



— THE EASTERN  
TRANSPORTATION  
COALITION

CONNECTING FOR SOLUTIONS



# Freight Data and Planning Working Group Web Meeting

*March 22, 2023*

# Welcome

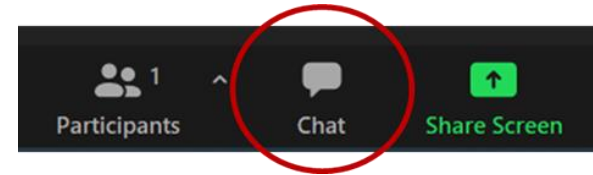
- We are using **Zoom Meeting**
- **VIDEO:** You are welcome to turn on your camera by pressing the camera icon in the bottom left corner of your screen
- **AUDIO (Computer):** Use your computer speakers and microphone by clicking the “Join Audio” button at the bottom left of the screen.
- **Alternate Audio (Phone):** Call into the meeting by dialing the phone number based on your location (provided in the confirmation email) and enter the Meeting ID at the prompt.
- Please keep your line muted when you are not speaking.
- **This web meeting is being recorded.**
- **Questions** with the audio or web? Please contact Esther directly via the chat box or email ([ekleit@kmjinc.com](mailto:ekleit@kmjinc.com))



# Asking Questions in Zoom Meeting

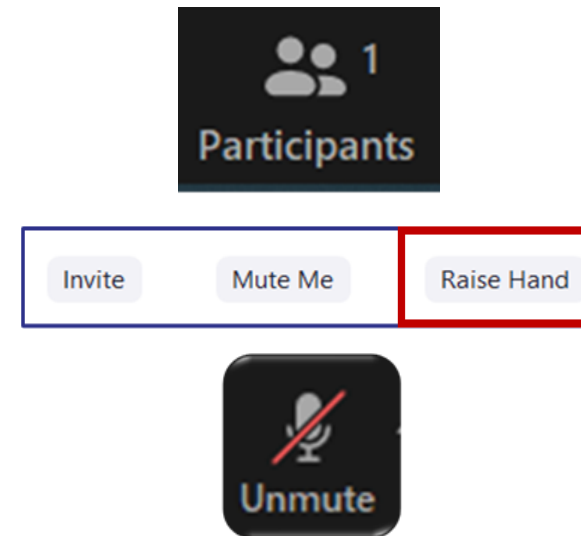
- **IN THE CHAT BOX**

- You may pose your questions using the Chat Box. Click on the chat icon at the bottom of your screen.
- The questions in the Chat Box will be monitored and answered at the end of the session.

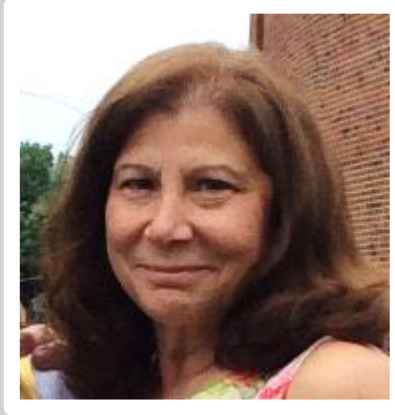


- **VERBALLY**

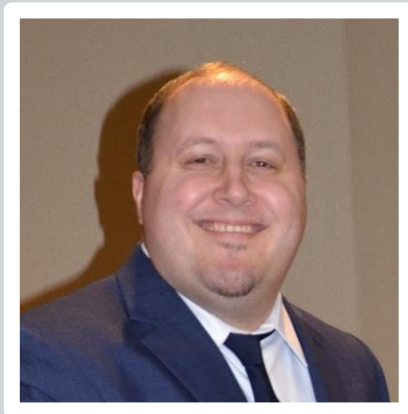
- Please raise your hand (click on the participants button at the bottom of the screen then scroll down to the bottom of the list of participants and click on the “Raise Hand” button) and unmute your line at the appropriate time.
- Please give your name and agency before asking your question
- **Please mute yourself when you are finished speaking**



# Welcome



**Marygrace Parker**, Freight Program Director,  
The Eastern Transportation Coalition



**Josh O'Neill**, Supervising Planner,  
Rhode Island Statewide Planning  
Freight Data and Planning Working Group Chair



# Agenda

Topic	Speaker
Welcome & Introductions	Marygrace Parker, The Eastern Transportation Coalition Josh O’Neill, RI Statewide Planning/Freight Data & Planning Working Group Chair
Spotlight Presentation: Innovative Use of TETC Dis-aggregated FAF Data	Sara Walfoort, Southwestern Pennsylvania Commission
Using disaggregated FAF data <ul style="list-style-type: none"><li>• Survey results</li><li>• Agency Roundtable discussion</li></ul>	Marygrace Parker and Agency members
Future Working Group Discussion Topics & Next Steps	Marygrace Parker, The Eastern Transportation Coalition



# Participating Agencies (by state)

<p><b>Alabama</b> Alabama DOT</p>	<p><b>Georgia</b> Georgia DOT</p>	<p><b>Maryland</b> Baltimore Metro Council Maryland DOT - SHA</p>	<p><b>New York</b> NYSDOT NYMTC PANYNJ</p>	<p><b>Tennessee</b> Tennessee DOT</p>
<p><b>Connecticut</b> ConnDOT</p>	<p><b>Kentucky</b> KYTC</p>	<p><b>Massachusetts</b> Boston Region MPO MassDOT Merrimack Valley PC</p>	<p><b>Pennsylvania</b> North Central RPO PennDOT DVRPC Southwestern PA Commission</p>	<p><b>USDOT</b> BTS</p>
<p><b>Delaware</b> DeIDOT Wilmapco</p>	<p><b>Maine</b> Maine DOT</p>	<p><b>New Jersey</b> NJDOT NJTPA</p>	<p><b>Rhode Island</b> RI Statewide Planning RIDOT</p>	



