NOTICE OF A MEETING
April 15, 2021

CENTRAL OHIO GREENWAYS - TRAIL DEVELOPMENT WORKING GROUP MEETING
MID-OHIO REGIONAL PLANNING COMMISSION
111 LIBERTY STREET, SUITE 100
COLUMBUS, OH 43215

AGENDA

1. Introduction
2. Eco Counter Vendor Presentation
3. TAP Updates
4. Trail Town Grant
5. Other Business
Make it Count:
Measuring Trail Use – New Approaches and Technologies

Louis Queruau
Client Consultant
Eco-Counter
About Eco-Counter

- Design & manufacture bike and pedestrian counters
- Work with public agencies and organizations to develop count programs
- Enable a data-driven approach to park/trail management & planning
Eco-Counter in North America

- 2700+ counters
- 1100+ counters
We are with you each step of the way.

1. Preliminary study & installation
2. Count
3. Data collection & transmission
4. Data analyze & communication
5. Dedicated support & services
Some of the organizations we work with
An essential tool to develop & manage trails

**WHY COUNT?**

- Capture daily, weekly, and seasonal trends
- Understand network flows
- Observe traffic mode
- Justify investments
- Gauge demand
- Inform grant applications
- Communicate success
- Quantify growth
- Understand weather impacts
- Plan maintenance
Track visitation over time

Start of the pandemic
Led to significant year-on-year growth
Monitor usage during the week...

Morning trail use by pedestrians

And cyclists enjoying an evening ride

Pedestrians
Cyclists
...versus during the weekend

Both pedestrians and cyclists enjoy the trail early morning.
Observe modal share

Understand user groups

- Pedestrians: 82.2%
- Cyclists: 17.5%
- Equestrians: 0.3%
Justifying the hiring or deploying staff

9:30 AM – 12:00 PM

2:30 PM – 4:00 PM
Communicating with data

**Minnesota state park visitation, trail use, fishing license sales up amid pandemic**

**ST. PAUL, Minn. (FOX 9) -** With many events and activities canceled due to the pandemic, Minnesotans are making a point of getting outside this year. Data from the Minnesota Department of Natural Resources shows park visitation, state trail use and fishing licenses sales are up compared to last year.

Overall, data from January through August shows park visitation is up seven percent from 2019. Parks visitation varies statewide, but parks closest to the Twin Cities metro and Rochester are seeing the highest visitation. Central region visits are up 70 percent. Fort Snelling, Frontenac, Afton, and Wild River are among the parks with the greatest percent increase in year-to-date use.

**Counter tracking foot traffic, bikes on Jacksonville’s Northbank Riverwalk; more coming**

Steve Patterson, Florida Times-Union
Published 6:14 am CT Mar 18, 2021

Eco Counter is a new “foot counter” device that counts the number of runners, walkers and bicyclists that pass by during a one-minute stretch at Congaree Park on Jacksonville’s Northbank Riverwalk Tuesday, March 15th. Florida Times-Union

Running or biking Jacksonville’s Northbank Riverwalk has always counted as exercise.

Now, a new device is keeping count of the people who do that.

The “eco-counter” dedicated Tuesday next to Congaree Park under the Acosta Bridge is the city’s first effort to reliably measure the number of people traveling through an area by foot or bike.
How can data be communicated?

Meaningfully integrate survey data

- **56%**
  - Of trail users were male

- **63%**
  - Trail users 45 and older made up 63% of trail users

- **90%**
  - Are white

- **80%**
  - Trail users had obtained a bachelor degree or higher

- **50%**
  - Modal split is about 50/50 bicyclists & pedestrians

- **66%**
  - Drive to the trail

- **60%**
  - Trail users use the trail mainly for health & exercise & 40% use the trail for non-recreational trips like commuting, visiting friends & running errands

- **60%**
  - Use the trail with 1 or more other person

- **19%**
  - Accompanied by a child
Communicate the data to the public
Who We Count
Eco-Counter Features

- Most are battery powered
- Wireless data transmission
- Can detect direction of travel
- Completely waterproof/weatherproof
- Eco-Visio software comes with the counter
Pedestrian Counters

PYRO-Box
PYRO in wooden post
PYRO in recycled post

Custom housing PYRO
PYRO in aluminum post
PYRO-Box – People Counter

- Counts cyclists and pedestrians with no differentiation
- Infrared PYRO sensor detects body heat
- Able to tell direction of travel
- 10-year battery life
PYRO – Post – People Counter

