



Freight Data and Planning Working Group Web Meeting

September 13, 2023

Welcome

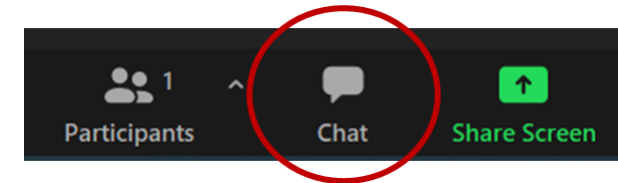
- We are using **Zoom Meeting**
- **VIDEO:** You are welcome to turn on your camera by pressing the camera icon in the bottom left corner of your screen
- **AUDIO (Computer):** Use your computer speakers and microphone by clicking the “Join Audio” button at the bottom left of the screen.
- **Alternate 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)



Asking Questions in Zoom Meeting

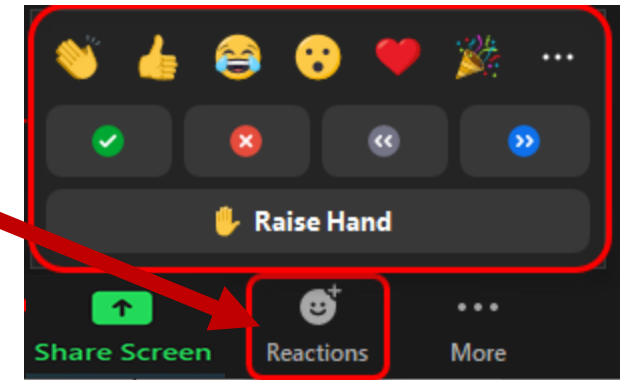
- **In the Chat Box**

- You may pose your question using the Chat Box. Click on the chat icon at the bottom of your screen



- **Verbally**

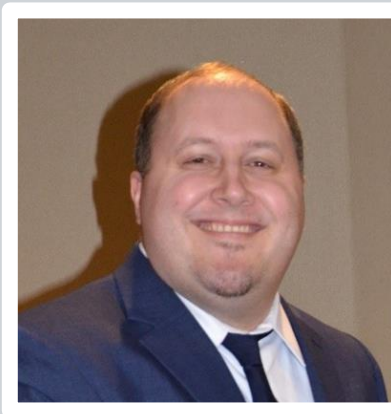
- Please raise your hand (click on the reactions button at the bottom of the screen then select the “Raise Hand” button), then you can unmute your line.
- Please give your name and organization before asking your question
- All questions will be monitored and answered at the end of the session.
- Please 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



Coalition Update – Recent & Upcoming Events

RECENT

- ✓ Info Sharing Event: Considerations for Digital Infrastructure – June 28, 2023
- ✓ RITIS User Group Meeting – July 27, 2023
- ✓ Truck Parking Quarterly Working Group Meeting – August 4, 2023

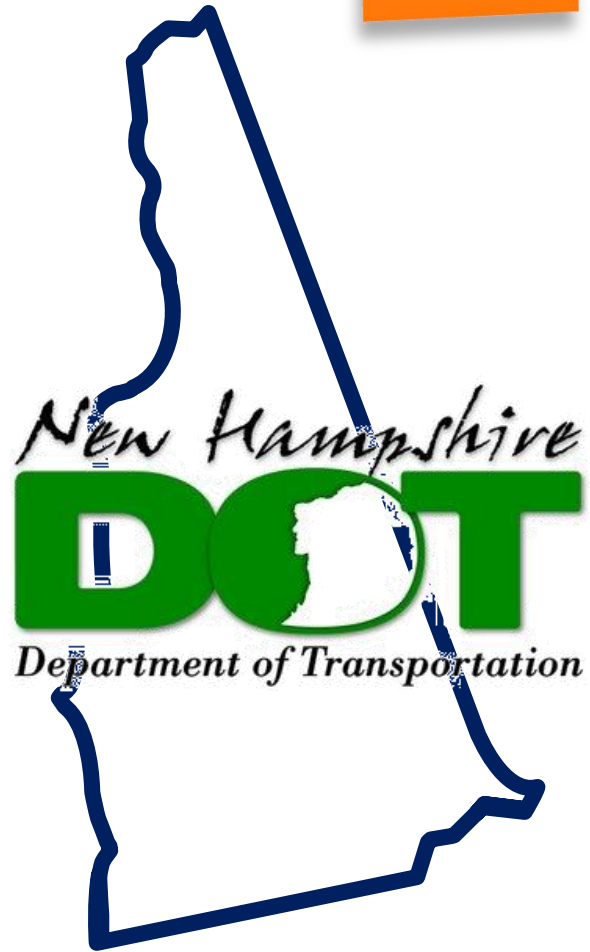


UPCOMING

- Regional HOGs In-person Exchanges with Virtual Reality TIM Training Sessions (*invite only*) – Oct-Dec 2023
- RITIS User Group Meeting – October 19, 2023
- Travel Information Summit, Raleigh, NC & via web (*invite only*) – October 24 & 25, 2023
 - **Trucking Session (Virtual) – October 24, 2023**
- RITIS Workshop – November 2023
- Truck Parking Working Group Meeting – November 3, 2023



W e l c o m e



— THE EASTERN —
TRANSPORTATION
COALITION

CONNECTING FOR SOLUTIONS



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 1: <ul style="list-style-type: none">Philly Freight Finder - Freight Data Portal for the Delaware Valley	Kristen Scudder, Delaware Valley Regional Planning Commission
Spotlight Presentation 2: <ul style="list-style-type: none">"The Rhode Island Freight Finder" - Rhode Island's Freight and Goods Movement Plan Mapping Application	Josh O'Neill, RI Statewide Planning/ Freight Data & Planning Working Group Chair
Polling & Discussion Questions	Marygrace Parker, The Eastern Transportation Coalition



Participating Agencies (by state)

Alabama Alabama DOT	Georgia Georgia DOT	Maryland Baltimore Metro Council Maryland DOT - SHA	New Jersey NJDOT NJTPA	Rhode Island RI Statewide Planning	Virginia Virginia DOT
Connecticut ConnDOT	Kentucky KYTC	Massachusetts Boston Region MPO MassDOT	New York NYSDOT	Tennessee Tennessee DOT	Washington DC District DOT
Delaware DeIDOT Wilmapco	Maine Maine DOT	New Hampshire New Hampshire DOT	Pennsylvania PennDOT DVRPC Southwestern PA Commission	Vermont Vermont AOT	USDOT BTS FHWA



Spotlight Presentation: Philly Freight Finder



Kristen Scudder,
Freight Program Manager
DVRPC



September 13, 2023

PhillyFreightFinder

Freight Data Portal for the Delaware Valley

TETC Freight Data and Planning Working Group



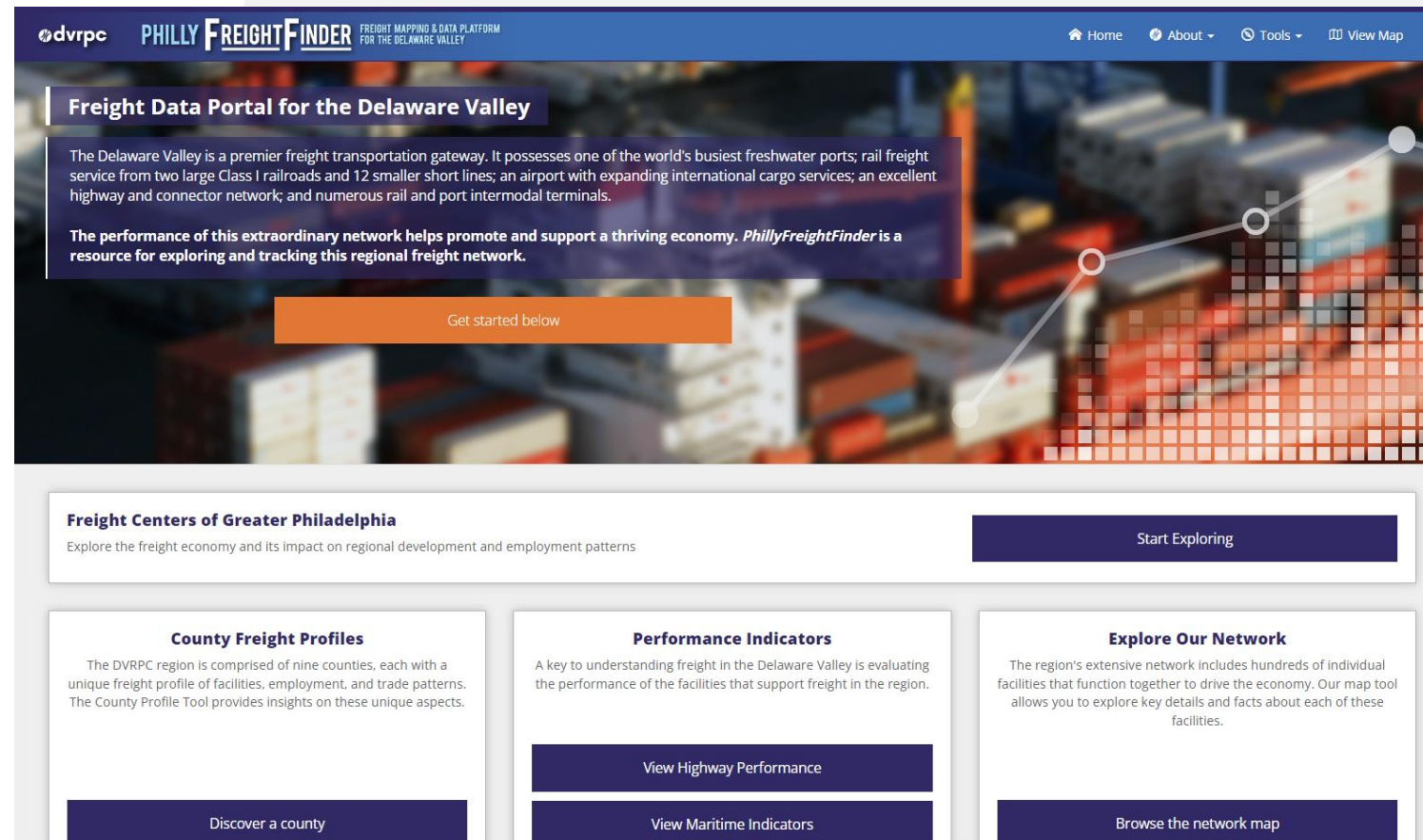
Kristen Scudder
Freight Program Manager
Delaware Valley Regional Planning Commission

