

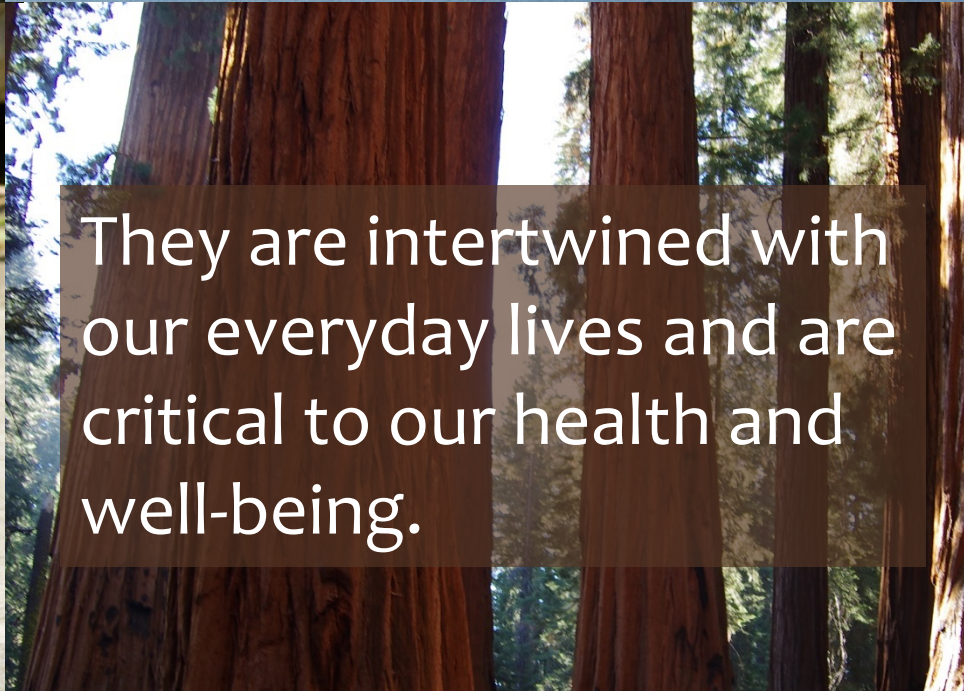
EnviroAtlas: Connecting People, Ecosystems, Health & the Economy



These materials are all part of the re-format for EPA Report # EPA/600/R-16/006.



Ecosystem Services:
the benefits we receive
from nature.

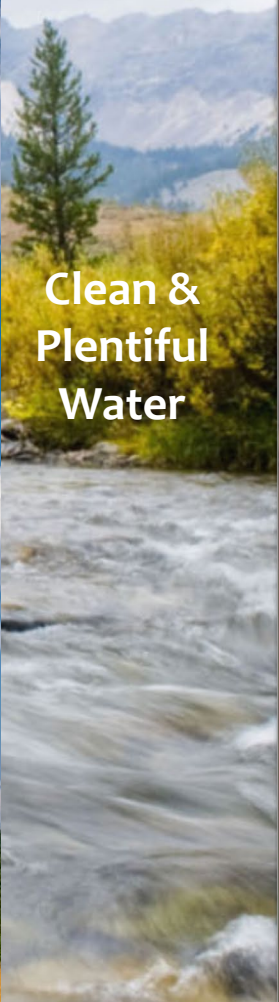


They are intertwined with
our everyday lives and are
critical to our health and
well-being.

Clean
Air



Clean &
Plentiful
Water



Biodiversity
Conservation



Food,
Fuel, &
Materials



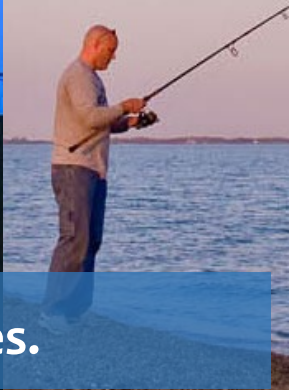
Natural
Hazard
Mitigation



Climate
Stabilization



Recreation,
Culture, &
Aesthetics

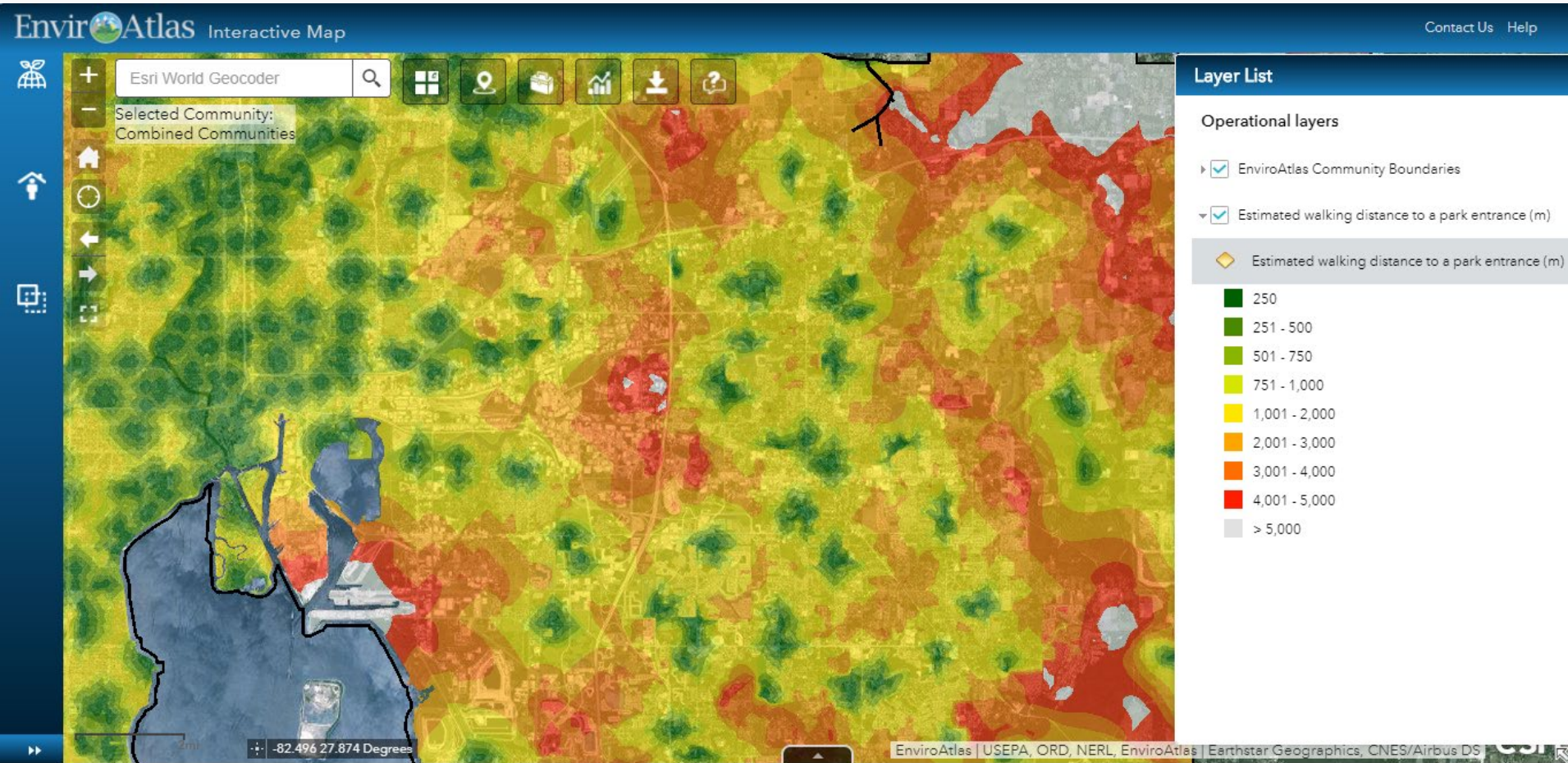


Our data are organized into 7 ecosystem service benefit categories.

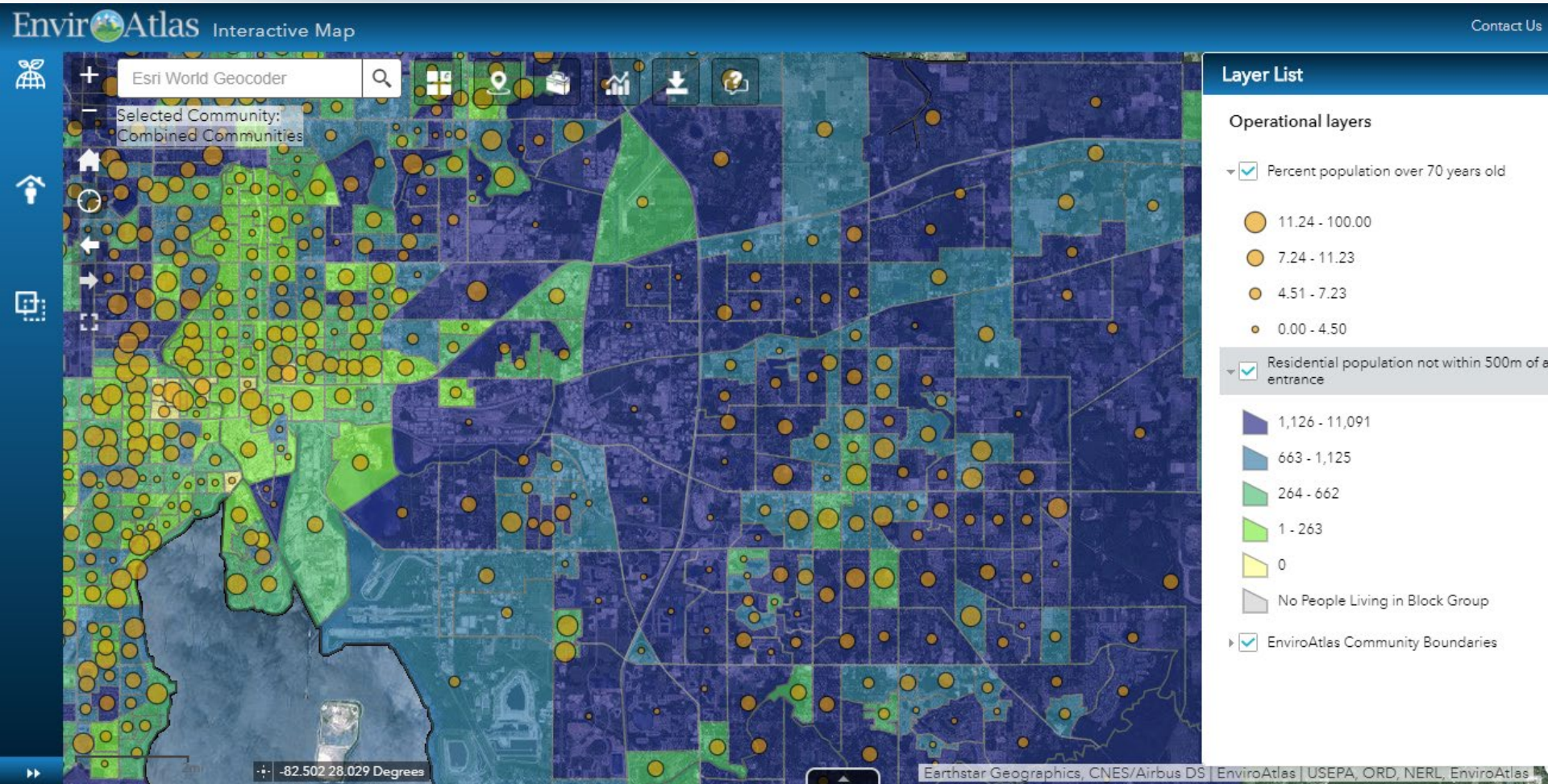


Source: http://www.huffingtonpost.ca/david-suzuki/nature-human-health_b_8040226.html

