How can bicycle and pedestrian miles traveled (BMT & PMT) across a state be calculated accurately?

### ABSTRACT

As cities and states strive for greater livability, planners need more accurate estimates of bicycle and pedestrian travel. Using Washington as a case study, we look at three methods to estimate bicycle and pedestrian miles traveled statewide.

- Investigates methods to determine BMT and PMT for the state of Washington
- Looks at pros and cons of each method
- Estimates calculated from manual and automated count data. Each AADB and AADP estimation was then associated with the variable found in the following equations.

### METHODS

**Aggregate Demand**

- This method uses the AADB and AADP estimates calculated from manual and automated count data. Each AADB and AADP estimation was then associated with the variable found in the following equations.

### DATA SOURCES

- National Household Travel Survey (All of Washington)
- Count-Based Estimates (Puget and Eastern Regions)
- Aggregate Demand Estimates (King County)

### RESULTS

**PMT = Pedestrian miles traveled in the state**

\[ \text{PMT} = \frac{365}{1} \times \left( \sum_{q=0}^{6} \sum_{p=0}^{2} \text{AADP}_{qq} \times x_{1} \times x_{2} \times x_{3} \times x_{4} \times x_{5} \times x_{6} \right) + \sum_{p=0}^{2} \text{AADP}_{pp} \]

\[ \text{AADP}_{pp} = \log(AADB + 1) = 0.620 + (1.766 \times 10^{-5})x_{1} + (0.835 \times 10^{-4})x_{2} + (0.102 \times 10^{-3})x_{3} + (0.000 \times 10^{-2})x_{4} + (0.000 \times 10^{-3})x_{5} + (0.000 \times 10^{-4})x_{6} \]

**APPENDIX**

- Methodology of estimating BMT and PMT
- Data sources and methods used for calculations
- Results of calculations and comparisons

### NEXT STEPS

- Expanding existing count programs
- Considering different methods for data collection
- Using more representative samples

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**NHTS** = National Household Travel Survey

**AADB** = Aggregate Demand Estimation

**AADP** = Aggregate Demand Projections

**PSRC** = Puget Sound Regional Council