BICYCLE LTS & CONNECTIVITY ANALYSIS

November 1, 2019

PRESENTED TO:

2019 Pennsylvania Health Equity Summit

PRESENTED BY:

Sarah Moran

DELAWARE VALLEY dvrpc REGIONAL PLANNING COMMISSION

PennDOT Connects

Planning with our communities

SE PA Suburban Bike Lanes Working Group

PennDOT

Suburban Counties

Bicycle Coalition

DVRPC

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Level of Traffic Stress (LTS)

LTS	Comfortable Enough For (Cyclist Type)	Characteristics
1	Most People	Lowest stress Comfortable for most ages and abilities
2	Interested, but Concerned	Suitable for most adults Presenting little traffic stress
3	Enthused and Confident	Moderate traffic stress Comfortable for those already biking in American cities
4	Strong and Fearless	High traffic stress Multilane, fast moving traffic

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Mekuria, M., Furth, P. and Nixon, H. "Low-stress bicycling and network connectivity", *Mineta Transportation Institute*, No. Report 11-19, 2012.
Geller, R. "Four Types of Cyclists," Portland Bureau of Transportation, Portland, OR, 2006. www.portlandoregon.gov/transportation/article/264746. Accessed Aug, 11, 2016.

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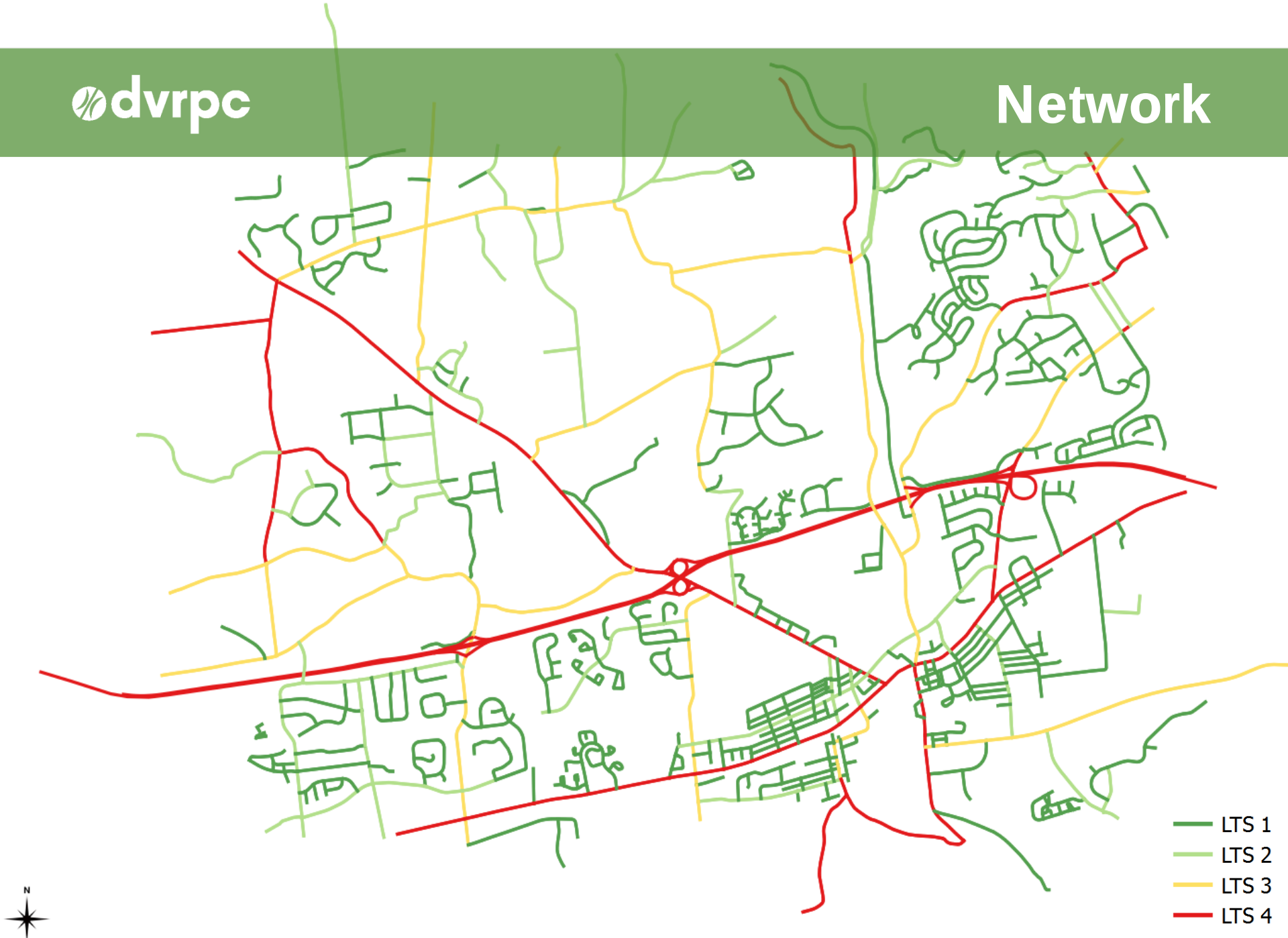
Network



