



Walking and Bicycling Counts: Collaboratively Collecting & Using Non-Motorized Data in Minnesota

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6/12/2020

Agenda



- Background
 - personal
 - programmatic
- Permanent Program
- Portable Program
- Challenges
- Strategic Plan
- Progress



Michael Petesch works for the Minnesota Department of Transportation managing and coordinating bicycle and pedestrian data collection efforts.

He strives to make it safer, easier, and more convenient for people of all ages and abilities to walk and bike where they need to go.

Michael's Background



2011 – 2013
\$21mil Federal
Non-Motorized
Transp. Pilot Program

- 6 Manual / month
- A few automated



2013 – 2016
Bike & Ped Data
Collection
Initiative

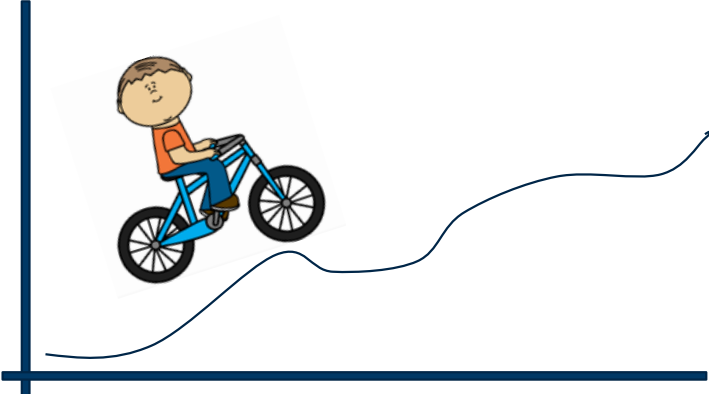
- 200+ Automated Counts
- 5 Formats



2016 – NOW
Bike & Ped Data
Collection
Programs

- 22 Perm
- 18 Portable
- ~100 temp sites
- 230+ Manual Count Sites

Program Background



**TOWARD
ZERO**

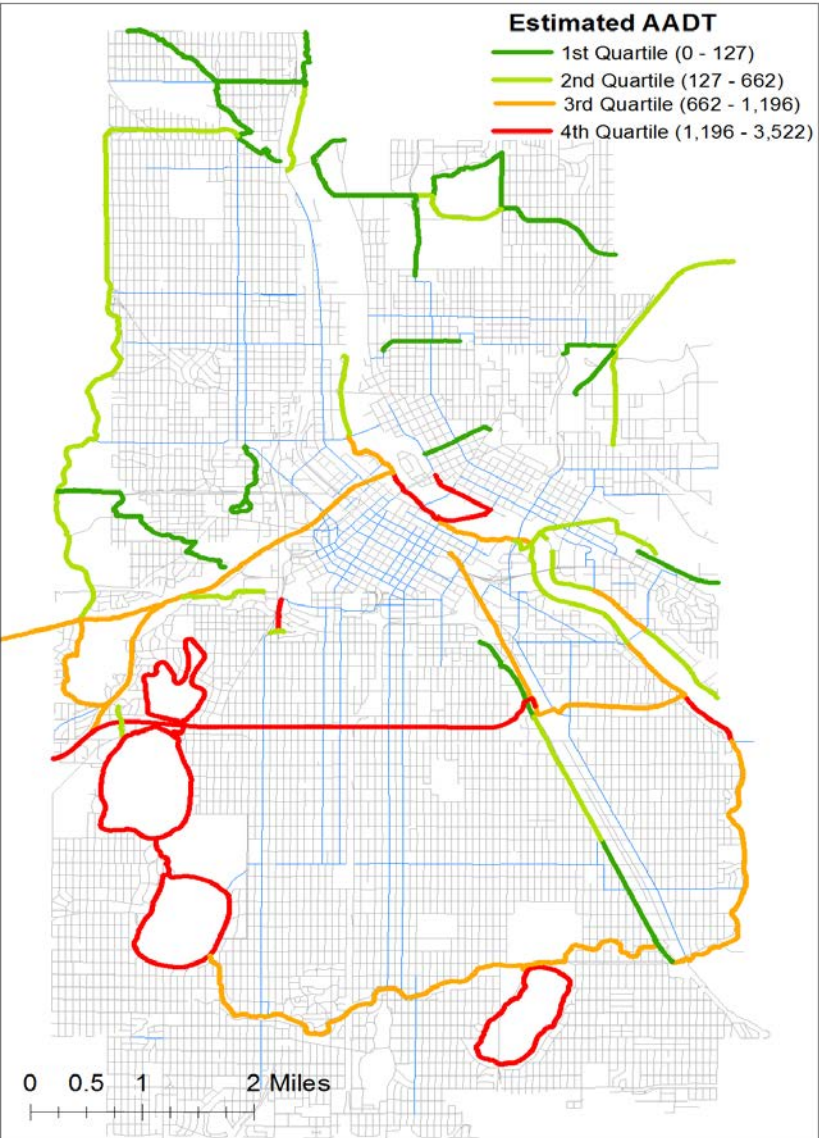
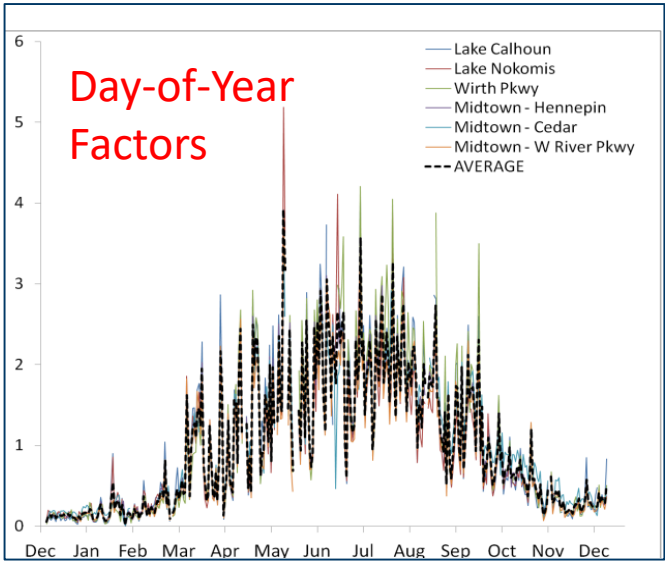
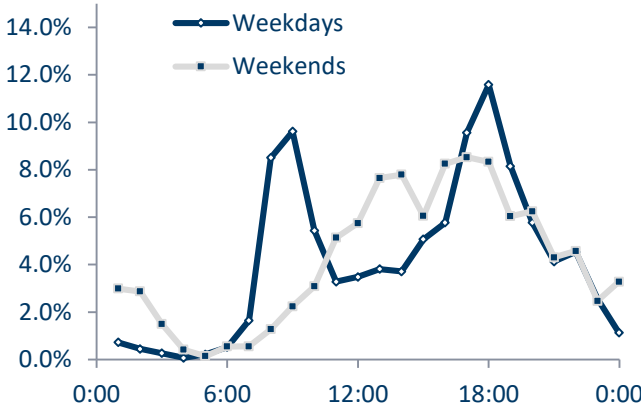
DEATHS