Background

An **online, interactive** platform for sharing freight network **data to enhance the understanding** of performance and value of freight in the regional economy

LAUNCHED IN 2013

With support from the DVRPC Freight Advisory Committee, the initial product was made public in 2013. The FAC assisted with identification of data and included a mix of public and private-sector members.



Why build *PhillyFreightFinder*

- Expand reach of freight planning efforts
- Improve **visibility + availability** of freight data
- **Educate** regional planners and the public
- Develop **better data sharing** with public- and private-sectors



- County planners have expanded freight planning capacity
- Engaged new partners (public + private)
- Centralized, accessible data resource for region
- Foundation for additional performance measure tracking

ADDED VALUE TO OUR WORK

being a resource **improves visibility** of all our products and **improves the quality and level** of input we get in our process

Components of PFF

FRONTEND APPLICATION

- Built 100% in-house
- Flexible, lightweight
- Open Source code
- Independent of Esri stack



BACKEND DATA WAREHOUSE

- ArcGIS Server + PostgreSQL
- Python for data intake
- Automation of data updates built-in to workflow



Data

+



Maps

+



Code

Data, data, and more data!

PRIORITIZE DATA

- essential to understanding the **intermodal supply** for freight movements;
- that explains freight demand and **supply-chain logic**; and
- that measures **system performance**.

4
internal

4
private

11
public

September 13, 2023

CONSIDERATIONS

- Practical use or application
- Cost to acquire
- Time/cost of processing
- Computational requirements
- Utility and availability over time

WHAT WE LEARNED

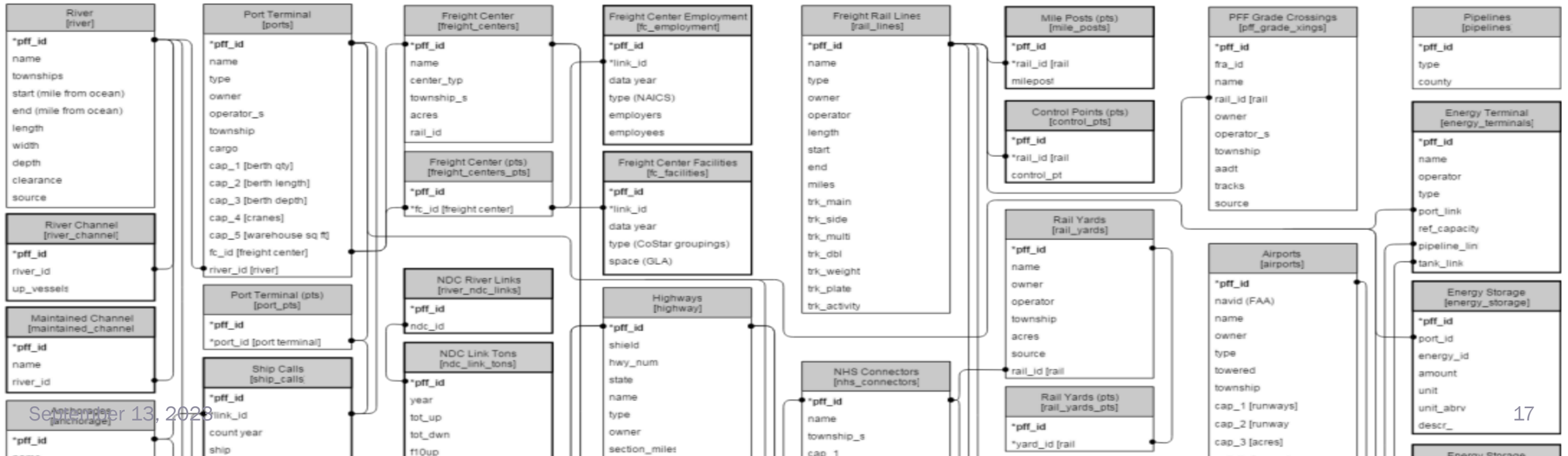
- **Recency/frequency** is a key consideration
- **Consistency and reliability** impact the utility of data for planning and tracking purposes
- Telling the story of freight with data requires an ongoing commitment

TOOLS WE USE FOR DATA MANAGEMENT



Schema Design

- Helpful step to understand context/relationships
- Key for planning optimization
- Provides documentation
- Foundation for Extract-Transform-Load process



- Only what we need
- Optimize for analysis/use
- Data validation checks

WHAT SHOULD WE AUTOMATE?

```
import urllib2
from operator import itemgetter
import yaml, csv

csa_data = []
top_twofive = []
port_lookup = []

url = 'http://api.census.gov/data/2013/acs5?
get=NAME,B01001_001E&for=metropolitan+statistical+area/micropolitan+statistical+area:*&key=f1ebba0078fa76b97
94f7070402b4b72095564b1'
response = urllib2.urlopen(url).read()
parsed_json = yaml.safe_load(response)

for msa in parsed_json[1:]:
    csa_data.append([msa[0],int(msa[1]),msa[2]])

sorted_msa = sorted(csa_data, key=itemgetter(1), reverse=True)

for msa in sorted_msa[:25]:
    top_twofive.append(msa[2])

print top_twofive

with open('port-msa-match.csv', 'rb') as f:
    reader = csv.reader(f)
    for row in reader:
        if row[5] in top_twofive:
            port_lookup.append(row)
    print port_lookup
```

KEY CONSIDERATIONS

automation is an effective tool to reduce future work **but** dependent on data source consistency. Error reporting and log tables are essential

Open Freight App



PHILLY FREIGHT FINDER

Home About Tools View Map

Open Freight App

Open Freight App is a project by the Delaware Valley Regional Planning Commission (DVRPC) to share with regional and national transportation planning partners the framework that is the basis for the [PhillyFreightFinder](#) web mapping and data application. Through this effort, DVRPC hopes that county planning agencies, metropolitan planning organizations and state departments of transportation, and economic development agencies can leverage this framework to further their efforts in making freight transportation data public. By utilizing the Open Freight App framework, rather than building from scratch, planning agencies can focus their time and resources on the development of data sets that can serve to improve the access to information on freight facilities and their role in economic development and transportation across the country. Open Freight App would serve as a self-hosted solution to offer these datasets to other planners, economic developers, public officials, decision-makers and the general public.

View Project on GitHub

Details

Open Freight App, is a white-label, open source version of the DVRPC [PhillyFreightFinder](#) application. This version is available for download and open for replication by any user. This version will have no branding or color styling applied and a standardized icon set will be provided for a sample set of data. In addition, the project will include the following:

- Full documentation and guide on:
 - Adding map functionality for layers and features
 - Creating info windows for feature data
 - Creating and modifying legend and layer controls
 - Populating search criteria
 - Converting ArcGIS Shapefiles to lightweight GeoJSONs for use in the map
 - and more!
- Fully commented versions of all necessary HTML, JavaScript and CSS files
- A starter set of freight facility icons
- License and credit materials

Advanced coding support is not included with this product. While staff at DVRPC can field general questions and assist with certain aspects of the project, formal support in the form of coding, styling, graphic design and advanced development must be done by an outside consultant. If you require more advanced support [please contact us](#) for more information.

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<> Code Issues 6 Pull requests Actions Projects Security Insights

master 3 branches 0 tags Go to file Code

DVRPCfreight Merge pull request #12 fr... 2172c02 on Feb 18, 2016 24 commits

data	Initial commit	9 years ago
lib	Fix to table/infobox_ height issues	7 years ago
.gitignore	Add proper selected icon support	8 years ago
LICENSE.md	Initial commit	9 years ago
README.md	Update README.md	9 years ago
index.html	Initial commit	9 years ago

README.md

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About

No description, website, or topics provided.