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LTS 1 & 2

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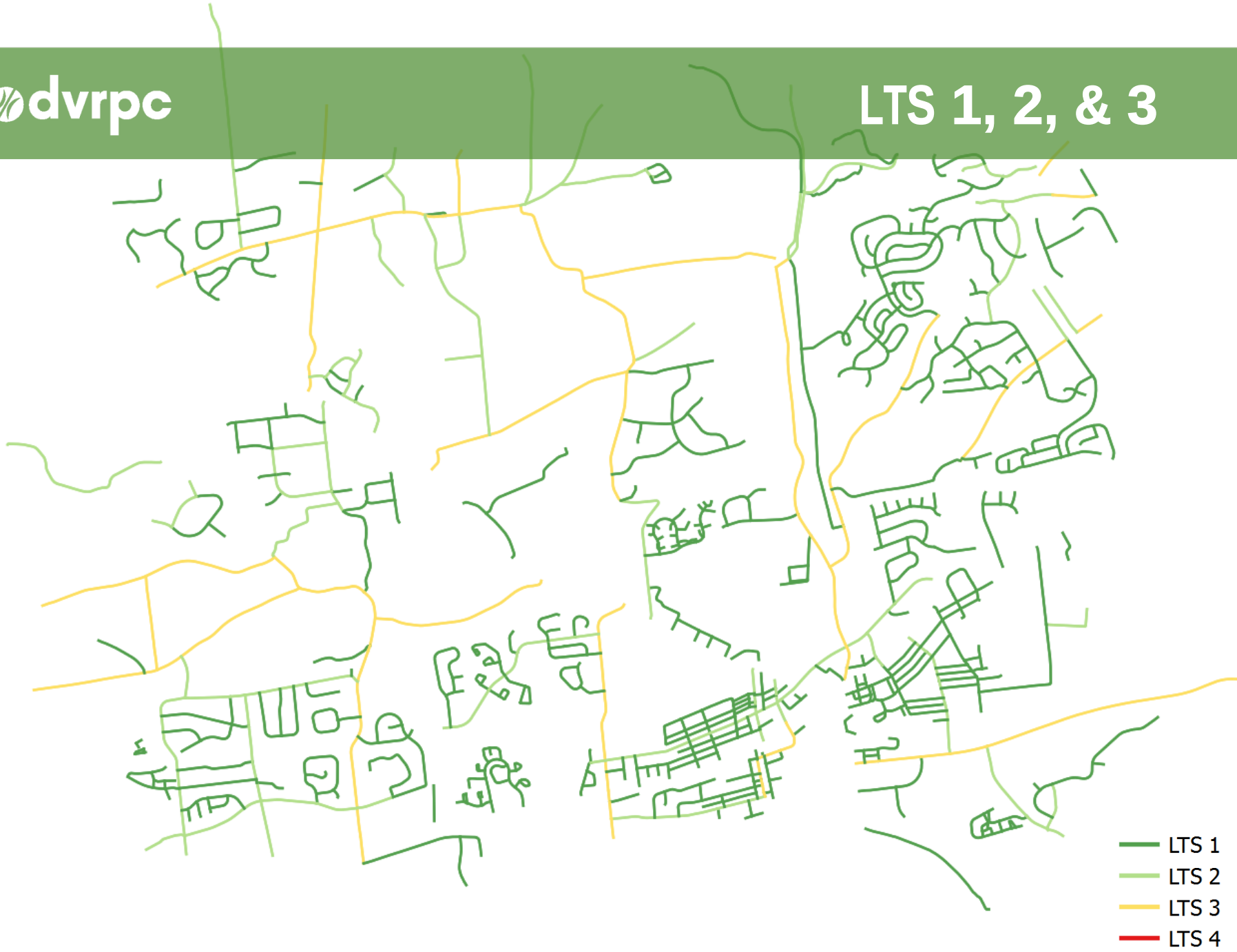
LTS 1, 2, & 3



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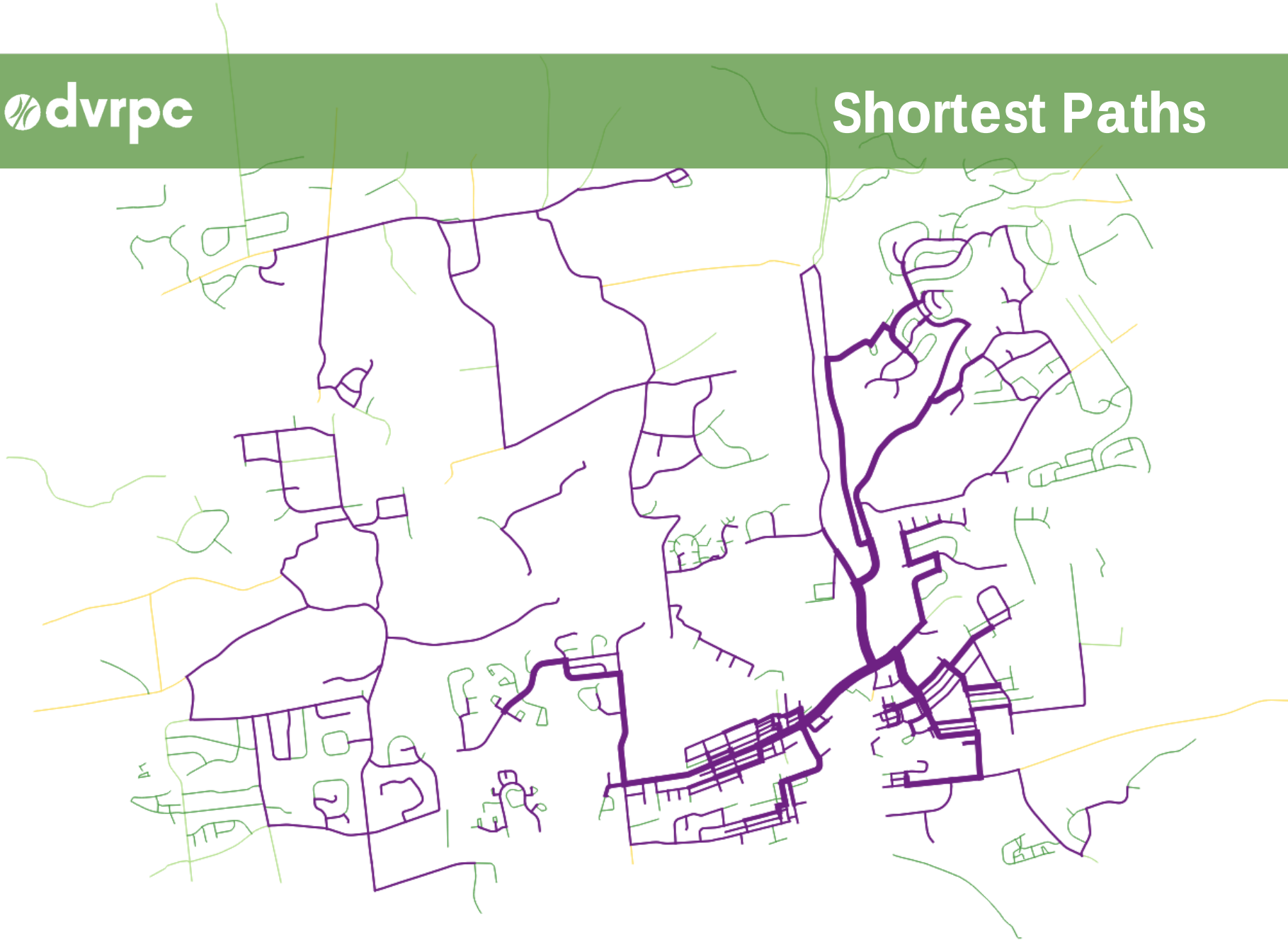
Shortest Paths



