

Biking & Health

Clarksville Urbanized Area MPO
April 15, 2021



Celebrated on April 15, 2021



<https://en.unesco.org/commemorations/worldartday>

- **World Art Day**
- **National Glazed Spiral Ham Day**
- **National Rubber Eraser Day**
 - Before the invention of the rubber eraser, crustless bread was used in Japan to remove mistakes.
- **National High Five Day**
- **National Titanic Remembrance Day**
 - Sank on 04/15/1912



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www.thereisadayforthat.com

Every One
Has A
Different
Perspective

Share Yours



Kentucky

– the Bluegrass State



US Census:

Population (2020 estimate): 4,477,253

KYTC Division Of Motor Vehicle Licensing:

Non-Commercial Vehicles (including motorcycles): 3,321,606

- Commercial = 175,440; Official: 13,542
- Total Number of Registered Vehicles (2020): 3, 510,588

Number of Licensed Drivers (2020): 3,079,906

Ratio of Non-Commercial Vehicles/Licensed Driver: 1.08

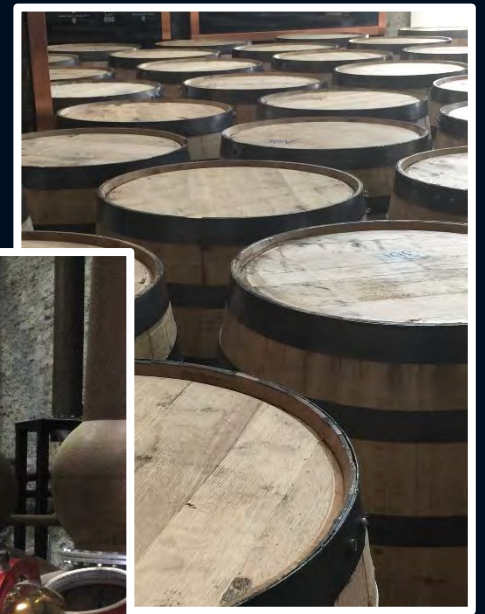


1,397,347 (32.21%) without cars!

Kentucky is known for:



Photos by Bernadette Dupont



43/50 States for Health!!!



COVID-19 - INTEREST IN BIKING INCREASED WORLDWIDE

- NETHERLANDS - THE CYCLING NATION

VISIT

[HTTP://WWW.PEDBIKEINFO.ORG/VIDEOS/WEBINAR_072820_HASPELS.MP4](http://www.pedbikeinfo.org/videos/webinar_072820_haspels.mp4)



- 7M DUTCH RESIDENTS, 25M BIKES
- 45% ARRIVE AT TRAIN STATION BY BIKE
- 26% OF ALL TRIPS BY BIKE

World's Most Bike Friendly Cities - 2019

Copenhagenize – a urban cycling design company

Factors: safety, traffic, bike share programs and infrastructure

1. Copenhagen, Denmark

2. Amsterdam, Netherlands
3. Utrecht, Netherlands
4. Antwerp, Belgium
5. Strasbourg, France
6. Bordeaux, France
7. Oslo, Norway
8. Paris, France
9. Vienna, Austria
10. Helsinki, Finland

11. Bremen, Germany
12. Bogota, Columbia
13. Barcelona, Spain
14. Ljubljana, Slovenia
15. Berlin, Germany
16. Tokyo, Japan
17. Taipei, Taiwan
18. Vancouver, Canada (tie)
18. Montreal, Canada (tie)
20. Hamburg, Germany



<https://www.wired.com/story/most-bike-friendly-cities-2019-copenhagenize-design-index/>

World's Most Bike Friendly Cities - 2019

COYA – an German insurance company

Factors: crime and safety (bike theft), infrastructure, sharing, events



1. Utrecht, Netherlands

2. Munster, Germany
3. Antwerp, Belgium
4. Copenhagen, Denmark
5. Amsterdam, Netherlands
6. Malmö, Sweden
7. Hangzhou, China
8. Bern, Switzerland
9. Bremen, Germany
10. Hannover, Germany

11. Strasbourg, France
12. Bordeaux, France
13. Hamburg, Germany
14. Leipzig, Germany
15. Bristol, UK
16. Montreal, Canada
17. Nuremberg, Germany
18. Innsbruck, Austria
19. Berlin, Germany
20. Melbourne, Australia

<https://www.coya.com/bike/index-2019>

World's Most Bike Friendly Cities - 2019



COYA

62. London, England



USA's Most Bike Friendly Cities - 2020

Smart Asset – an independent personal finance technology company

Factors: Walk Score.com, % biking to work, NTSA fatality rate, miles of protected bike lanes, 2018 US Census Commodity Survey on household income



City	Walk Score	% Biking to Work	Miles	Fatalities /100 K	Income-Housing	Index
1. Portland, OR	82.4	5.3	5.3	0.48	\$56,009	100.0
2. Minneapolis, MN	83.5	3.4	41.7	0.64	\$48,998	95.23
3. Seattle, WA	70.3	3.8	12.2	0.85	\$71,713	91.11
4. St. Paul, MN	66.9	1.4	9.4	0.36	\$46,109	87.20
5. Boston, MA	70.5	2.3	5.31	0.87	\$50,810	82.86
6. Washington, DC	69.1	4.3	11.9	1.14	\$64,863	81.34
7. San Francisco, CA	72.2	4.2	16.7	1.58	\$87,728	78.52
8. Madison, WI	65.1	4.5	0.8	0.74	\$49,557	77.44
9. Chicago, IL	72.2	1.8	27.3	1.06	\$42,478	75.70
10. New York City, NY	70.0	1.3	124.2	1.17	\$46,871	72.02

Census Bureau, 2018

- **1/ 200 Americans – 0.5% – biked to work.**
- **Portland, Oregon highest at 5.3%.**



<https://smartasset.com/checking-account/most-bike-friendly-cities-2020>

POLICY



“TDOT’s mission is to provide a safe, reliable transportation system that supports economic growth and quality of life.”

Update of the Active Transportation Plan
Funding for Safe Bike Routes

<https://www.tn.gov/tdot/multimodal-transportation-resources/bicycle-and-pedestrian-program.html>

Rochelle Carpenter

Active Transportation Coordinator

TDOT – Multimodal Transportation Resources Division

James K. Polk Building, 12th Floor

594 Deaderick Street

Nashville, TN 37243

Office: 615-741-0654

Rochelle.Carpenter@tn.gov

POLICY



“KYTC will consider the incorporation of pedestrian and bicycling facilities on all new or reconstructed state-maintained roadways in existing and planned urban and suburban areas.”

Title 23 USC 217 states: “Bicycle transportation facilities and pedestrian walkways shall be considered where appropriate in considered, where appropriate, in conjunction with all new construction and reconstruction of transportation facilities...”

<https://transportation.ky.gov/BikeWalk/Pages/Home%20Page.aspx>



Vacant

Statewide Bicycle and Pedestrian Coordinator
Kentucky Transportation Cabinet, Division of Planning
200 Mero Street, 5th Floor West
Frankfort, Kentucky 40622
Office: 502-782-5060
????????@ky.gov

POLICY



FHWA's Bicycle and Pedestrian Program promotes **safe**, comfortable, and convenient walking and bicycling for people of all ages and abilities.

FHWA provides:
Funding, Policy Guidance, Program Management, and Resources

https://www.fhwa.dot.gov/environment/bicycle_pedestrian/

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Bicycle and Pedestrian Coordinator
Federal Highway Administration - TN
404 BNA Drive, Building 200, Suite 508
Nashville, TN 37217
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Darrin Grenfell

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Office: 502-223-6727
Darrin.Grenfell@dot.gov

GUIDANCE

U.S. Department of Transportation
Federal Highway Administration

About Programs Resources Briefing Room Contact Search FHWA

Office of Planning, Environment, & Realty (HEP)

Planning Environment Real Estate

HEP Events Guidance Publications Glossary Awards Contacts

Bicycle and Pedestrian Program

Legislation
Funding
Guidance
Resources

State Coordinator and FHWA Division Coordinator

Each State has a [Bicycle and Pedestrian Coordinator](#), and each [FHWA Division office](#) has a point of contact.

FHWA Headquarters Contact

For more information, please contact [Darren Buck](#), 202-366-1362.

