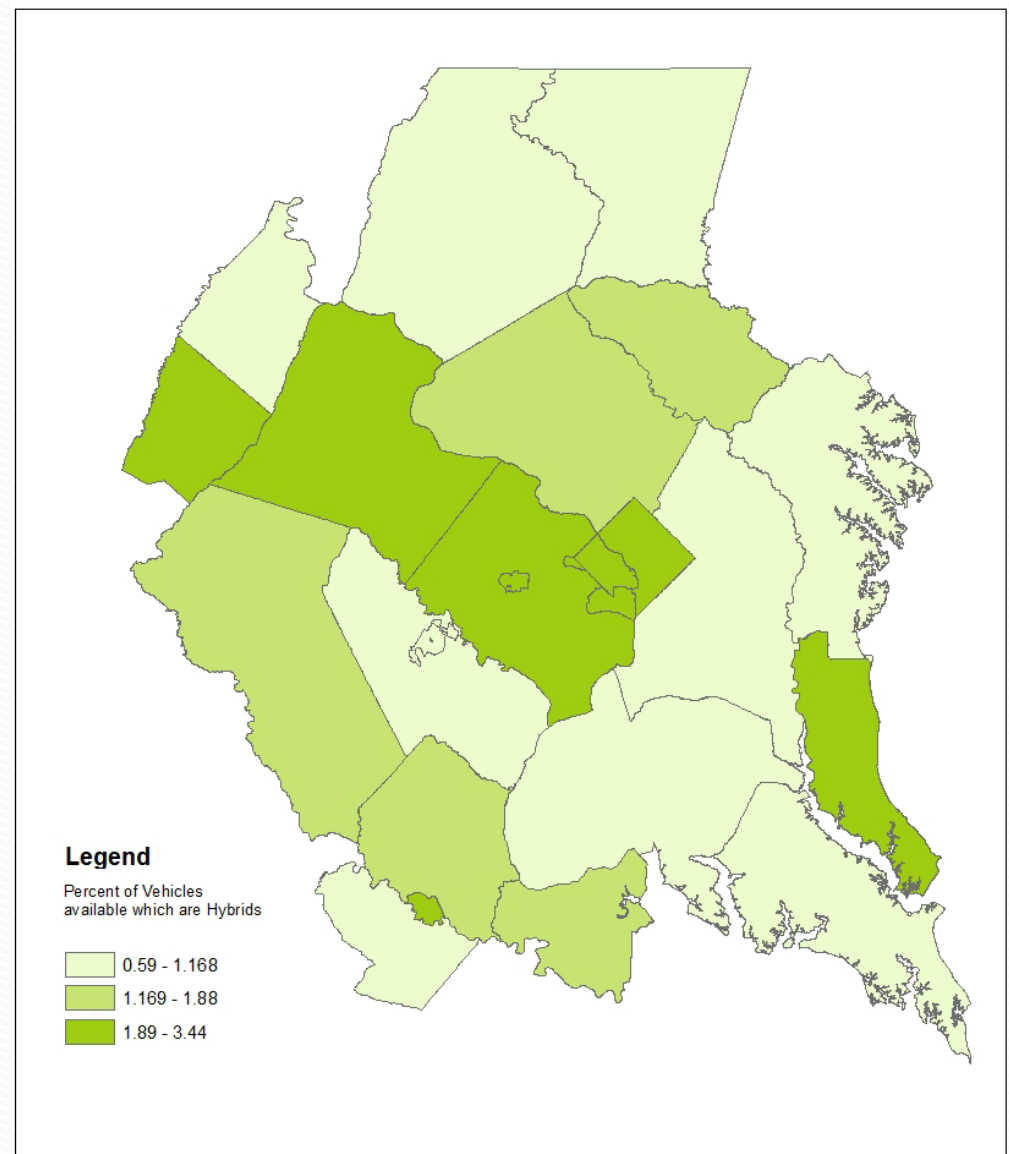


Hybrid Percent of Household Vehicles by Jurisdiction

Hybrids account for 1.5% of household vehicles in region