Program Background

3-part research study (2012-2016) called the “MN Bicycle and Pedestrian Counting Initiative”

- Methodologies: Test and develop data collection & factoring methods with a few devices and manual counts.
- Implementation: Purchase and test various equipment, install many locations and validate counts. Show trends and travel patterns.
- Institutionalization: Imbed work in MnDOT, purchase and install more equipment, work with partners to collect more data.

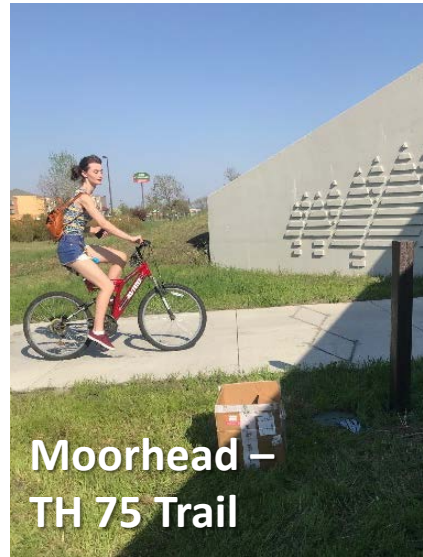


MnDOT's Pedestrian and Bicyclist Data Collection Program

MnDOT PROGRAM



PERMANENT



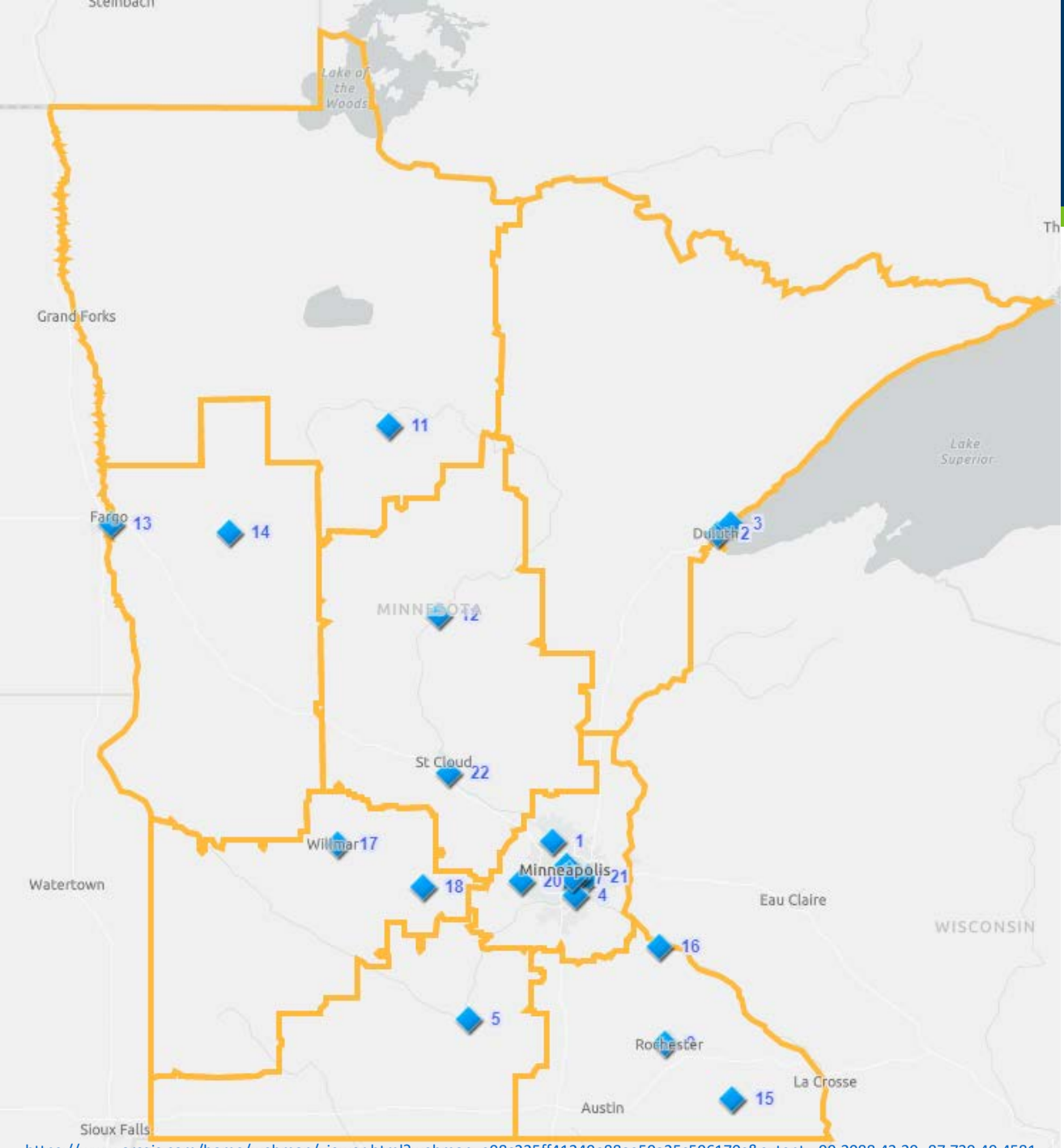
PORTABLE



Permanent Sites

- Joint Effort
- Trends
- Factoring
- Partnerships
- Continuous
- 27 at 21
- 13 trail
- 8 road

Year	Counters Installed	Sites Added
2013	4	2
2014	5	4
2015	6	4
2016	11	9
2017	3	3
Grand Total	29	22