FHWA Supports:


PBIC


PEDSAFE


BIKESAFE

[FHWA](#) → [Environment](#)

Bicycle and Pedestrian Program

The Federal Highway Administration's Bicycle and Pedestrian Program promotes safe, comfortable, and convenient walking and bicycling for people of all ages and abilities. We support pedestrian and bicycle transportation through funding, policy, program management, and resource development.

Each State has a [State Bicycle and Pedestrian Coordinator](#), and each FHWA Division office has an [FHWA Bicycle and Pedestrian Coordinator](#) for contact.

Key Resources

- [Pedestrian and Bicycle Funding Opportunities](#)
- [FHWA Guidance: Bicycle and Pedestrian Planning, Program, and Project Development](#) (September 26, 2019)
- [Bicycle Facilities and the Manual on Uniform Traffic Control Devices](#)
- [Memorandum: Bicycle and Pedestrian Facility Design Flexibility](#)
- [Policy Statement on Bicycle and Pedestrian Accommodation Regulations and Recommendations](#) | [Memorandum](#)
- See more [Resources](#)...

Recent Publications

- [Guidebook for Developing Performance Measures](#)
- [Bike Network Mapping Idea Book](#)
- [Incorporating On-Road Bicycle Networks into Resurfacing Projects](#)
- [Separated Bike Lane Planning and Design Guide](#)

Featured Resources

Strategies for Accelerating Multimodal Project Delivery
This guidebook identifies specific strategies and techniques for accelerating multimodal project delivery. It highlights proven techniques that agencies are using to get high quality results, and opportunities to address barriers or delays in the project delivery process.

Case Studies in Realizing Co-Benefits of Multimodal Roadway Design and Gray and Green Infrastructure
This report provides information to encourage agencies interested in making improvements to their pedestrian and bicycle networks that also provide green infrastructure and resiliency benefits.

Guidebook for Measuring Multimodal Network Connectivity
This resource focuses on measuring pedestrian and bicycle network connectivity and incorporating connectivity analysis into the transportation planning process.

Accessible Shared Streets: Notable Practices and Considerations for Accommodating Pedestrians with Vision Disabilities
This document reviews notable practices and considerations for accommodating pedestrians with vision disabilities on shared

https://www.fhwa.dot.gov/environment/bicycle_pedestrian/

FUNDING



- Congestion Mitigation and Air Quality (CMAQ)
- Surface Transportation Block Grant (STBG)
 - Safe Routes to School (SRTS)
 - Transportation Alternatives (STBG-TA)
- Recreational Trail Program (RTP)

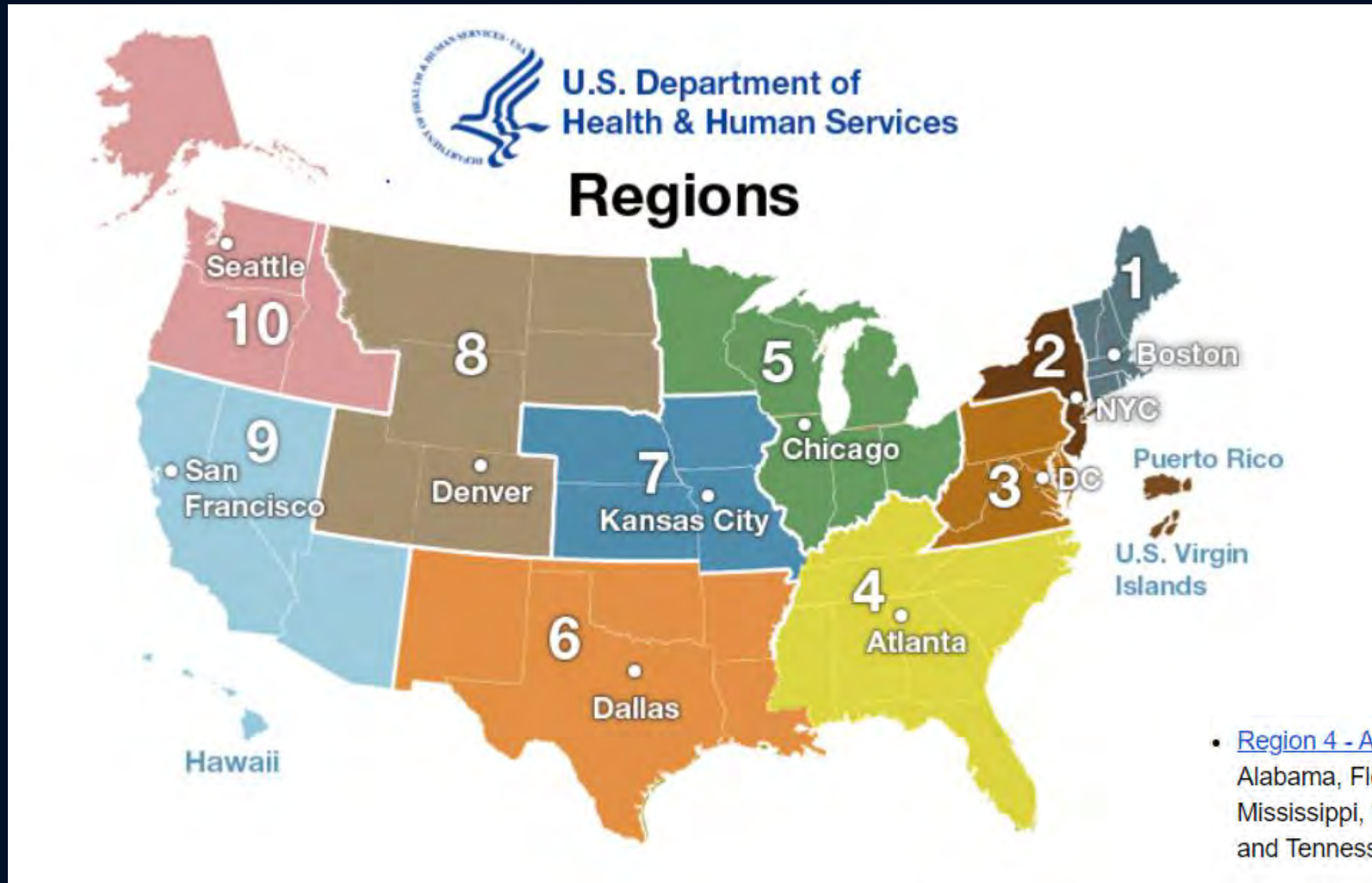
- =====
- Highway Safety Improvement Program (HSIP)
 - **future** local road safety plan at KYTC

- =====
- National Highway Program (NHP)

- Planning Funds
 - Plans, data collection (counts and monitoring), mapping, safety programs, training



FUNDING



- Programs & Services
- **Grants** and Contracts
- Laws and Regulations

<https://www.hhs.gov/about/agencies/iea/regional-offices/index.html>

FUNDING



Association of State and
Territorial Health Officials

<https://www.astho.org/>

Data Dashboard: <https://www.astho.org/profile/>

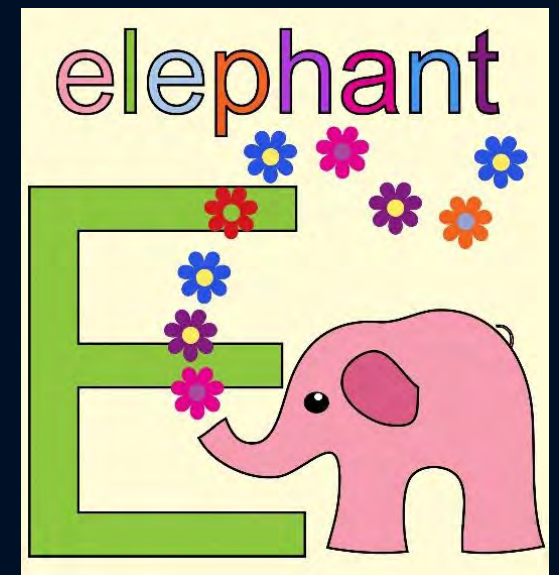
CDC Funding

Troy Hearn

Health Program Administrator
Division of Prevention & Quality Improvement
Cabinet for Health & Family Services
502-564-9358 ext. 4022
275 E. Main St HS1EE
Frankfort, KY 40621

