

REGIONAL TRAVEL SURVEY



Planning Our Future Together

2017-2018 REGIONAL HOUSEHOLD TRAVEL SURVEY

Status Report #6

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Presentation Outline

- Pre-test survey overview
- rSurvey and rMove
- Pre-test survey results
- Non-response follow-up results
- Considerations for the main survey
- Updated survey schedule
- Next steps and next report to TFS



Pre-Test Survey Overview

- The pre-test survey for the Regional Travel Survey was launched on February 9 and concluded on April 4
- A total of 16,020 randomly selected households were invited to participate in the pre-test survey
 - 8,010 households assigned to Segment 1 (rMove eligible)
 - 8,010 households assigned to Segment 2 (rSurvey only)
- Survey was split into two parts: recruit survey (Part 1); retrieval survey (Part 2)
- Part 1 survey collected basic household-level, vehicle-level, and person-level information (online or phone)
- Part 2 survey collected person-level and trip-level information in the form of a travel diary (online, phone, or smartphone app)



rSurvey

- rSurvey participants completed a one-day travel diary for each household member
- The survey asked respondents to provide a full list of places they went during their travel dates
- Once a trip roster was complete, the location for each place was geocoded using Google Maps API
- Part 2 collected details about each individual trip, including:
 - When they traveled
 - Activities at the trip destination
 - Travel mode
 - Who they traveled with

Example Trip Roster in rSurvey

Link to rSurvey: <https://rsgstage.net/mwcog/pages/go>



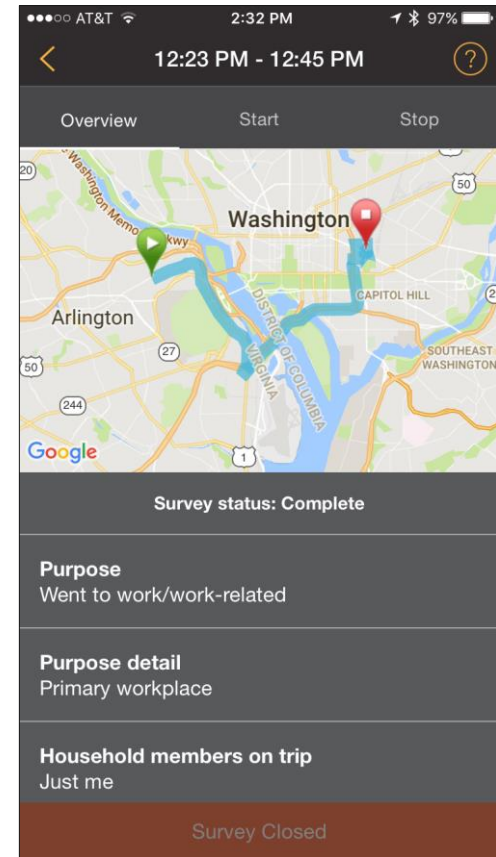
rSurvey

- The travel diary survey also asked specific questions by mode:
 - *Auto trips*: type of vehicle used, type of parking location, parking payment method (if applicable), use of HOV lane, HOT lane, toll road/bridge, or ferry
 - *Carpool trips*: whether respondent was the driver or passenger
 - *Transit trips*: access to and egress from transit stop, transit payment method, transit systems used (e.g., Metrorail)
 - *School bus trips*: access to and egress from bus stop, where they boarded the bus
- Respondents could also copy trips where only auto was selected as the mode and where they were reported as a member of the travel party with other household members



rMove

- rMove participants completed a 7-day travel diary for each household member (age 16+)
- rMove passively collected participant's trips in the background, identifying trip starts and stops
- Participants completed a short trip survey after each detected trip and a daily summary survey at the end of each travel day
- Trip-level details collected in rMove were similar to rSurvey



Example Trip in rMove

Pre-Test Survey Region

- The pre-test sampling plan identified sampling targets and response rates for the following target areas (super strata):
 - **S1: District of Columbia**
 - **S2: Arlington and Alexandria**
 - **S3: Suburbs – High Density** (MTG, PGC, FFX, LDN, PWC, CHS, FRD)
 - **S4: Suburbs – Low Density** (MTG, PGC, FFX, LDN, PWC, CHS, FRD)
 - **S5: Outer Ring Jurisdictions** (CAR, HOW, AA, CAL, STM, KG, SPOT, FRB, STF, FAQ, CLK, JEFF)