St Cloud – Beaver Island



Minneapolis – Franklin Ave



Detroit Lakes –
West Lake Dr



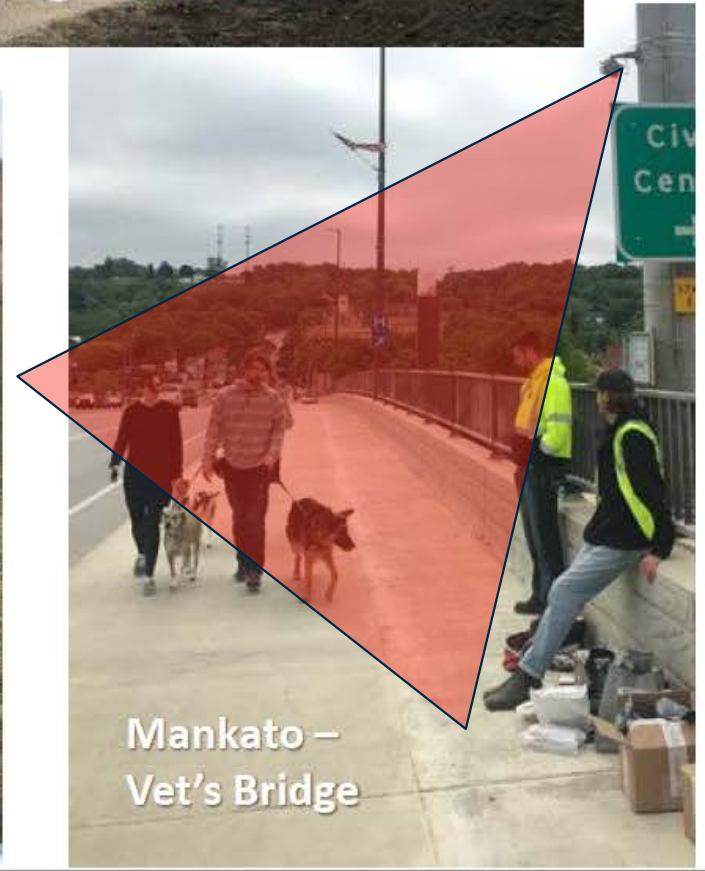
Willmar –
Lakeland Dr



Moorhead – TH 75 Trail



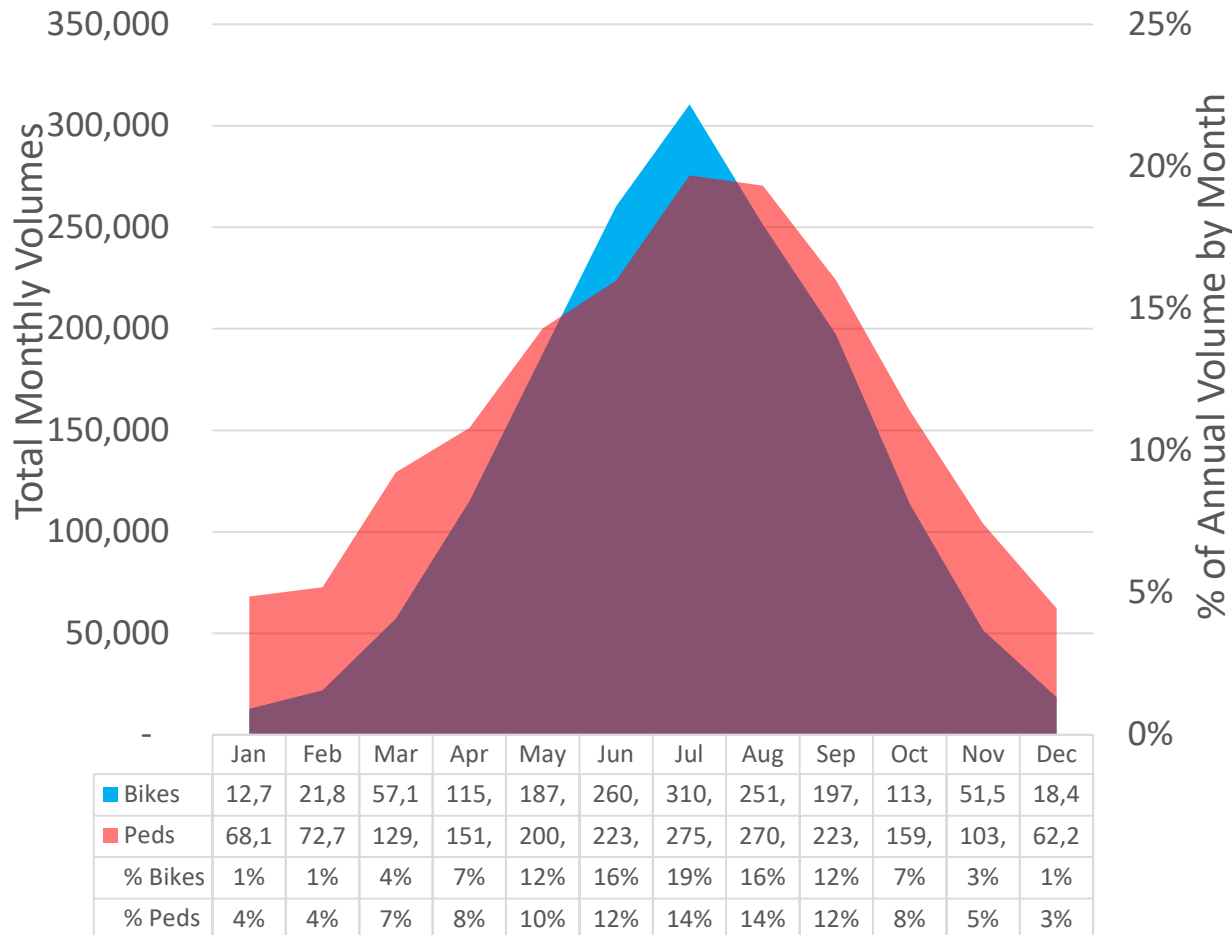
Rochester – Douglas Tr



Mankato –
Vet's Bridge

Permanent Sites

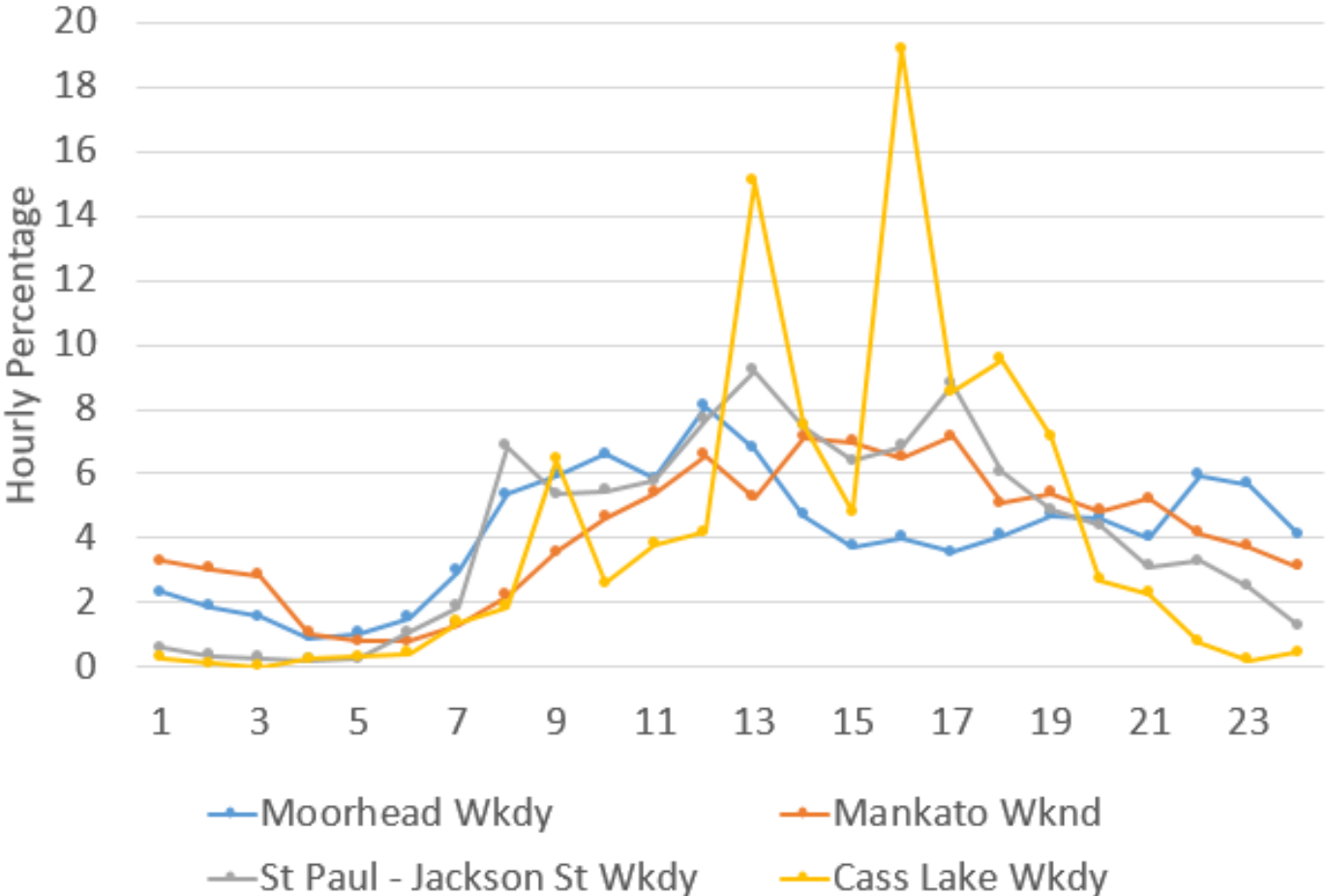
Total Traffic Volumes Across All Reference Sites That Count Both Bikes and Peds, 2014-2017



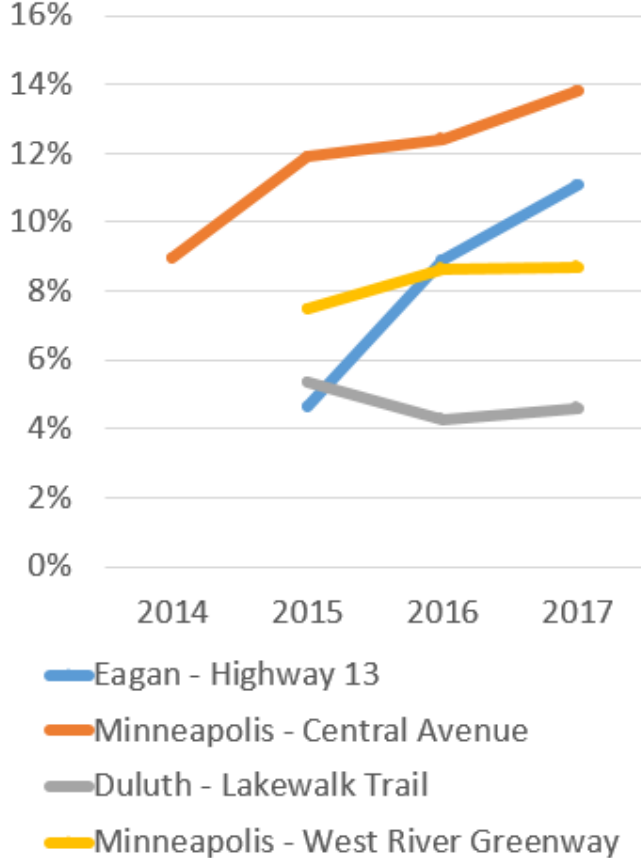
Pedestrian Sites	Annual Peds	AADP	Jan ADP	July ADP
Brainerd – Paul Bunyan Tr	13,568	37	15	64
Brooklyn Park – Rush Creek Tr	36,186	99	33	135
Cass Lake – Migizi Tr	3,956	11	4	20
Duluth – Lakewalk Tr	304,123	833	315	1,634
Lanesboro – Root River Tr	19,822	54	11	114
Mpls – West River Greenway	249,973	685	222	1,105
Moorhead – Highway 75 Tr	19,049	52	51	82
St Cloud – Beaver Island Tr	27,265	75	29	65
St Paul – Jackson St path	128,399	352	186	447
Grand Total	802,340	2,198	867	3,665

Permanent Sites

2017 Hourly Pedestrian Volumes



Percent of winter riders by year as shown in for the four sites with at least three years of data



Portable Equipment

- 8 Sets
- Training Material
- Free
- Check out & Return forms
- Local Needs
- Wide Coverage
- Public Data



Return Form for MnDOT's Bicycle and Pedestrian Counting Equipment

Date: *

Jun 08 2020 

Choose the Equipment Host in your MnDOT District: *

District 1 * Charlie Moore * ARDC * 218-529-7553 * cmoore@ardc.org * Duluth, MN

Borrower's (Your) Name *

First Name Last Name

Tubes & Pyro Installed Together or Separately? *

Reason for count: *

Choose one...

What Difference Will This Data Make? *

Tubes & Pyro Installed Together or Separately? *

Reason for count: *

Choose one...