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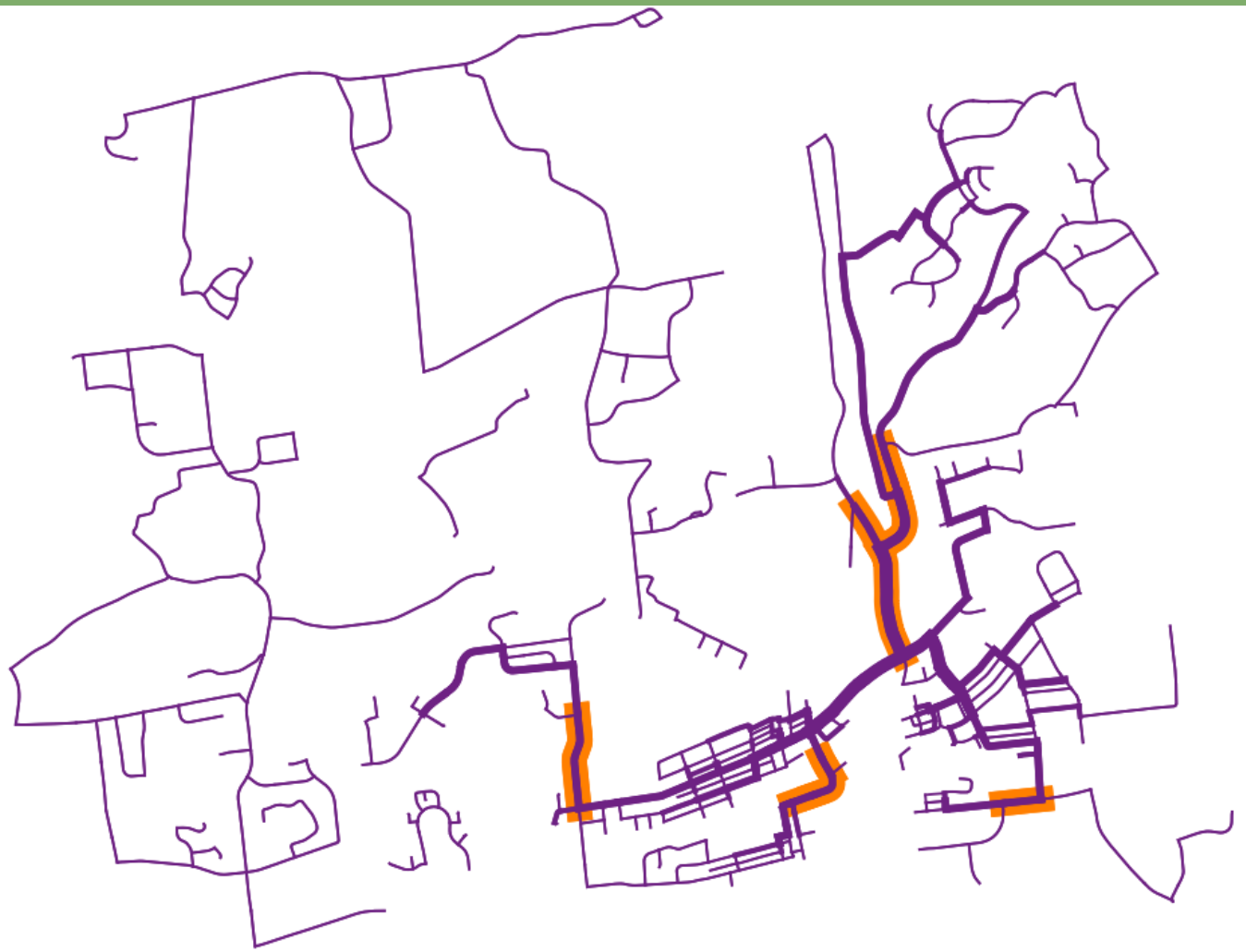
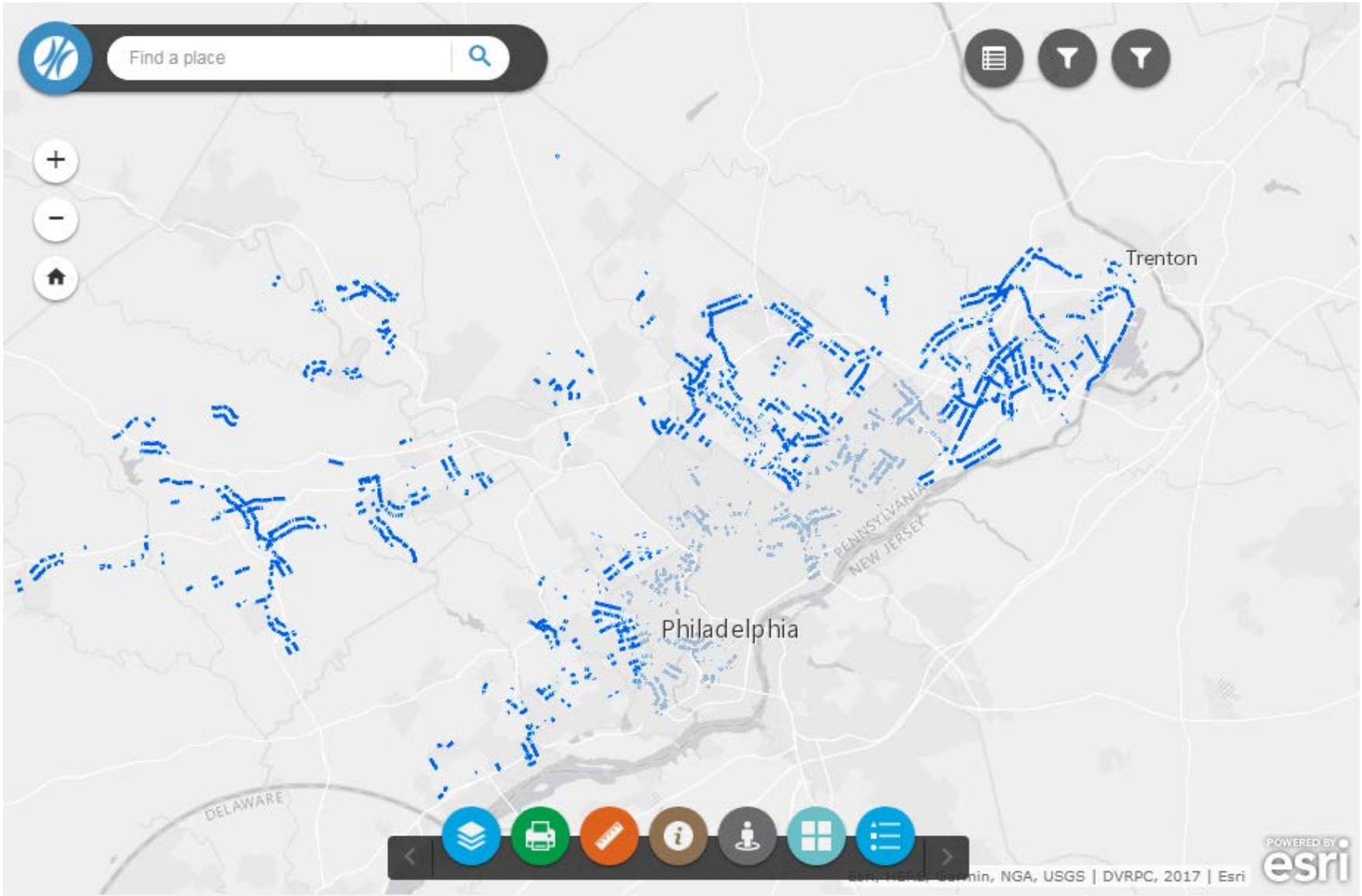
Highest Usage