# Spotlight Presentation: Innovative Use of TETC Dis-aggregated FAF Data



**Sara Walfoort**

*Freight Planning Manager*

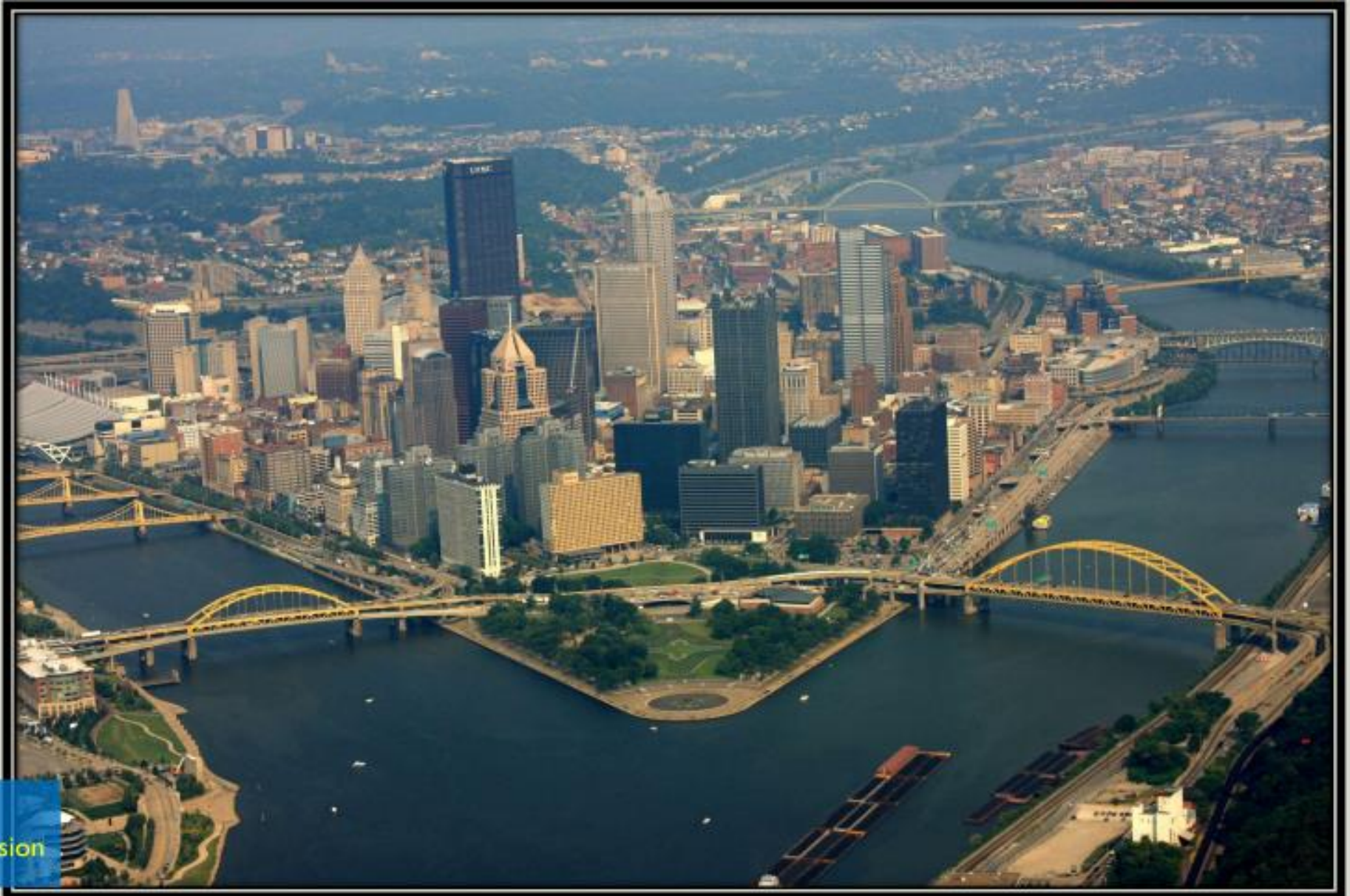
Southwestern Pennsylvania Commission



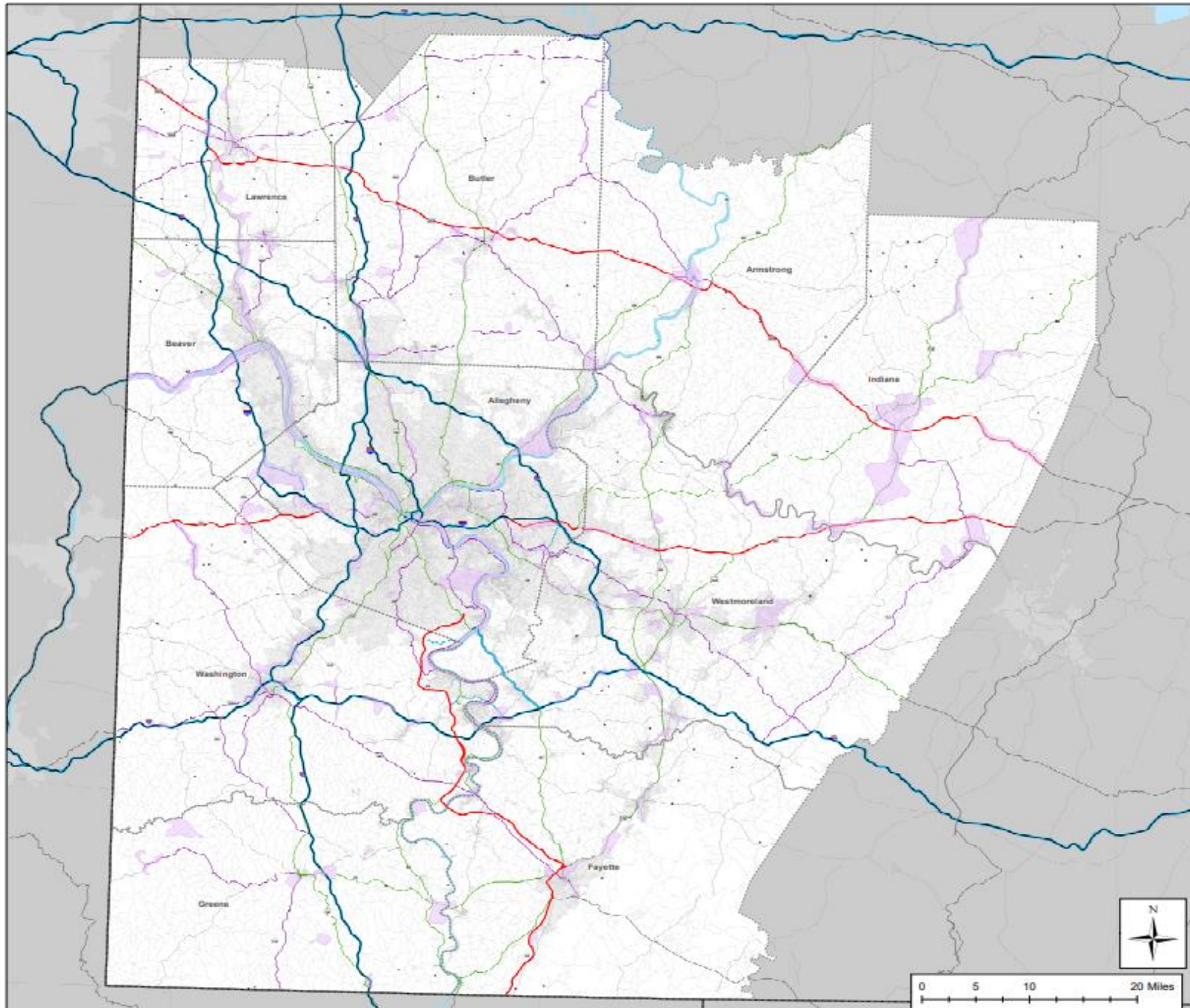
# Innovative Use of TETC Dis-aggregated FAF Data