Pre-Test Survey Region



Pre-test Survey Results

- A total of 537 invited households completed the entire pre-test survey (Part 1 recruit and Part 2 travel diary)
- A rSurvey household was considered complete once all household members reported their travel for their assigned date
- A rMove household was considered complete when all household members (age 16+) completed all trip and daily summary surveys for one or more concurrent days in rMove
- Pre-test survey responses included data from 537 households, 1,098 persons, 809 vehicles, and 8,497 trips



Pre-Test Survey Responses

Sample Type	Recruited Households	Recruitment Rate	Complete Households	Complete Rate
Segment 1: Smartphone	472	5.9%	210	2.6%
Segment 2: Web Only	495	6.2%	327	4.1%
TOTAL	967	6.0%	537	3.4%

Survey Method	Recruited Households	Household Retrievals	Retrieval Rate
rMove	319	101	31.7%
rSurvey	648	436	67.3%
TOTAL	967	537	55.5%

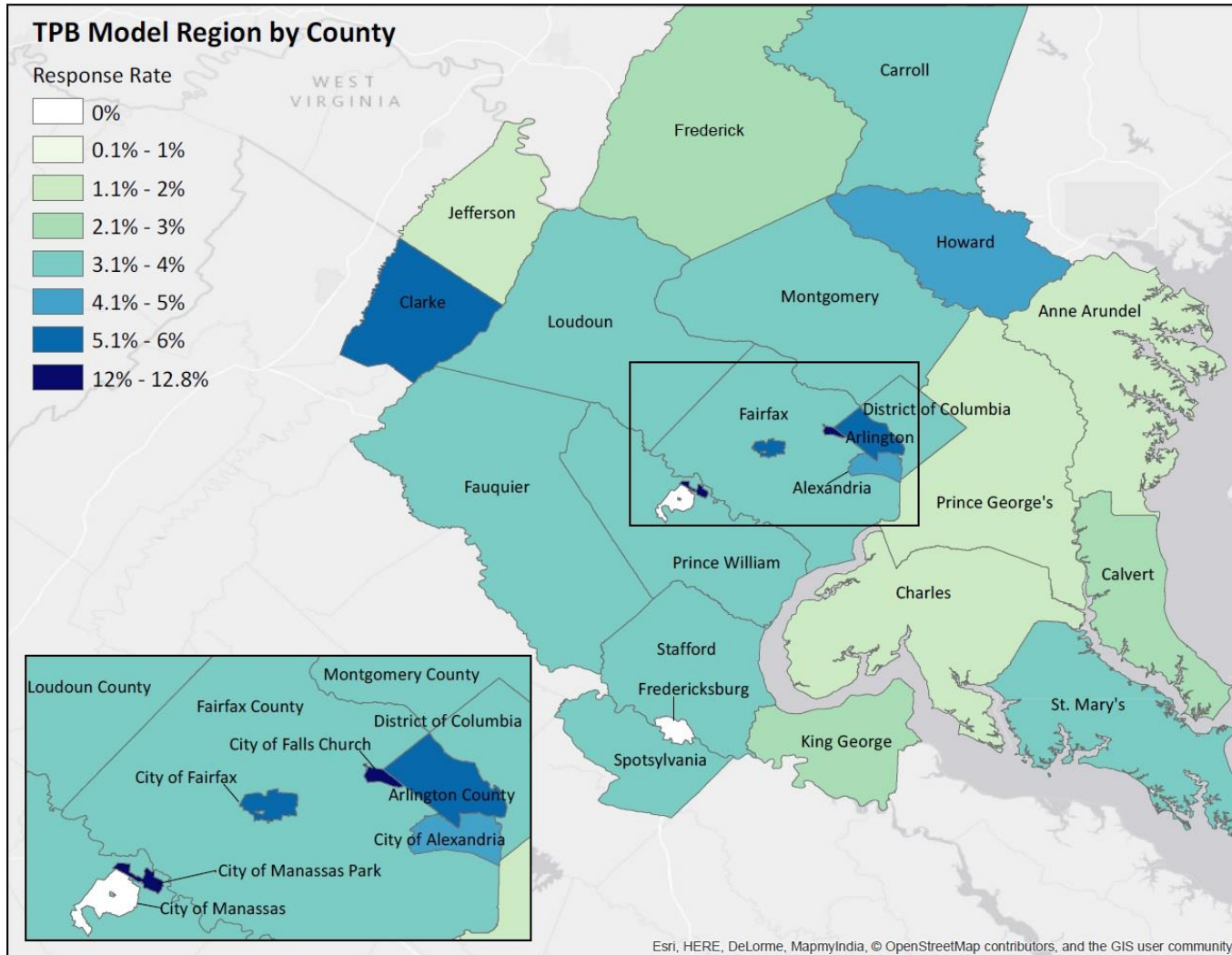


Pre-Test Survey Responses by Super Strata

Super Strata	Recruited Households	Complete Households	Retrieval Rate	Response Rate
District of Columbia	193	106	54.9%	3.3%
Arlington and Alexandria	153	96	62.7%	4.9%
Higher density suburbs	322	177	55.0%	3.2%
Lower-density suburbs	172	89	51.7%	3.2%
Outer-ring jurisdictions	127	69	54.3%	2.9%
TOTAL	967	537	55.5%	3.4%



Pre-Test Survey Response Rates by County



Non-Response Follow-Up Results

- Survey pre-test results were evaluated to determine how closely the demographic characteristics of participants match the census
- The non-response follow-up analysis also examined demographic differences between block groups with recruited households vs. sampled block groups with no recruited households
- Pre-test non-respondents included **lower income households, renters, larger households, minority and Hispanic populations, and younger populations (18-24 years of age)**
- Non-participant characteristics were found to be in block groups where no one participated



