2017 Household Travel Study Results
TDM Advisory Committee - April 10, 2019

https://www.psrc.org/household-travel-survey-program
Puget Sound Travel Studies

1961
1971
1988
1989-2002
1999
2006
2014-2015
2017
2019
2021
The surveys answer the 5 W’s & H:

• **WHO?** Household (HH) & person (Per) socio-demographics

• **WHAT?** HH vehicles, homes, parking; Per employment/school status

• **WHERE?** HH home & Per emp/school locations; Trip origins/destinations

• **WHEN?** HH relocations; Trip/activity times

• **WHY?** HH location factors; Trip purpose; Attitudes

• **HOW?** Usual ways to commute; Trip modes; Deliveries
2017 Survey Sample

Representative sample
• 3,285 HHs (0.22% sampling rate)
• Includes Redmond & Seattle add-ons
• 9 weeks in April-June 2017

Sampling & Stratifications
• Random address sample from USPS
• Targeted areas for oversampling
  • Low-income, no vehicles, renters, young, Regional Growth Centers
  • Lower expected response rates including rural areas
Survey Design

Two-part survey
1. HH info
2. Travel diary

Two groups
1. Smartphone, up to 7 days: 705 HHs (21%) 35,024 trips (67%)
2. Online or phone, 1 day only: 2580 HHs (79%) 17,469 trips (33%)
What are some uses of the data?

Analysis

• Most recent travel choices and patterns
• Trends: comparisons with previous surveys

Model development

• SoundCast
  • Estimate models of activity/travel choices
• UrbanSim
  • Estimate residential location choice model
How often did you go for a walk longer than 15 minutes?
How often went for a walk for more than 15 minutes
By Gender

- **5+ days per week**: 24% Female, 24% Male
- **1-4 days per week**: 34% Female, 35% Male
- **Less than weekly**: 19% Female, 18% Male
- **Never**: 23% Female, 23% Male
How often went for a walk for more than 15 minutes

By Age

<table>
<thead>
<tr>
<th></th>
<th>Under 18 years</th>
<th>18-64 years</th>
<th>65 years+</th>
</tr>
</thead>
<tbody>
<tr>
<td>5+ days per week</td>
<td>21%</td>
<td>24%</td>
<td>30%</td>
</tr>
<tr>
<td>1-4 days per week</td>
<td>39%</td>
<td>34%</td>
<td>27%</td>
</tr>
<tr>
<td>Less than weekly</td>
<td>18%</td>
<td>19%</td>
<td>22%</td>
</tr>
<tr>
<td>Never</td>
<td>22%</td>
<td>24%</td>
<td>21%</td>
</tr>
<tr>
<td>By Race</td>
<td>5+ days per week</td>
<td>1-4 days per week</td>
<td>Less than weekly</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>------------------</td>
<td>-------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>African-American, Hispanic, Multiracial, and Other</td>
<td>25%</td>
<td>29%</td>
<td>17%</td>
</tr>
<tr>
<td>Asian Only</td>
<td>15%</td>
<td>23%</td>
<td>18%</td>
</tr>
<tr>
<td>White Only</td>
<td>26%</td>
<td>34%</td>
<td>21%</td>
</tr>
</tbody>
</table>
How often went for a walk for more than 15 minutes
By Household Income

- **Under $25,000**:
  - 5+ days per week: 43%
  - 1-4 days per week: 25%
  - Less than weekly: 12%
  - Never: 20%

- **$25,000-$49,999**:
  - 5+ days per week: 15%
  - 1-4 days per week: 24%
  - Less than weekly: 21%
  - Never: 40%

- **$50,000+**:
  - 5+ days per week: 23%
  - 1-4 days per week: 37%
  - Less than weekly: 19%
  - Never: 21%
How often went for a walk for more than 15 minutes
By Number of Household Vehicles

- **4+ vehicles**: 14% 5+ days per week, 39% 1-4 days per week, 15% less than weekly, 33% never
- **3 vehicles**: 15% 5+ days per week, 33% 1-4 days per week, 18% less than weekly, 34% never
- **2 vehicles**: 25% 5+ days per week, 36% 1-4 days per week, 22% less than weekly, 18% never
- **1 vehicle**: 31% 5+ days per week, 30% 1-4 days per week, 17% less than weekly, 21% never
- **0 vehicles**: 51% 5+ days per week, 29% 1-4 days per week, 9% less than weekly, 11% never
How often went for a walk for more than 15 minutes
By Home in a Regional Growth Center (RGC)
What are variables are most strongly related to walking? Model results