- Readme
- View license
- Activity
- 12 stars
- 2 watching
- 6 forks

Report repository

Releases

No releases published

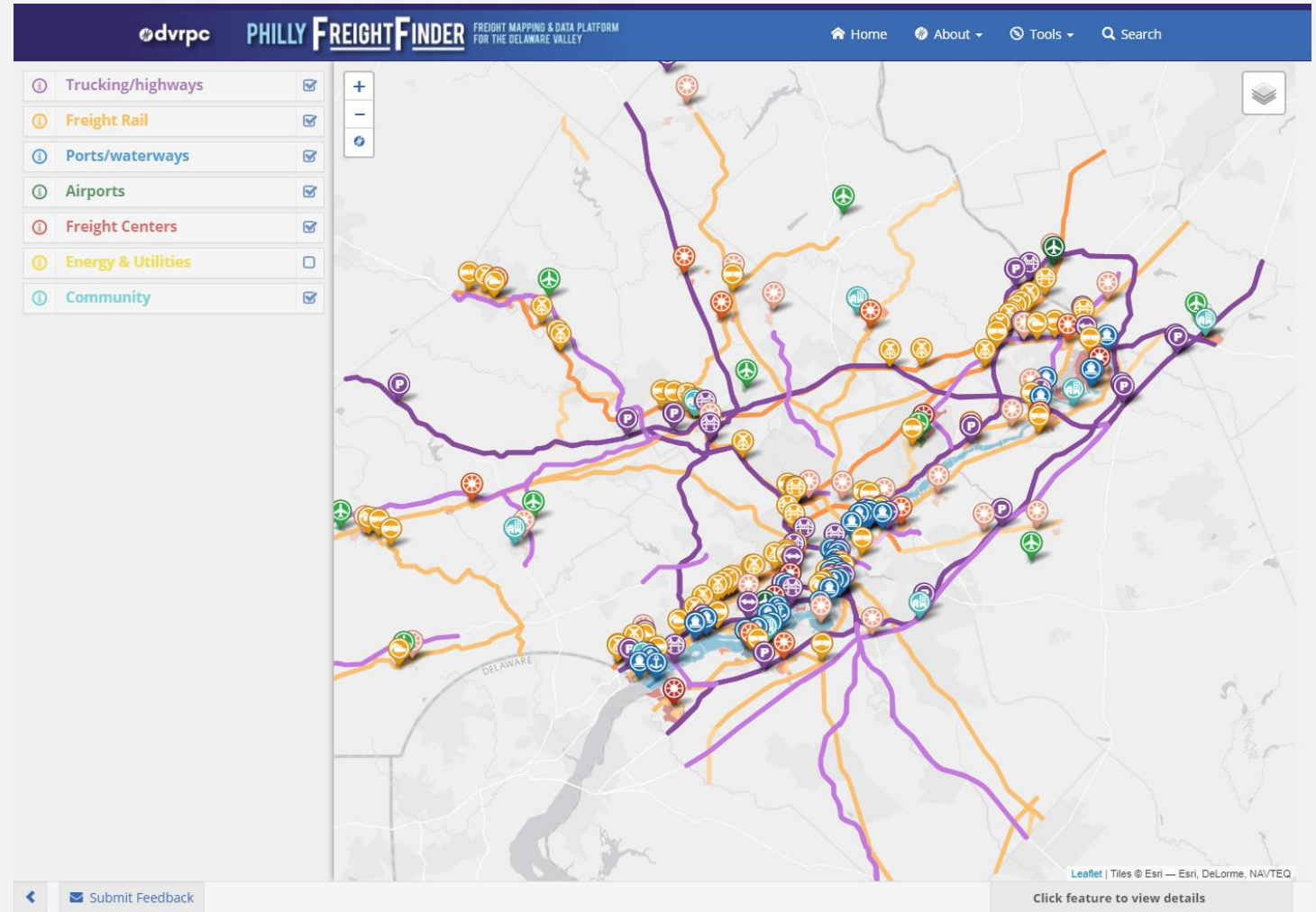
Packages

No packages published

Languages

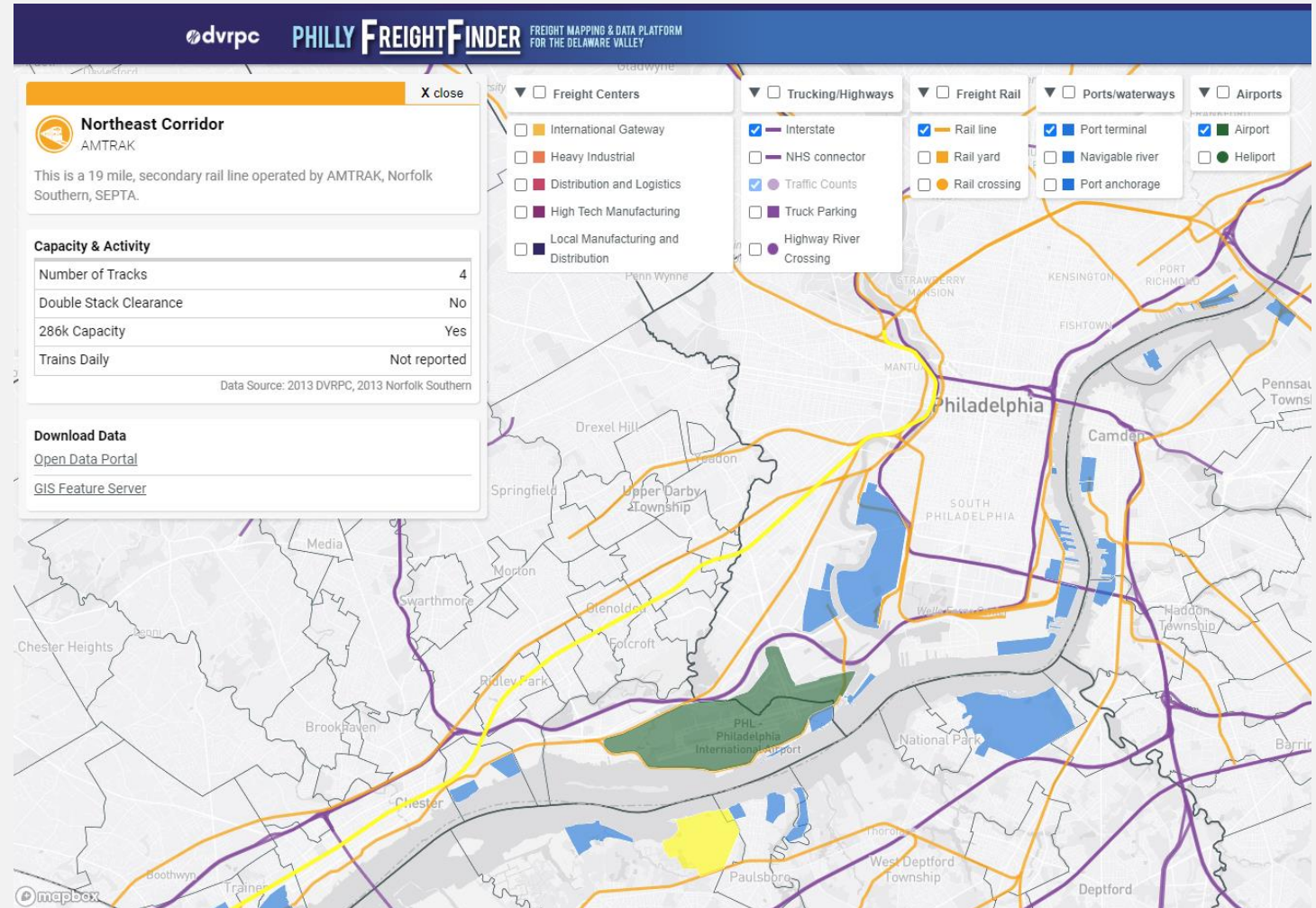
Evolution of Philly Freight Finder

- Addition of tools over time
 - County Profiles
 - Maritime Indicators
 - Highway Performance Measures
 - Freight Center Interactive Story
- Data updates- challenge to maintain regular maintenance
- Other agency data center tools
- What's next?



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Thank You



Kristen Scudder

Freight Program Manager

Office of Freight and Clean Transportation

Delaware Valley Regional Planning Commission

kscudder@dvrpc.org

[215.238.2939](tel:215.238.2939)

PhillyFreightFinder: <http://dvrpc.org/webmaps/phillyfreightfinder>

Open Freight App: <http://dvrpcfreight.github.io/open-freight-app/>

Freight Data Portal for the Delaware Valley

The Delaware Valley is a premier freight transportation gateway. It possesses one of the world's busiest freshwater ports; rail freight service from two large Class I railroads and 12 smaller short lines; an airport with expanding international cargo services; an excellent highway and connector network; and numerous rail and port intermodal terminals.

The performance of this extraordinary network helps promote and support a thriving economy. *PhillyFreightFinder* is a resource for exploring and tracking the Philadelphia-Camden-Trenton regional freight network.