- Counts cyclists and pedestrians with no differentiation
- Wooden or recycled post
- Infrared PYRO sensor detects body heat
- Able to tell direction of travel
- 10-year battery life
Cyclist counters
ZELT Loops - Cyclist counters

- Permanent installation: perfect for measuring long-term trends
- Able to detect direction of travel
- Battery powered with 2-year battery life
- Invisible – eliminates risk of vandalism
- Works in all weather conditions
- Can be installed in any type of ground (asphalt, concrete, gravel, soil)
Pneumatic TUBES - Cyclist counters

- Mobile & temporary: Perfect for before-and-after studies
- Quick install time (~30 minutes)
- Able to detect direction of travel
- Automatic data transmission available
- Battery powered with 10-year battery life
MULTI – Pedestrian & Bicycle Counters

- Jeff Davis Trail, TX
- Louisville, KY
- Brisbane, Australia
- Vallée de Loire, France
- Boston, MA
- South Lake Tahoe, CA
MULTI – Pedestrian + Bike Counter

- Differentiates between cyclists and pedestrians
- Infrared PYRO sensor + electromagnetic ZELT loops
- Great for long-term permanent counting sites
- Able to determine direction of travel
- 2-year battery life
Mobile MULTI – Pedestrian + Bike Counter

- Mobile counter
- Flexible solution for a variety of situation and sites
- Differentiates between cyclists and pedestrians
- Combination of Infrared PYRO + Tube sensors
- Able to determine direction of travel
Eco-Display Counter - Bike + Pedestrian Counter

- Displays cyclists and/or pedestrian counts in real time
- Infrared PYRO sensor + electromagnetic ZELT loops
- Great for long-term permanent counting sites
- Requires electricity
Eco-Visio data analysis software

- Included with every counter
- Option for data to be automatically transmitted to the software daily
- Create graphs, charts, and reports
Eco-Visio reports
Any questions?
Louis Queruau
Client Consultant
Montreal, QC
lqu@eco-counter.com
1 (866) 518-4404
The current approach used to monitor non-motorized activity along trails within Central Ohio, generally follows guidelines and procedures outlined in Chapter 4 Traffic Monitoring for Non-motorized Traffic of the *Traffic Monitoring Guide* (TMG; FHWA 2013). It is designed to produce estimates of:

- Average Annual Daily Trail Traffic (AADTT)
- Trail Miles Traveled (TMT)
Monitoring Strategy Overview

1. Selection of Monitoring Devices
2. Segmentation of the trail network for purposes of short-duration monitoring
3. Selection and Installation of continuous reference monitoring locations
4. Short-duration monitoring on segments without continuous monitors
5. Data cleaning, quality assurance, and adjustment
6. Derivation of factors for extrapolation
7. Estimation of Average Annual Daily Trail Traffic (AADTT) & Trail Miles Traveled (TMT)
Monitoring Devices

Trafx Passive Infrared Counters

Eco Counter
Pyro Box (passive infrared) Counters

TrailMaster Active Infrared Counters
## Monitoring Segments

<table>
<thead>
<tr>
<th>Trail</th>
<th>Segment Count</th>
<th>Total Length</th>
<th>Average Segment Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alum Creek Trail</td>
<td>19</td>
<td>24.26</td>
<td>1.28</td>
</tr>
<tr>
<td>Big Walnut Trail</td>
<td>7</td>
<td>6.11</td>
<td>0.87</td>
</tr>
<tr>
<td>Blacklick Creek Trail</td>
<td>10</td>
<td>14.6</td>
<td>1.46</td>
</tr>
<tr>
<td>Camp Chase Trail</td>
<td>13</td>
<td>26.63</td>
<td>2.05</td>
</tr>
<tr>
<td>Darby Creek Trail</td>
<td>2</td>
<td>8.67</td>
<td>4.34</td>
</tr>
<tr>
<td>Hellbranch Trail</td>
<td>4</td>
<td>4.84</td>
<td>1.21</td>
</tr>
<tr>
<td>Heritage Trail</td>
<td>3</td>
<td>6.14</td>
<td>2.05</td>
</tr>
<tr>
<td>I-670 Connector</td>
<td>4</td>
<td>2.85</td>
<td>0.71</td>
</tr>
<tr>
<td>Ohio to Erie Trail</td>
<td>10</td>
<td>17.23</td>
<td>1.72</td>
</tr>
<tr>
<td>Olentangy Trail</td>
<td>16</td>
<td>15.22</td>
<td>0.95</td>
</tr>
<tr>
<td>Rocky Fork Trail</td>
<td>3</td>
<td>2.37</td>
<td>0.79</td>
</tr>
<tr>
<td>Scioto Trail</td>
<td>11</td>
<td>9.42</td>
<td>0.86</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>103</strong></td>
<td><strong>139.29</strong></td>
<td><strong>1.35</strong></td>
</tr>
</tbody>
</table>
Continuous Count Stations