What Difference Will This Data Make? *

400/400

Check-out Date: *



Installation Date & Time: *



:

Removal Date & Time: *

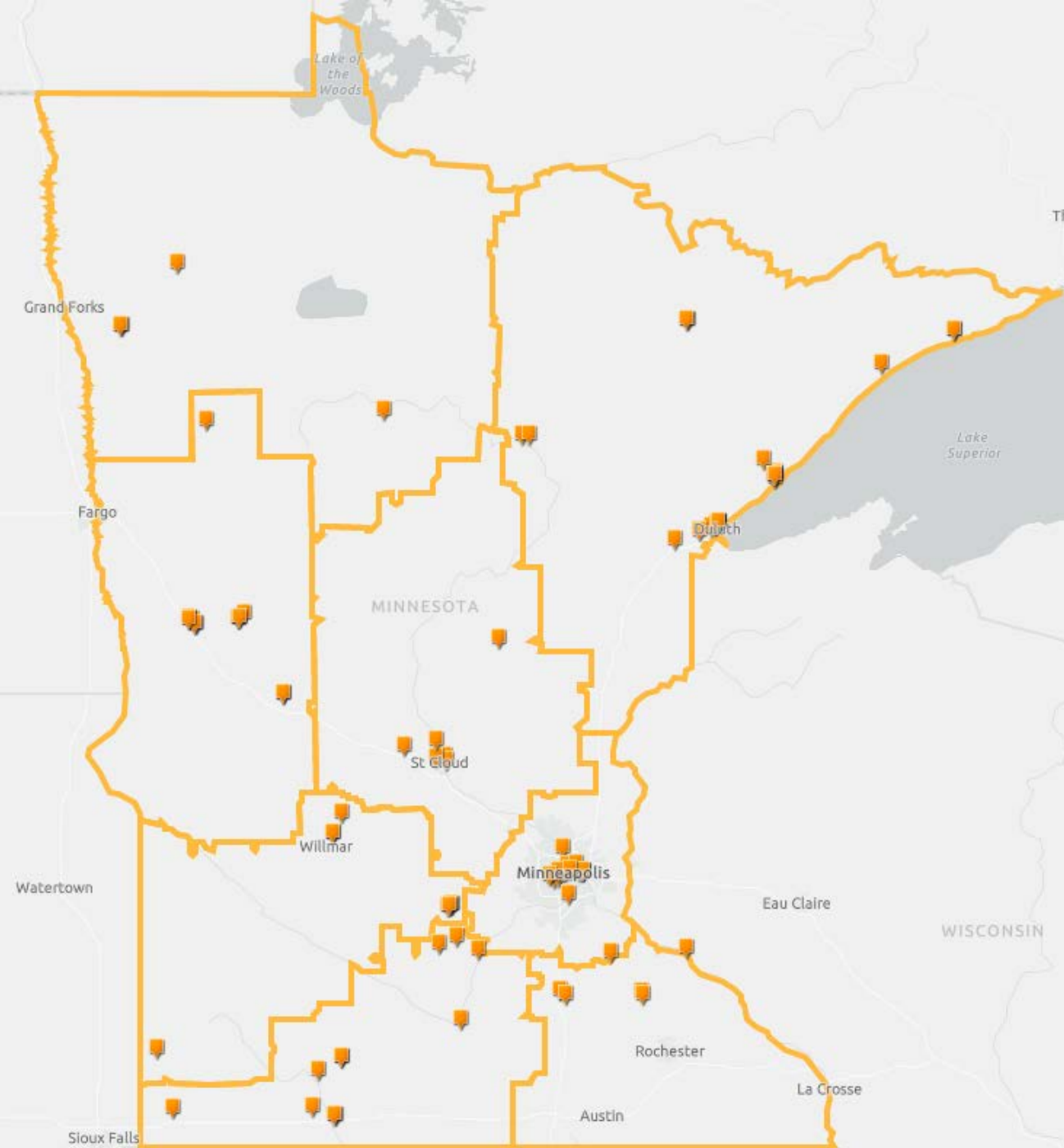


:

Return Date: *



MnDOT Portable Sites



Year	Cities	Sites	Installs
2015	4	9	9
2016	7	13	17
2017	16	21	34
2018	21	26	32
2019	10	19	26
2020	7	11	12
Total	65	99	140

- Many partners & agendas
- Lots of data & formats
- QA / QC
- Factoring & Estimates
- Share Data
- Data-Driven Decision Making
- Resources (< motor vehicle)
- Expansion



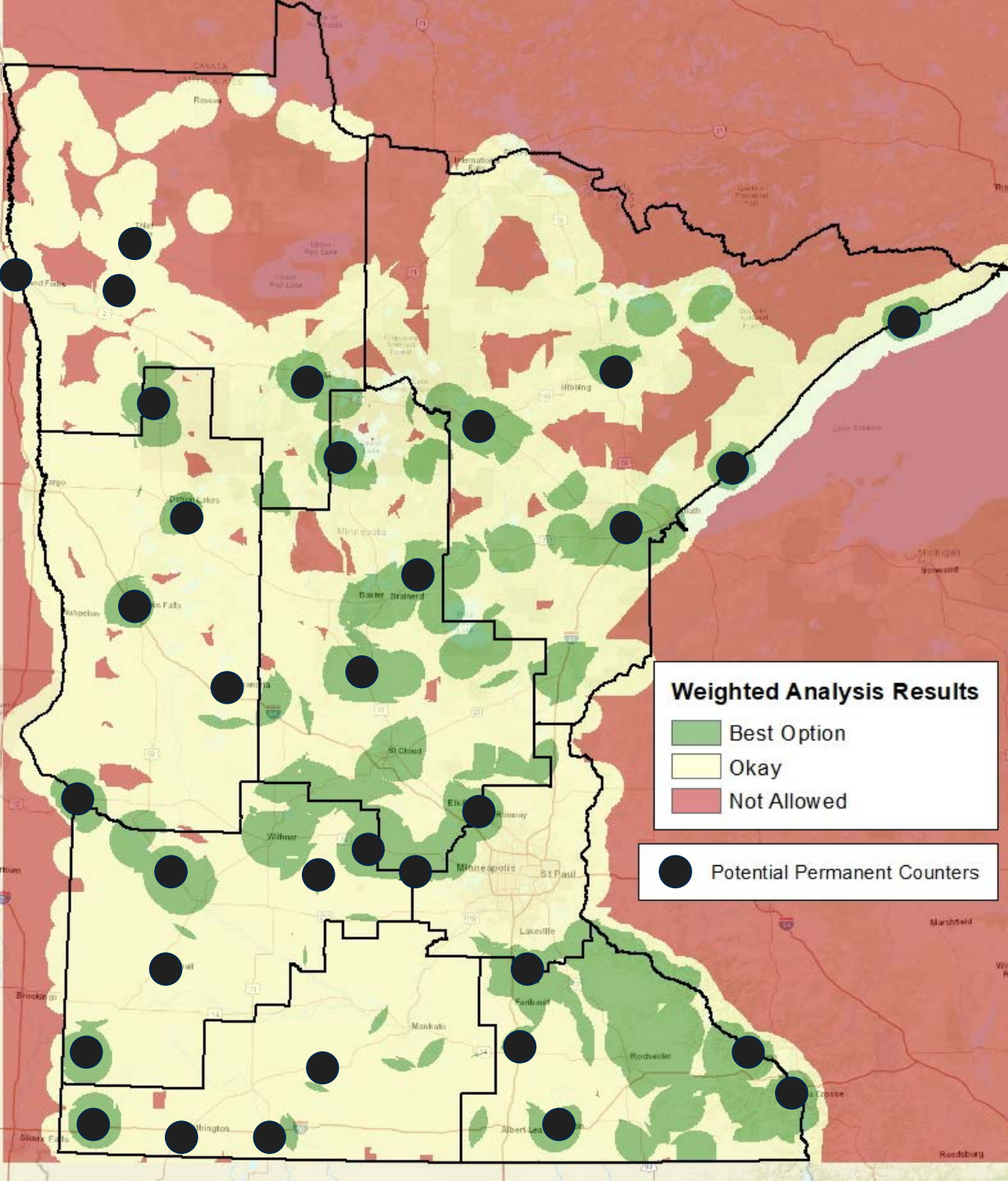
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<https://www.dot.state.mn.us/bike/documents/planning-research/strategic-plan.pdf>