Get started below

County Freight Profiles

The DVRPC region is comprised of nine counties, each with a unique freight profile of facilities, employment, and trade patterns. The County Profile Tool provides insights on these unique aspects.

Explore a county

Performance Indicators

A key to understanding freight in the Delaware Valley is evaluating the performance of the facilities that support freight in the region.

View Highway Performance

View Maritime Indicators

Explore Our Network

The region's extensive network includes hundreds of individual facilities that function together to drive the economy. Our map tool allows you to explore key details and facts about each of these facilities.

Browse the network map

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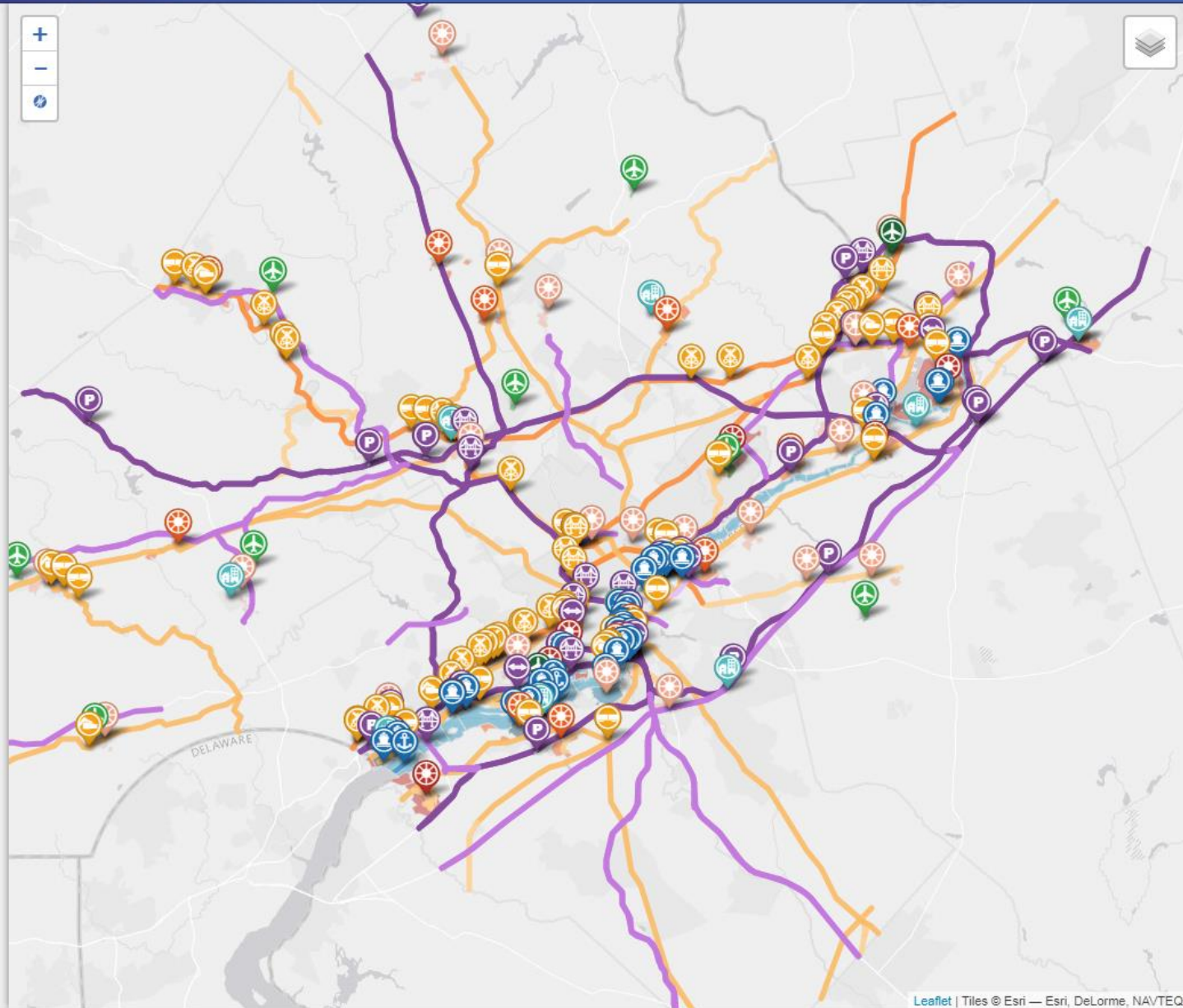
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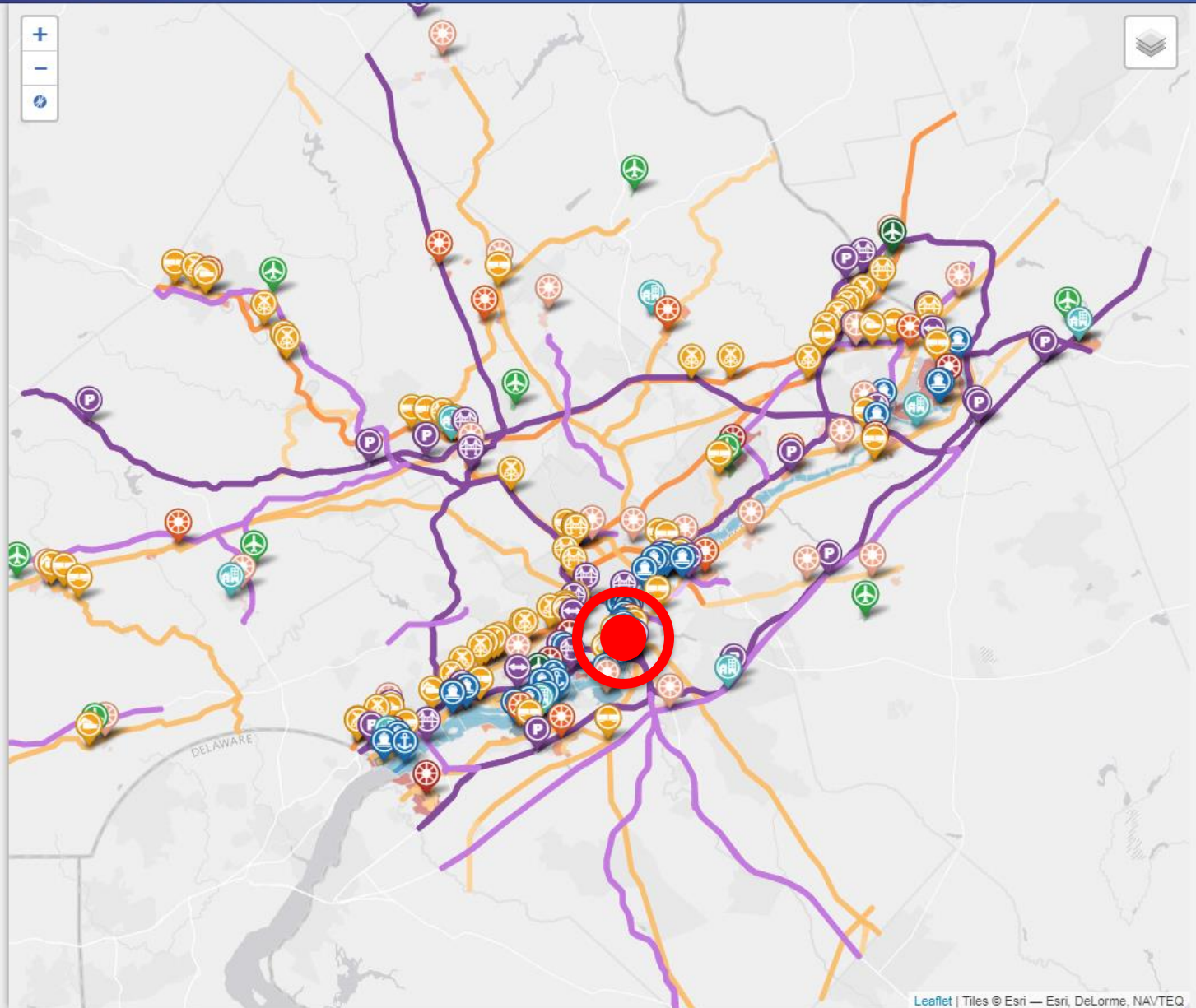
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<input type="checkbox"/>	Energy & Utilities	<input type="checkbox"/>
<input checked="" type="checkbox"/>	Community	<input checked="" type="checkbox"/>



