Non-motorized Traffic Monitoring: State, Local, and Regional Perspectives

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Background

• Increased interest in (and use of) nonmotorized travel modes
• Concerns about safety
  – Bicycle and pedestrian fatalities have increased
• Project prioritization and evaluation of investments
  – Bike/ped usage and facility demand needed
Study Elements

• Literature review
• Summarize some established programs in other states
  – Colorado
  – Minnesota
  – North Carolina
• Obtain Virginia-specific information
  – Survey Virginia localities
Efforts in Other States
Colorado

- First statewide program
  - Responding to lack of data
- Strategic plan in 2016
  - Annualize short-duration counts
  - Strategic approach for site selection
  - Share data outside of CDOT through online platform
  - Use big data to supplement counts
Minnesota

• Used NBPDP methodology

• Goals
  – Demonstrate feasibility of counting
  – Encourage local counts

• Loan program so localities are familiar with counts and using data

• Eco-Counter’s Eco-Visio database allows localities to share with MPOs and DOT
North Carolina

- DOT oversees installation/maintenance for 2 years
- Localities own/maintain after 2 years
- Goal to measure performance and prioritize projects
- Lessons learned
  - Conflict over counter placement
  - Rural areas uninterested
Survey of Virginia Localities

• Counting
  – Continuous/periodic vs. sporadic
    • Purpose
    • Methods
    • Technology
    • Locations
    • Frequency
    • Storage
    • Validation/Data Quality
    • Data Availability
    • Funding Sources
    • Program Oversight

• Interest in Counting
  – Non-Counters
  – Counters
  – Partnering with VDOT

6/20/2018
Perform Counting? (Question 1)

Yes

Continuous/periodically at same location(s)? (Question 2)

No

- Discussions on topic?
- Potential locations?
- Interest rating in partnering with VDOT using NC and Minnesota examples. (Questions 34-40)

Yes

Project specific studies? Counting Methods? (Questions 3-4)

No

- Years counts conducted?
- Counting methods?
- Counting purpose?
- Discussions about continuous/periodic counting at distinct locations?
- Potential locations for continuous/periodic counting?
- Interest rating in partnering with VDOT using NC and Minnesota examples. (Questions 34-40)
Survey of Virginia Localities

Legend
- Red Circle: Response
- White Circle: No Response
What’s Happening in Virginia

Legend
- Red dot: Does Count
- Pink dot: Does Not Count
- White dot: No Response
What’s Happening in Virginia

• 27 localities have performed counts
  – 9 counties
  – 11 cities
  – 7 towns
What’s Happening in Virginia

Percent of Respondents by Locality Type

- Towns
- Counties
- Cities
## What’s Happening in Virginia

### Locality Population and Counting Percentages

<table>
<thead>
<tr>
<th>Locality Population</th>
<th>Survey Response to Counting</th>
<th>No. of Responses</th>
<th>Percent Counting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 5,000</td>
<td>Yes</td>
<td>3</td>
<td>3.3</td>
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<td></td>
<td>No</td>
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<td>5,000 to 20,000</td>
<td>Yes</td>
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<td>20,000 to 100,000</td>
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<td>10</td>
<td>15.6</td>
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<td></td>
<td>No</td>
<td>54</td>
<td></td>
</tr>
<tr>
<td>Over 100,000</td>
<td>Yes</td>
<td>7</td>
<td>38.9</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>11</td>
<td></td>
</tr>
</tbody>
</table>
What’s Happening in Virginia

Use of Counting Technologies

- Passive Infrared: 11
- Pneumatic Tubes: 4
- Inductive Loops: 3
- Other: 3
- Automated Video: 2
- Active Infrared: 1

Number of Localities
What’s Happening in Virginia

Number of Existing Count Locations

- 2-10 Locations: 41%
- 11-20 Locations: 29%
- More than 20 Locations: 29%

6/20/2018
What’s Happening in Virginia

Discussion Regarding Counts

- No: 58%
- Yes, Informal Discussions: 34%
- Yes, Formal Discussions: 4%
- Don’t Know: 4%
What’s Happening in Virginia

### Purpose for Counting Among Non-Continuous Counters

- **Prepare a Planning Document**: 2 respondents
- **Grant Application**: 3 respondents
- **Existing Project**: 6 respondents
- **Obtain Baseline Count Data**: 8 respondents

*Number of Respondents*
What's Happening in Virginia

Use of Data Storage by Continuous or Periodic Counters

- Computerized, Spatial
- Paper Files
- Other
- Vendor or 3rd Party
- Computerized, Non-tabular
- Computerized, Tabular

Number of Localities
What’s Happening in Virginia

Data Sharing by Localities with Recurring Counts

Outside Entities

- No
- Stakeholders
- Government Planning Partners
- General Public

Number of Localities
Reported Limitations

- Equipment
- Funding
- Project prioritization
- More facilities → increased usage, but facilities require counts showing usage
Interest in Existing State Models

State DOT loans portable counting equipment to local agencies for short-duration counts.

State DOT installs permanent counting equipment at its expense; local governments agree to maintain it at their expense.
Interest by VDOT District

MNDOT Average Interest by VDOT District

NCDOT Average Interest by VDOT District

Legend
- < 3.00
- 3.00 - 3.25
- 3.26 - 3.50
- 3.51 - 3.75
- > 3.75

6/20/2018
Localities Who Have Counted
Total Interest in Counting

Legend
- Interest
- No Interest
- No Response
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