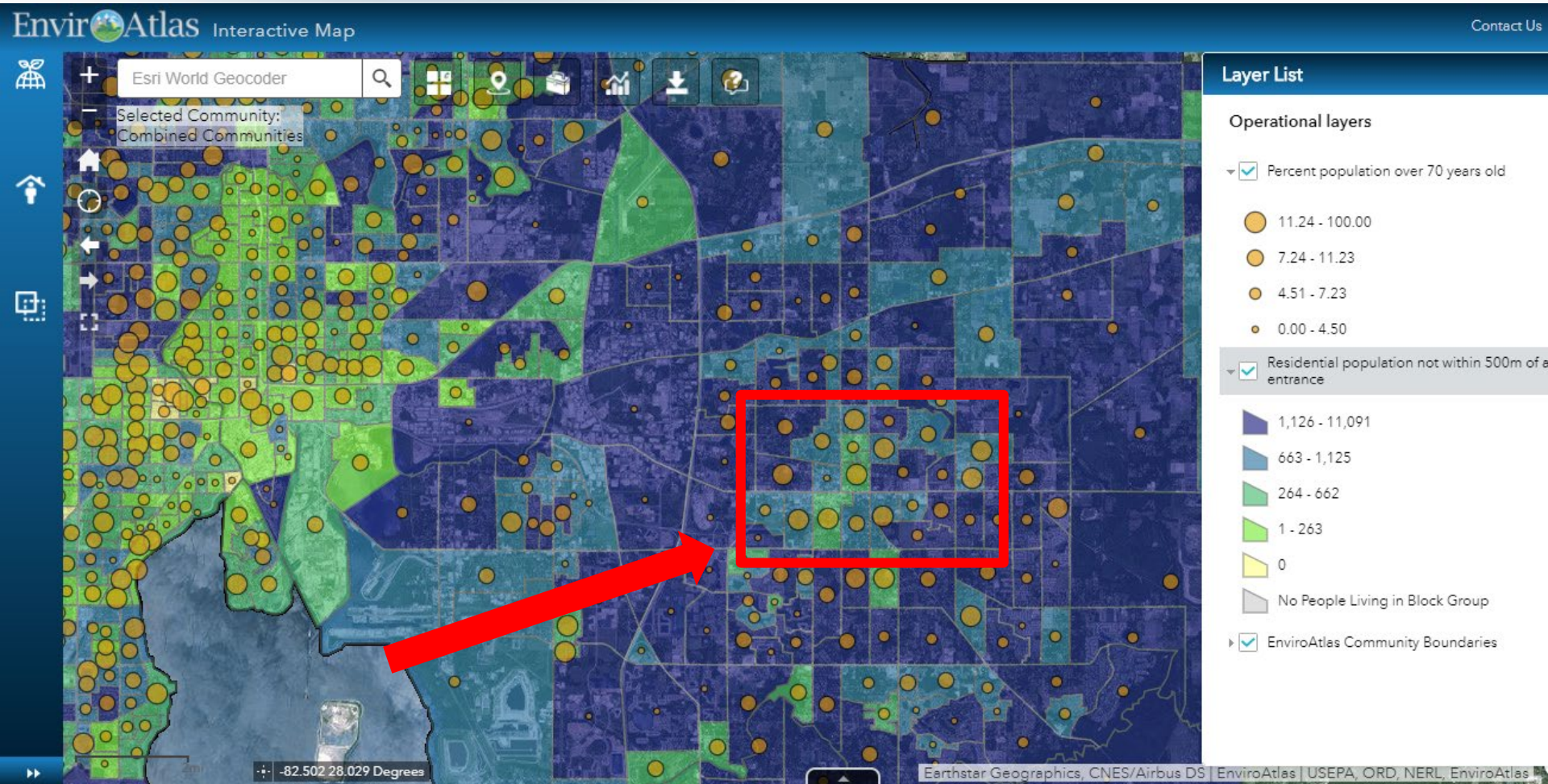
Access to Parks



Access to Parks



Access to Parks





EnviroAtlas

EnviroAtlas Data Used for Zika Vector Research

[Learn more about this ongoing research.](#)



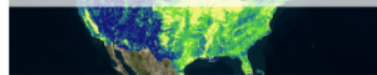
1 2 3 4



Subscribe to our email list

EnviroAtlas interactive tools allow users to discover, analyze, and download data and maps related to [ecosystem services](#), or the benefits people receive from nature. Ecosystem services underpin most aspects of human well-being, including water, security, and the economy.

Get started with EnviroAtlas



- [Project Fact Sheet](#)
- [Community Component Fact Sheet](#)
- [Current Status of EnviroAtlas](#)
- [EnviroAtlas Introduction Video](#)

Access Interactive Apps



- [EnviroAtlas Interactive Map](#) - Discover and use hundreds of maps
- [Eco-Health Relationship Browser](#) - See the many linkages between ecosystem services and human health

EnviroAtlas Data



- [Learn about EnviroAtlas Data](#)- Spatial extents, organization, and approach
- [Data Matrix](#) - Search and sort 300+ maps
- [Data Download](#)

Learn How to Use EnviroAtlas



- [What are Ecosystem Services?](#)
- [Explore Example Uses of Our Tools](#)
- [Interactive Map User's Guide](#)

EnviroAtlas in the Classroom



- [Access Educational Modules for Grades K-12 and Beyond](#)

More Resources



- [Learn about Featured Communities](#)
- [EnviroAtlas Tools and Toolboxes](#)
- [How to Cite EnviroAtlas](#)

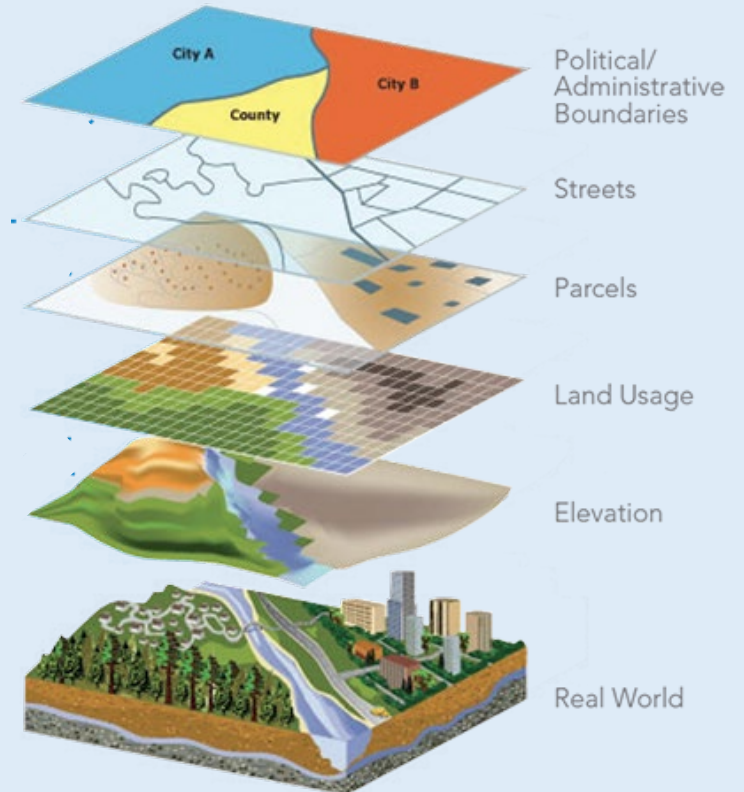
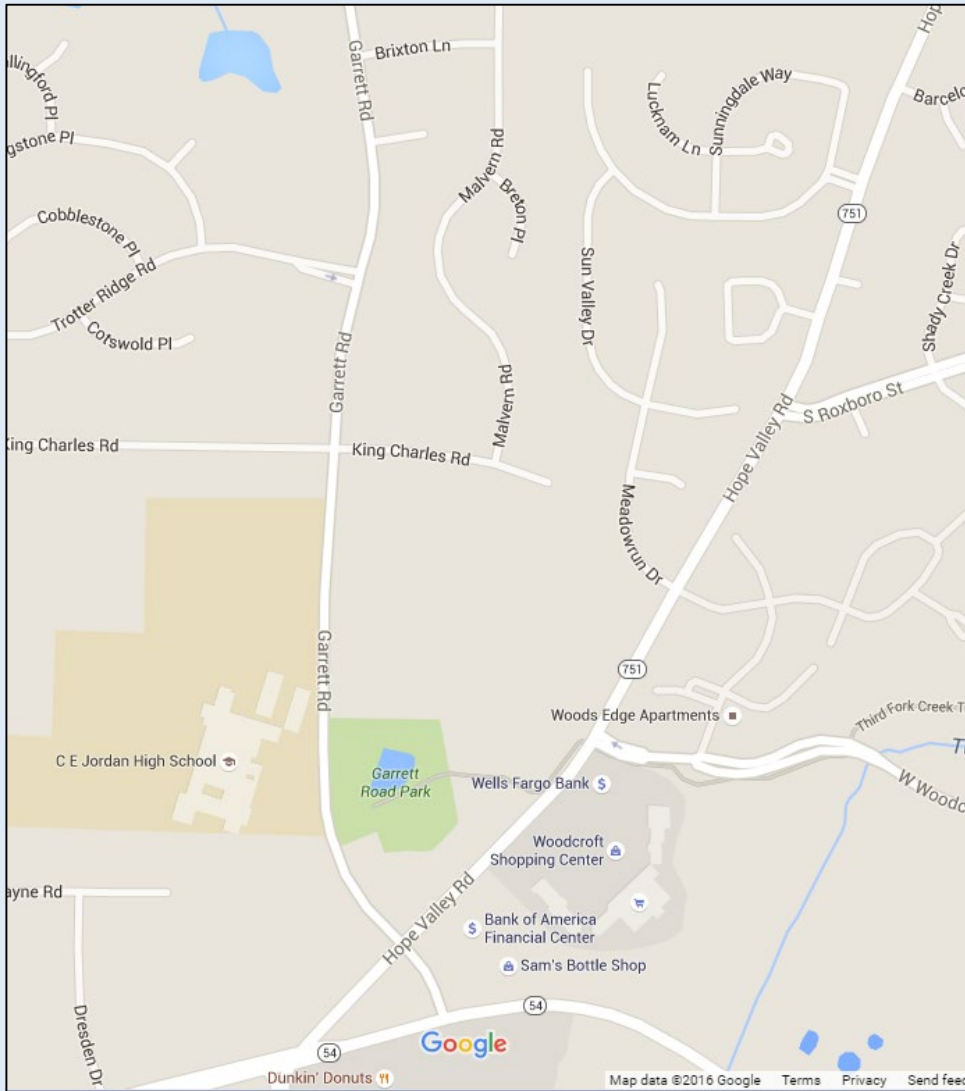
Free