Southwestern Pennsylvania Commission  
Briefing Paper and Marine Highway Application  
December 2022



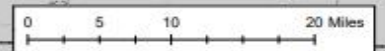


Sara Walfoort  
Southwestern PA Commission



- Legend**
- Freight Activity**
    - Localized Freight Activity
    - ▭ Freight Activity Cluster
  - Regional Freight Network Candidates**
    - Regional Routes
    - Intercounty Routes
    - Connector Routes
  - National Highway Freight Network**
    - National Highway Freight Network
    - PHFS Intermodal Connectors (Freight Related)
  - Roadways**
    - Interstates
    - U.S. Highways
    - State Highways
    - Secondary Roads
  - Boundaries**
    - ▭ Urbanized Areas
    - ▭ County Boundaries
    - ▭ State Boundaries

Why did we need data?  
 What data did we need?



Did we really  
need MORE  
data?

- Commodity flow a critical element of freight analysis
- Big Data Sources:
  - Commodity Flow Survey
  - Bureau of Transportation Statistics
  - National Transportation Atlas Database
  - INRIX
  - RITIS
  - LPMS (USACE)

Strategic Decision:  
Use the right tool  
for the job

- A regional synopsis of the FAF5 and TETC data that focused on changes from the 2017 Freight Plan
- Data is collected and aggregated based on *regions*
- “Freight does not recognize jurisdictional boundaries...”



# Metropolitan Planning Organizations in Pennsylvania



Map No.

- | Map No. | MPO  |
|---------|--|
| 1       | Adams County Rural Area                      |
| 2       | Altoona Urbanized Area                       |
| 3       | Centre Region Urbanized Area                 |
| 4       | Delaware Valley Regional Planning Commission |
| 5       | Erie Urbanized Area                          |
| 6       | Franklin County Rural Area                   |
| 7       | Harrisburg Urbanized Area                    |
| 8       | Johnstown Urbanized Area                     |
| 9       | Lancaster Urbanized Area                     |
| 10      | Lebanon County Rural Area                    |
| 11      | Lehigh Valley Urbanized Area                 |

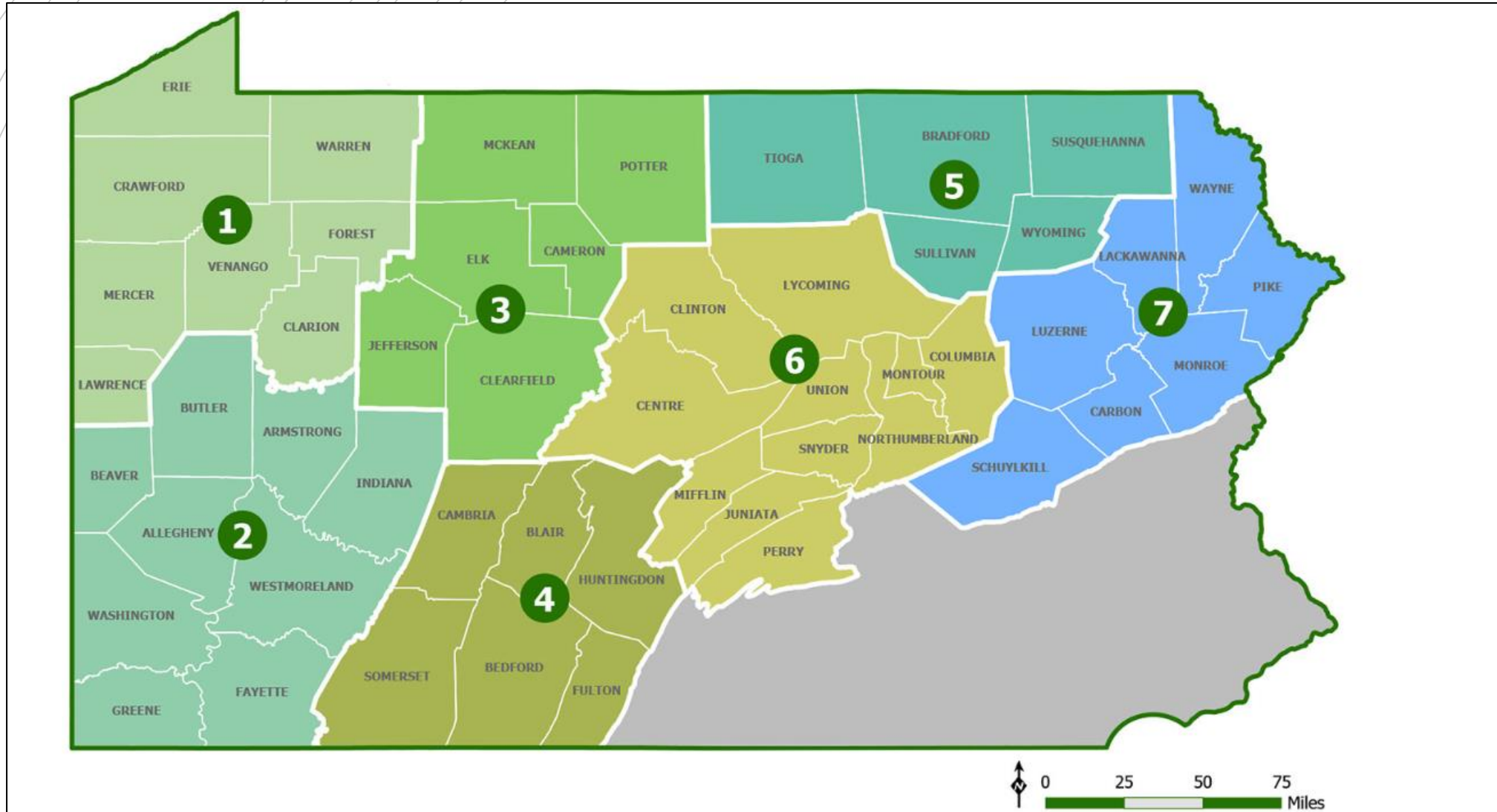
Map No.