Webmap

www.dvrpc.org/webmaps/BikeStress/



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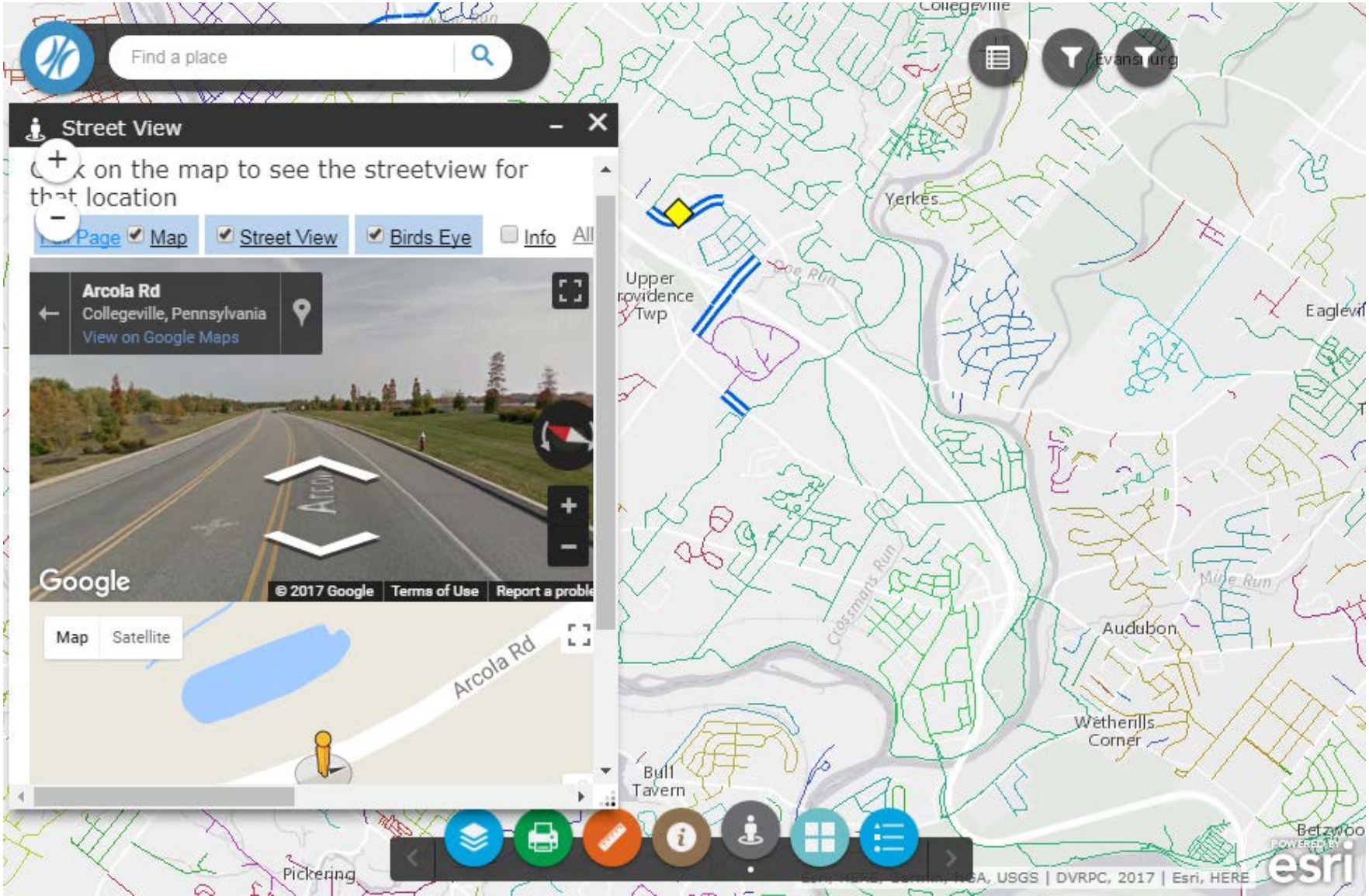