~20 Segments

LEGEND
- Permanent Count Station
- Surveyed Trail

Trafx Passive Infrared Counters

11cm (4.3")
## Continuous Count Station Equipment

<table>
<thead>
<tr>
<th>Count Site</th>
<th>Equipment Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>1001 - Camp Chase Trail at Darby Creek</td>
<td>4</td>
</tr>
<tr>
<td>1003 - Camp Chase Trail at Galloway Rd</td>
<td>2</td>
</tr>
<tr>
<td>102 - Scioto Trail at River’s Edge</td>
<td>4</td>
</tr>
<tr>
<td>103 - Scioto Trail at Grandview Ave</td>
<td>2</td>
</tr>
<tr>
<td>106 - Scioto Trail at North Bank Park</td>
<td>13</td>
</tr>
<tr>
<td>109 - Scioto Trail at Scioto Audubon</td>
<td>4</td>
</tr>
<tr>
<td>207 - I-670 Trail at Nelson Rd</td>
<td>4</td>
</tr>
<tr>
<td>304 - Alum Creek Trail at S. of I-270</td>
<td>4</td>
</tr>
<tr>
<td>306 - Alum Creek Trail at Easton Soccer Fields</td>
<td>6</td>
</tr>
<tr>
<td>308 - Alum Creek Trail at Ballyvaughn Dr</td>
<td>6</td>
</tr>
<tr>
<td>310 - Alum Creek Trail at Clifton Ave</td>
<td>8</td>
</tr>
<tr>
<td>313 - Alum Creek Trail at S. of I-70</td>
<td>4</td>
</tr>
<tr>
<td>316 - Alum Creek Trail at Brittany Hills</td>
<td>6</td>
</tr>
<tr>
<td>402 - Blacklick Trail at Three Creeks</td>
<td>4</td>
</tr>
<tr>
<td>412 - Blacklick Trail at Blacklick Woods</td>
<td>4</td>
</tr>
<tr>
<td>503 - Olentangy Trail at Worthington Hills</td>
<td>7</td>
</tr>
<tr>
<td>506 - Olentangy Trail at Antrim Park</td>
<td>13</td>
</tr>
<tr>
<td>511 - Olentangy Trail at OSU Wetlands</td>
<td>13</td>
</tr>
<tr>
<td>515 - Olentangy Trail at 5th Ave</td>
<td>13</td>
</tr>
<tr>
<td>517x - Olentangy Trail at Goodale Ramp</td>
<td>4</td>
</tr>
<tr>
<td>801 – Heritage Trail at Heritage Trail MetroPark</td>
<td>?</td>
</tr>
<tr>
<td>803 – Heritage Trail at Cosgray Rd</td>
<td>7</td>
</tr>
</tbody>
</table>
Short Duration Counts

80+ Segments

Eco Counter
Pyro Box (passive infrared) Counters

LEGEND
△ Temporary/Rotating Station
 маршрут
Surveyed Trail

THE REGION IS GROWING…A LOT.
THE REGION IS GROWING… A LOT.

Trail Monitoring Area Expansion

<table>
<thead>
<tr>
<th>Segment Status</th>
<th>Total Miles</th>
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</thead>
<tbody>
<tr>
<td>Currently Monitored</td>
<td>130</td>
</tr>
<tr>
<td>Not Currently Monitored</td>
<td>120</td>
</tr>
<tr>
<td>Not Yet Built</td>
<td>400+</td>
</tr>
</tbody>
</table>

LEGEND

- Segment Currently Monitored
- Segment Not Currently Monitored
- Proposed/Future Trail Segment
Trail Monitoring Equipment Needs

Continuous Count Stations

Multi-Use Counters

- Differentiates user type
- Records direction of travel
- 1 – 2 year battery life
- 11 months of data memory
- $5,700 per unit
  - Up to 15’ range
  - Direction detection
  - (not incl. installation)

Discretely measures cyclist and pedestrian usage in an urban environment.

Cyclists and pedestrians are counted and differentiated on a shared use path.
The region is growing... a lot.

Trail Monitoring Program Management
THE REGION IS GROWING…A LOT.

Trail Monitoring Program Management