- | Map No. | MPO  |
|---------|--|
| 12      | North Central Pennsylvania Rural Area      |
| 13      | Northeastern Pennsylvania Rural Area       |
| 14      | Northern Tier Rural Area                   |
| 15      | Northwestern Pennsylvania Rural Area       |
| 16      | Reading Urbanized Area                     |
| 17      | SEDA-COG Rural Area                        |
| 18      | Scranton/Wilkes-Barre Urbanized Area       |
| 19      | Mercer County Regional Planning Commission |
| 20      | Southern Alleghenies Rural Area            |
| 21      | Southwestern Pennsylvania Commission       |
| 22      | Williamsport Urbanized Area                |
| 23      | York Urbanized Area                        |

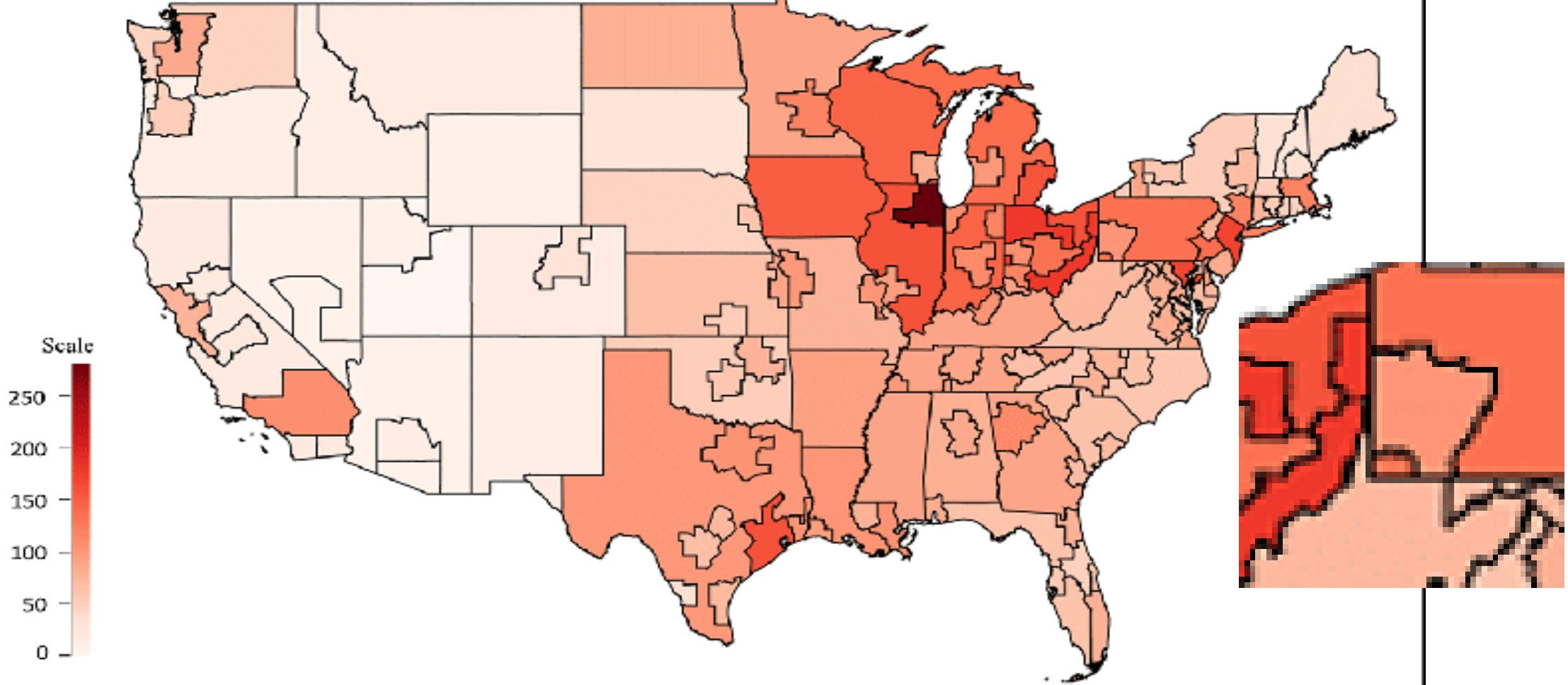
July 2003

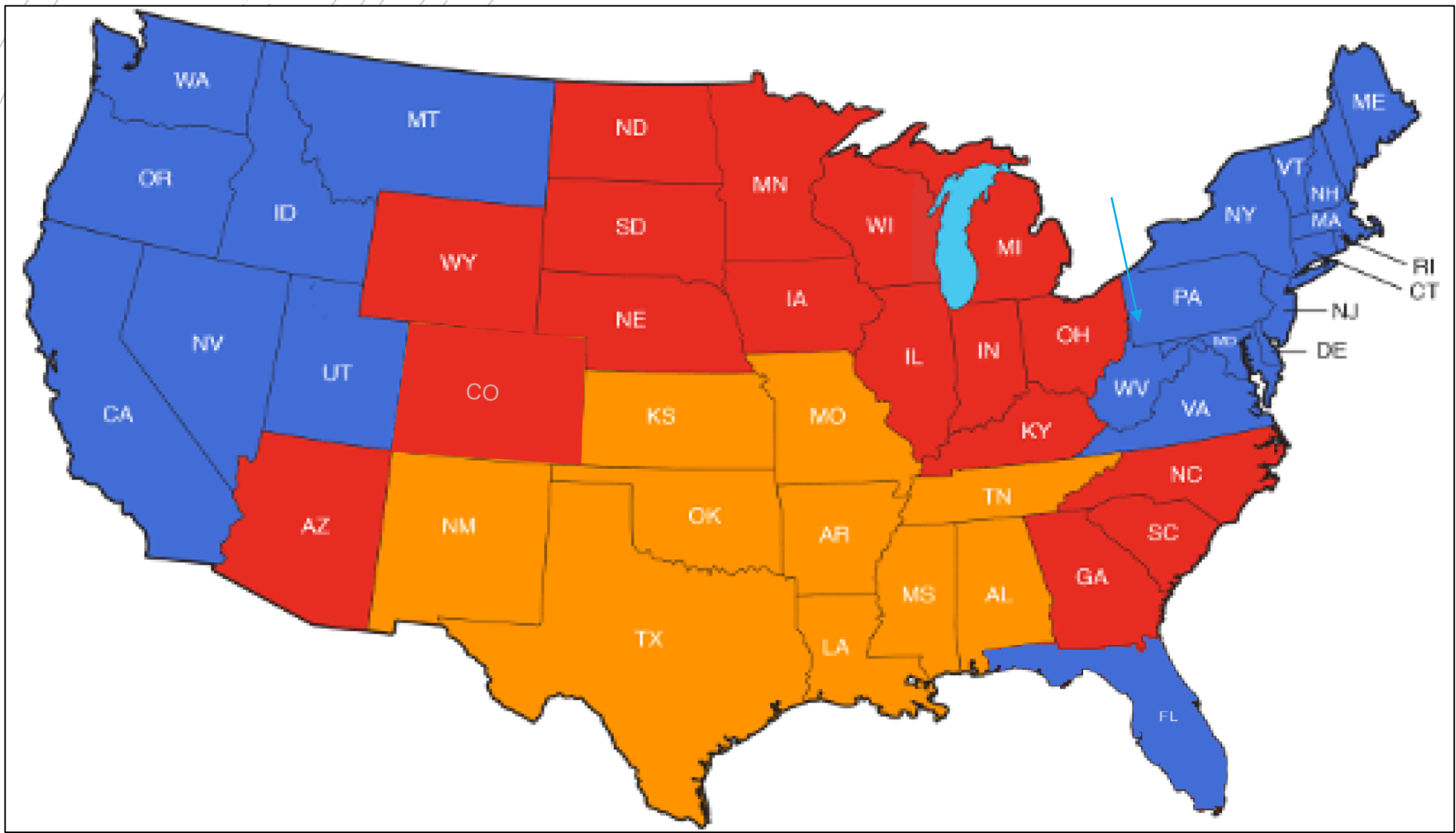
SOUTHWESTERN PENNSYLVANIA COMMISSION: 425 Sixth Avenue, Suite 2500, Pittsburgh PA 15219-1852  
 Phone: (412) 391-5590 Fax: (412)391-9160 E-Mail: [comments@spcregion.org](mailto:comments@spcregion.org) [www.spcregion.org](http://www.spcregion.org)

# Local Development Districts in Pennsylvania (ARC)



# Representation of FAF Zones





March 22, 2023



Dis-aggregated  
FAF data provided  
*real information*



## Our goal was to understand how freight movement patterns had changed since the last Regional Freight Plan

	Data	Information
Description	Raw facts and figures which helps to develop ideas or conclusion.	Findings/Analysis from data which make meaningful information as per the need.
Format	It could be in the form of character, letters, numbers or anything.	Ideas and inferences extracted from data's and properly arranged.
Support for Decision Making	It cannot be used for decision making.	Used for decision making.
Significance	Data alone has no significance.	It is significant by itself.
Usefulness	May or may not be useful because it may also contain irrelevant data.	It is useful and valuable as it is the inferred from data.
<i>Source: EDUCBA.com</i>		