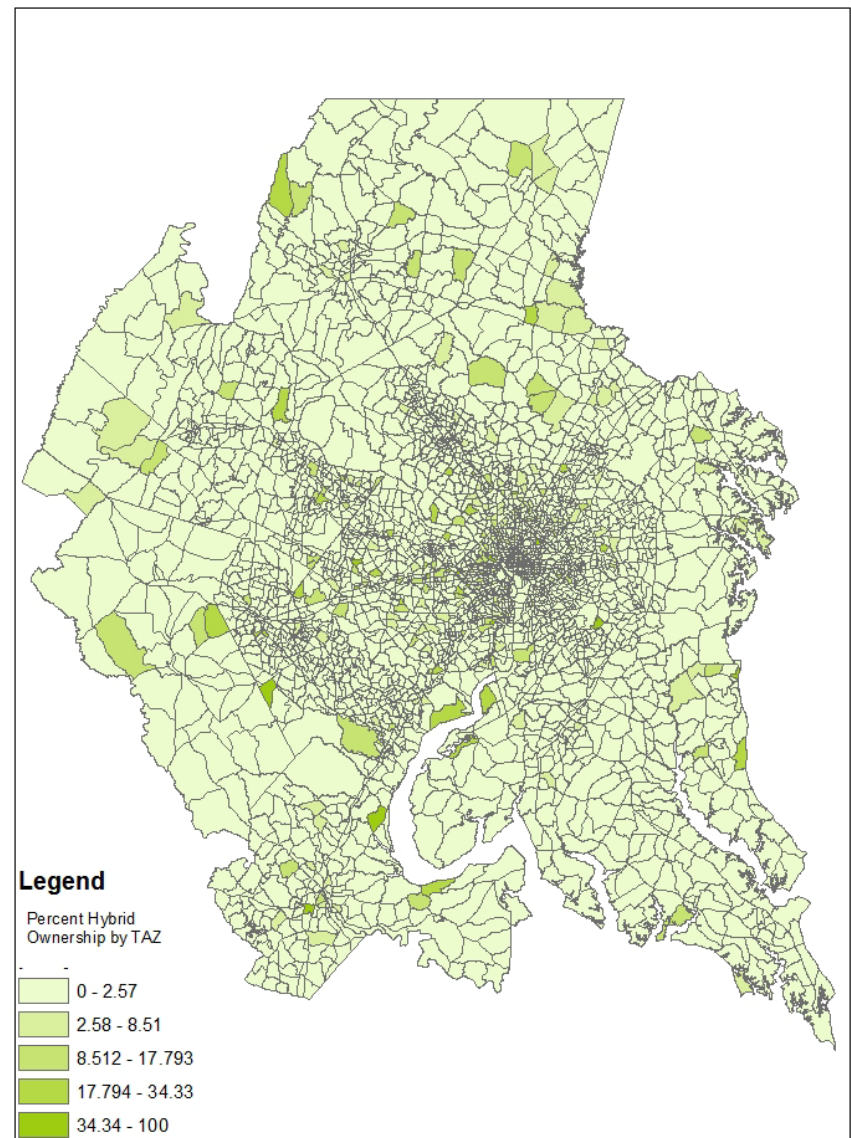
More heavily concentrated in wealthier counties

Heavy concentration in Virginia outer suburbs due to HOV exemption allowed on hybrid vehicles