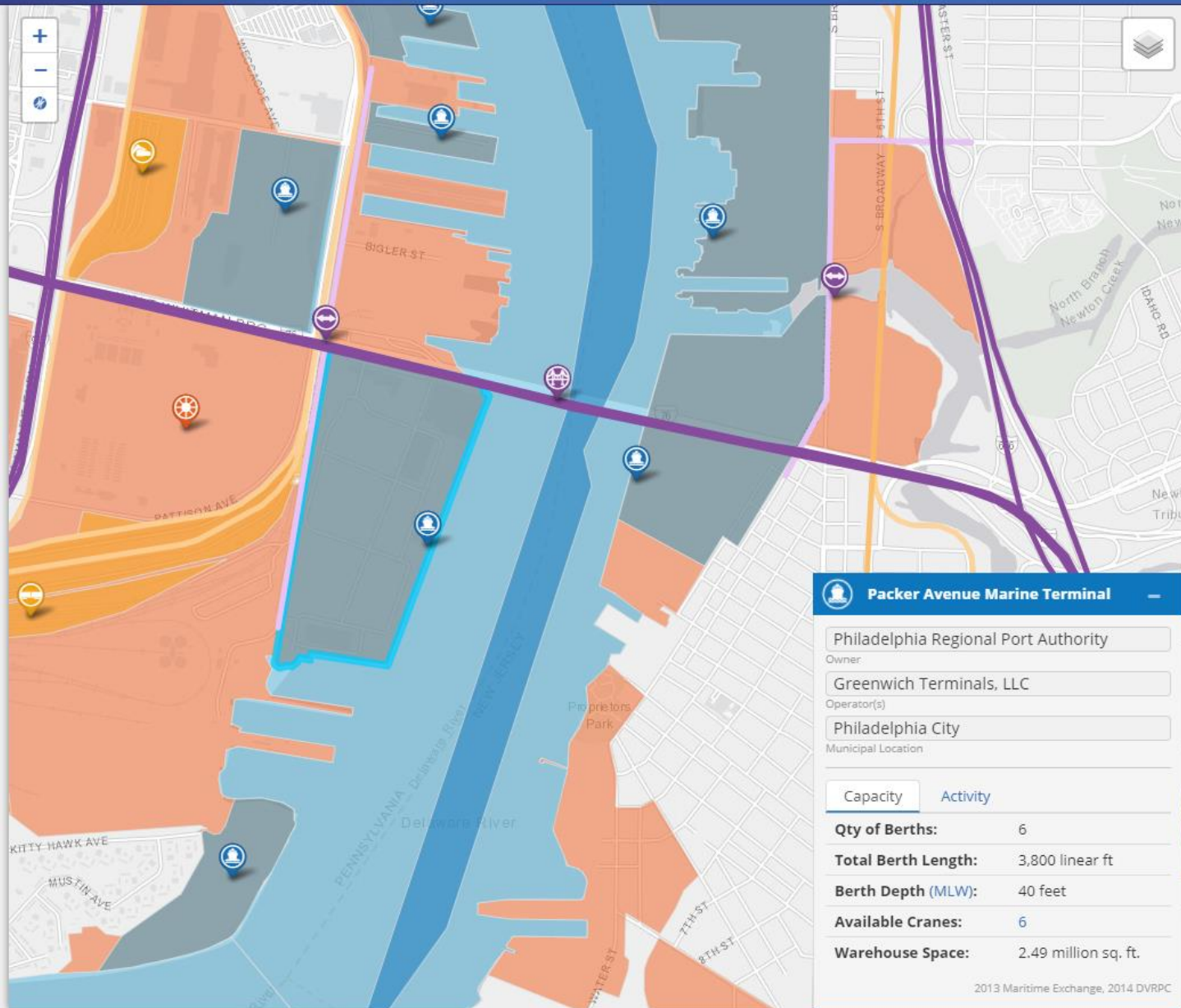
Leaflet | Tiles © Esri — Esri, DeLorme, NAVTEQ

[Submit Feedback](#)[Click feature to view details](#)

- ☒ Trucking/highways
- ☒ Freight Rail
- ☒ Ports/waterways
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DVRPC Region | Overview

overview

network

trade patterns

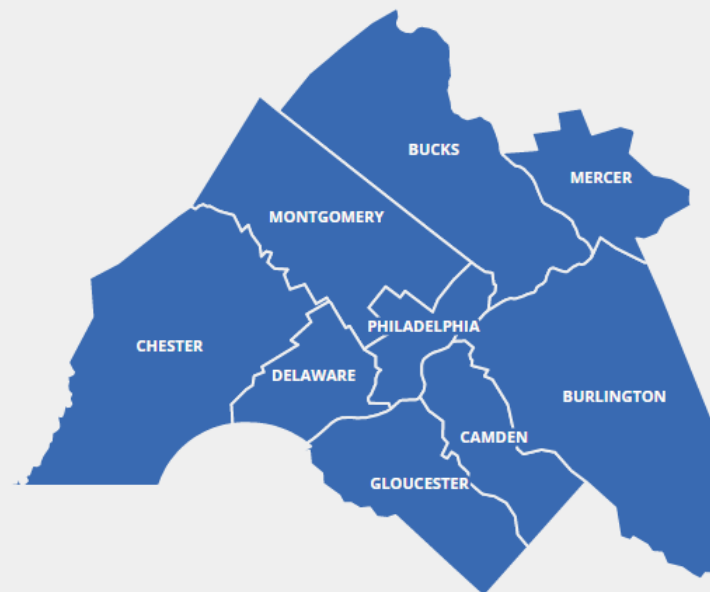
The Delaware Valley region consists of nine counties: Bucks, Chester, Delaware, Montgomery and Philadelphia in Pennsylvania, and Burlington, Camden, Gloucester and Mercer in New Jersey.

The DVRPC region contains an impressive freight transportation network consisting of highways, rail lines, ports, airports, and pipelines. These key linkages unite an expansive list of facilities including warehouses, manufacturing sites, rail yards, and truck stops.

Strategically positioned in the middle of the densest population center in the United States; over 100 million people live within a 500-mile radius of Philadelphia, representing a vast consumer base and making the region ideally situated as a manufacturing and distribution hub.

Explore freight facilities and activity by county

(select a county of interest)



DVRPC Region | Overview

overview

network

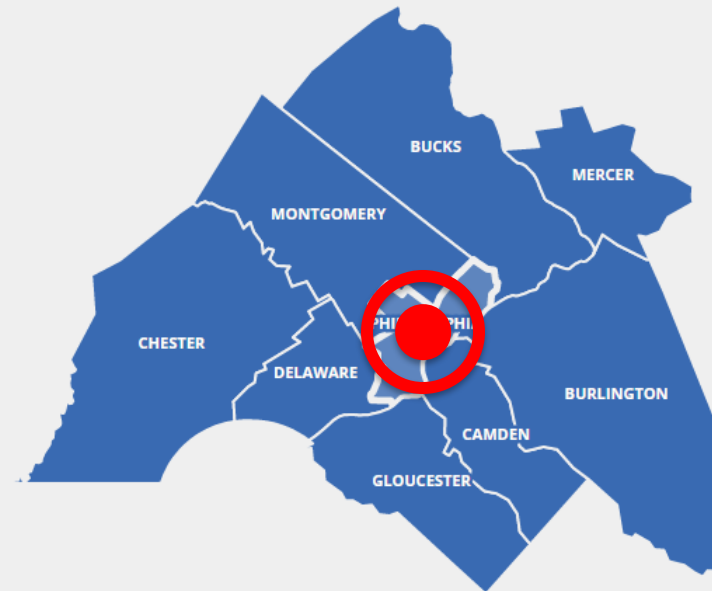
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Philadelphia County | Network

overview

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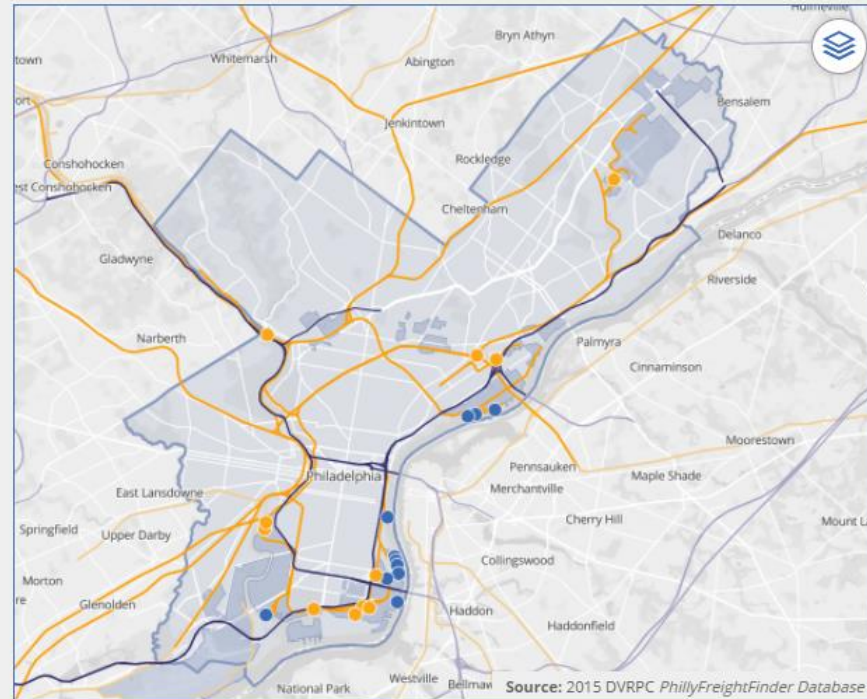
trade patterns

Like powerful Internet networking tools, Philadelphia, Pennsylvania's freight system affords rapid, productive, and global connections. Once known as the *Workshop of the World*, Philadelphia now serves as the calling card of the Delaware Valley region's impressive freight assets. For even the casual observer, the City's prominence in international commerce is abundantly evident: mammoth container cranes, multi-cultural company logos, and non-stop daily pick-up and delivery patterns dot the landscape.