Web-based

Easy to use

No GIS skills required

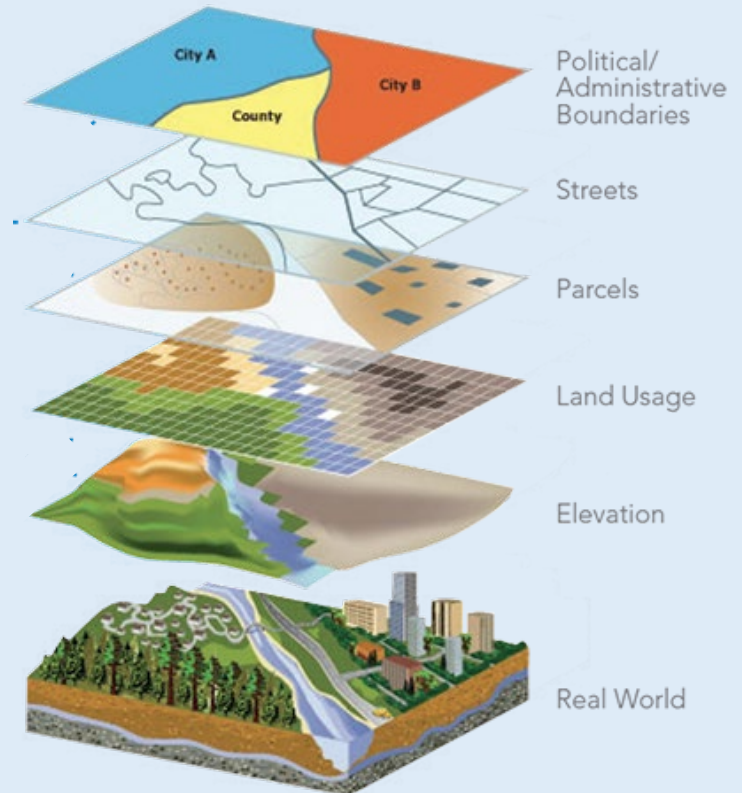
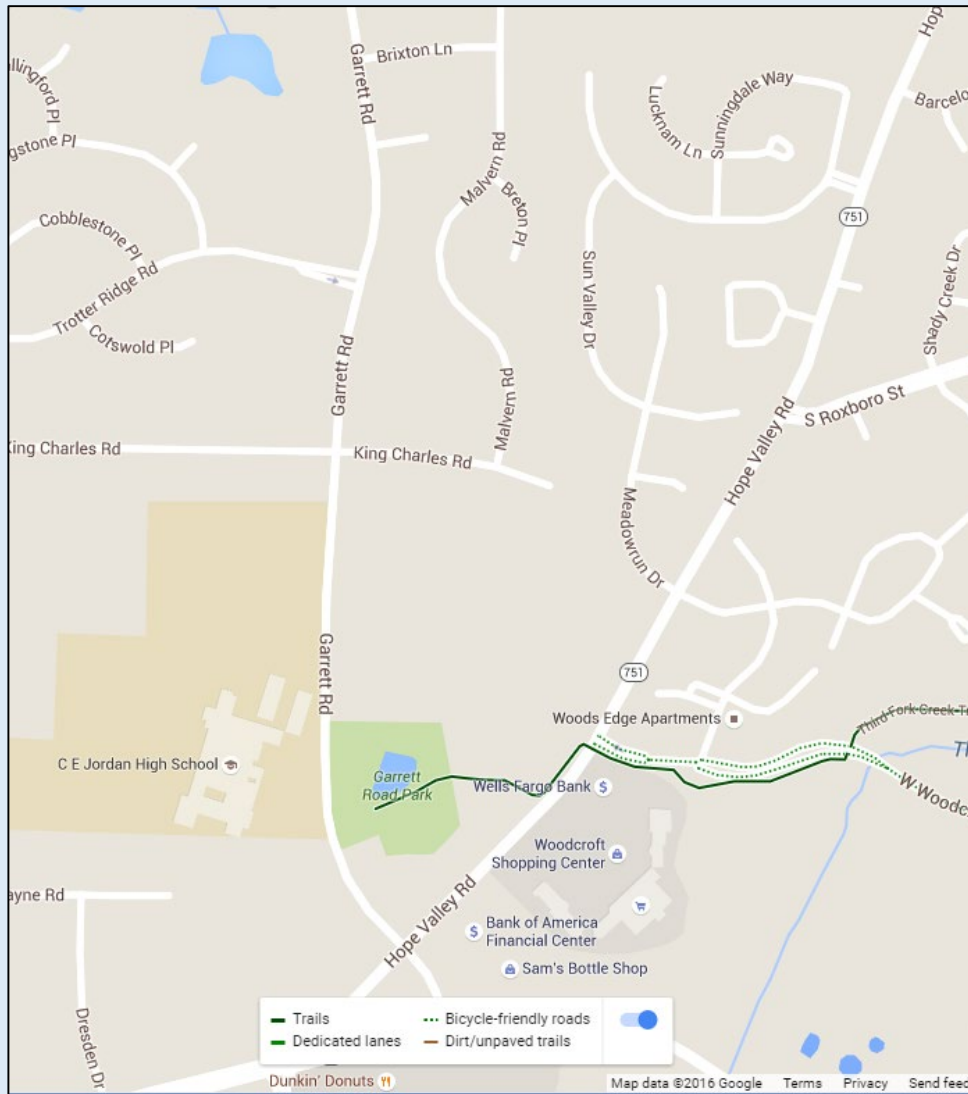
Maps and Geospatial Analysis



Source: <http://learn.arcgis.com/en/arcgis-book/images/ch5/05-fig-5-4.png>

Google Maps
Basemap

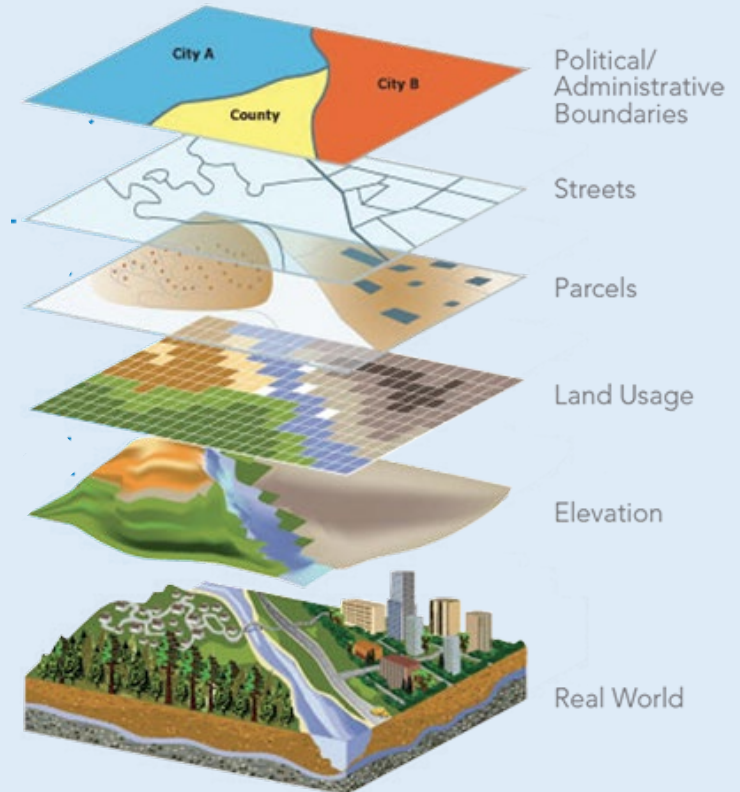
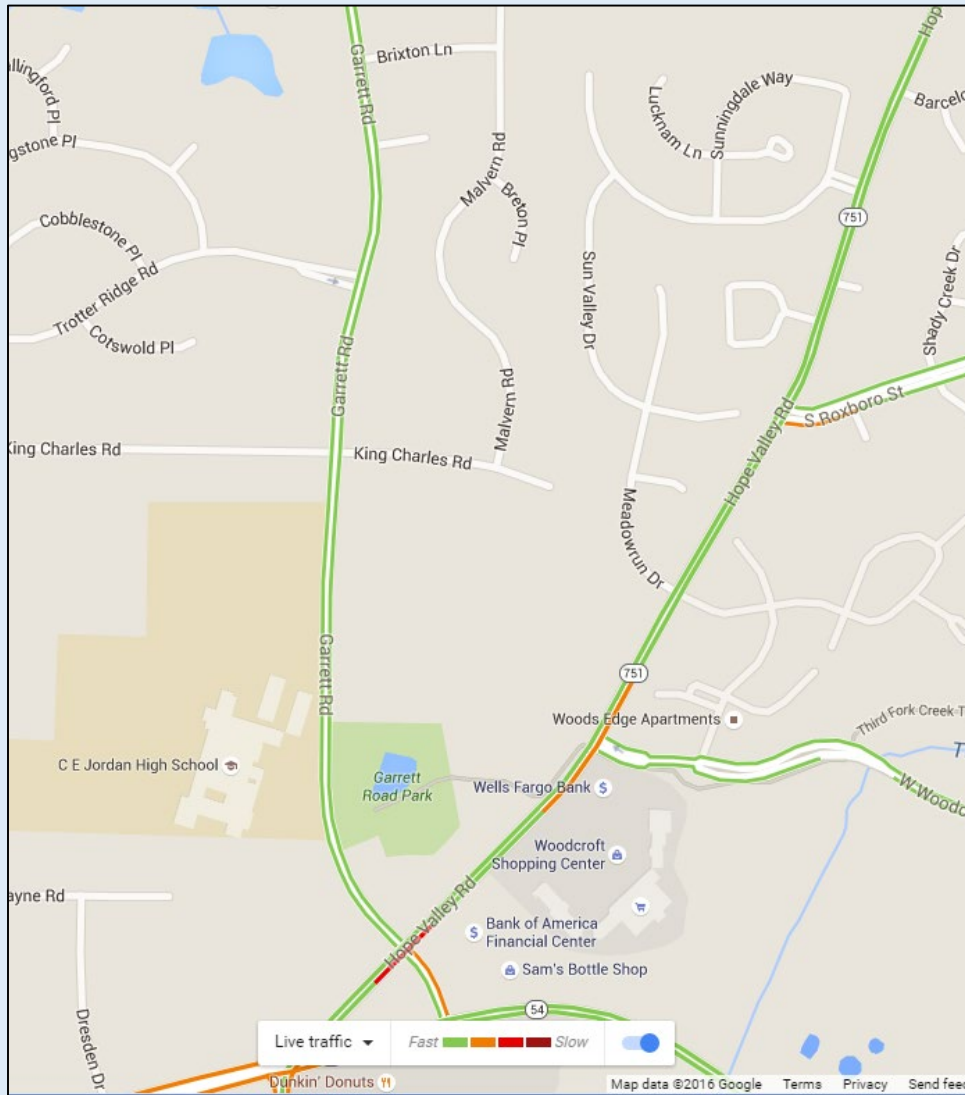
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Google Maps
Basemap + Bike Routes