Community Impact Index (CII)

- Criteria taken into account:
  - Equity -- Indicators of Potential Disadvantage (DVRPC)
  - Density -- both population and employment
  - Transportation -- distance to circuit trails, proportion of household with 0 vehicles available, distance to transit
  - Health -- obesity rate and rate of respiratory hazards

BICYCLE COALITION OF GREATER PHILADELPHIA

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Indicators of Potential Disadvantage

- Identifies populations of interest under Title VI and EJ
- Based on U.S. Census American Community Survey (ACS) 2013-2017 5-year estimates
- Each population group is an "indicator"
  - Youth
  - Older Adults
  - Female
  - Racial Minority
  - Ethnic Minority
  - Foreign-Born
  - Limited English Proficiency
  - Disabled
  - Low-Income

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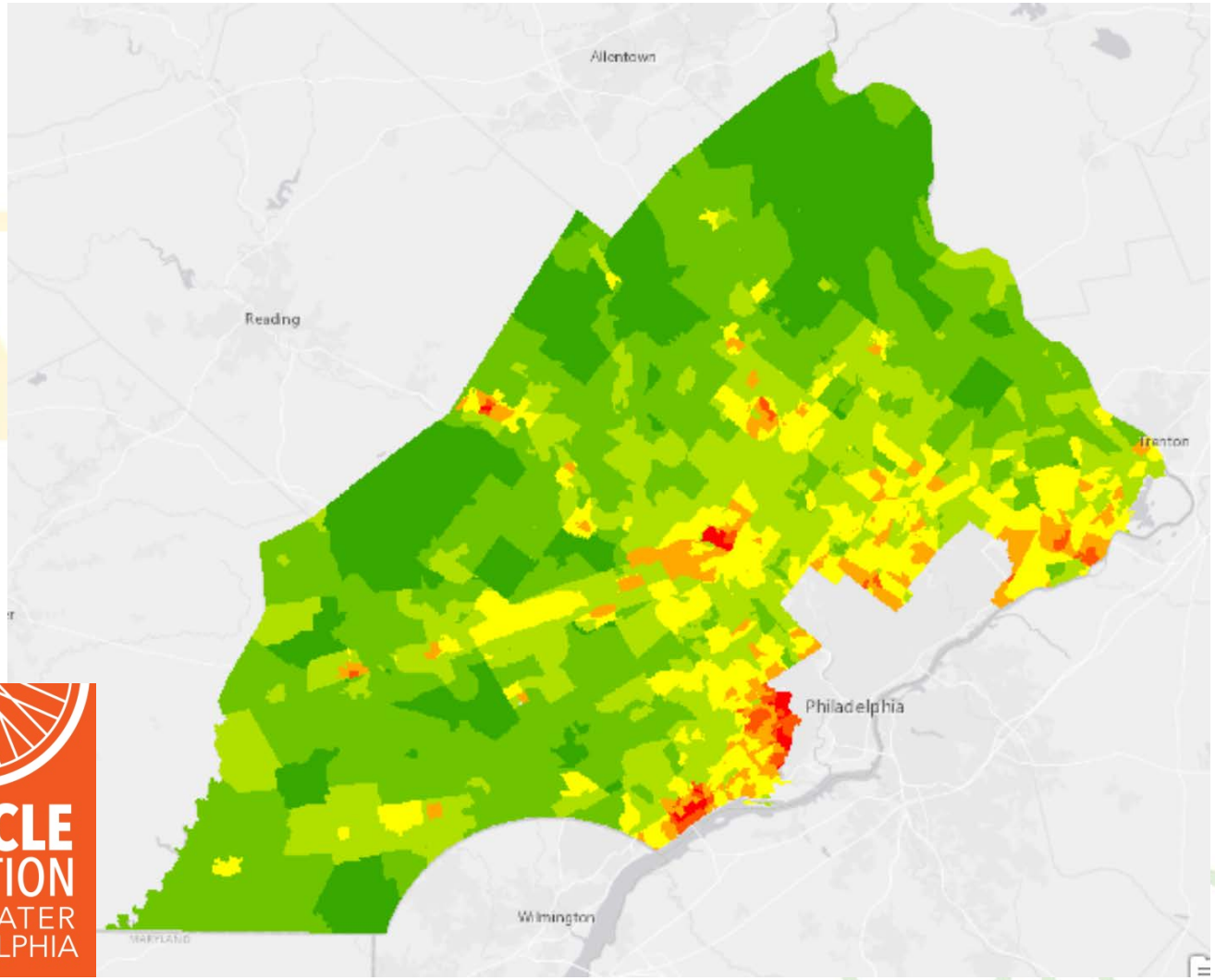
Community Impact Index (CII)