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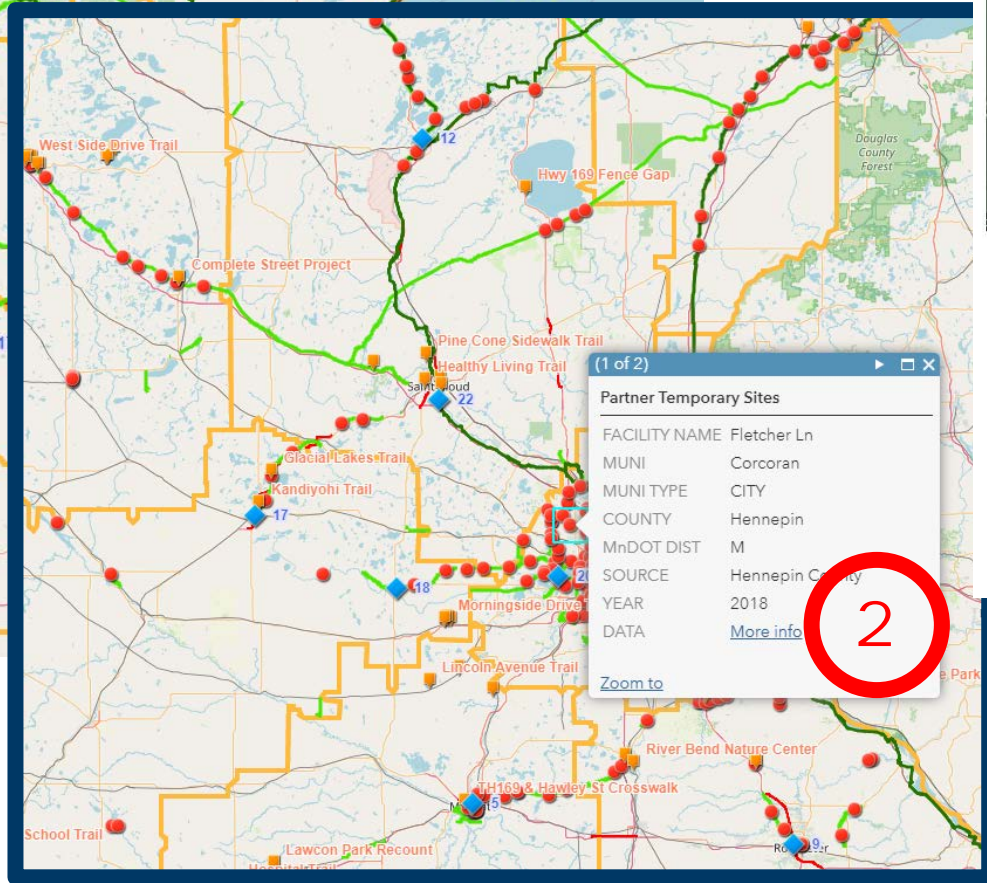
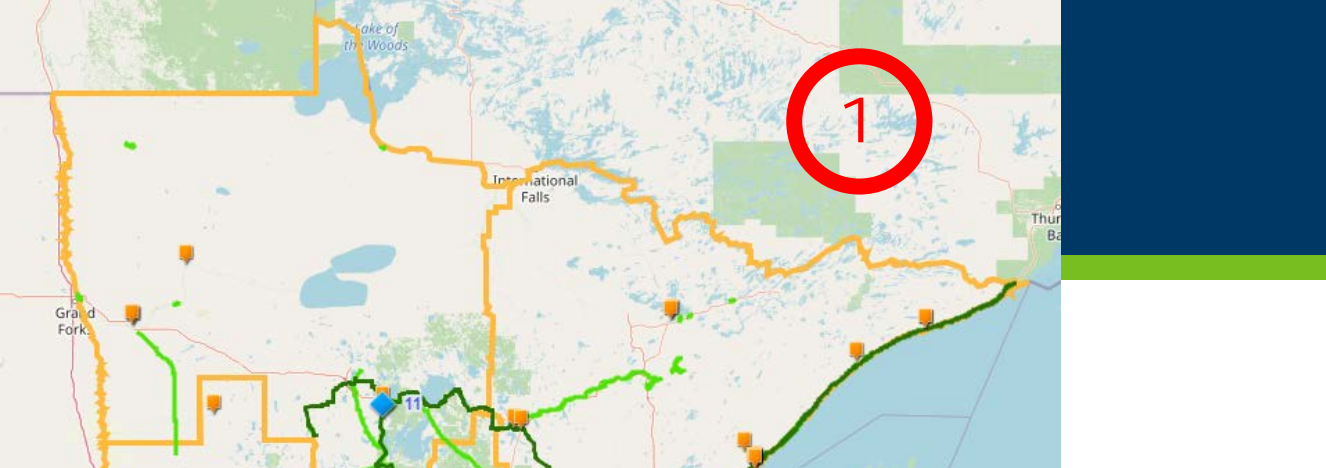
Strategy 1: Strategic Deployment



Inputs:

- Greater MN
- Bicycle Investment Routes
- Trunk Highways
- **Paved Shoulders ($\geq 5\text{ft}$)**
- Bridges and Culverts
- USBR 41 & 45
- State Trails
- Off Road Bicycle Trails
- Population Centers
- Native American Reservations
- Public Suggestions

Strategy 2: Build Data Warehouse

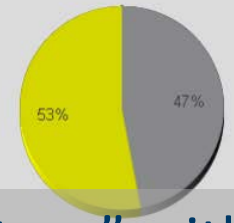


No picture available.
You can add a picture to the counter's Eco-Visio file.