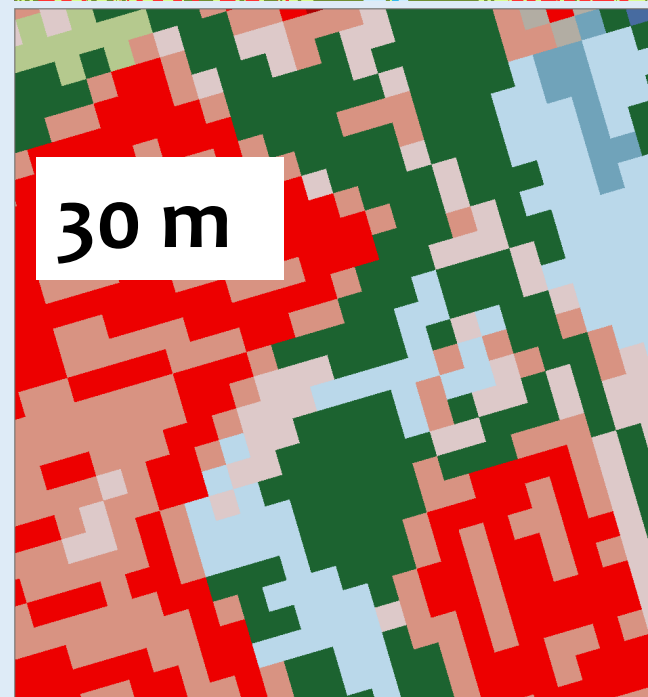
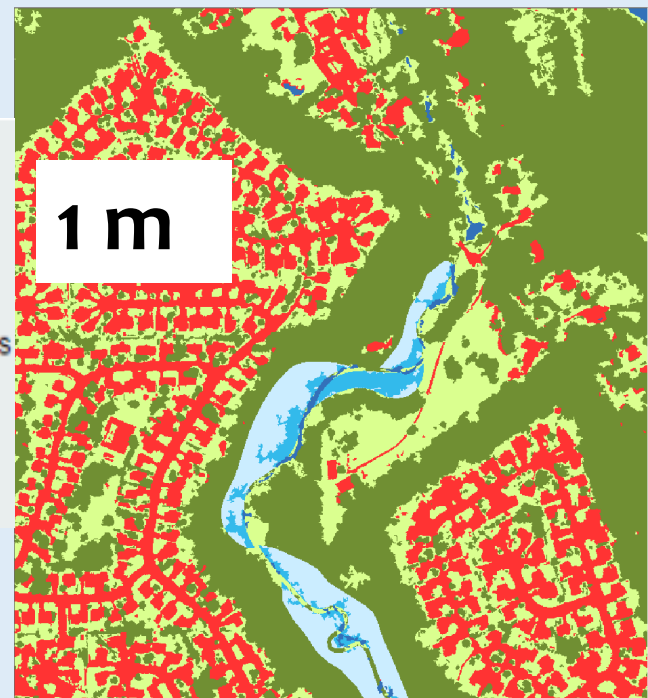
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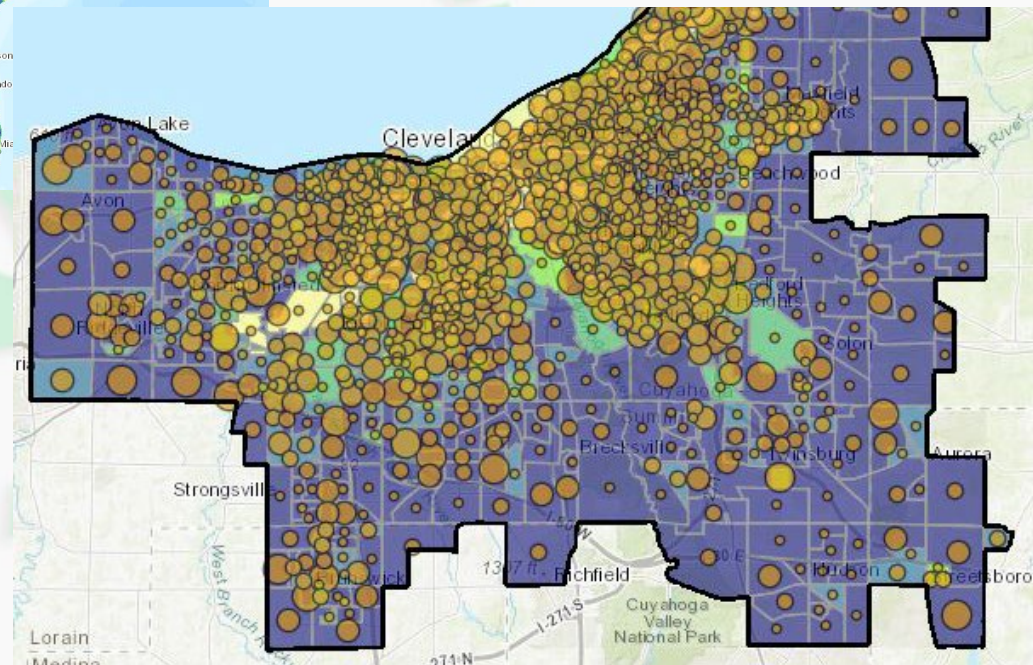
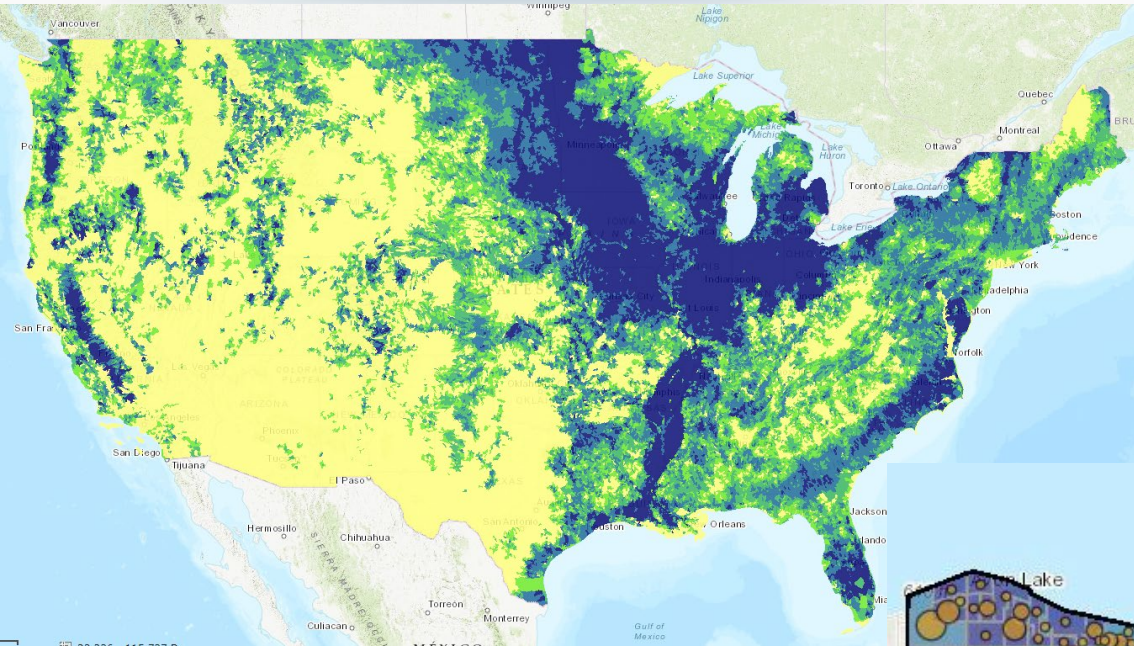
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Google Maps
Basemap + Traffic Conditions

Land cover is an important input



Public Data



www.epa.gov/enviroatlas

Building a Greenway



Black Creek Greenway

Source: <http://www.trillink.com/trail-photos/black-creek-greenway.aspx>



Kit Creek Greenway

Source: <https://www.townofcary.org/>

Canton Greenway

- Canton 2025 Sustainability Plan
- Equal access to resources, conservation of open space, and economic development
- EPA Sustainability Grant
- Pilot section
- Positive health outcomes
- Natural habitat
- Neighborhood connectivity
- Active transportation



Photo credit: Riley Perszyk

Student Map Set for the Building a Greenway: Case Study

Figure 1. Proposed trail network area with numbered trail heads



Figure 1 shows the pilot route proposed by the Parks and Recreation Department runs from trailhead 1 to 4.

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Figure 2. Percent population over 64 years old, overlaid over percent green space

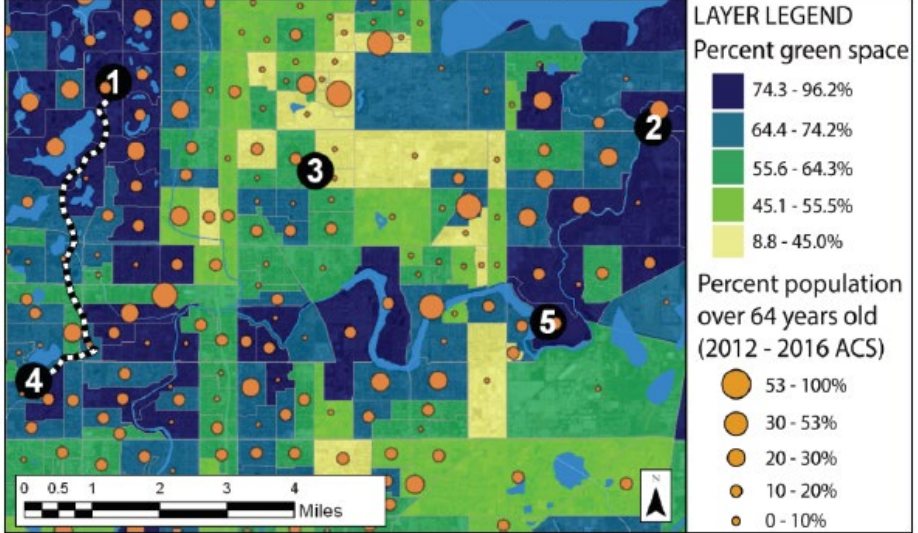


Figure 2 shows the percent of the Canton population that is over 64 years old, on top of a map showing percent green space in Canton. Waterbodies are shown in light blue.