BICYCLE COALITION OF GREATER PHILADELPHIA

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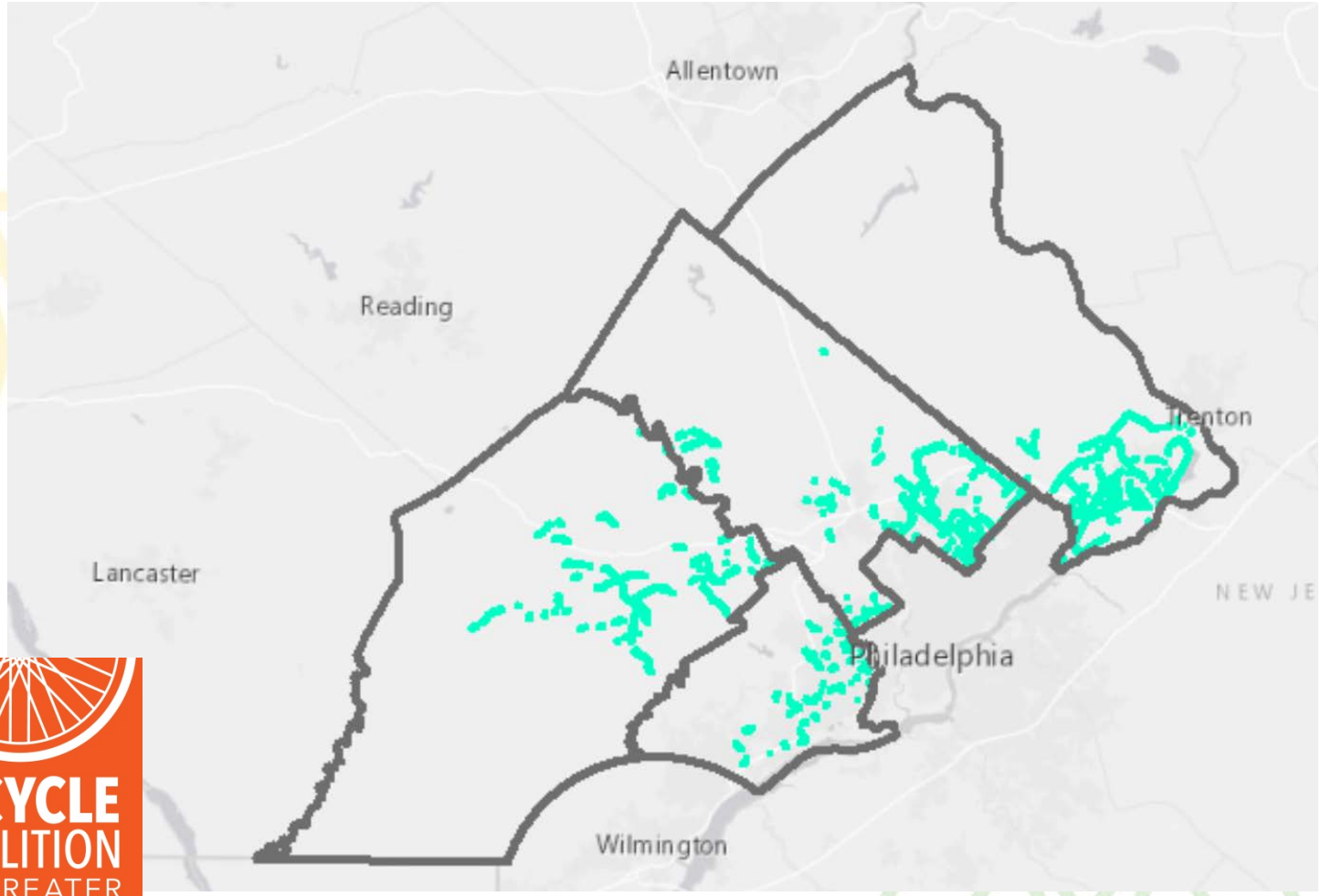
Original Top 10%



BICYCLE COALITION OF GREATER PHILADELPHIA

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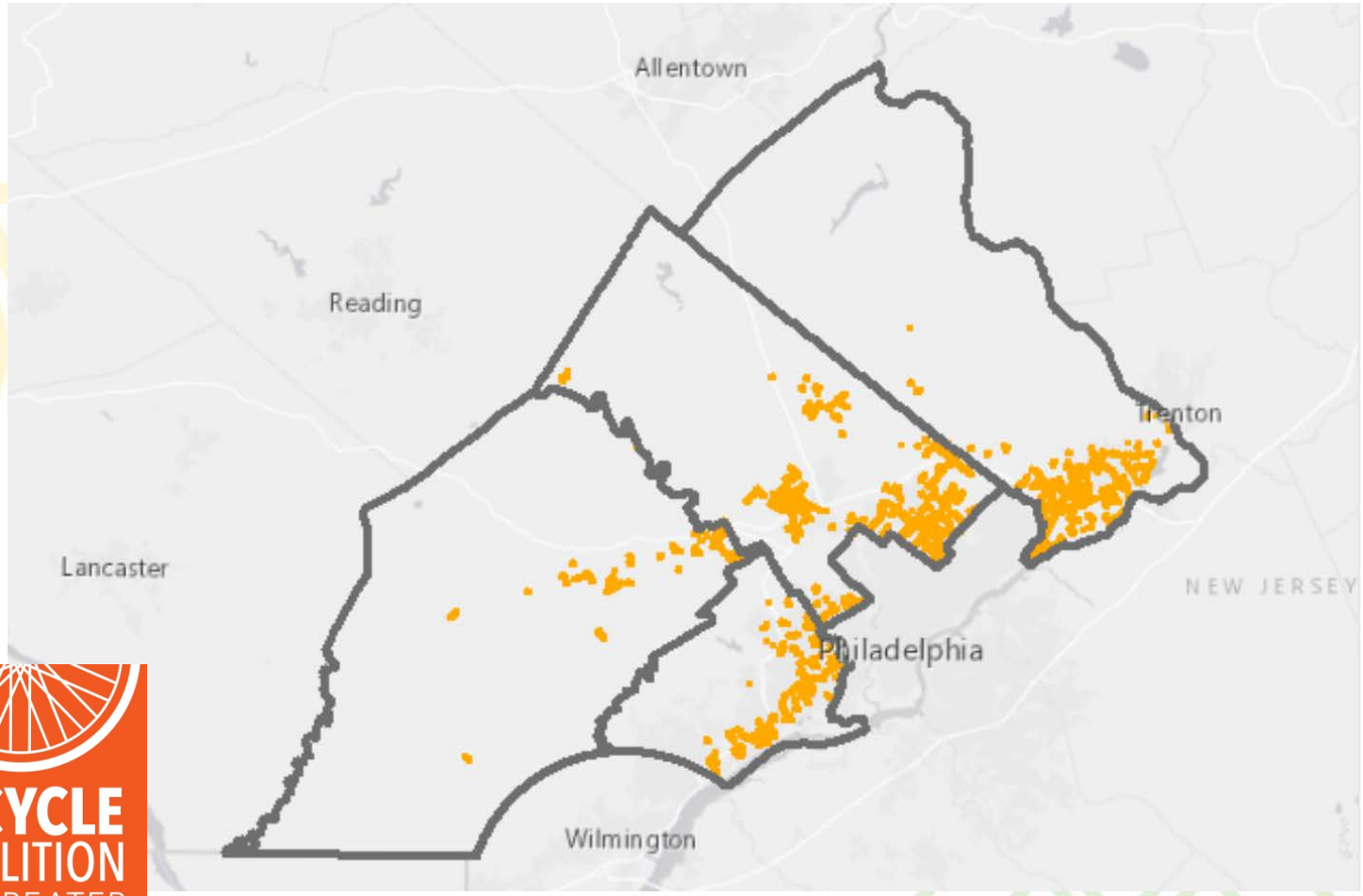
New Top 10%