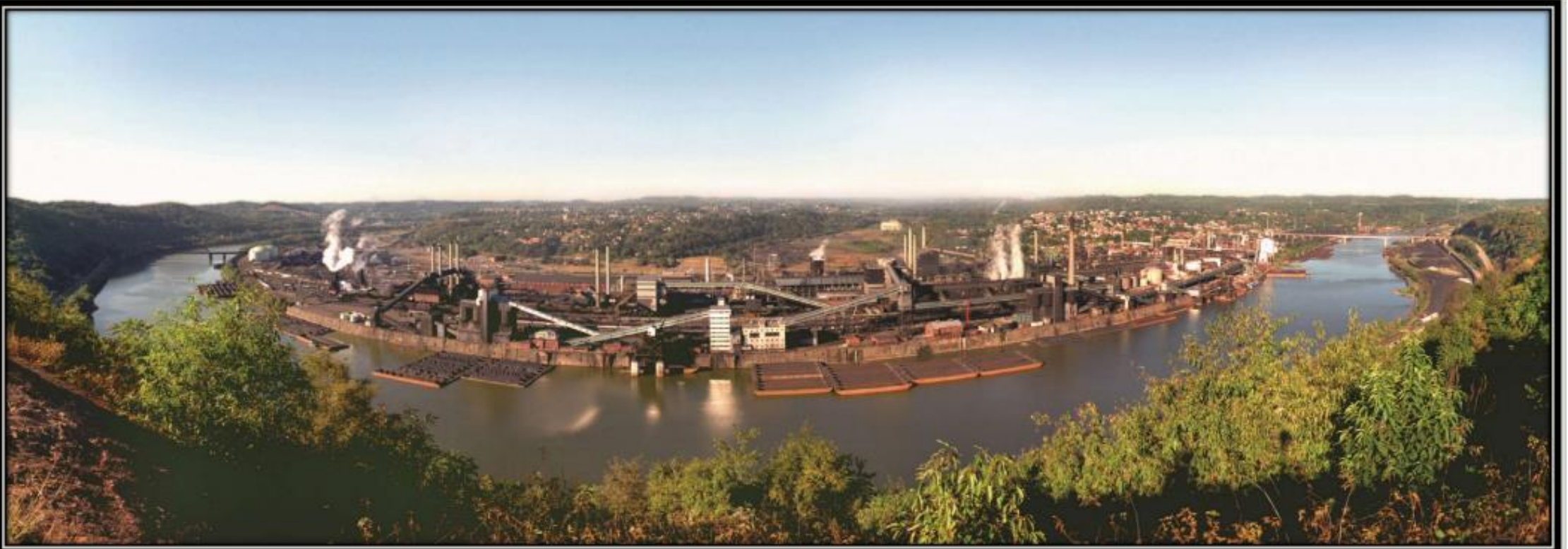
## What we found using TETC dis-aggregated data

- Our resources were better spent identifying new trends and patterns post-pandemic than tracking trends through the pandemic
- Next phase of Freight Plan Update will focus on FAF5 and TETC data resources, with route analyses available from INRIX and RITIS rather than full O/D commodity flow assessment.
- **Cost savings to region: a six figure data contract could be deferred for several years with no meaningful loss to planning output**

# Serendipitous results

- BIL has released broad new funding and program activities that have cross-over influence on the regional freight program
- Our ability to react to such opportunities depends in large part to our anticipatory readiness.
- Can we tell the story of our funding need and eligibility?
- FAF5 and TETC helped in one unique, but critical area

## The River System that Built America



*Photo used with permission of USS*

March 22, 2023

# NOFO Response: Key Elements

## US MARINE HIGHWAY ROUTE PROGRAM (NON-BIL)

- MH Program offers federal funding opportunities in support of commercial navigation / ports on the inland river system
- Ohio River was included in original MH designation (M-70); “tributary rivers” were not included in designation
- Opportunity to request MH designation for Allegheny and Monongahela Rivers (December 2022)

## BRIEFING PAPER FOR SPC COMMISSION

- Commercial (barge) traffic on local rivers is virtually invisible to local residents
- Reduced river traffic associated with coal decline is clearly apparent, but river movement is still vital regional transportation option
- Local highways, railroads unable to carry deferred / reassigned traffic

## Consensus building and storytelling

- One task (briefing paper) was to create a regional voice affirming that the transportation benefits of the river system extend well beyond the riverfront communities
- Second task (Marine Highway Route Designation application) was to demonstrate the value of the rivers in regional and interstate freight movement
- 20 years ago, our rivers carried 50 million tons of cargo, making Pittsburgh the largest inland port in the US
- Today, they carry less than half that amount, but still handle more cargo than the Port of Boston or Galveston

## Why such a hard story to tell?

- Our data points were highly disaggregated along 200 miles of river front
- Rivers form the border between virtually every data assessment unit (TAZ, FAF, Zip Code)
- Traditional data source was USACE LPMS, an asset based system that measured activity at each of 17 locks
- Lowest available data unit was the County – and available most readily from TETC
- By drilling down to the County level, and then focusing on movements made by water, we could make good progress on telling the story of our waterway *as a transportation network*



# Asset Management to System Analysis

- Best envisioned by correlating to Interstate System where only the only measurement of truck activity is available at the interchanges.
- Network linkages require tracking each vehicle through the system
- TETC data provides the connective tissue to “create” network out of individual river segments, or pools

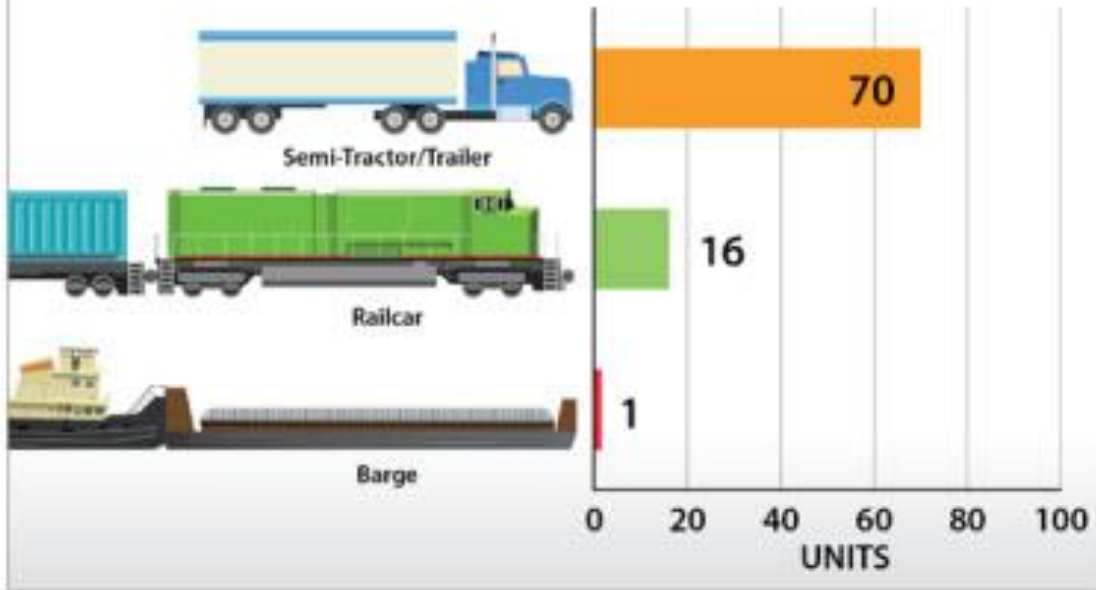
# TETC Data Outputs

- Using consultant created Excel Spreadsheets and Pivot Tables, data for waterborne movement by county (and destination pair) was extracted
- Clear delineation of intra-regional, tri-state and national trade partnerships based on the inland river system emerged
- Dataset included a more comprehensive delineation of commodity type, an unexpected bonus