Hybrid Percent of Household Vehicles by TAZ

Wide Dispersal of Hybrid ownership

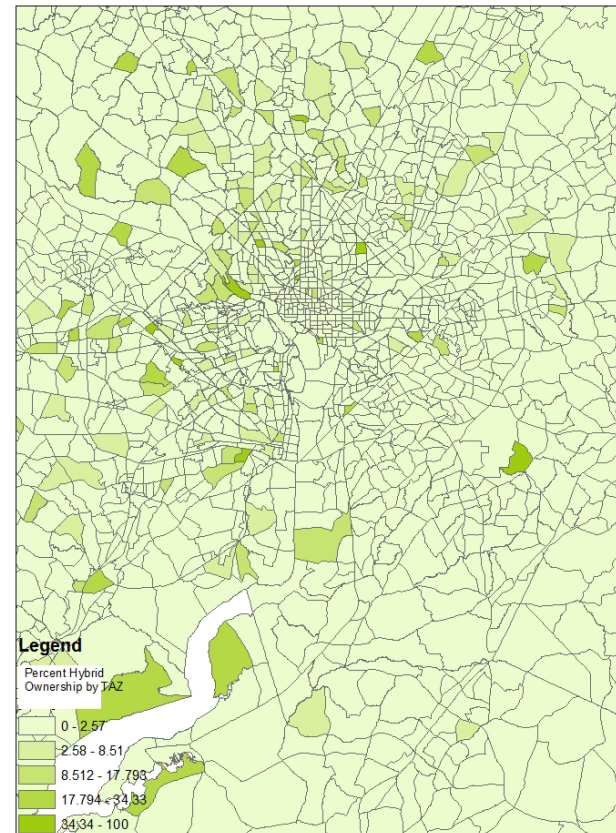


Hybrid Percent of Household Vehicles by TAZ

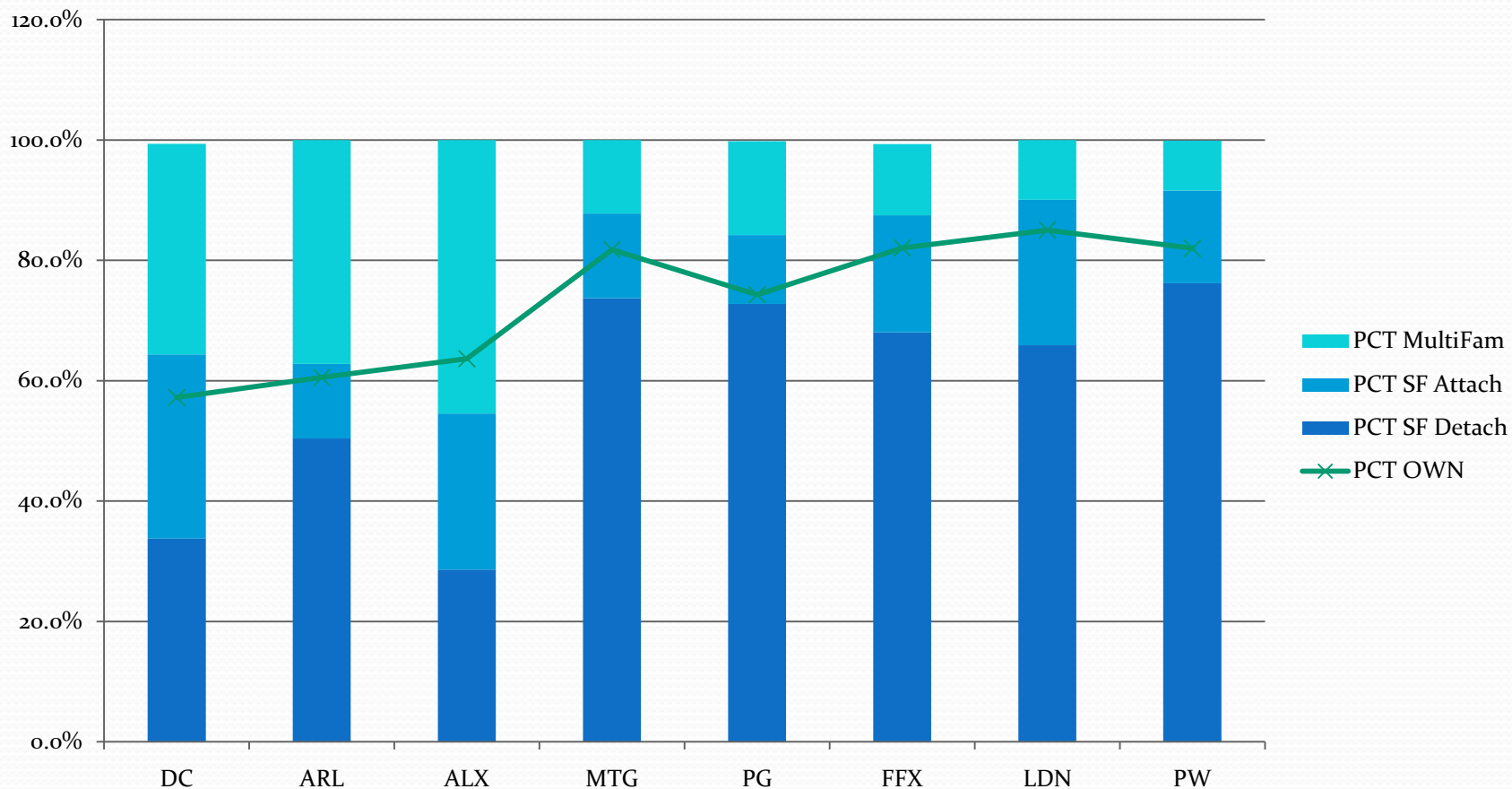
Zoomed in on the District of Columbia, Arlington, and surrounding area