FHWA's Comprehensive Approach - 5 E'S

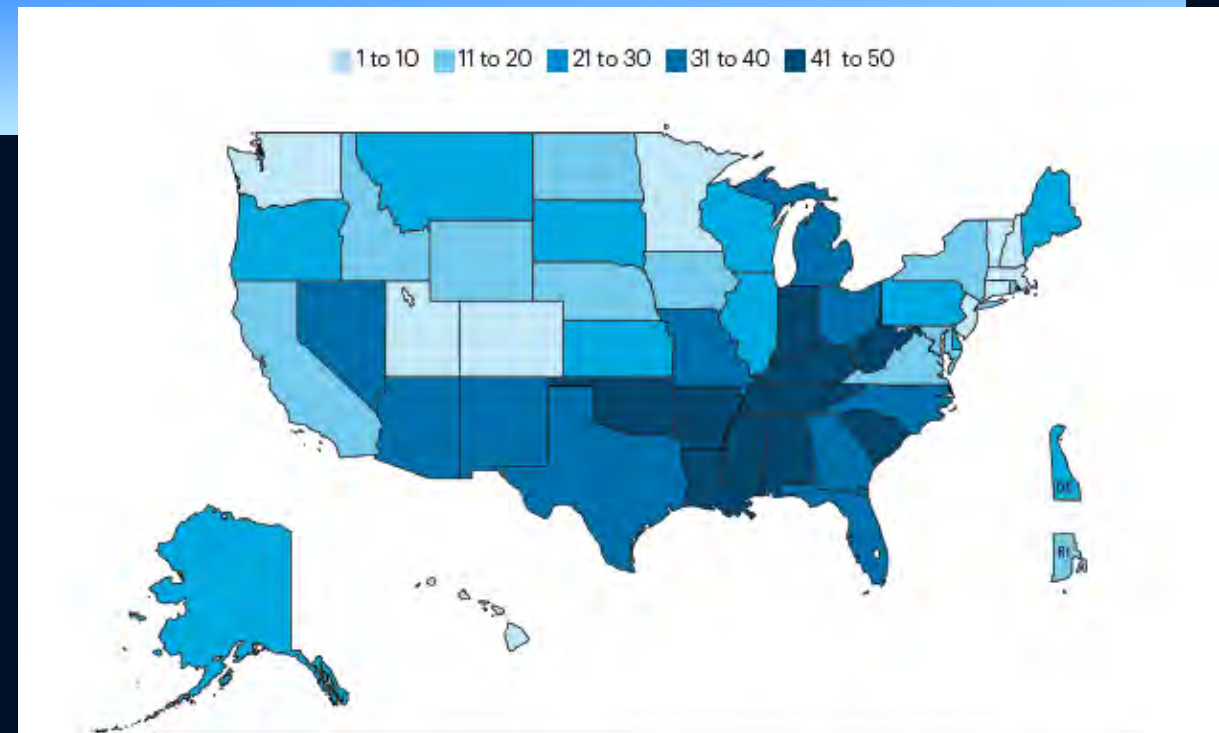
- Engineering – design and construction of bike/ped facilities
- Education – teaching bicyclists, pedestrians, motorists
- Enforcement – ensure traffic laws and rules are followed
- Encouragement – providing incentives
- Evaluation – outcomes achieved



5 E'S - EDUCATION

1. Start with Data

UNITED HEALTH FOUNDATION®



Nationwide Problems!

Obesity among adults is up 166%
11.6% in 1990 to 30.9% in 2019

Diabetes among adults is up 148%
4.4% in 1996 to 10.9% in 2019

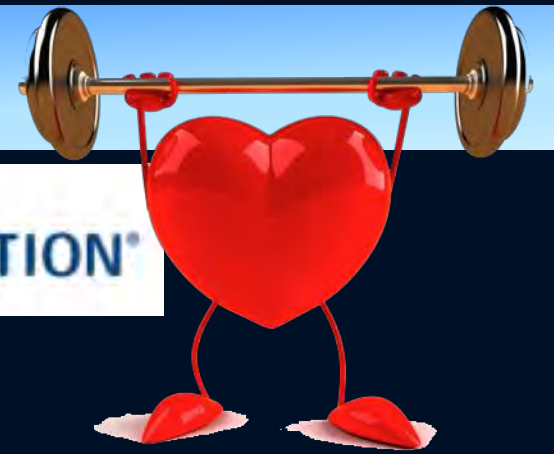
https://assets.americashealthrankings.org/app/uploads/ahr_2019annualreport.pdf

5 E'S - EDUCATION

1. Start with Data

UNITED HEALTH FOUNDATION®

Categories: Behaviors, Community and Environment, Public and Health Policies, Clinical Care, and Health Outcomes.



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Kentucky is ranked
43rd / 50 States!
Tennessee is ranked
44th / 50 States!

https://assets.americashealthrankings.org/app/uploads/ahr_2019annualreport.pdf

KY – p 63; TN – p 88


5 E'S - EDUCATION

1. Start with Data - KY

UNITED HEALTH FOUNDATION*



Behaviors:

Physical Inactivity	50/50		32.4% of adults
Smoking	49/50		30% (2012) – 23.0 % (2019)- declining
Obesity	46/50		12% (1990) – 36.6% (2019)
Drug Deaths	46/50		32.2/100,000 population (96% in 10 yrs)

Outcomes:

Cancer Deaths	 50/50	233.4/100,000 population
Diabetes	44/50	13.7% of adults
Cardiovascular Deaths	42/50	301.2/100,000 population

[This Photo](#) by Unknown Author is licensed under [CC BY](#)

5 E'S - EDUCATION

1. Start with Data - TN

UNITED HEALTH FOUNDATION*

Behaviors:

Physical Inactivity	47/50	30.9% of adults
Smoking	46/50	20.7% of adults
Obesity	38/50	34.4%
Drug Deaths	38/50	24.3/100,000 population

Outcomes:

Cancer Deaths	45/50	217.2/100,000 population
Diabetes	45/50	13.8% of adults
Cardiovascular Deaths	45/50	313.6/100,000 population



5 E'S - EDUCATION

1. Start with Data

2021 Facility Types	KY	TN
Multi-Use Paths	179 (90 miles)*	Not Tracked
Rails-To-Trails (multi-purpose)	28 (63 miles)	64 (280.11 miles)
United States Bicycle Routes	5 (844.8 miles)	1 (153.5 miles)

MULTI-USE PATHS

* KY Data is from the Highway Information System (HIS), maintained by KYTC's Division of Planning. The data ONLY includes Multi-Use Paths inside Right-Of-Way.



5 E'S - EDUCATION

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RAILS-TO-TRAILS

National Trails System Act, 16 U.S.C. 1247(d), Notice of Interim Trail Use)

- Allows abandonment or banking for possible future use.

<https://www.traillink.com/trailsearch/?mmloc=Kentucky>

<https://www.traillink.com/trailsearch/?mmloc=Tennessee>



5 E'S - EDUCATION



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USBR - Kentucky - Added 2 New USBR Routes in 2018 – 5th in the Nation!

USBR 21 – 251 mile route

- Follows Boone Trace established by Daniel Boone in 1775.
- Connects the Ohio River in Mason Co → Bluegrass → Cumberland Gap, TN

USBR 23 – 108.9 mile route

- Connects the Cave Region of SW KY and Mammoth Cave

USBR 76 – 484.9 mile route

- Starts in Elizabethtown and goes East just past Hazard



<https://www.adventurecycling.org/routes-and-maps/us-bicycle-route-system/maps-and-route-resources/>

5 E'S - EDUCATION



1. Start with Data

2021 Facility Types	KY	TN
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USBR - Tennessee

USBR 23 – 153.5 miles

- Robertson County → Nashville → Civil War Sites in Franklin → Alabama border in Ardmore.