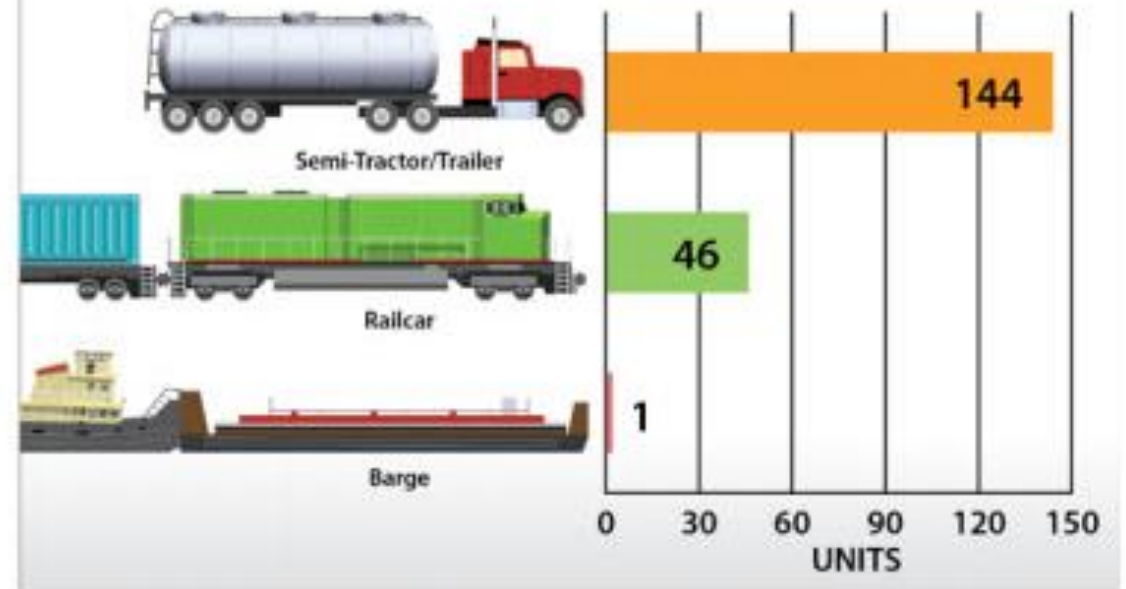
## Use of data in short term

- Trade data already used in Port of Pittsburgh Commission application for US Marine Highway Route designation
- Has enhanced regional understanding of the importance of this transportation mode in the multimodal network
- Has enhanced appreciation of the benefits to the surface transportation network that waterborne traffic creates through congestion reduction and wear and tear

## UNITS NEEDED TO CARRY APPROXIMATELY 1750 SHORT TONS OF DRY CARGO



## UNITS NEEDED TO CARRY APPROXIMATELY 27,500 BBL OF LIQUID CARGO



Foreign Origin	Domestic Origin	Domestic Destination	Domestic Mode	Foreign Export Mode	Commodity	TradeType
Not Foreign	West Virginia	Allegheny, PA	Water	No foreign mode	Coal	Domestic Only
Not Foreign	West Virginia	Beaver, PA	Water	No foreign mode	Coal	Domestic Only
Not Foreign	Rest of OH	Allegheny, PA	Water	No foreign mode	Coal	Domestic Only
Not Foreign	Rest of IN	Allegheny, PA	Water	No foreign mode	Gravel	Domestic Only
Not Foreign	Beaumont TX	Allegheny, PA	Water	No foreign mode	Coal-n.e.c.	Domestic Only
Not Foreign	Rest of LA	Allegheny, PA	Water	No foreign mode	Nonmetallic minerals	Domestic Only
Not Foreign	Rest of IN	Fayette, PA	Water	No foreign mode	Gravel	Domestic Only
Not Foreign	Fayette, PA	Westmoreland, PA	Water	No foreign mode	Gravel	Domestic Only
Eastern Asia	New Orleans LA-MS (LA Part)	Allegheny, PA	Water	No foreign mode	Nonmetallic minerals	Import
Europe	Houston TX	Allegheny, PA	Water	No foreign mode	Mixed freight	Import
Not Foreign	Butler, PA	Memphis TN-MS-AR (TN Part)	Water	No foreign mode	Crude petroleum	Domestic Only
Not Foreign	Allegheny, PA	Houston TX	Water	Water	Basic chemicals	Export
Not Foreign	Beaumont TX	Armstrong, PA	Water	No foreign mode	Coal-n.e.c.	Domestic Only
Not Foreign	Washington, PA	Chicago IL-IN-WI (IL Part)	Water	Water	Coal	Export
Not Foreign	Westmoreland, PA	Memphis TN-MS-AR (TN Part)	Water	No foreign mode	Crude petroleum	Domestic Only
Eastern Asia	New Orleans LA-MS (LA Part)	Washington, PA	Water	No foreign mode	Nonmetallic minerals	Import

Domestic Origin	Domestic Destination	Domestic Mode	Commodity	distons_2017	disvalue_2017
West Virginia	Allegheny, PA	Water	Coal	8354.58	\$309.980
West Virginia	Beaver, PA	Water	Coal	3175.50	\$117.820
Rest of OH	Allegheny, PA	Water	Coal	1552.68	\$57.370
Washington, PA	Westmoreland, PA	Water	Gravel	76.58	\$0.610
Armstrong, PA	Allegheny, PA	Water	Gravel	54.70	\$0.430
Washington, PA	Washington, PA	Water	Gravel	45.05	\$0.360
Fayette, PA	Allegheny, PA	Water	Gravel	41.85	\$0.330
Washington, PA	Westmoreland, PA	Water	Natural sands	41.74	\$0.300
Washington, PA	Memphis TN-MS-AR (TN Part)	Water	Crude petroleum	31.35	\$9.370
Armstrong, PA	Allegheny, PA	Water	Natural sands	29.81	\$0.210
Grand Rapids MI	Washington, PA	Water	Waste/scrap	28.87	\$7.230
Rest of LA	Washington, PA	Water	Nonmetallic minerals	21.68	\$0.910
Butler, PA	Allegheny, PA	Water	Natural sands	20.49	\$0.150
Washington, PA	Beaver, PA	Water	Natural sands	19.64	\$0.140