Key Figures

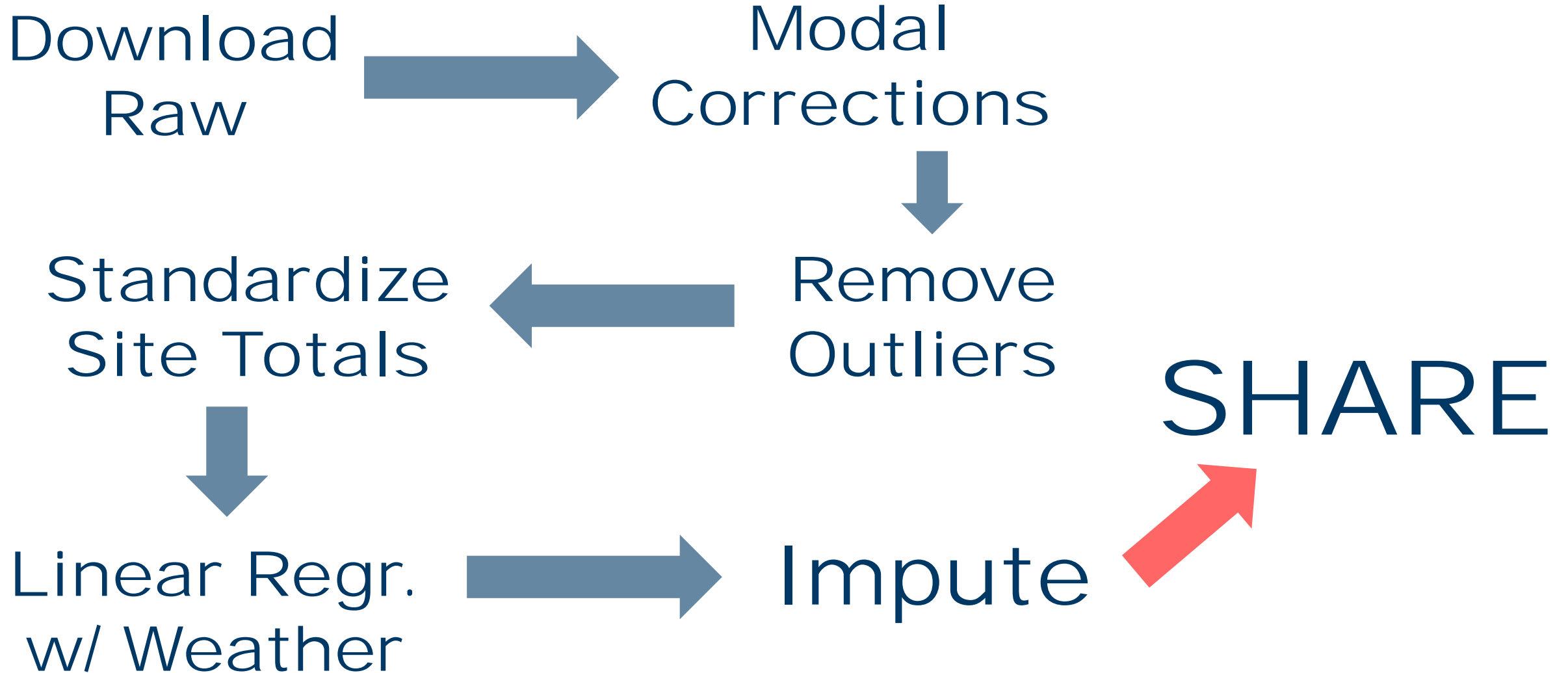
- Total Traffic for the Period Analyzed: 863
- Daily Average: 48
Weekdays: 50 / Weekend days: 41
- Busiest Day of the Week: Friday
- Busiest Days of the Period Analyzed:
 1. Friday, July 13, 2018 (162)
 2. Tuesday, June 26, 2018 (89)
 3. Monday, July 02, 2018 (63)
- Distribution by Direction:

IN: 53%
OUT: 47%



- Pre warehouse count “directory” with data from MnDOT, Hennepin County, MnDNR, City of Minneapolis, and others.
- IT Project

Strategy 3: Develop Factors (DOY)