<https://www.adventurecycling.org/routes-and-maps/us-bicycle-route-system/maps-and-route-resources/>

5 E'S - EDUCATION

1. Start with Data



NOTE: AASHTO designates the USBR, 13,536 miles Nationwide (29 States & DC)



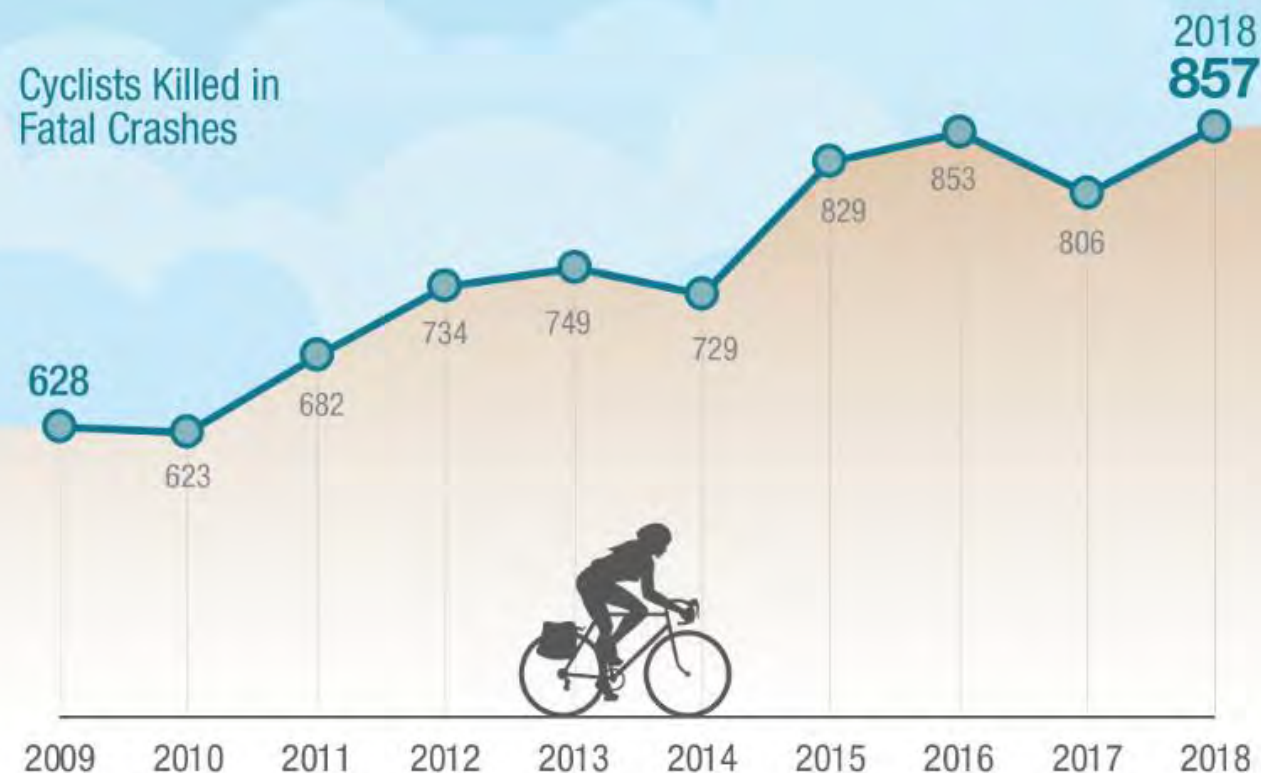
5 E'S - EDUCATION

1. Start with Data

FHWA Weekly Factoid 08/19/20

BIKE FATALITIES INCREASED IN 2018

Since 2009, bike fatalities have increased 36%



Source: DOT NHTSA FARS - <https://www-fars.nhtsa.dot.gov/>

SAFETY: Make the road safer for all users.

- Between 2009 and 2018, **Bike Fatalities have increased 36%!!**
- 2009: 628 bike fatalities
- 2018: 857 bike fatalities



KY - 23% of all traffic fatalities were vulnerable road users.

Emphasis Area

VULNERABLE ROAD USERS



Overview

For this SHSP, Vulnerable Roadway Users encompasses all non-motorized roadway users, such as pedestrians and bicyclists, in addition to motorcyclists, moped riders, and electric scooter riders. These varying types of roadway users are combined into one group here for the fact that all are at a significantly heightened risk of severe injury or death in the event of a collision with a motor vehicle.

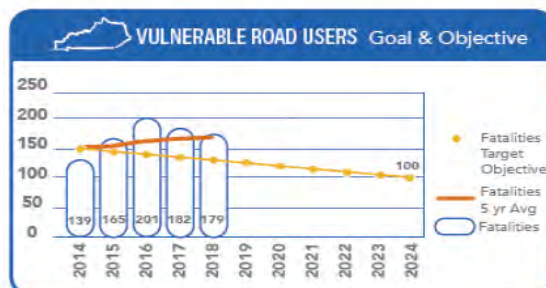
From 2014 to 2018, there were 866 fatalities involving vulnerable roadway users in Kentucky, which accounted for 23 percent of all highway fatalities. Of these 866 fatalities, 449 (52 percent) were motorcyclists, 378 (44 percent) were pedestrians, and 39 (5 percent) were bicyclists.

Opportunities

This SHSP includes strategies to improve the safety of Kentucky's vulnerable roadway users, including:

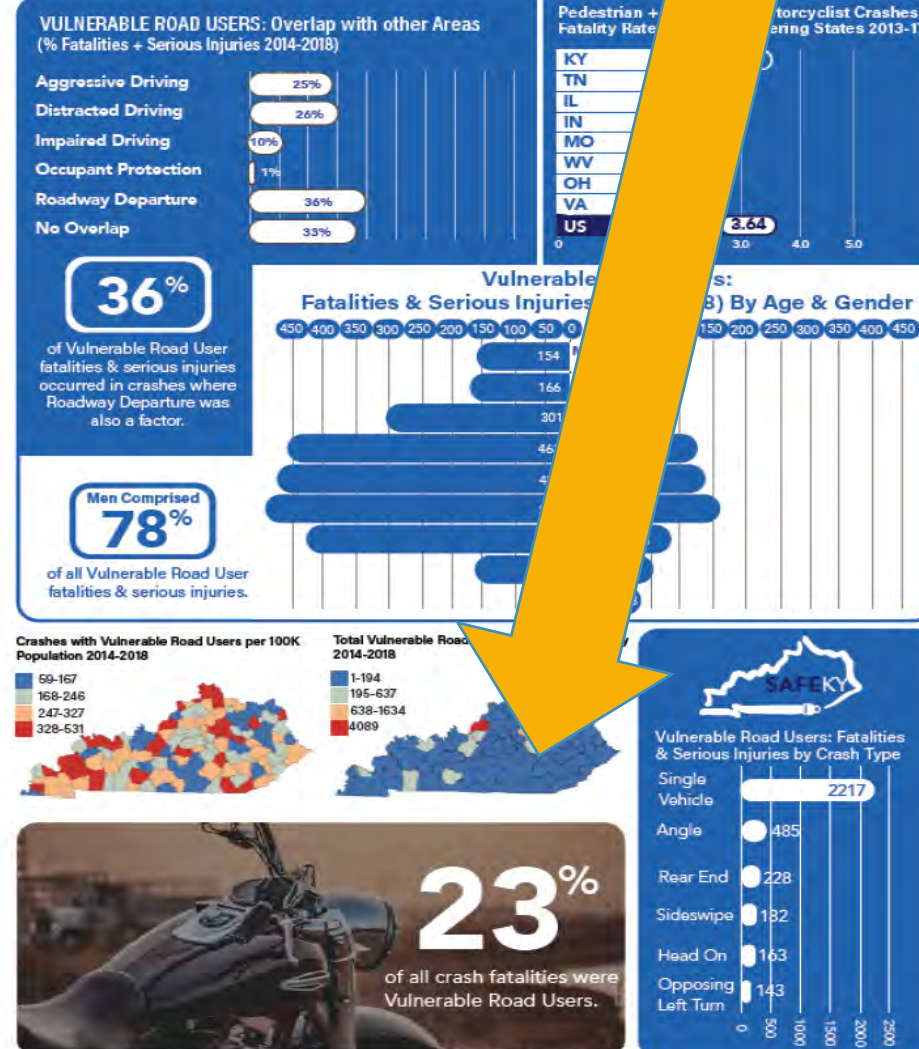
- Installing Pedestrian Refuge Islands at busy intersections.
- Developing media campaigns to promote and educate on motorcycle safety.
- Developing Road Diets for corridors that feature large numbers of non-motorized road users.