Figure 3. Estimated walking distance to a park entrance in the proposed trail area

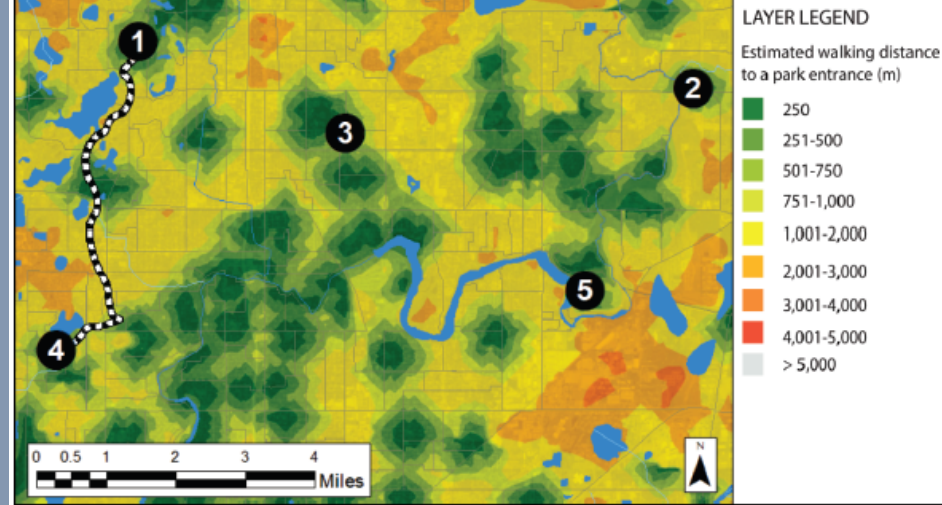


Figure 3 shows the estimated walking distance (in meters) via roads to a park entrance in the proposed trail network area. Waterbodies like lakes and streams are shown in light blue.

Figure 4. Natural land cover connectivity

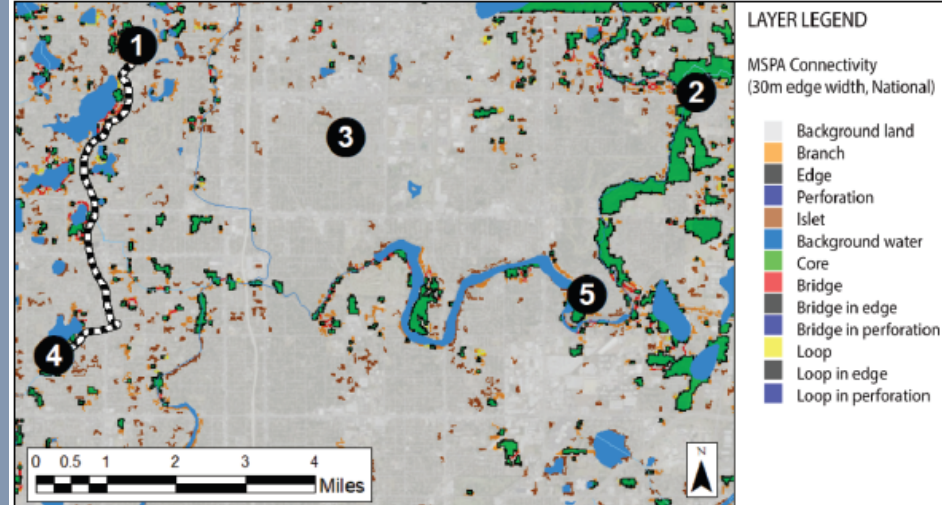


Figure 4 shows the connectivity of natural land cover types. This map can be used to identify areas that could be targeted for conservation or restoration efforts. In this map, the green "core" areas are patches of natural land cover.

Figure 5. Land cover classification

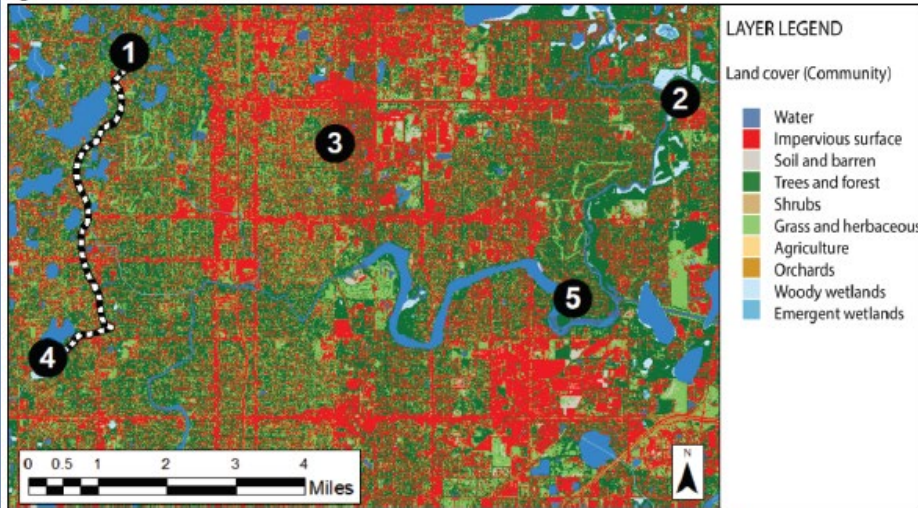


Figure 5 shows the area of interest in Canton with the landscape classified into 10 land cover types.

Figure 6. Residential population not within 500m of a park entrance

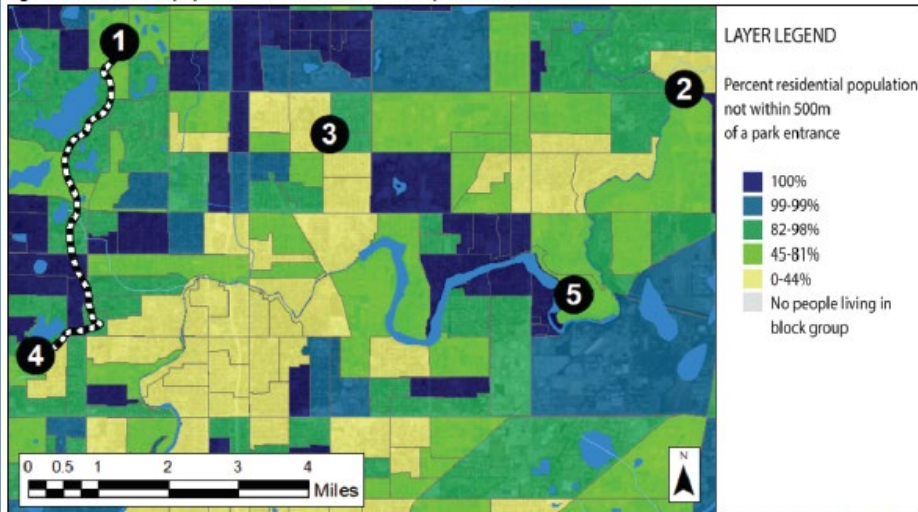


Figure 6 shows the percent of the residential population that does not live within 500 meters of a park entrance, summarized by census block group.

Figure 7. Pedestrian-oriented street intersection density

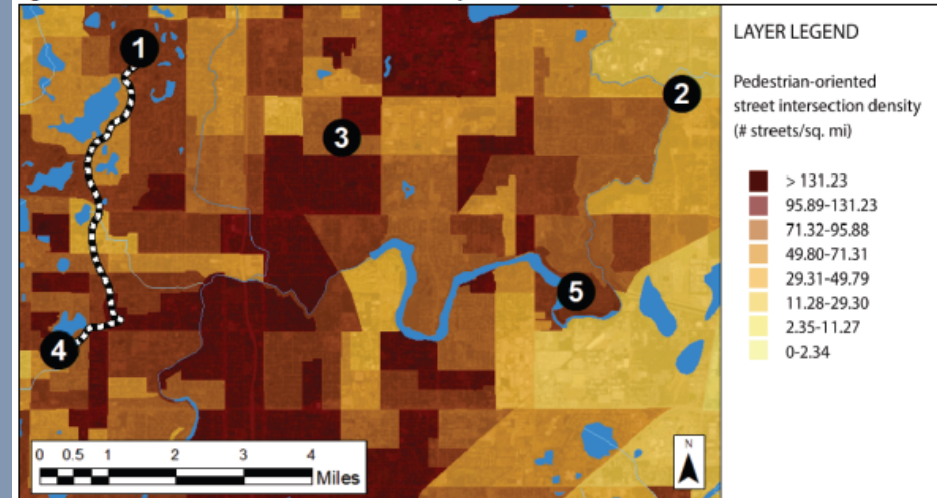


Figure 7 shows the pedestrian oriented street intersection density in the area of interest in Canton. Intersection density is the number of intersections per square mile and is a factor in the overall walkability of an area.