More hybrids in western half of the District, northern Arlington, Bethesda

And fewer hybrids in SE DC and Prince George's County



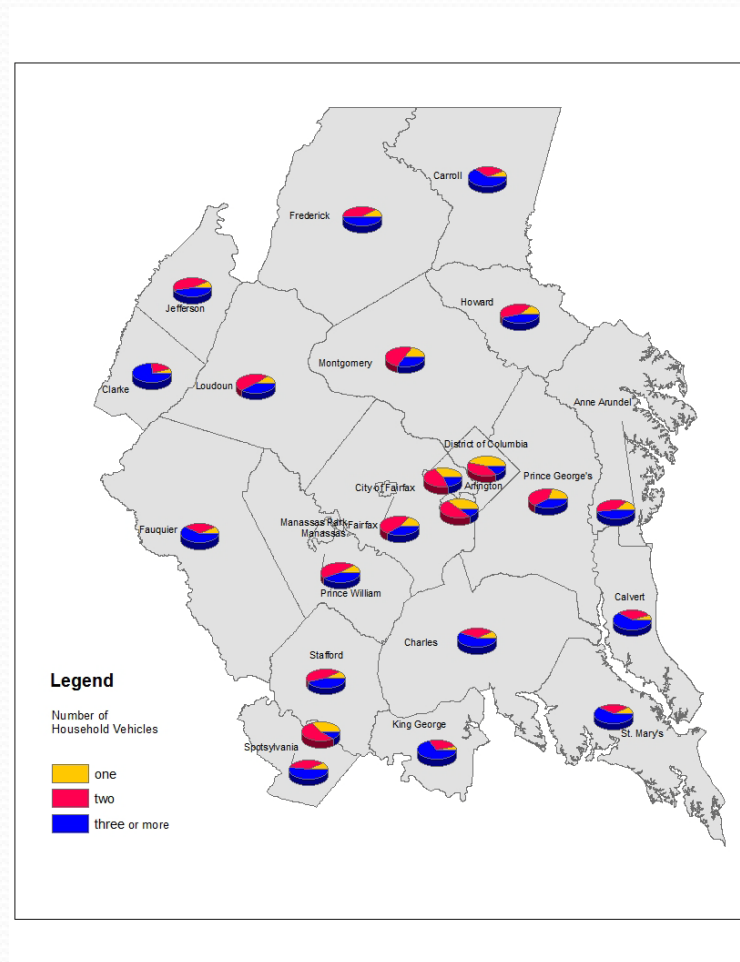
Housing Type & Tenure by Jurisdiction



Household Vehicles Available by Jurisdiction

Inner Jurisdictions are 'car light'