Kentucky has identified Vulnerable Road Users as an emphasis area due to the severity of the problem and opportunity for improvement. A goal of this SHSP is to identify and implement strategies that prevent future vulnerable road user fatalities and serious injuries.

To measure progress toward this goal, an objective has been set to prevent future vulnerable road user fatalities such that the annual total will fall at or below 100 by December 31, 2024.



5 E'S - EDUCATION

1. Start with Data



SAFETY: Make the road safer for all users.

2019 KY Bicycle Crashes	Total Crashes	Fatal Crashes	No. Killed	Injury Crashes	No. Injured
- All Roads	362	5	5	223	228
- Public Roads	343	5	5	217	222
2019 TN Bicycle Crashes	Total Crashes	Fatal Crashes	No. Killed	Injury Crashes	No. Injured
- All Roads	396	7	7	315	315

Police reports are submitted to the NTSA Fatality Analysis Reporting System (FARS).

UK Research Center create reports for KYTC and TDOT stores the data in their E-TRIMS database.



2019 Crash Facts - https://works.bepress.com/eric_green/105/
2019 5-Year Analysis - https://works.bepress.com/eric_green/106/

5 E'S - EDUCATION

1. Start with Data



SAFETY: Make the road safer for all users.

MPO (2019 All Roads*)	Bike Crashes	Fatal	Injury
Bowling Green	14	0	9
Cincinnati	41	0	25
Clarksville	6	1	4
Evansville	5	0	4
KYOVA	6	0	3
Lexington	52	0	34
Louisville	136	2	88
Owensboro	22	0	15
Radcliff/Elizabethtown	9	0	6

***All Roads includes parking lots and other private property**

5 E'S - EDUCATION

2. Target Audience

a) New drivers?

- Driver Education
- Driver Testing

b) College Students?

- Campus Newspaper
- Biking Groups

c) Motorists?

- Traffic School

d) Neighbors?



Photo by Bernadette Dupont



Photo by Bernadette Dupont



Photo from MUTCD

5 E'S - EDUCATION

2. Target Audience

e) Bikers?



National Bike Club

- The Wheelmen



Local Bike Club

- Clarksville Cycling Club

Local Events

- Bike the CRAM – May 22-29, 2021
- Sunrise Century Bike Ride – Labor Day

Local Bike Shops



5 E'S - EDUCATION

3. Effective Message Delivery

a) Prioritize messages

FHWA Programs:

- Safety
- Helmet Use
- Share the Road
- Complete Streets
- Road Diet (4 In ➡ 3 In)