Figure A1. Percent tree cover, overlaid with percent households below the US poverty level

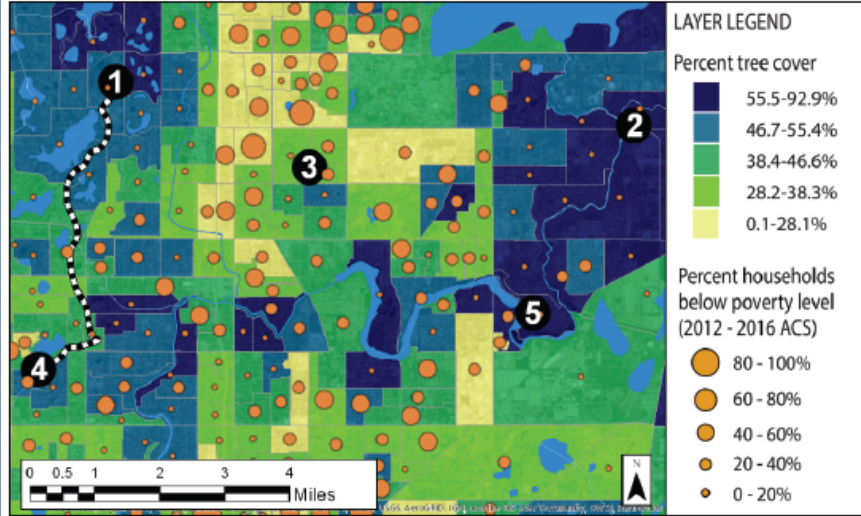


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Figure A2. Dasymetric allocation of population

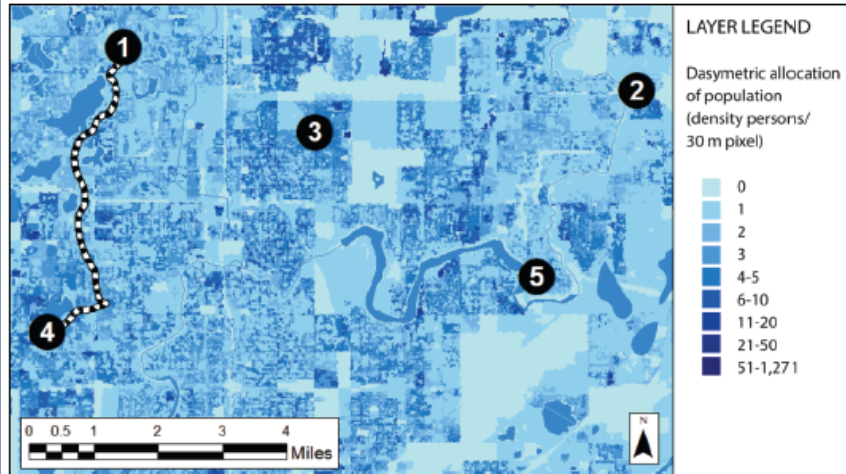


Figure A2 shows the dasymetric allocation of population for the Canton area. This means that the population is distributed to depict where people may actually live (e.g. not in waterbodies). In the map above, the darker colors represent areas where more people live and the lighter colors are where fewer people live.

Figure A3. Vacancy of business addresses

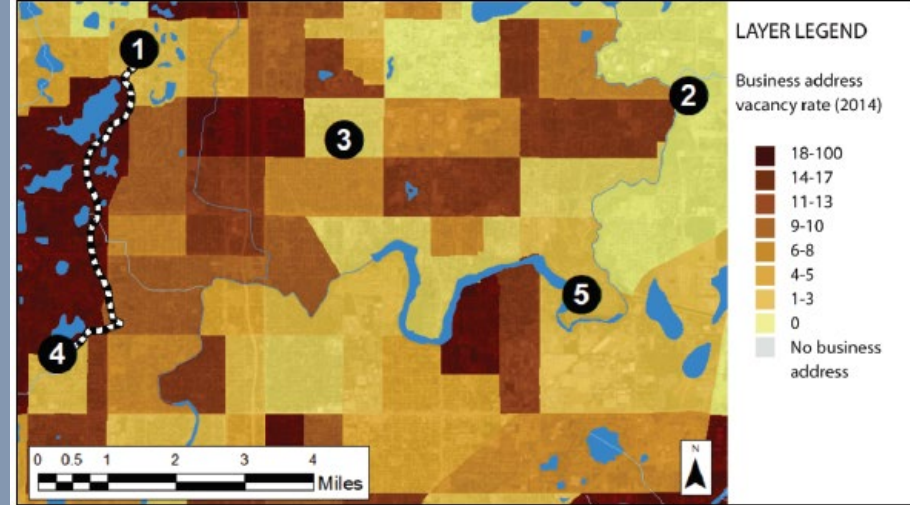


Figure A3 shows the percentage of local business addresses that had remained vacant for more than one year in 2014. The information is based on the United States Postal Service (USPS) Vacant Address Data.

Figure A4. Percent of workers who bike or walk to work

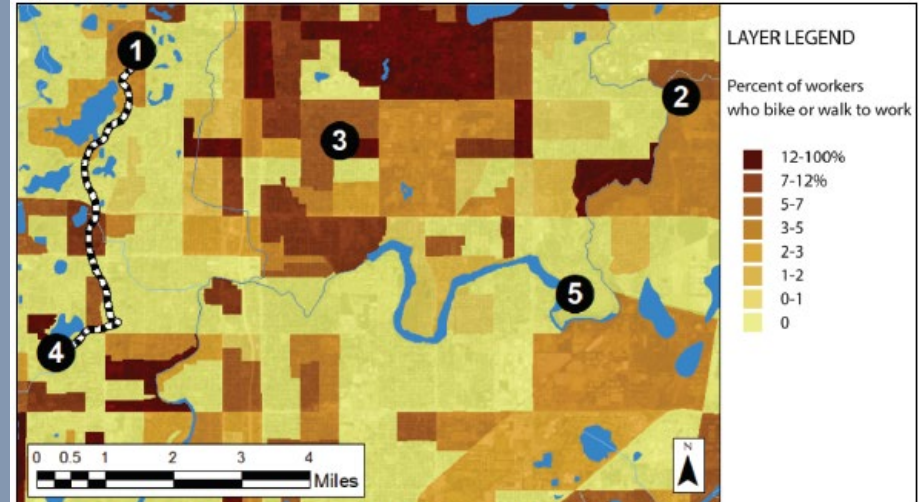
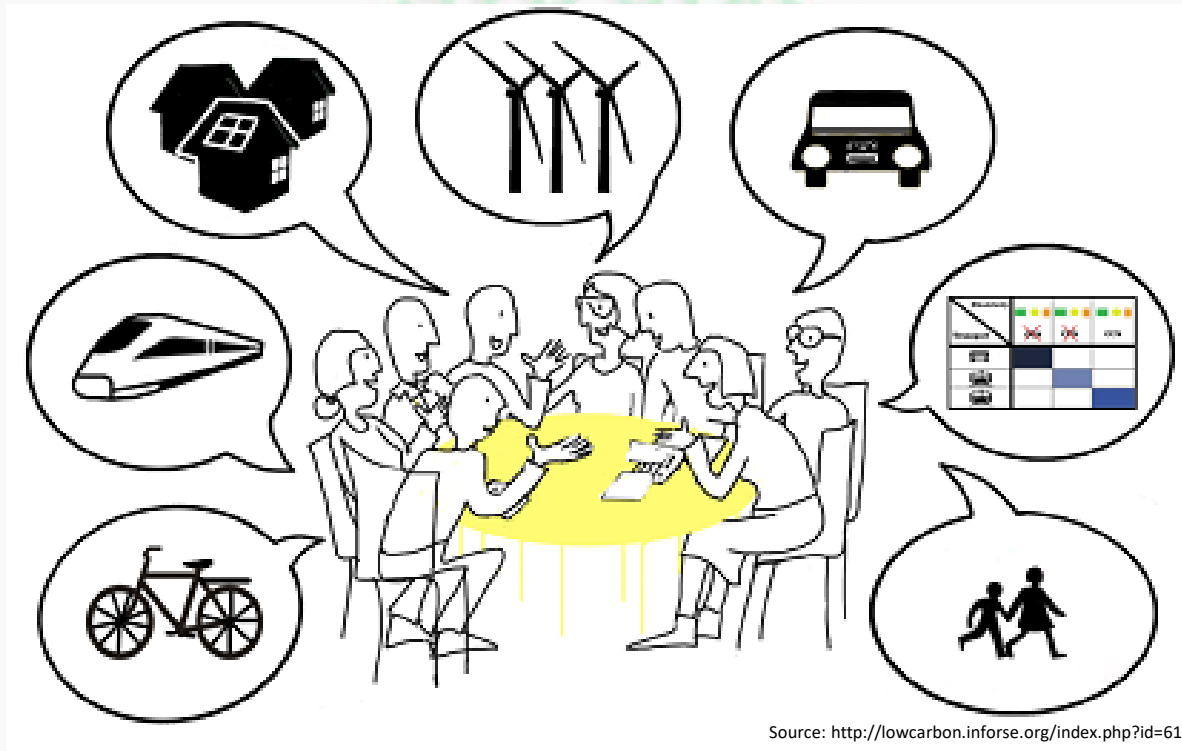


Figure A4 shows the percent of workers in Canton who bike or walk to work.

Stakeholders

People who have an interest or concern in the decision being made.



What are some categories of stakeholders?
(Think occupations, special interests, community groups)

Stakeholders

People who have an interest or concern in the decision being made.



Source: <http://lowcarbon.inforse.org/index.php?id=61>



Teachers – Businesses – Children and Families – Governments –
Commuters – Local Organizations – Environmentalists –
Recreationists



Environmental Scientists



City Bicycling Club



City Council Member

Stakeholder Groups

- Understanding Maps
- Support pilot section or propose a new one between two trailheads
- Provide reasons for your decision
 - Ecosystem services
 - Economic
 - Environmental
 - Community



Wildlife Enthusiasts



Neighborhood Parent Association



Local Business Owner

Focus Questions

- In looking at these maps, which ones provide information that you want (from your stakeholder perspective) in order to make your decision?
- How do the maps demonstrate the reasons to support Parks and Rec's pilot section?
- From your stakeholder perspective, what other information would you want to know or need to know in order to make your decision?
- Do you support the pilot section or do you propose a different pilot section (connect any two trailheads)? How do the maps demonstrate the reasons to support your selection?