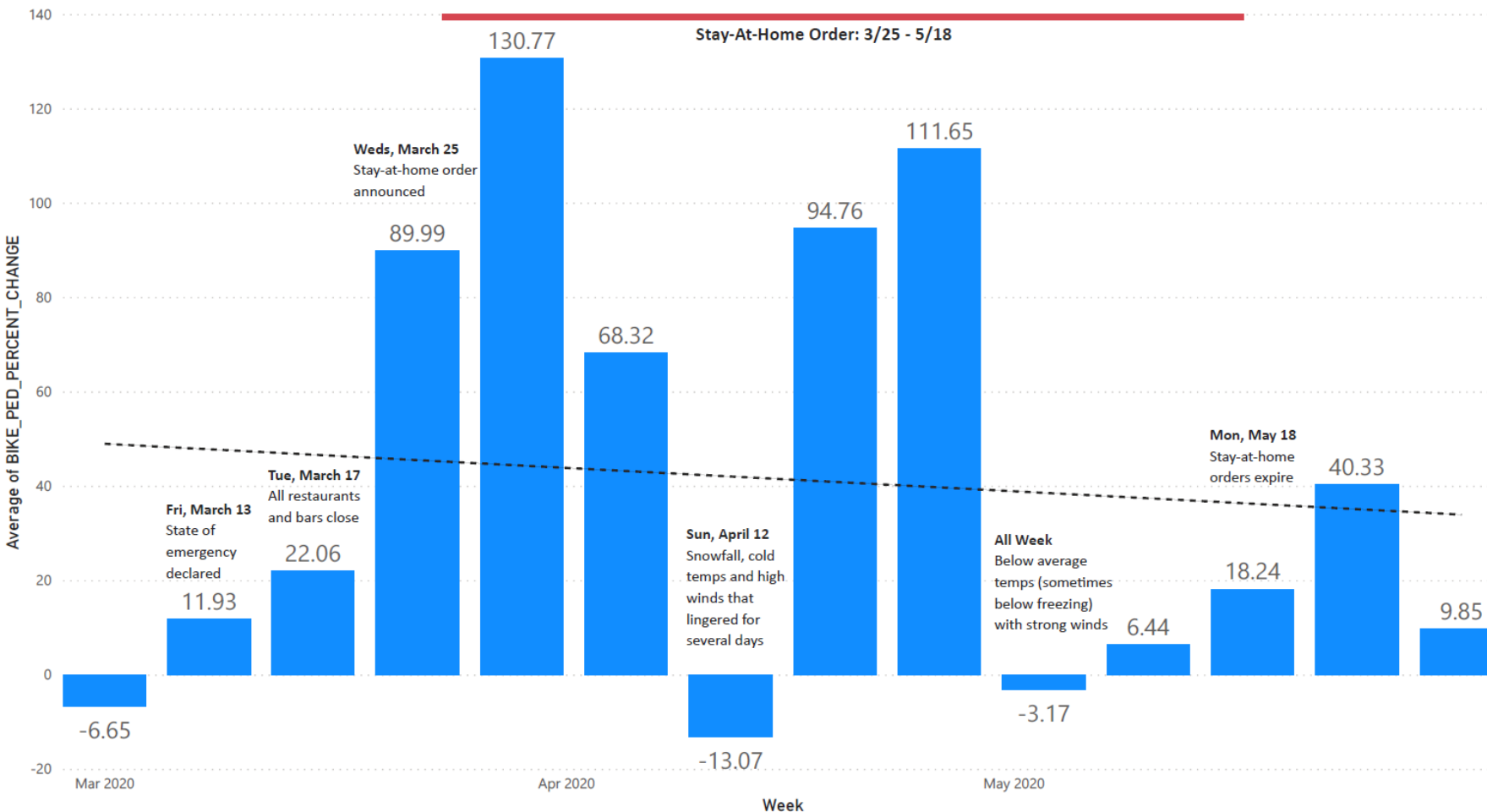


Strategy 4: Lead & Convene



Strategy 5: Communication

Bicycling and Walking has Surged in MN During the COVID-19 Pandemic



2020 compared to MADW of previous 3yrs.

Total % Change by Site and Extent
(3/13 – 5/31/20)

EXTENT	Total
Greater MN	68.45
+ D1 Duluth Lakewalk Trail	29.49
+ D2 Cass Lake Migizi Trail	42.12
+ D3 Brainerd Paul Bunyan Trail	68.29
+ D3 St Cloud Beaver Island Trail	131.08
+ D4 Moorhead TH75 Trail	50.12
+ D6 Lanesboro Root River Trail	49.09
+ D7 Mankato Veterans Mem. Bridge	41.14
+ D8 Hutchinson Luce Line Trail	103.76
+ D8 Willmar Lakeland Drive	101.50
Metro	32.31
+ Metro Brooklyn Park Rush Creek Trail	178.09
+ Metro Minneapolis Central Ave	-9.35
+ Metro Minneapolis Franklin Tower	0.01
+ Metro Minneapolis Park Ave Northbound	-41.87
+ Metro Minneapolis West River Greenway	42.97
+ Metro Orono Shadywood Dr	128.16
+ Metro St Paul Jackson St	-24.42
+ Metro St Paul Summit Ave (all loops)	-8.72
Total	51.52

Strategy 5: Communication



Alexandria: Demo Projects

Strategy 5: Communication



St Paul:
Ped / Bike Bridge
Reconstructions

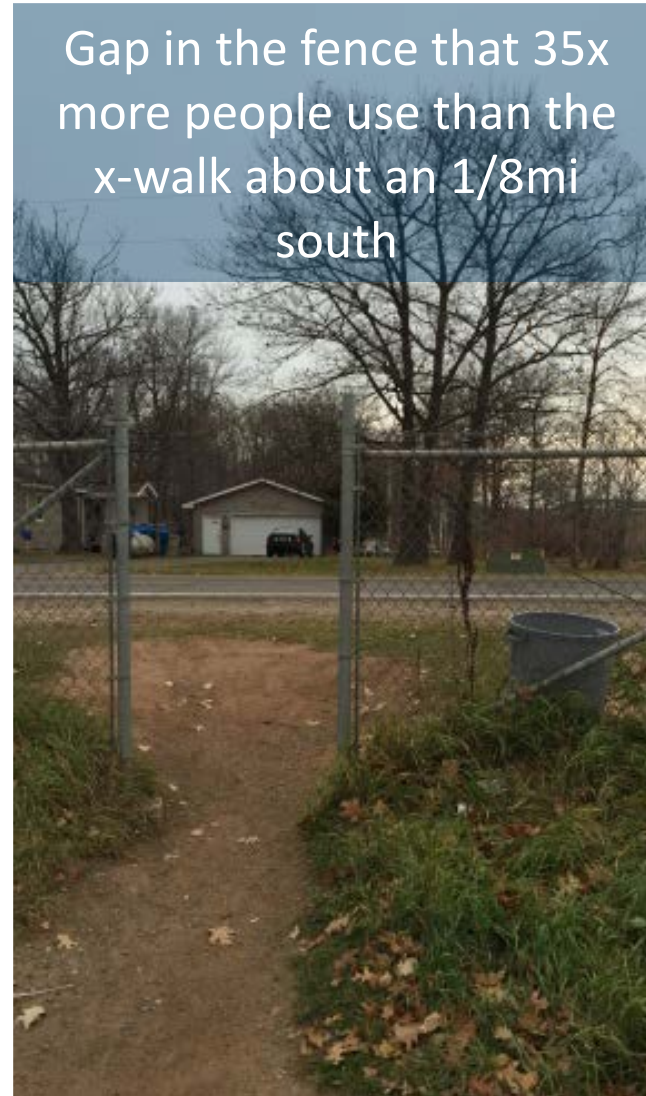
Strategy 5: Communication



Strategy 5: Communication



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



Resulted in
\$300k
sidewalk and
HAWK system
funding and
will include a
people
counter

Thank you again!

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MnDOT Pedestrian and Bicyclist Count Program