<table>
<thead>
<tr>
<th>More Walking Associated with</th>
<th>Less Walking Associated with</th>
</tr>
</thead>
<tbody>
<tr>
<td>Having zero household cars</td>
<td>Having three or more household cars</td>
</tr>
<tr>
<td>Living in a growth center</td>
<td>Being a person of color</td>
</tr>
</tbody>
</table>
How often did you go for a bike ride longer than 15 minutes?
How often went for a bike ride for more than 15 minutes
By Gender

- **5+ days per week**
  - Female: 2%
  - Male: 4%

- **1-4 days per week**
  - Female: 8%
  - Male: 13%

- **Less than weekly**
  - Female: 22%
  - Male: 26%

- **Never**
  - Female: 67%
  - Male: 57%
How often went for a bike ride for more than 15 minutes

By Age

- 6% Under 18 years, 7% 18-64 years, 6% 65 years+
- 3% Under 18 years, 6% 18-64 years, 0% 65 years+
- 0% Under 18 years, 6% 18-64 years, 0% 65 years+
- 0% Under 18 years, 6% 18-64 years, 0% 65 years+
- 0% Under 18 years, 6% 18-64 years, 0% 65 years+
- 38% Never Under 18 years, 66% Never 18-64 years, 74% Never 65 years+
How often went for a bike ride for more than 15 minutes

By Race

<table>
<thead>
<tr>
<th>Frequency</th>
<th>African-American, Hispanic, Multiracial, and Other</th>
<th>Asian Only</th>
<th>White Only</th>
</tr>
</thead>
<tbody>
<tr>
<td>5+ days per week</td>
<td>1%</td>
<td>4%</td>
<td>2%</td>
</tr>
<tr>
<td>1-4 days per week</td>
<td>5%</td>
<td>3%</td>
<td>8%</td>
</tr>
<tr>
<td>Less than weekly</td>
<td>19%</td>
<td>14%</td>
<td>27%</td>
</tr>
<tr>
<td>Never</td>
<td>76%</td>
<td>79%</td>
<td>63%</td>
</tr>
</tbody>
</table>
How often went for a bike ride for more than 15 minutes
By Household Income

- Under $25,000:
  - Never: 60%
  - Less than weekly: 26%
  - 1-4 days per week: 10%
  - 5+ days per week: 3%

- $25,000-$49,999:
  - Never: 79%
  - Less than weekly: 19%
  - 1-4 days per week: 12%
  - 5+ days per week: 1%

- $50,000+:
  - Never: 58%
  - Less than weekly: 28%
  - 1-4 days per week: 12%
  - 5+ days per week: 3%
How often went for a bike ride for more than 15 minutes
By Number of Vehicles

- 4+ vehicles: 5+ days per week (10%), 1-4 days per week (20%), less than weekly (30%), never (40%)
- 3 vehicles: 5+ days per week (10%), 1-4 days per week (20%), less than weekly (30%), never (40%)
- 2 vehicles: 5+ days per week (10%), 1-4 days per week (20%), less than weekly (30%), never (40%)
- 1 vehicle: 5+ days per week (10%), 1-4 days per week (20%), less than weekly (30%), never (40%)
- 0 vehicles: 5+ days per week (10%), 1-4 days per week (20%), less than weekly (30%), never (40%)
How often went for a bike ride for more than 15 minutes
By Home in a Regional Growth Center (RGC)
What are variables are most strongly related to biking? Model results

<table>
<thead>
<tr>
<th>More Biking Associated with</th>
<th>Less Biking Associated with</th>
</tr>
</thead>
<tbody>
<tr>
<td>Being younger than 18</td>
<td>Being older than 65</td>
</tr>
<tr>
<td>Having zero household cars</td>
<td>Having 3 or more household cars</td>
</tr>
<tr>
<td>Being male</td>
<td>Being a person of color</td>
</tr>
</tbody>
</table>
2019 Travel Study

- Survey Participation Dates: April 23- June 10, 2019
- Data released on PSRC’s website: January 2020
- What’s different? More smartphone households
thank you

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Extra Slides, if time
If the following bicycle improvements were in place, how often would choose to take a bike trip where bicycling is an option?
How much more biking: Shared Use Path or Protected Bike Lane

- Never, 46%
- Not Applicable, 19%
- Occasionally (1-8 times per month), 25%
- Often (3 or more days per week), 9%
Mode Choices by group
Mode Choice and Race

Drive Alone | Drive with Someone | Walk | Transit | Bike | Other

- African-American, Hispanic, Multiracial, and Other
- Asian
- White
- Total
Mode Choice and Purpose

- Drive Alone
- Drive with Someone
- Walk
- Transit
- Bike
- Other

- Work
- School
- Errands and Shopping
- Recreation and Eat Meal