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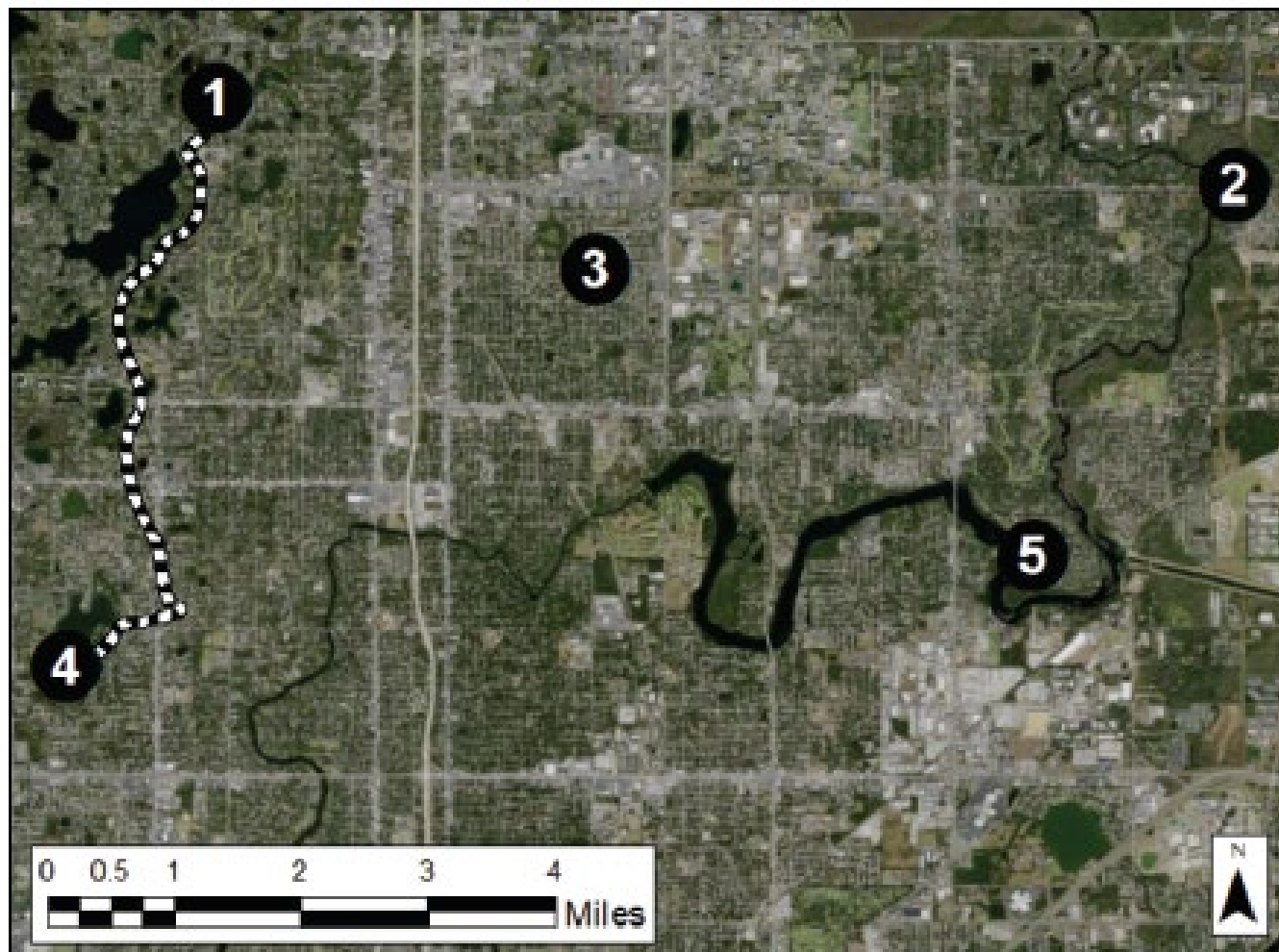


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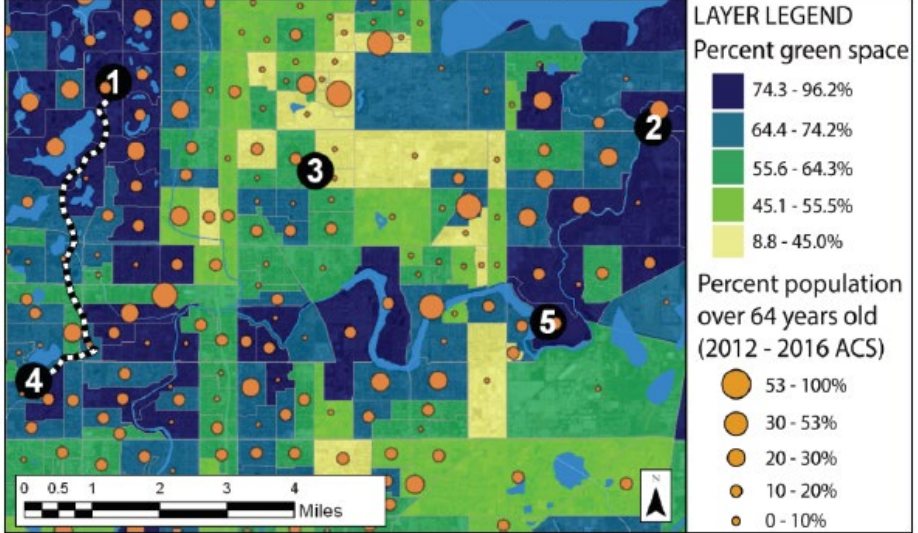


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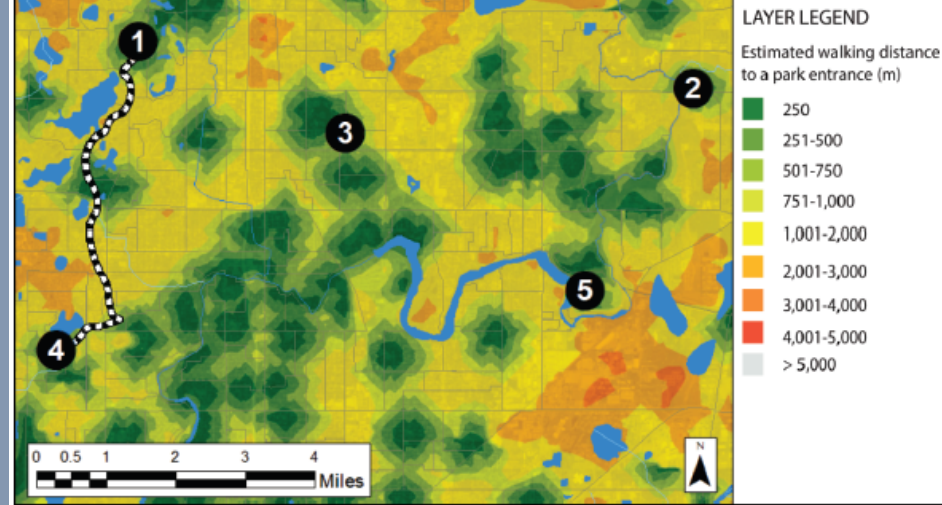


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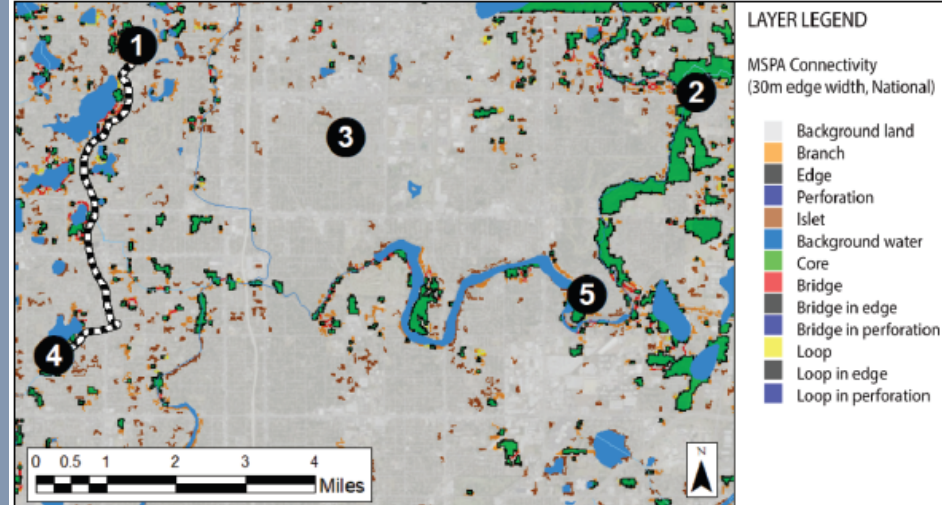


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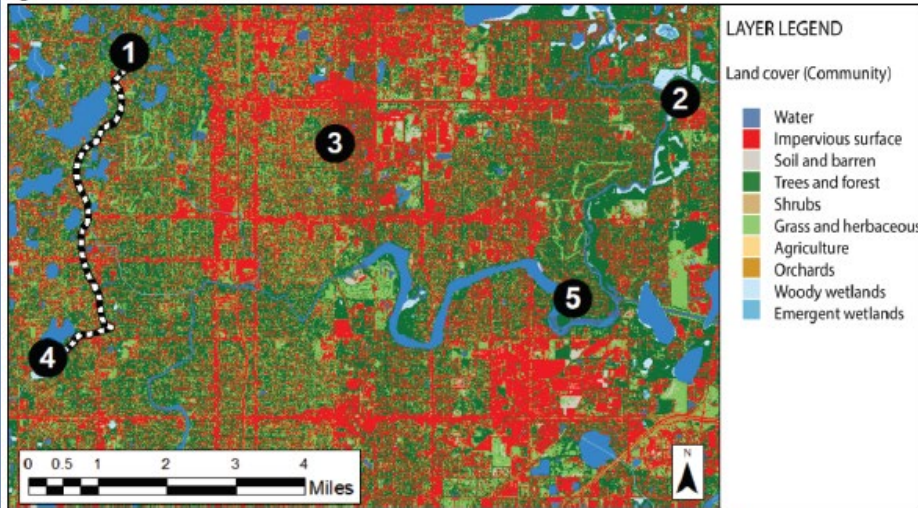


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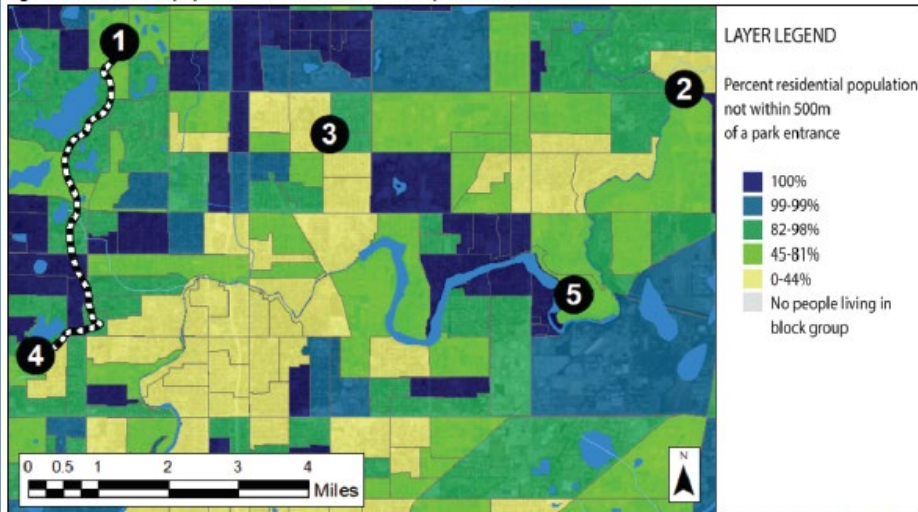