Photo from MUTCD



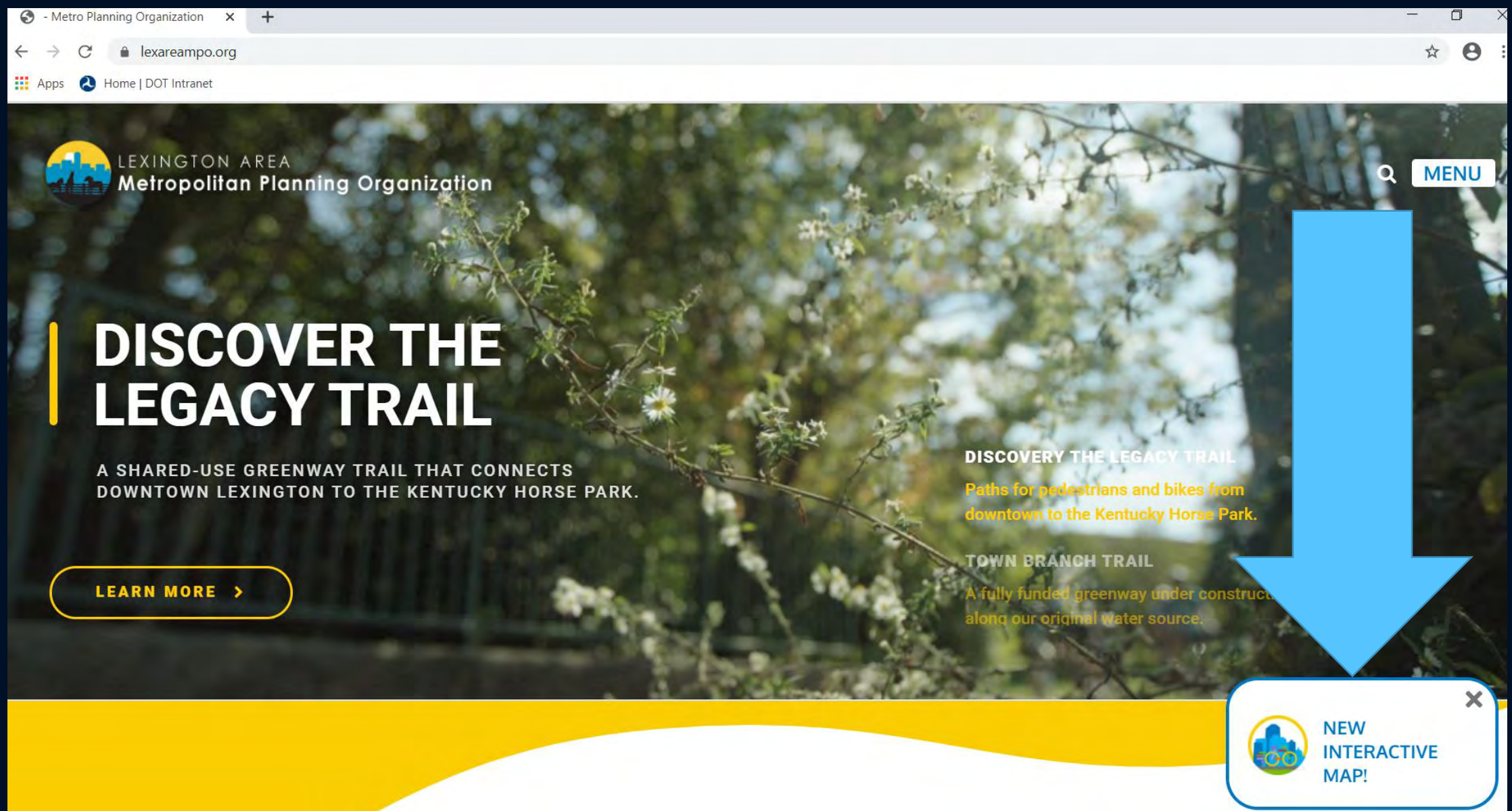
Photo by Bernadette Dupont

5 E'S - EDUCATION

3. Effective Message Delivery

b) Innovative

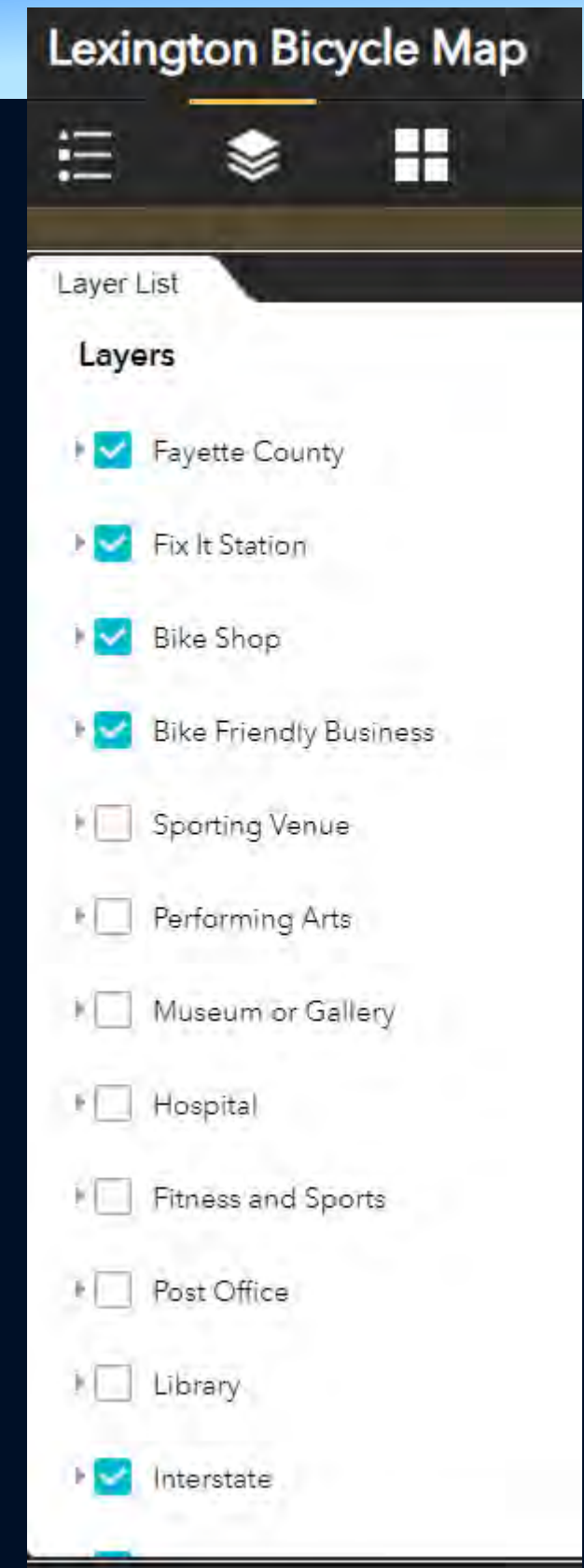
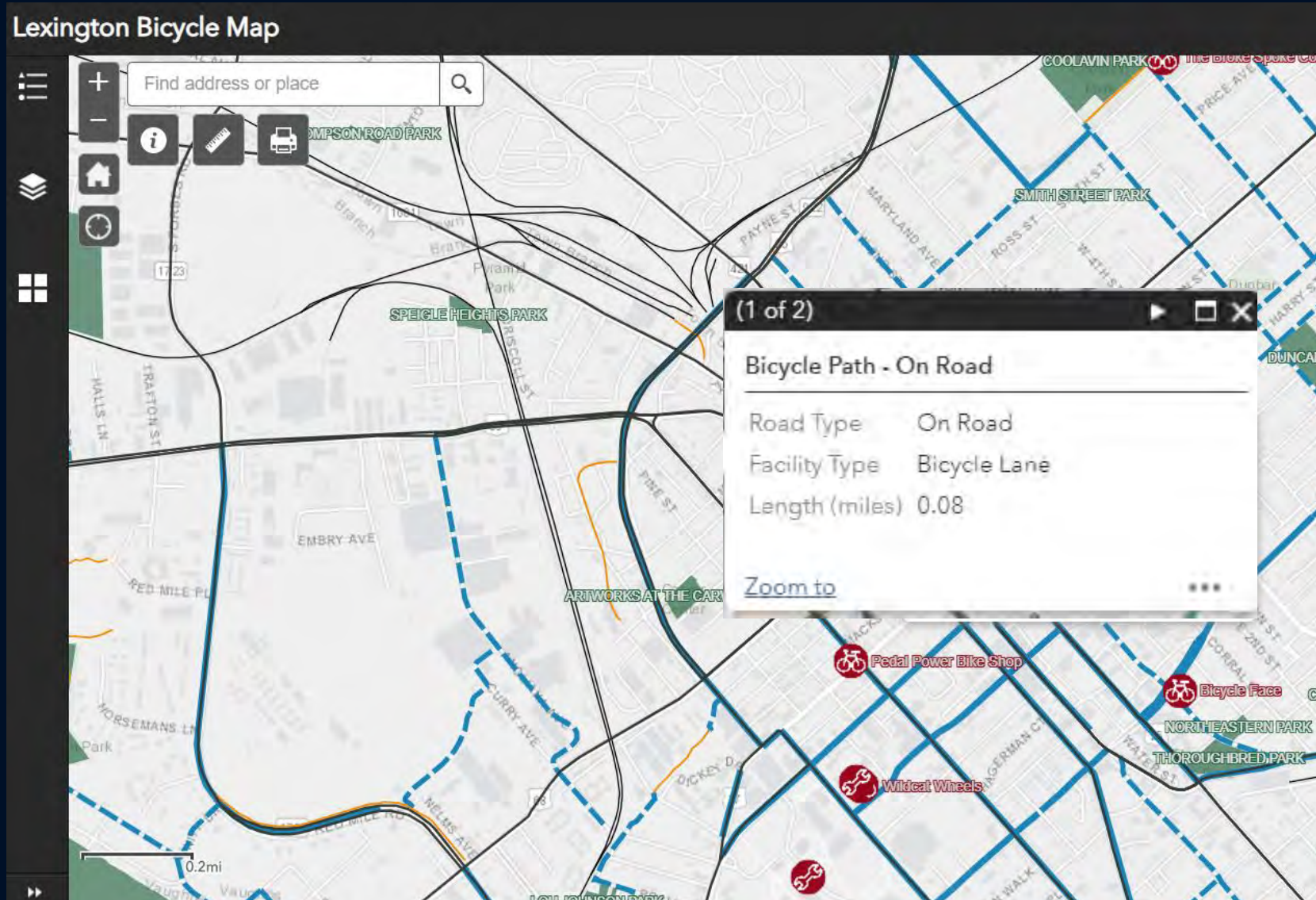
<https://lexareampo.org/>



5 E'S - EDUCATION

3. Effective Message Delivery

b) Innovative



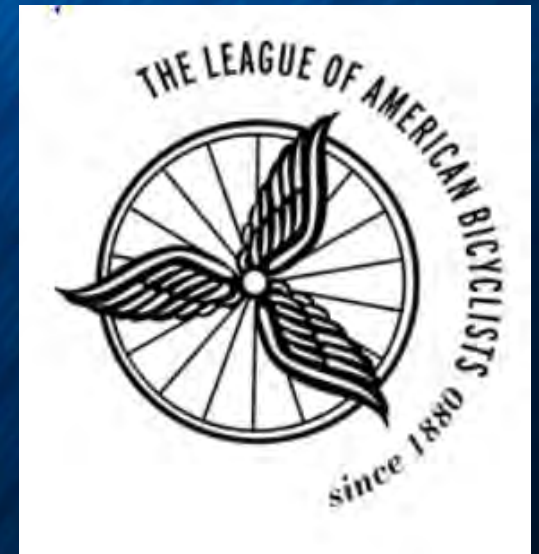
5 E'S - EDUCATION

3. Effective Message Delivery

- c) Marketing
 - Tourism
 - Economic Development

Bike Friendly Actions include:

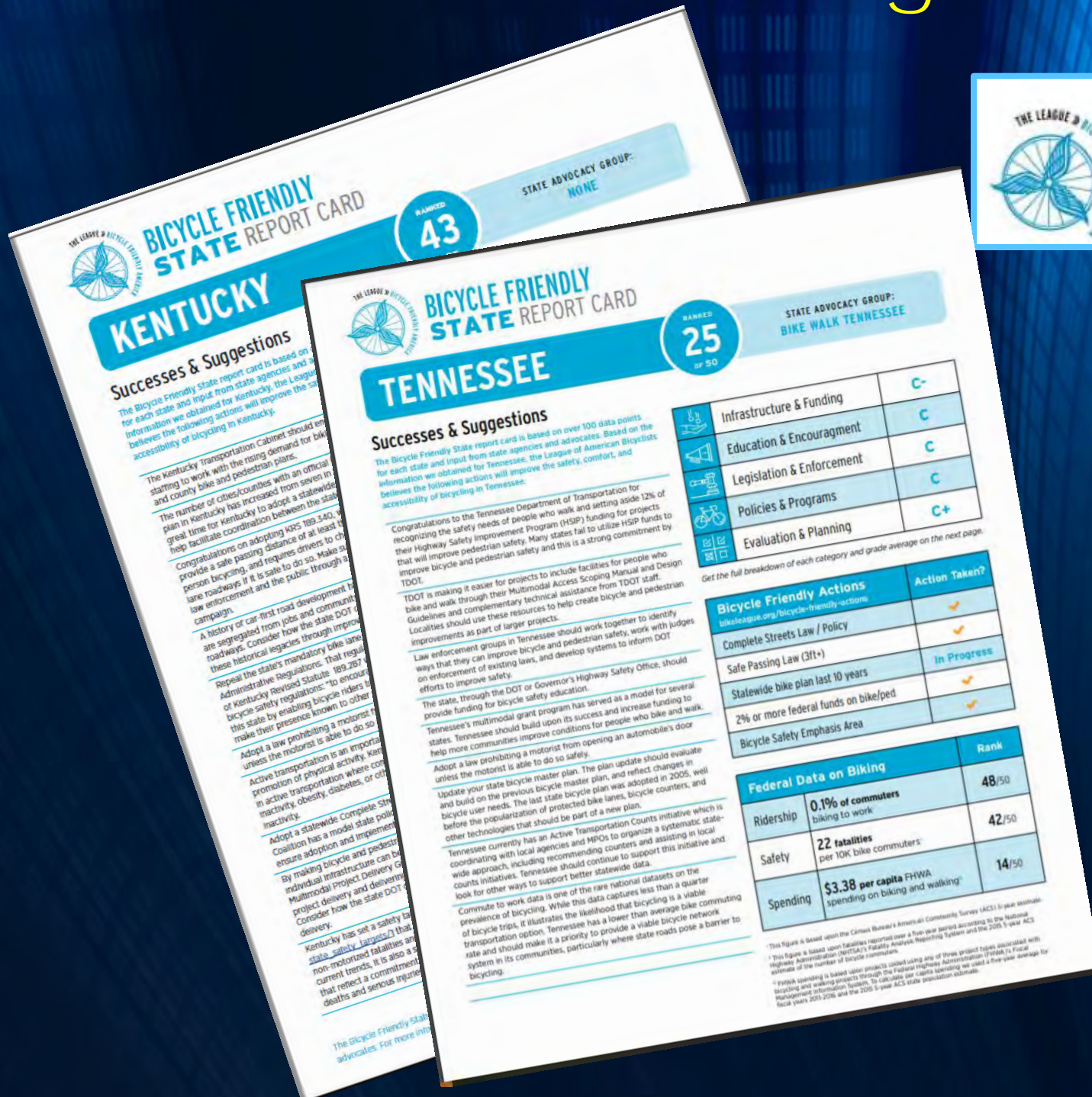
- ☐ Complete Streets Policy
- ☐ Safe Passing Law
- ☐ Bike Plan
- ☐ 2% of more Fed \$ spent on Bike/Ped
- ☐ Bicycle Safety Emphasis Area.



The League of American Bicyclists conducts an annual review of applications. Once awarded a city holds the award title for four years.

5 E'S - EDUCATION

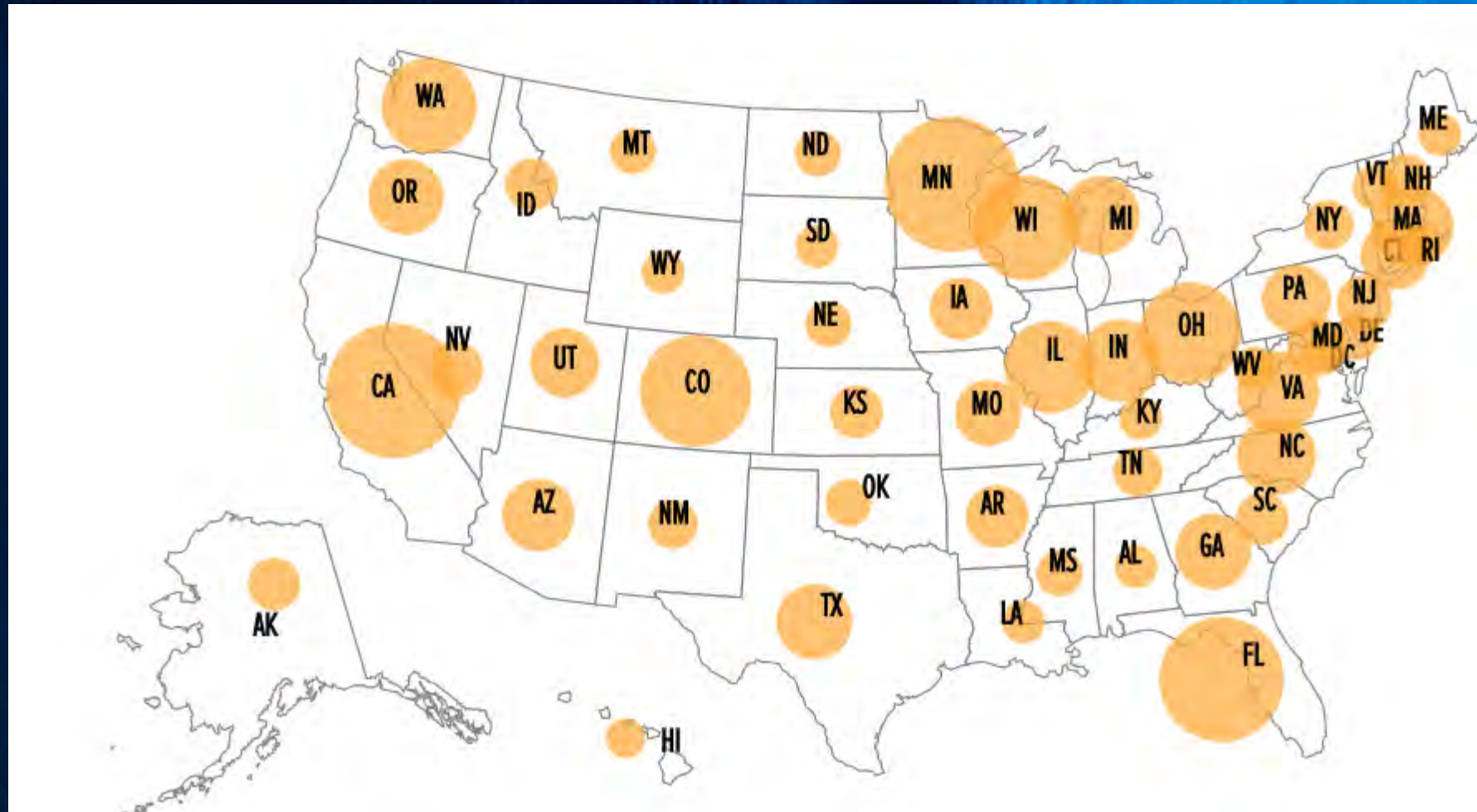
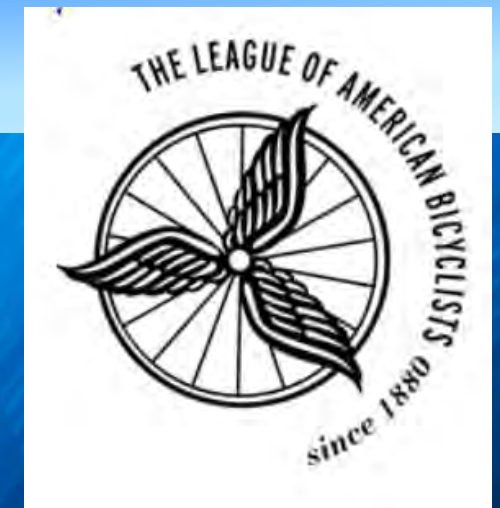
3. Effective Message Delivery



TN is 25th
KY is 43rd

5 E'S - EDUCATION

3. Effective Message Delivery



STATE	Bronze	Silver	Gold	#Bike Friendly
KY	1- Lexington	1 – Louisville	0	2
TN	3- Knoxville; Memphis; Nashville	1- Chattanooga	0	4

5 E'S - EDUCATION

3. Effective Message Delivery



<https://bikeleague.org/bfa/awards#community>

How to get to the next level.



5 E'S - EDUCATION

3. Effective Message Delivery



5 E's – Encouragement (Economic Development)

_____ is a “Bike Friendly City” awarded

☒ Platinum

☐ Gold

☐ Silver

☐ Bronze

PLATINUM



FUNDING

Kentucky Trail Towns - A How-to-Guide for Communities

Kentucky Office for Adventure Tourism



Designed to help leaders take advantage of the **economic opportunity** brought by the attraction of trails and rivers.