BICYCLE COALITION OF GREATER PHILADELPHIA

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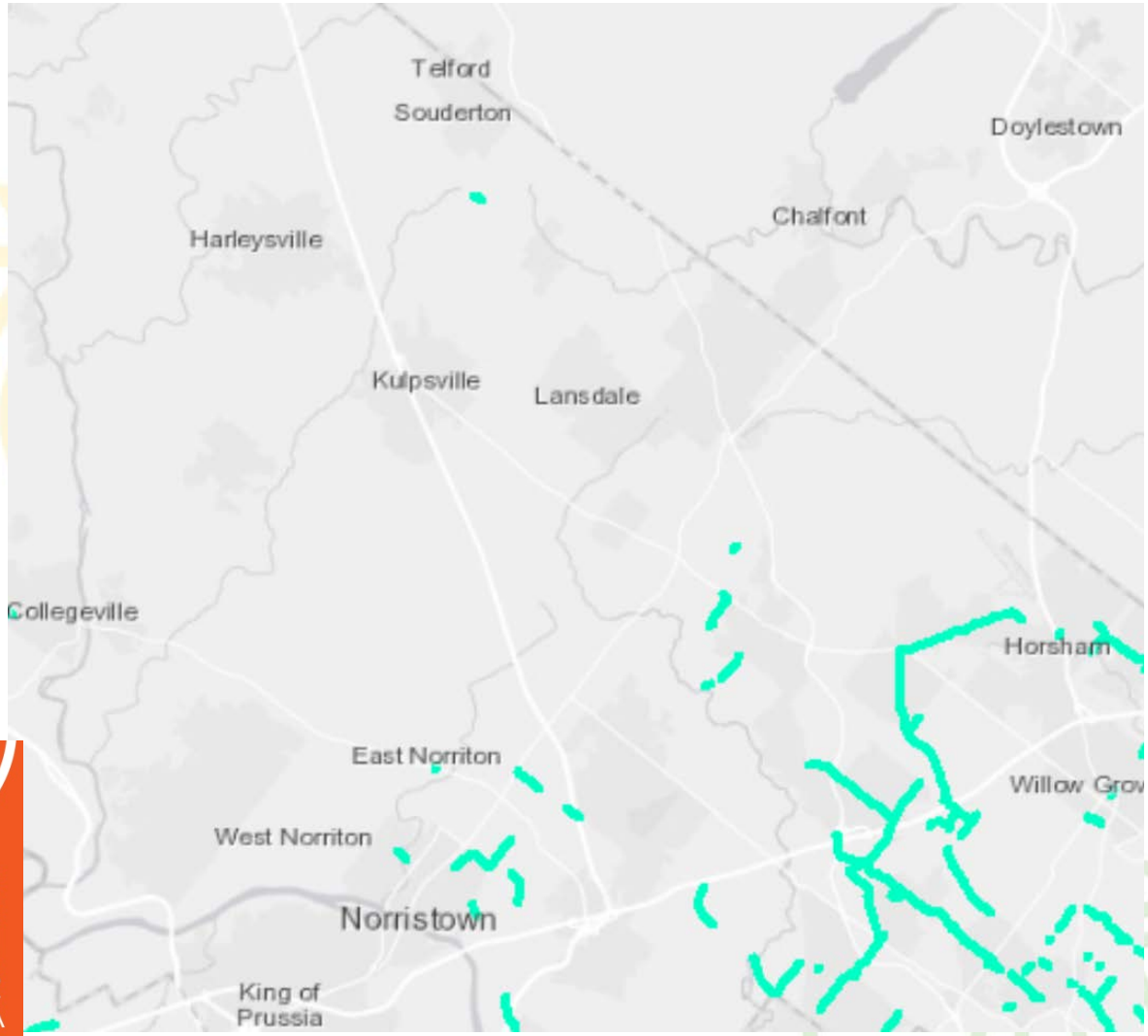
Original Top 10% (details)