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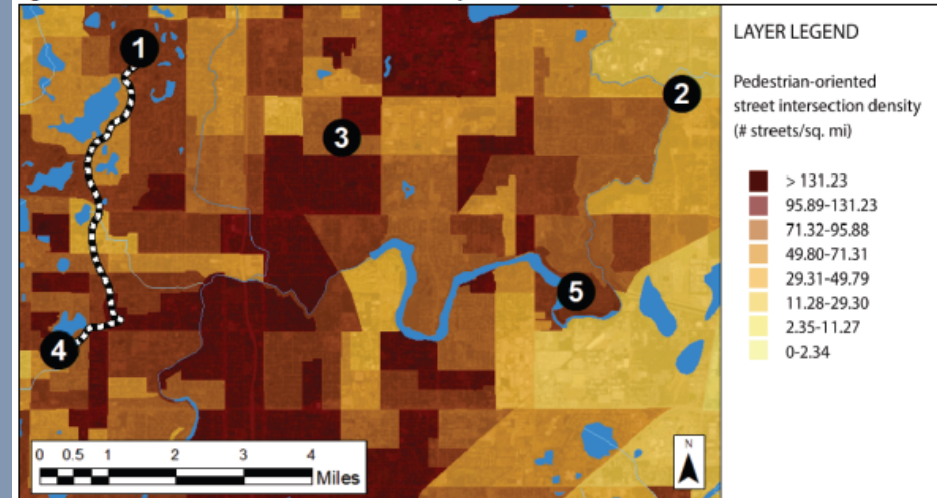


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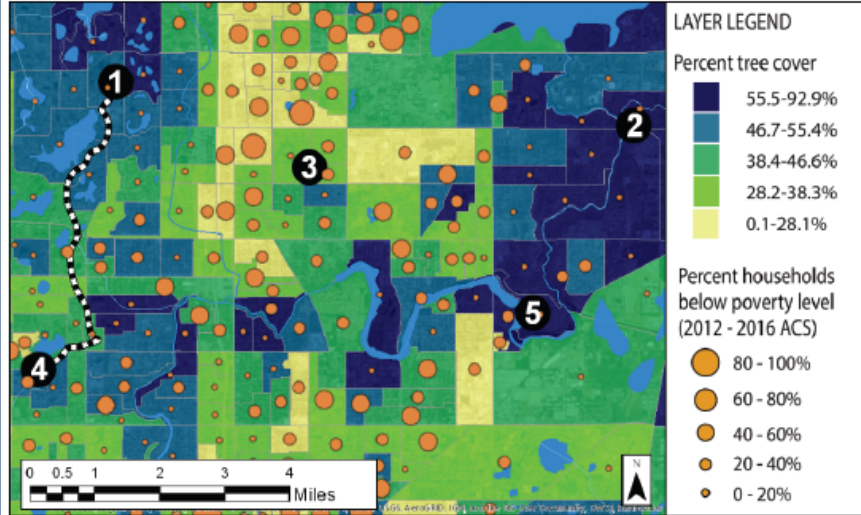


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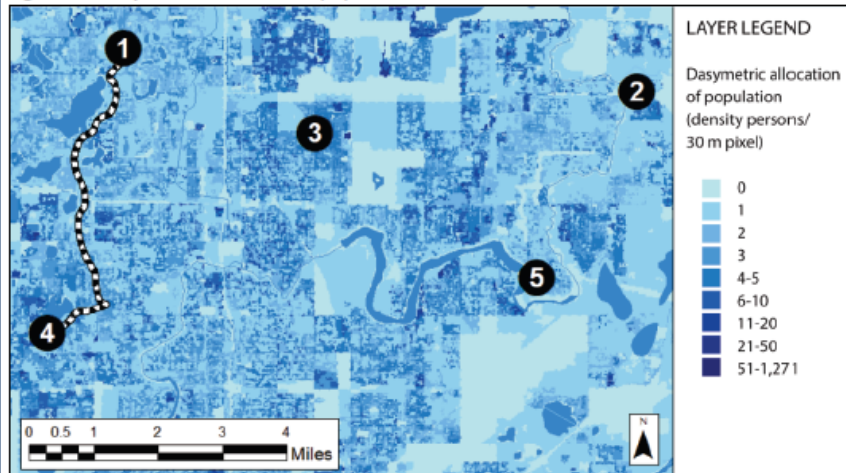


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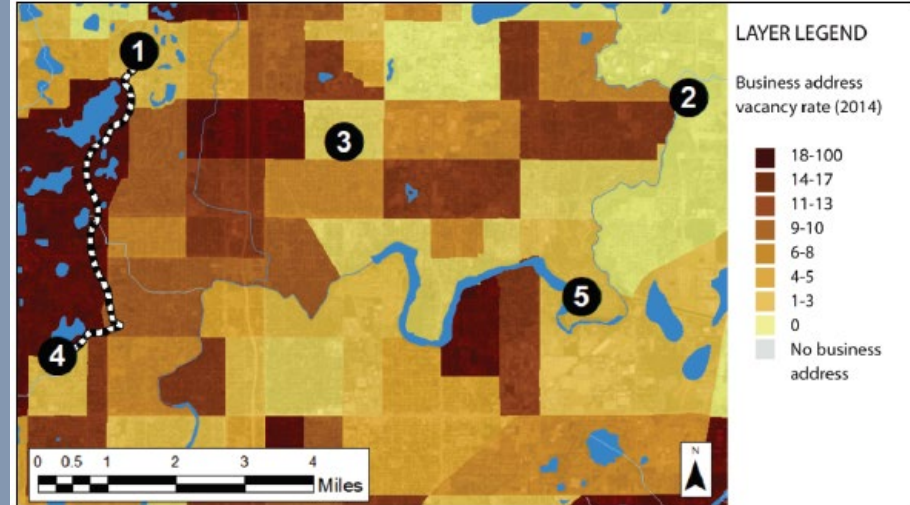


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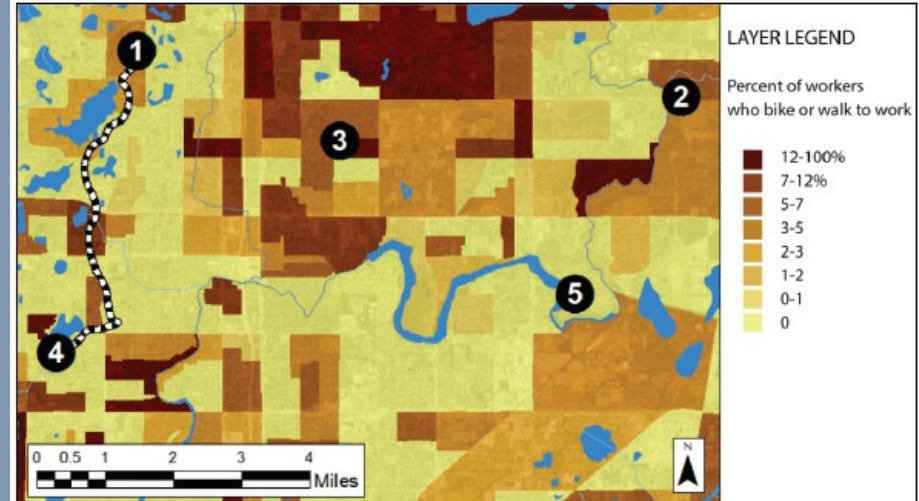


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Time to Share

- Environmental Scientist
- City Council Member
- Neighborhood Parent Association
- City Bicycling Club
- Wildlife Enthusiasts
- Local Business Owner



Time to Vote!

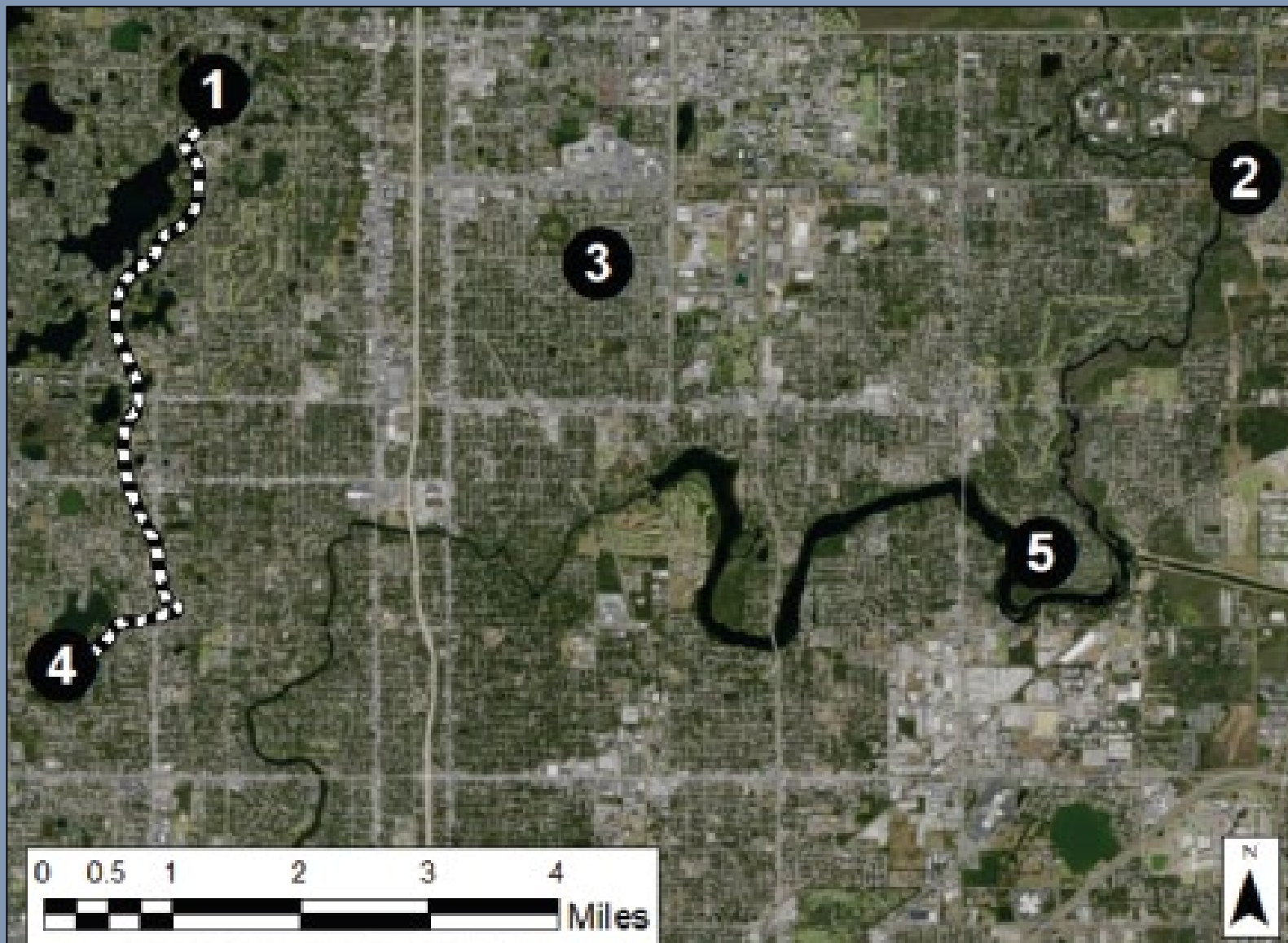




Photo credit: Sarina Lewis