Not Stand-Alone Community, but linked through trails

Hiking Trail

Water Trail

Rail Trail

<https://www.americantrails.org/resources/kentucky-trail-towns-a-how-to-guide-for-communities>

Get Started Now



2021 National Bike Summit (Virtual)
League of American Bicyclists

Bikes: Our Vehicle for Change
February 28 – March 3, 2021



5 E'S - EDUCATION

SUMMARY

1. Data

2. Audience

3. Effective Message Delivery

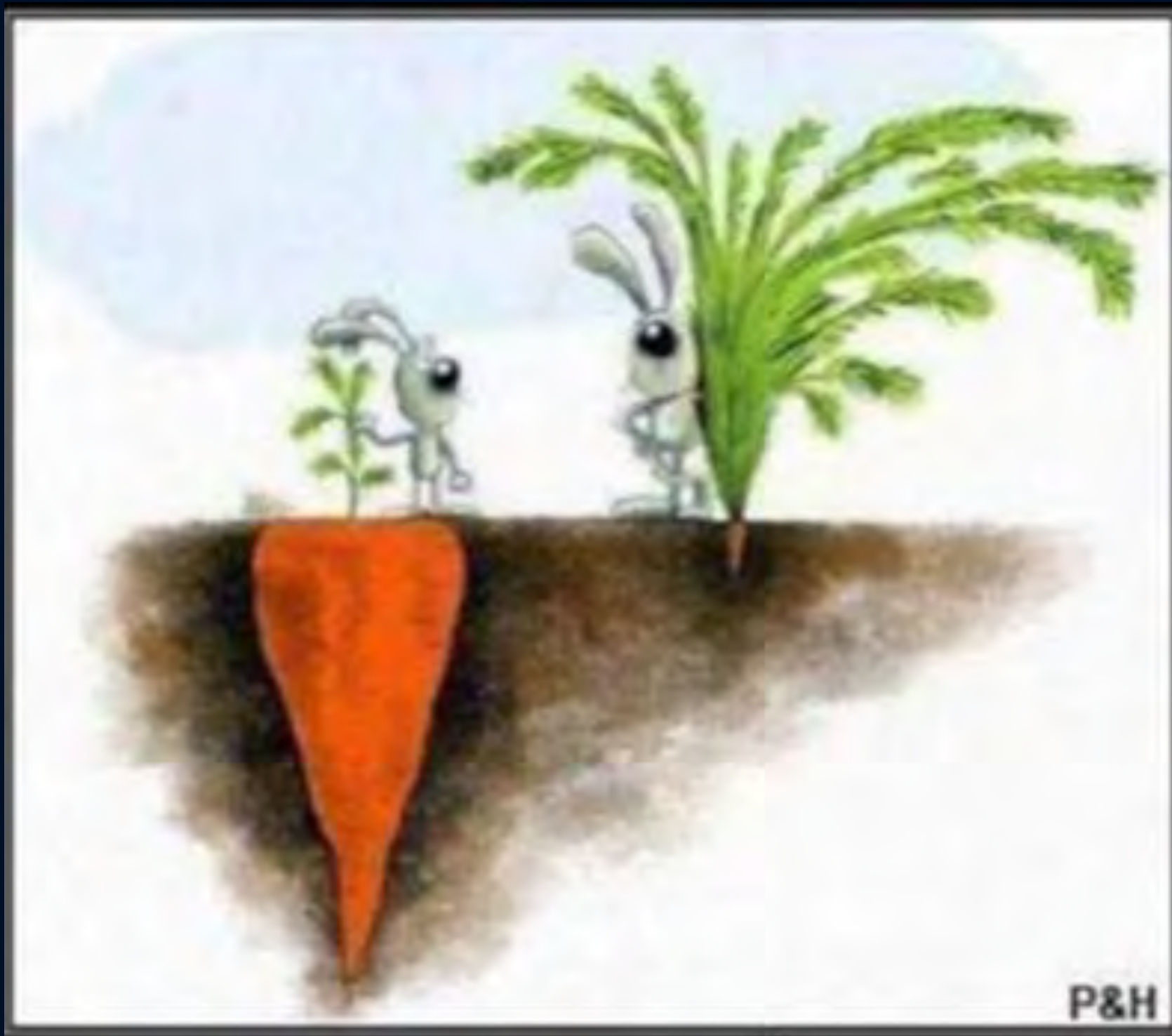


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5 E'S - EDUCATION

SUMMARY

STATE	United Health Foundation Ranking	League of American Bicyclists' Bike Friendly Cities
Kentucky	43	43
Tennessee	44	25



SUCCESS
It isn't always what you see.

QUESTIONS?

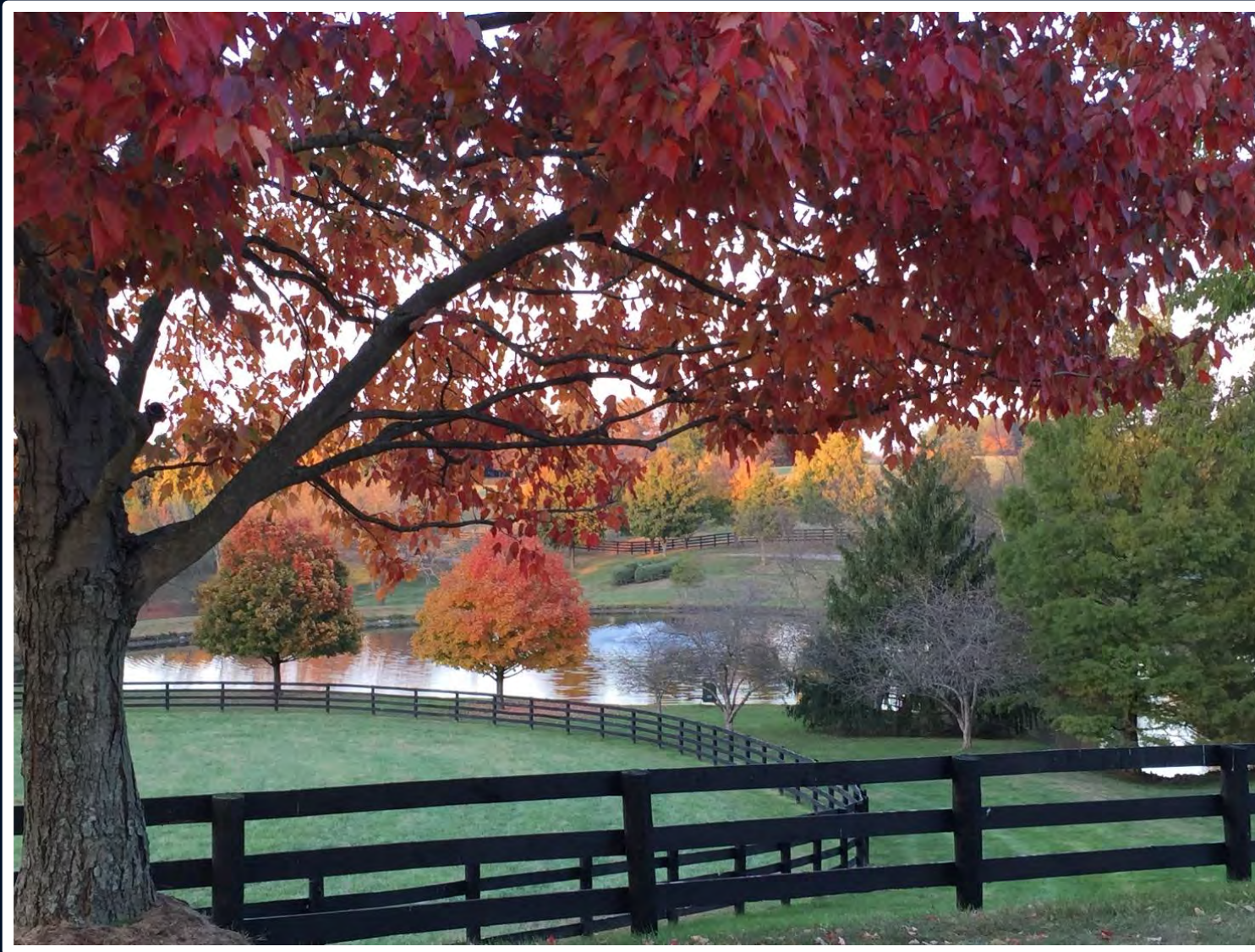


Photo by Bernadette Dupont

Bernadette Dupont

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