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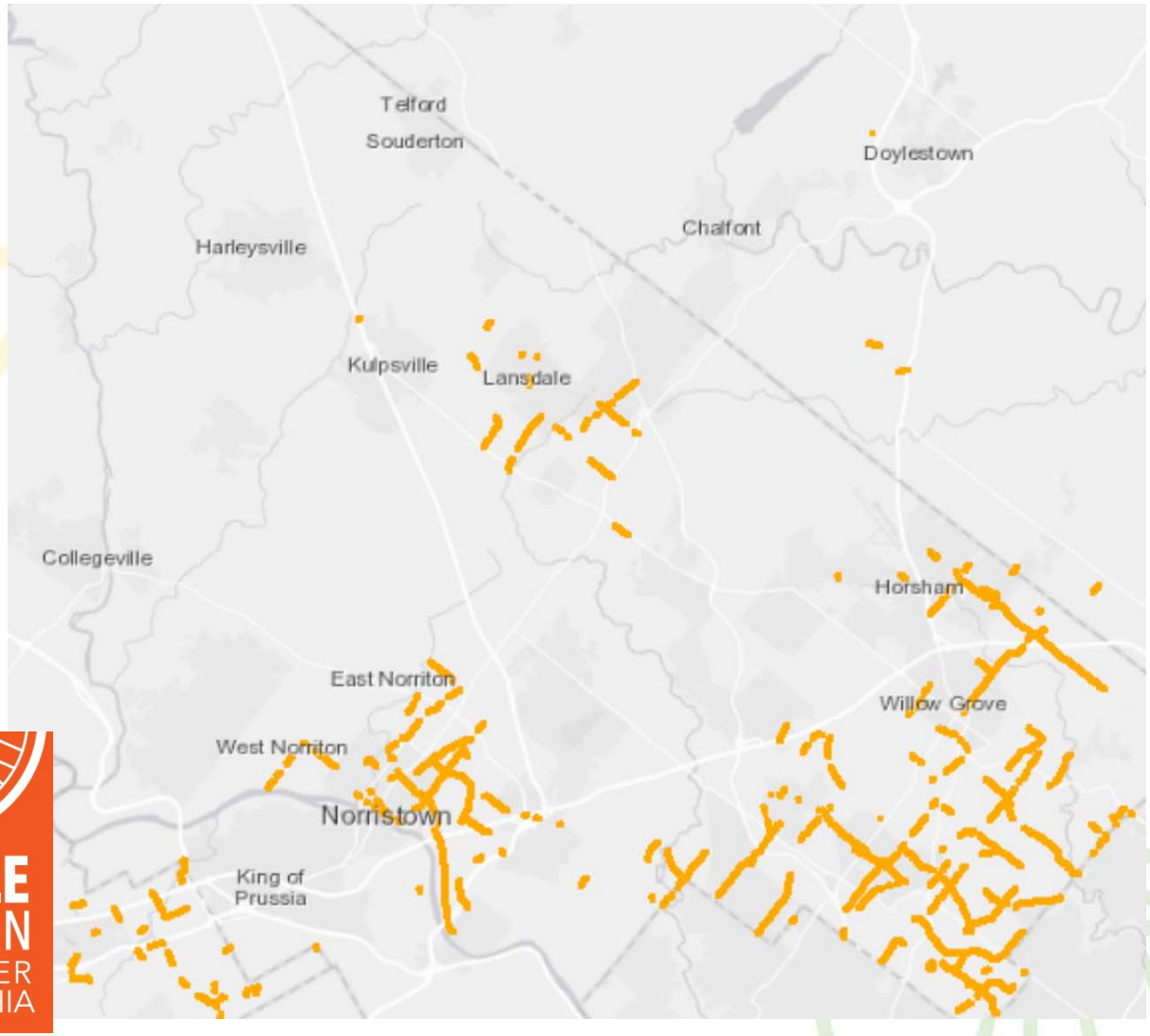
New Top 10% (details)



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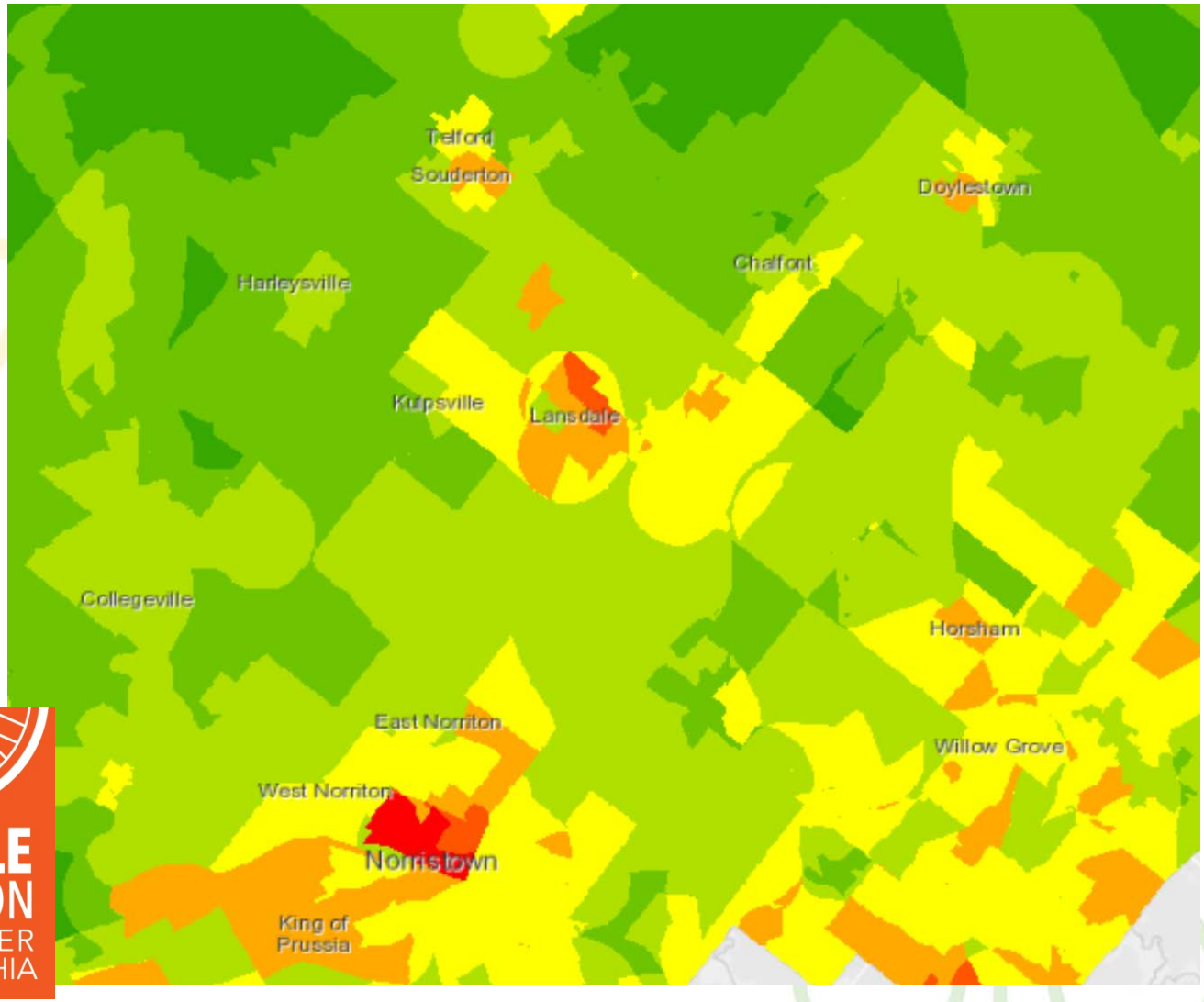
Community Impact Index (details)



BICYCLE COALITION OF GREATER PHILADELPHIA

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Next Steps

- Incorporate CII into shortest path analysis
  - Weight origin and destinations?
  - Weight area covered by islands?

- Include the entire DVRPC region

Questions?

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