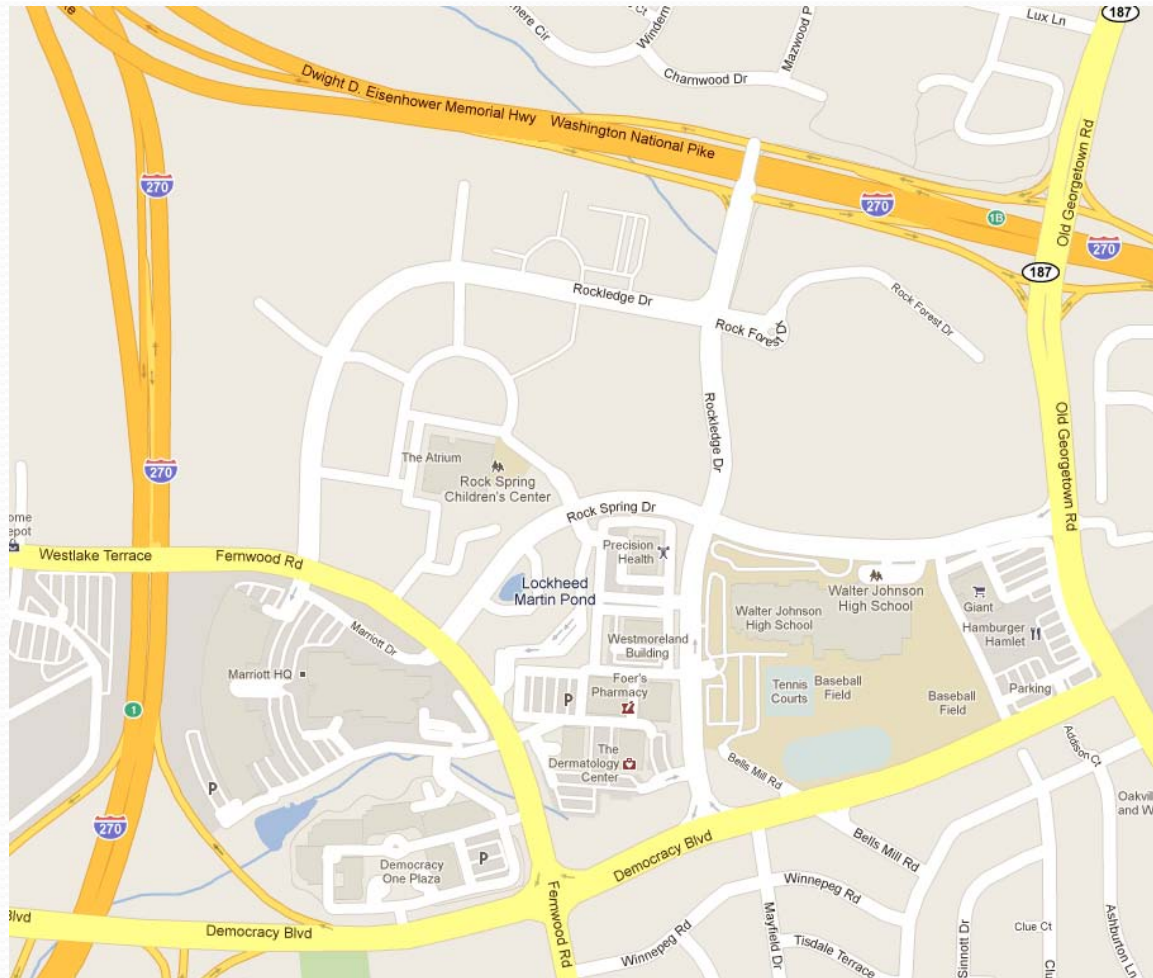
Outer ring jurisdictions have a lot of cars



Home to Work Trips

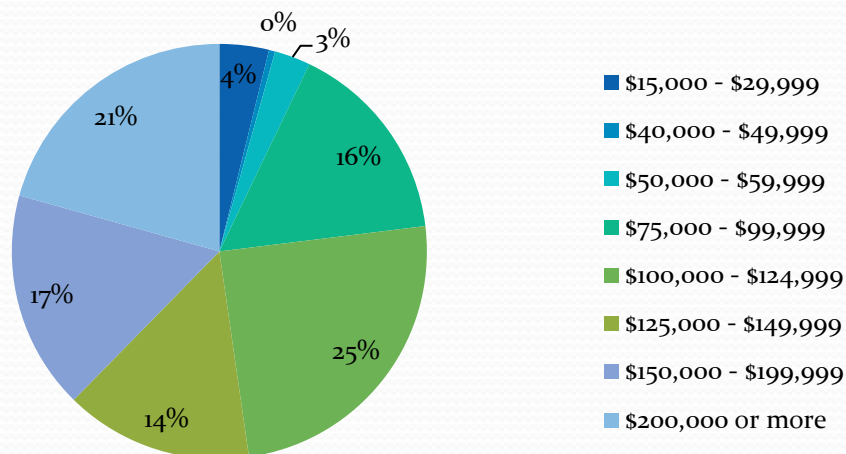
- Only addressing JTW trips made by auto drivers
- Created conservative buffer of 20 miles
 - Area congestion can affect EV performance
- 2 case studies
 - City of Alexandria
 - TAZ 702, contains Marriott HQ in Bethesda