Non-Response Follow-Up Results

Stratum	More than Census	Equal to Census	Less than Census
Region	Higher Income (+12%)	Own/Rent Ratio, Housing Type, HH Vehicles, Hispanic, Gender, Age	HH Size 4+ (-10%) Minority (-16%)
District of Columbia	Owners (+14%) Higher Income (+21%) Ages 25-34 (+11%)	HH Size, Housing Type, HH Vehicles, Hispanic, Gender	Minority (-30%) Ages 18-24 (-8%)
Arlington and Alexandria	Owners (+20%) Higher Income (+17%) Age 65+ (+8%)	HH Size, Housing Type, HH Vehicles, Gender	Hispanic (-11%) Minority (-23%)
Higher Density Suburbs	Owners (+16%) Higher Income (+13%) Age 35+ (+14%)	HH Size, HH Vehicles, Gender	MFD 10-49 units (-12%) Hispanic (-16%) Minority (-23%)
Lower Density Suburbs	Owners (+15%) Single Family Dwelling (+14%) Higher Income (+13%)	HH Vehicles, Gender, Age	HH Size 4+ (-13%) Hispanic (-10%) Minority (-20%)
Outer Ring		Own/Rent Ratio, HH Size, Housing Type, HH Vehicle, Income, Hispanic, Minority, Gender, Age	



Considerations for the Main Survey

- Modify sampling plan to oversample underrepresented groups (e.g., low income, minority households)
- Increase incentive amount and targeting incentives to certain demographics
- The sample split of rMove vs. rSurvey households
- Targeted public outreach to hard-to-reach populations
- Refine the survey instrument to reduce respondent burden



Updated Survey Schedule

- Some dates still subject to adjustment
- Analysis of pre-test results and survey refinement: April through June 2017
- Main survey: August 2017
 - WMATA SafeTrack Surge 15 from May 16, 2017 to June 15, 2017; Surge 16 from June 17, 2017 to June 25, 2017
 - 12 months of travel dates
- Complete main survey: Summer 2018
- All deliverables by end of 2018



Next Steps and Next Report to TFS

- Wrap-up survey pre-test analysis
- Make necessary revisions to survey instrument
- Prepare for the main survey launch
- Next report to TFS: July 2017 meeting



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