## Longer term implications

- Highways and bridges are impacted as commodity movement in the event that cargo moves from river to truck (rail is available but not currently compatible)
- Earlier UONS Traffic Deferral Study revealed that greatest impact would fall on roadways paralleling the rivers, and on major river-crossing bridges.
- In previous TIP we allocated to \$86 million to maintain those bridges to accommodate existing traffic volumes
- Enables multi-program assessment of freight need/costs
- Freight Improvement Program development enhancement

# Lessons Learned

- The inland waterways are the only regional network asset currently operating at less than capacity
- Understanding of the role of the rivers in national and export trade is extremely valuable in heightening awareness
- The more we can do in-house, or at extremely low-cost, the more immediately we can access the data, and begin, build and grow the story of our full regional transportation network



## Enhancements would be nice

- One of the largest limitations in the TETC data is that it relies on FAF5 movement types
- A movement that goes by truck from a farm processing center to a river port, travels by barge some distance and is then offloaded to another truck for final delivery may be classified as a water movement or as “multimodal and mail” movement
- Ground-truthing can resolve some, but not all such, questions

Domestic Origin	Domestic Destination	Domestic Mode	Commodity	distons_2017
Rest of MN	Allegheny, PA	Multiple modes & mail	Metallic ores	1604.29
Houston TX	Allegheny, PA	Multiple modes & mail	Plastics/rubber	123.06
Allegheny, PA	Kansas City MO-KS (KS Part)	Multiple modes & mail	Base metals	26.72
Rest of MN	Fayette, PA	Multiple modes & mail	Metallic ores	26.51
Philadelphia PA-NJ-DE-MD (NJ Part)	Fayette, PA	Multiple modes & mail	Natural sands	24.51
Greene, PA	Rest of AL	Multiple modes & mail	Gravel	24.34
Allegheny, PA	Memphis TN-MS-AR (TN Part)	Multiple modes & mail	Base metals	23.23
Houston TX	Washington, PA	Multiple modes & mail	Plastics/rubber	22.07
Baton Rouge LA	Allegheny, PA	Multiple modes & mail	Plastics/rubber	21.77
New Orleans LA-MS (LA Part)	Allegheny, PA	Multiple modes & mail	Basic chemicals	17.86
Detroit MI	Allegheny, PA	Multiple modes & mail	Waste/scrap	17.78
Westmoreland, PA	Atlanta GA	Multiple modes & mail	Base metals	17.75



Sara Walfoort  
Manager, Freight Planning  
Southwestern PA Commission

Questions? Comments?

[Swalfoort@spcregion.org](mailto:Swalfoort@spcregion.org)



# Discussion: Using Disaggregated FAF Data

*Marygrace Parker  
Agency Members*

# FAF Data Survey Summary & Reminder

- FAF Disaggregated Data Survey
- Data files provided by TETC to member agencies in 2021/2022
- Four agencies completed the survey – THANKS!
  - Two agencies currently use the disaggregated FAF data
  - One agency is planning to use the FAF data in future projects for comparison during local freight planning technical assistance
- **Please take a few minutes to complete this very brief survey -**  
**<https://www.surveymonkey.com/r/TETC-FAF-Data>**



# Using the FAF Disaggregated Data: Tennessee DOT

- Used the FAF disaggregated data files for the following:
  - Internal analysis to determine commodity flows along TN's functional classes of different road
  - Examining the different types of commodities going in and out of Tennessee
- Did not use the data for any of the recent updating of the state freight plan currently under review by FHWA
- Thankful for another data source by the ETC and the state collaboration and use of the data in the future



# Using the FAF Disaggregated Data: New York State DOT

- Purchases Transearch for commodity flow data
  - Uses Transearch to look at through freight
  - Through freight is the majority of freight for value and tonnage moving through New York State
- Utilizes FAF data as another tool in the toolbox for looking at commodity flow
  - Is a secondary data source
- Offered disaggregated FAF and/or Transearch to the MPOs





**Future Working Group Discussion Topics**  
**Next Steps**  
*Marygrace Parker*



# Previous Freight Data & Planning Working Group Activities

- Freight Data Vendor Forum – 9/21/2022
  - 8/12/2022: Request for questions to ask the vendors during forum
  - 10/5/2022: Follow-up documents (for each vendor) - Slides, Q&A Summary, and a recording of the forum
- 11/8/22 - Examples of TDM Vendor Data for State Freight Plan Updates
  - Each Freight Data Vendor (Geotab, INRIX, Quetica, Streetlight Data) provided brief examples on agencies are using their data for State Freight Plans
- FD&PWG Web Meeting – 12/15/22
  - 1/17/23: Follow-up documents: Slides, Q&A/Roundtable Summary, and a recording of the meeting



# Polling Question 1

1. Is there a particular freight data vendor that you would like to hear from?
  - a. Geotab
  - b. INRIX
  - c. Quetica
  - d. Streetlight
  - e. Other (please provide)



# Polling Question 2

What topics would you like to discuss at upcoming Freight Data & Planning Working Group meetings?

- a. Multimodal Freight
- b. WIM
- c. Freight Origin-Destination/Routing
- d. Bills of Lading
- e. Long haul truck traffic
- f. Other (please provide)



# Upcoming Freight Data & Planning Working Group Meeting

## SAVE THE DATE

- June 21, 2023 –
  - 1:30pm-3:00pm, ET
  - Topic to be determined



# Remaining Questions or Comments?



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# THANK YOU

Marygrace Parker, Freight Program Director

The Eastern Transportation Coalition

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