TAZ 702, bounded by 270 & Democracy Blvd

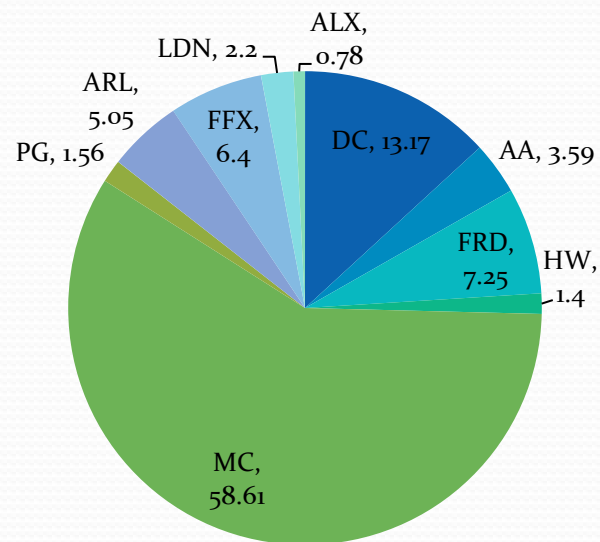


TAZ 702

HH Income for Workers in TAZ 702



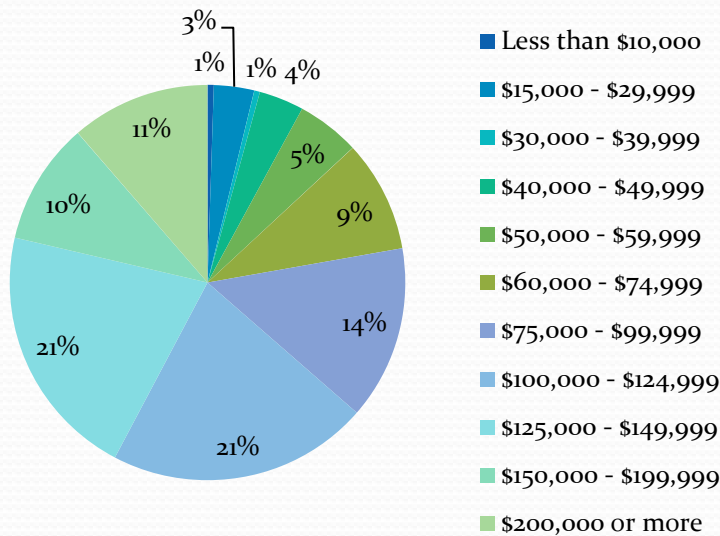
Residence Jurisdiction for Workers of TAZ 702



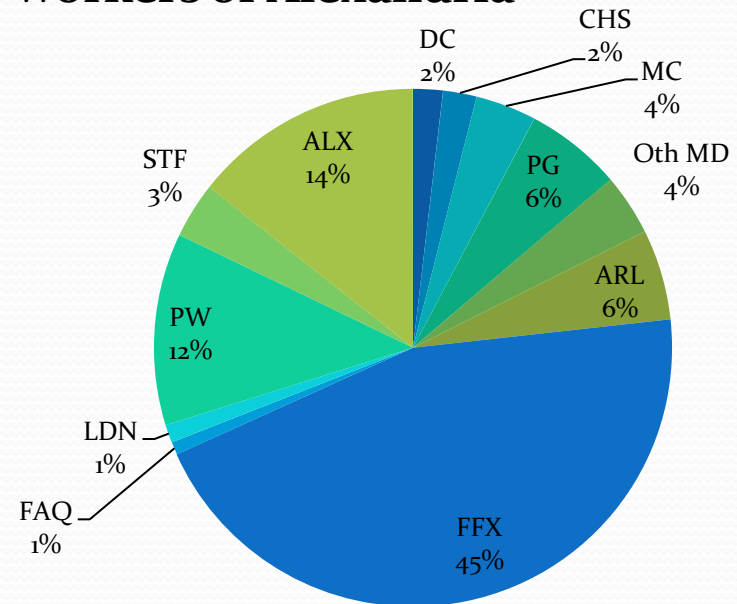
77% of workers who drive live within 20 miles of TAZ 702

City of Alexandria

HH Income for those Working in Alexandria



Residence Jurisdiction for Workers of Alexandria



74% of workers who drive live within 20 miles of Alexandria



Questions?