We All Count: Collaboratively Collecting & Using Biking and Walking Data in Minnesota

Michael Petesch | Pedestrian and Bicycle Data Coordinator

Agenda

• Why collect info about people biking and walking?
• How data is collected in MN
• Community examples
• Rural pedestrian research
• Next steps
• Questions & Answers
What are some things we hear when a new bike lane or sidewalk is proposed?

“We don’t build bridges because people are driving into rivers…”

- Gil Penalosa of 8-80 Cities
MnDOT’s Strategic Directions

Manual Counts – Now Managed by MDH

50 MN cities counted between 2013-16, 2 hrs per site per year, weather dependent, good for determining automated sites, increase public awareness, build advocacy, etc.
Permanent:
• 29 people counters installed at 22 sites between 2013-2017
• 13 trail locations
• 9 on road locations
• Collaborative Placement
• MnDOT maintains, analyzes and creates factors

Portable:
• 8 sets of portable counters
• Free to use for local data collection needs
• Data accessible to locals and MnDOT

Automated Counters – Managed by MnDOT

St Cloud – Beaver Island
Willmar – Lakeland Dr
Minneapolis – Franklin Ave
Detroit Lakes – West Lake Dr

Alexandria – Broadway St
Moorhead – TH 75 Trail
Rochester – Douglas Tr
Mankato – Victory Mem. Bridge

Automated Counters
### Average Annual Daily Pedestrians (AADP) at some Counters:

<table>
<thead>
<tr>
<th>Pedestrian Sites</th>
<th>Annual Peds</th>
<th>AADP</th>
<th>Jan ADP</th>
<th>Non-Winter ADP</th>
<th>Jul ADP</th>
<th>Winter ADP (Dec – March)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brainerd – Paul Bunyan Trail</td>
<td>13,568</td>
<td>37</td>
<td>16</td>
<td>48</td>
<td>37</td>
<td>16</td>
</tr>
<tr>
<td>Brooklyn Park – Rush Creek Trail</td>
<td>36,186</td>
<td>33</td>
<td>53</td>
<td>122</td>
<td>86</td>
<td>4</td>
</tr>
<tr>
<td>Cass Lake – Migizi Trail</td>
<td>3,956</td>
<td>6</td>
<td>6</td>
<td>13</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Duluth – Lakewalk Trail</td>
<td>304,123</td>
<td>833</td>
<td>315</td>
<td>1,046</td>
<td>115</td>
<td>315</td>
</tr>
<tr>
<td>Lanesboro – Root River Trail</td>
<td>19,822</td>
<td>54</td>
<td>12</td>
<td>75</td>
<td>16</td>
<td>12</td>
</tr>
<tr>
<td>Mpls – West River Greenway</td>
<td>249,973</td>
<td>685</td>
<td>222</td>
<td>868</td>
<td>222</td>
<td>222</td>
</tr>
<tr>
<td>Moorhead – Highway 75 Trail</td>
<td>19,049</td>
<td>52</td>
<td>33</td>
<td>61</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>St Cloud – Beaver Island Trail</td>
<td>27,265</td>
<td>75</td>
<td>42</td>
<td>91</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>St Paul – Jackson St shared-use path</td>
<td>128,399</td>
<td>352</td>
<td>232</td>
<td>411</td>
<td>232</td>
<td>232</td>
</tr>
<tr>
<td>Grand Total</td>
<td>802,340</td>
<td>2,198</td>
<td>1,113</td>
<td>2,736</td>
<td>1,113</td>
<td>1,113</td>
</tr>
</tbody>
</table>

### Automated Counters – Permanent

<table>
<thead>
<tr>
<th></th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Total Monthly Volumes</th>
<th>% of Annual Volume by Month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bikes</td>
<td>12,720</td>
<td>21,869</td>
<td>57,158</td>
<td>115,102</td>
<td>187,710</td>
<td>260,325</td>
<td>310,628</td>
<td>251,381</td>
<td>197,075</td>
<td>113,799</td>
<td>51,578</td>
<td>18,444</td>
<td>1,125,636</td>
<td>0% 5% 10% 15% 20% 25%</td>
</tr>
<tr>
<td>Peds</td>
<td>68,113</td>
<td>72,754</td>
<td>129,298</td>
<td>151,249</td>
<td>200,299</td>
<td>223,710</td>
<td>275,639</td>
<td>270,486</td>
<td>223,811</td>
<td>159,713</td>
<td>103,999</td>
<td>62,252</td>
<td>3,665,060</td>
<td>0% 5% 10% 15% 20% 25%</td>
</tr>
</tbody>
</table>

% Bikes: 1% 1% 4% 7% 12% 16% 19% 16% 12% 7% 3% 1%  
% Peds: 4% 4% 7% 8% 10% 12% 14% 14% 12% 8% 5% 3%
Percent of winter riders by year as shown in for the four sites with at least three years of data

Portable Equipment Kits

FREE TO USE!!

Infra-red counter (PYRO)
Tube counter + rubber tubes
Tablet to connect via Bluetooth
Basic tools and hardware
Lock and chain
Safety vest

Interested in getting trained?
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Key Outcomes of Counting

Local Governments: Planning and Monitoring
• Proctor: SRTS sidewalk traffic
• Lake County: Winter fat bike traffic
• St Cloud APO: Lots of baseline data collection
• Hennepin County: ~70 locations bike monitoring plan
• D7 Mankato: Portables booked ALL SUMMER!
• Ped bridge monitoring over I-94 in St Paul
• Alexandria: Demonstration protected bike lane
• Moorhead, St Cloud, Minneapolis and St Paul have robust annual manual counting programs

Local Governments: Better Decisions
• Mankato: new mid-block crossings based on counts
• Grand Marais: data for Hwy 61 reconstruction (higher priority for funding)
• Mille Lacs Band of Ojibwe – used video count data in application for Transportation Alternative Program funding from MnDOT to improve safety of an intersection on Hwy 169

Understanding Pedestrian Travel Behavior and Safety in Rural Settings

• Research born out of MN Walks and Bike & Ped Data Collection
  • Priority populations
  • Connect people and places
  • Limited understanding of Peds
  • Identify and improve collection methods for travel behaviors in rural areas
• Partnered with four tribes
  • Lots of walking
  • Anecdotal data
• Has grown beyond initial intent
TH 169 in Mille Lacs

136 People / Day

4 People / Day

TH 169 near Mille Lacs Casino – A photo collage of people traveling to destinations

Gap in the fence that 35x more people use than the x-walk about an 1/8mi south
Highway 61 in Grand Portage

Highway 61 at Blaze’s Pit Road – A photo collage of people traveling to destinations

Highway 61 at Stevens Road – A photo collage of people traveling to destinations
Bike and Ped Data Next Steps

- Organize, Digitize and Publicize
- Apply knowledge to projects and plans (i.e. rural ped research)
- Expand portable counting
- Be responsive to communities
- Inform performance measures
- Bike and Walk Data Taskforce
  - Coordination & Collaboration – lots of overlap in needs and desires
  - Create data warehouse

Thank you!

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