Freight Network Statistics

HIGHWAY
STATISTICS39
MILES
INTERSTATE
ROUTES91
MILES
NATIONAL
HIGHWAY4
NHS
CONNECTORS26
INTERSTATE
HIGHWAY
INTERCHANGES0
TRUCK STOPS
AND REST AREASFREIGHT RAIL
STATISTICS105
MILES
FREIGHT
TRACKAGE11
YARDS AND
INTERMODAL
TERMINALSMARITIME
STATISTICS10
PORT
TERMINALS734
ANNUAL
SHIP CALLS8
UNIQUE
FREIGHT
CORIDORS37.3 k
EMPLOYMENT
CORIDORS

A Ship being unloaded at Packer Avenue Marine Terminal



Philadelphia County | Network

overview

network

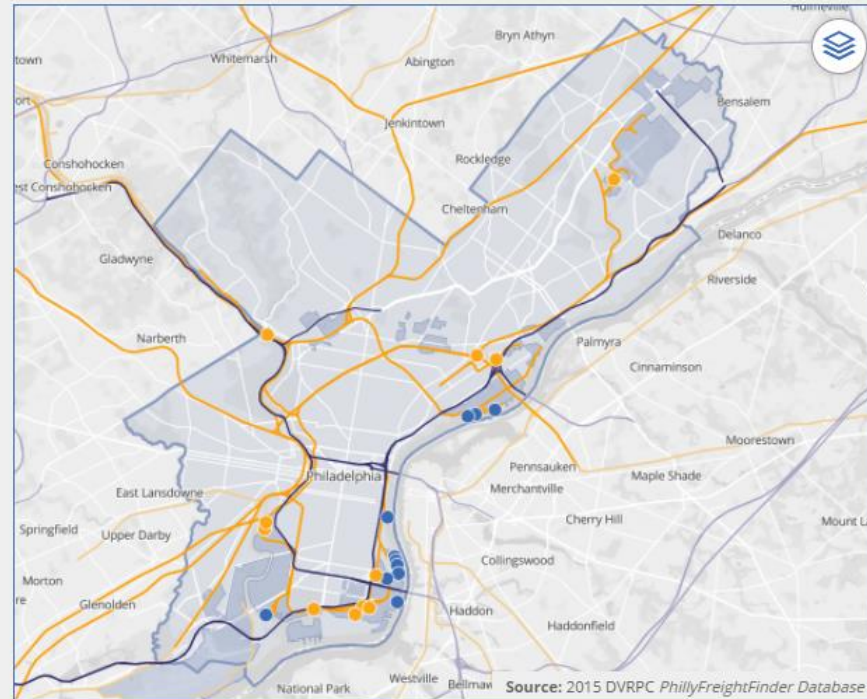
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ANNUAL
SHIP CALLS8
UNIQUE
FREIGHT
CORPORATE37.3 k
EMPLOYMENT
CORPORATE

A Ship being unloaded at Packer Avenue Marine Terminal



Philadelphia County | Domestic Trade Patterns

overview

network

trade patterns

Top Trading Partners

Southern New Jersey	4,176.2 ktons
New York Metro Area	3,244.9 ktons
Harrisburg, PA	2,759.6 ktons
Delaware County, PA	1,195.9 ktons
Gloucester County, NJ	1,151.4 ktons
Washington DC Metro Area	903.2 ktons
Chicago, IL	719.0 ktons
Pittsburgh, PA	688.2 ktons
Chester County, PA	537.0 ktons
Bucks County, PA	518.4 ktons

Measured by:

Volume

Value

Shipment direction:

Inbound

Outbound

Mode of transportation:

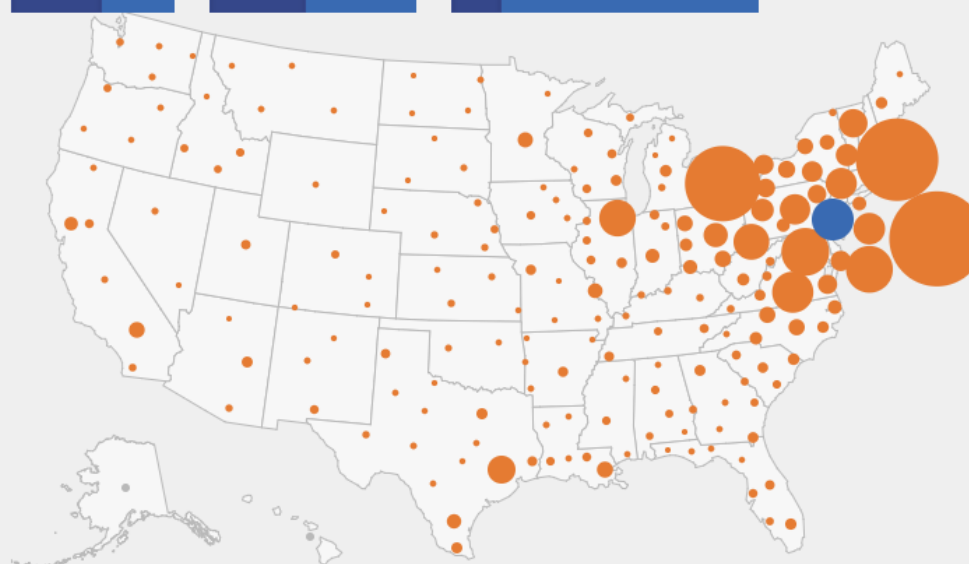
All

Truck

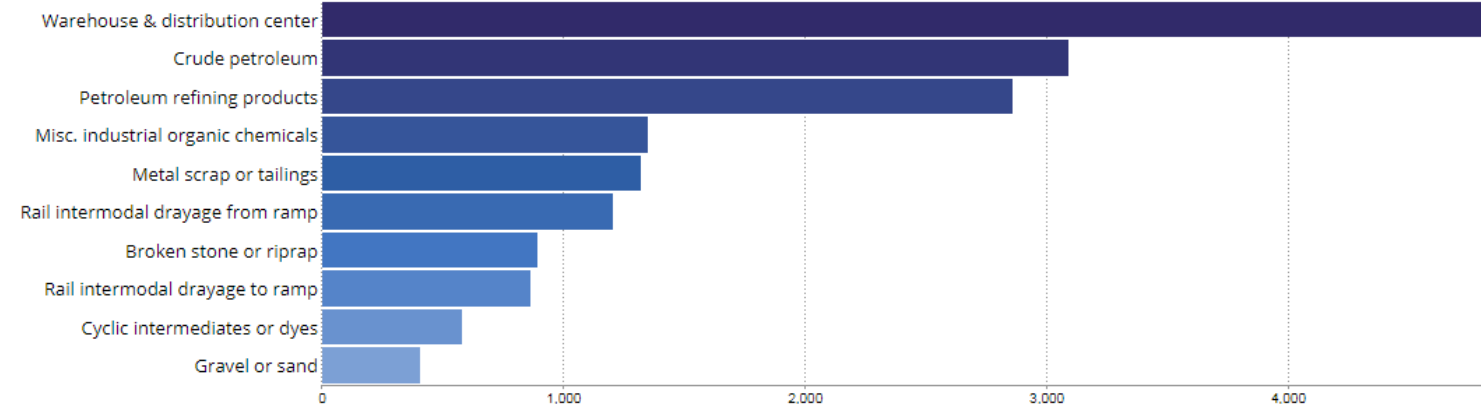
Rail

Water

Air



Top Inbound - Commodities by Volume



Philadelphia County | Domestic Trade Patterns

overview

network

trade patterns

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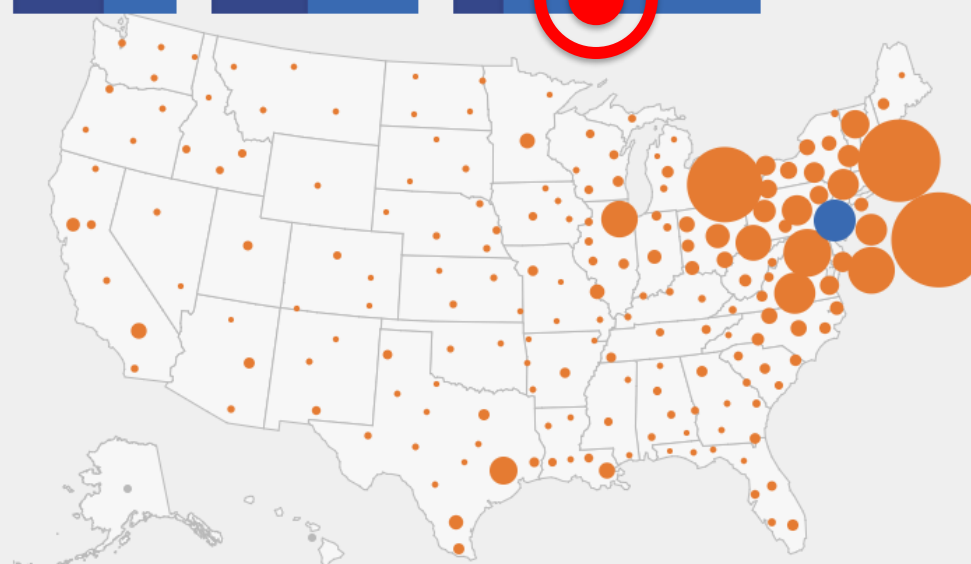
Mode of transportation:

All

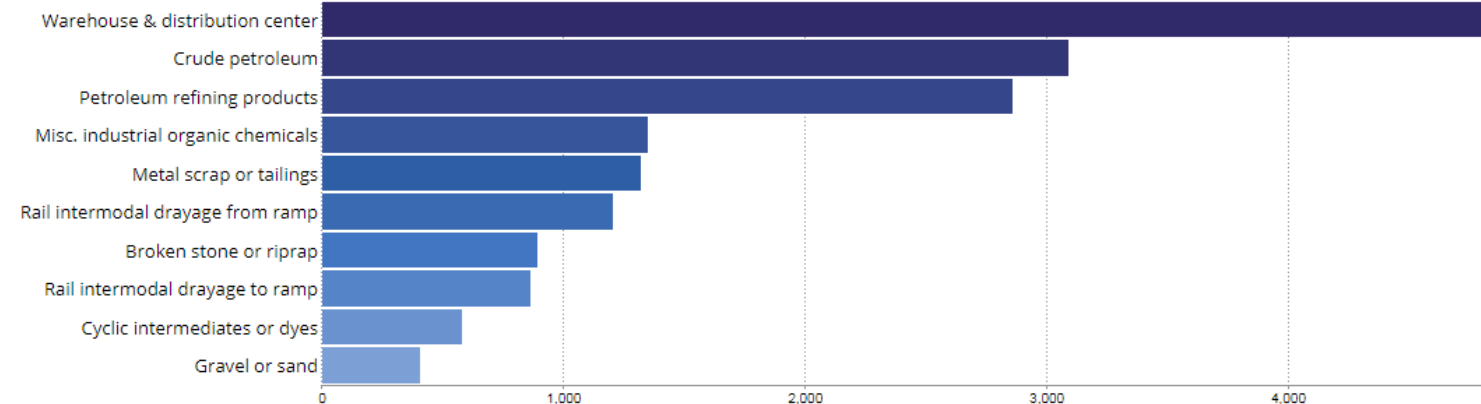
Truck

Water

Air



Top Inbound - Commodities by Volume



Philadelphia County | Domestic Trade Patterns

overview

network

trade patterns

Top Trading Partners

Chicago, IL	664.3 ktons
Harrisburg, PA	456.2 ktons
New Orleans, LA	85.8 ktons
St. Louis, MO	73.4 ktons
Toledo-Fremont, OH	62.7 ktons
Los Angeles-Long Beach, CA	58.9 ktons
Minneapolis, MN	51.0 ktons
Buffalo, NY	50.7 ktons
Indianapolis, IN	40.7 ktons
Cincinnati, OH	39.0 ktons

Measured by:

Volume

Value

Shipment direction:

Inbound

Outbound

Mode of transportation:

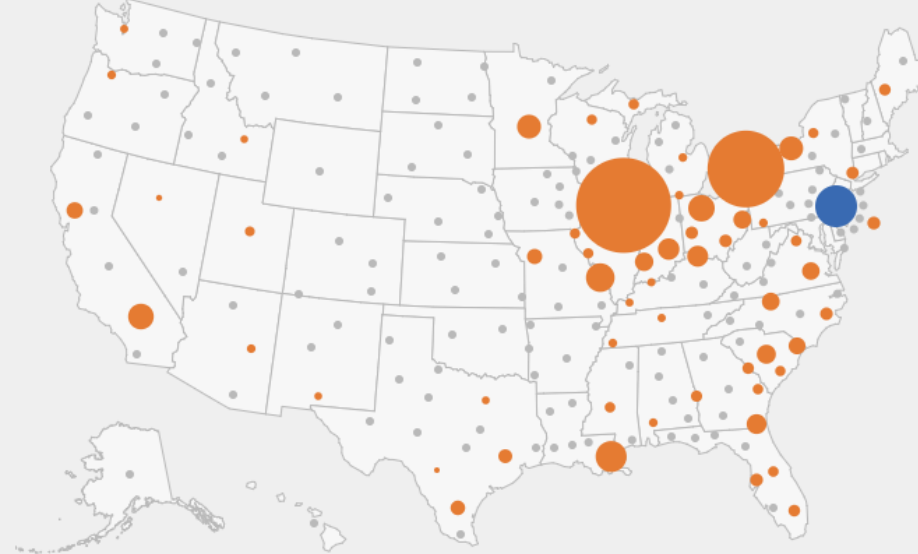
All

Truck

Rail

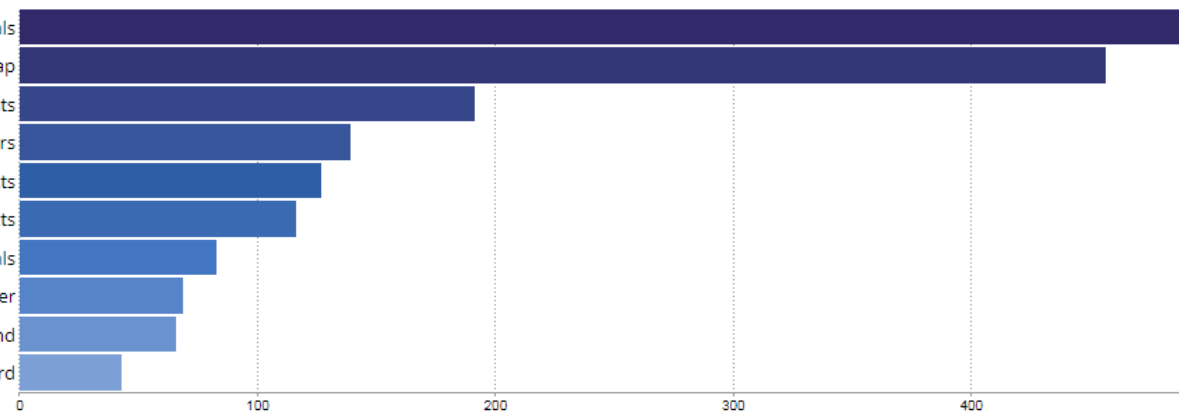
Water

Air



Top Inbound - Commodities by Volume -

Misc. industrial organic chemicals
Broken stone or riprap
Freight-all-kinds shipments
Plastic matter or synthetic fibers
Flour or other grain mill products
Primary iron or steel products
Misc. industrial organic chemicals
Paper
Potassium or sodium compound
Fiber, paper or pulpboard





Philadelphia County | Domestic Trade Patterns

overview

network

trade patterns

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Outbound

Mode of transportation:

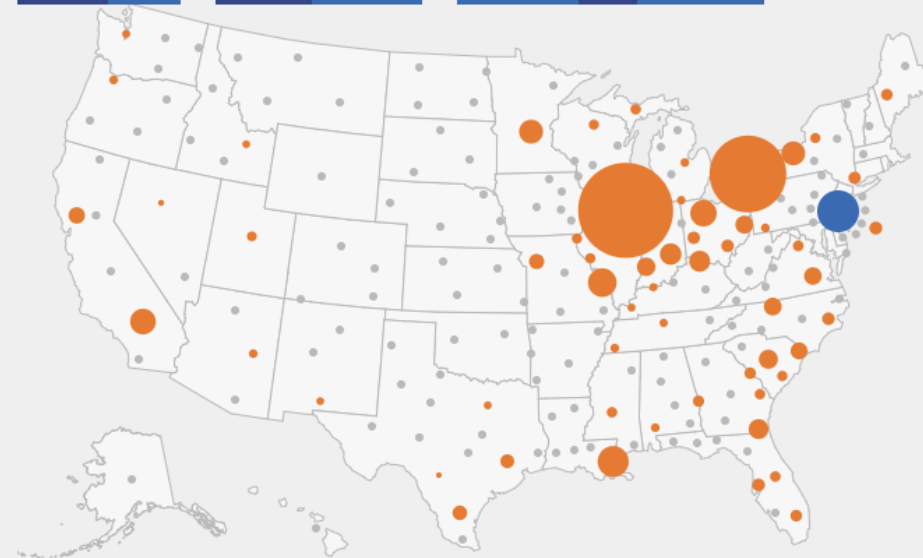
All

Truck

Rail

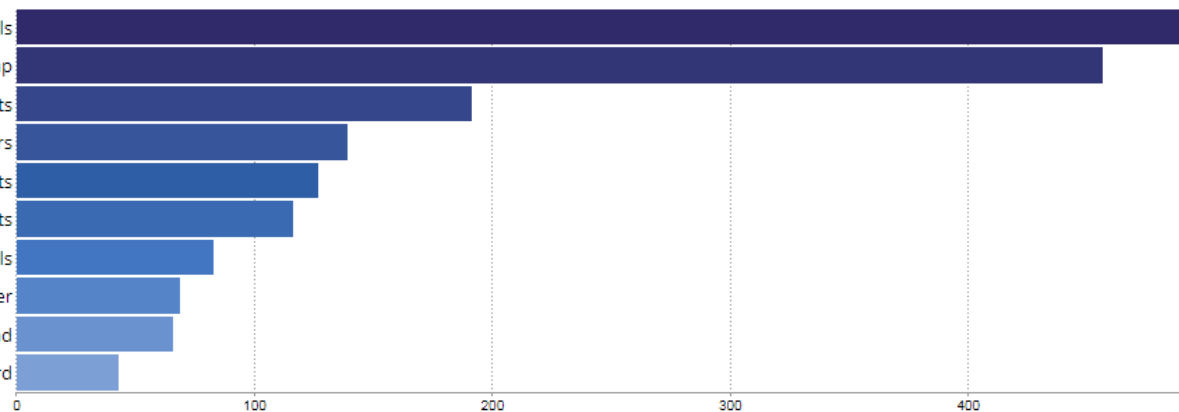
Water

Air



Top Inbound - Commodities by Volume

Misc. industrial organic chemicals
Broken stone or riprap
Freight-all-kinds shipments
Plastic matter or synthetic fibers
Flour or other grain mill products
Primary iron or steel products
Misc. industrial organic chemicals
Paper
Potassium or sodium compound
Fiber, paper or pulpboard



Freight Data Portal for the Delaware Valley

The Delaware Valley is a premier freight transportation gateway. It possesses one of the world's busiest freshwater ports; rail freight service from two large Class I railroads and 12 smaller short lines; an airport with expanding international cargo services; an excellent highway and connector network; and numerous rail and port intermodal terminals.

The performance of this extraordinary network helps promote and support a thriving economy. *PhillyFreightFinder* is a resource for exploring and tracking the Philadelphia-Camden-Trenton regional freight network.

Get started below

County Freight Profiles

The DVRPC region is comprised of nine counties, each with a unique freight profile of facilities, employment, and trade patterns. The County Profile Tool provides insights on these unique aspects.

Explore a county

Performance Indicators

A key to understanding freight in the Delaware Valley is evaluating the performance of the facilities that support freight in the region.

View Highway Performance

View Maritime Indicators

Explore Our Network

The region's extensive network includes hundreds of individual facilities that function together to drive the economy. Our map tool allows you to explore key details and facts about each of these facilities.

Browse the network map

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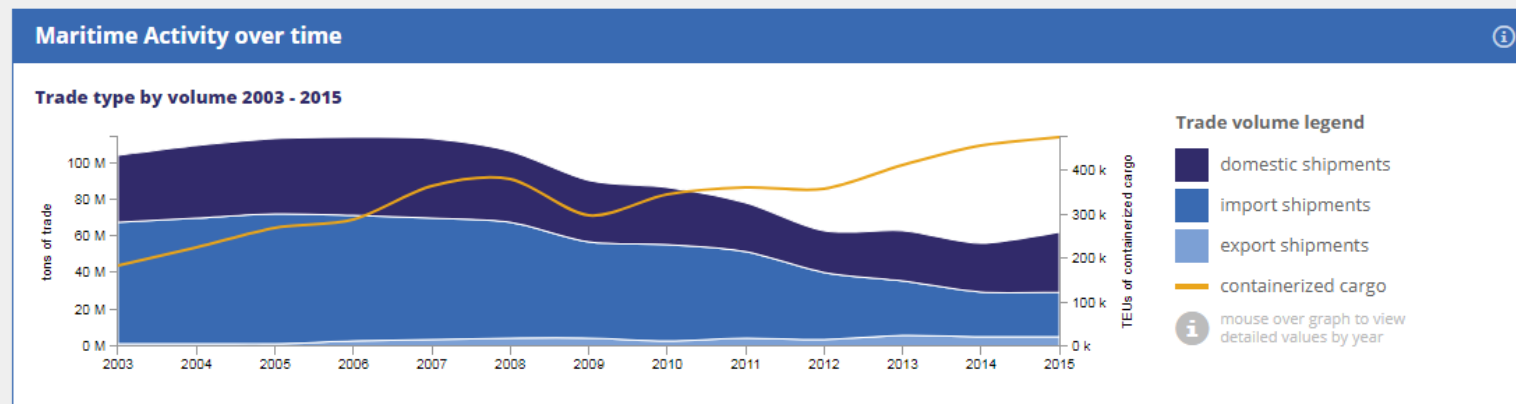
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2015 ▾



Maritime Indicators

select a year:

2015 ▾



2015 Annual Indicators

**4** regional port
rank by volume**62.2 M**
total trade (tons)

10.0% regional change vs. -2.3% national change

**\$24 B**
total foreign trade

-6.1% regional change vs. -10.8% national change

**5.4 M**
maritime exports (tons)

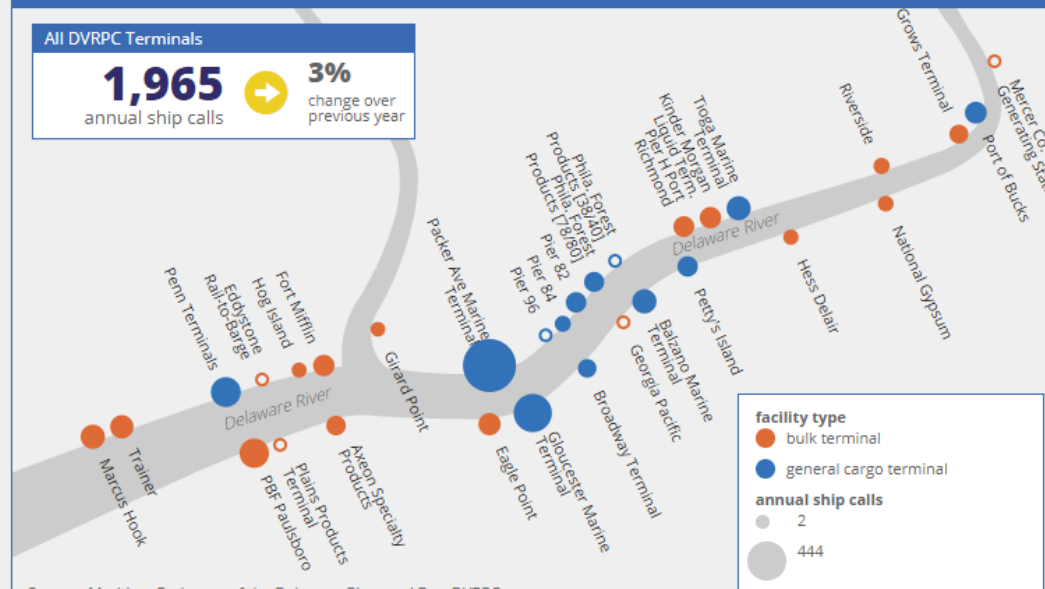
1.2% regional change vs. -15.1% national change

**18%**export share of
foreign trade
by volume

2015 vessel activity by terminal



All DVRPC Terminals

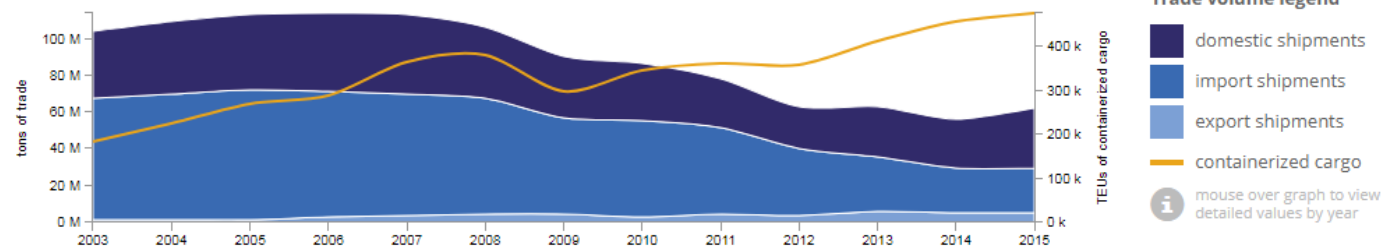
1,965
annual ship calls**3%**
change over
previous year

Source: Maritime Exchange of the Delaware River and Bay, DVRPC

Maritime Activity over time



Trade type by volume 2003 - 2015



Maritime Indicators

select a year:

2014 ▾



2014 Annual Indicators

**4** regional port
rank by volume**56.6 M**
total trade (tons)

-10.3% regional change vs. 5.2% national change

**\$25 B**
total foreign trade

-0.7% regional change vs. 0.3% national change

**5.3 M**
maritime exports (tons)

-13.8% regional change vs. 0.4% national change

**18%**export share of
foreign trade
by volume

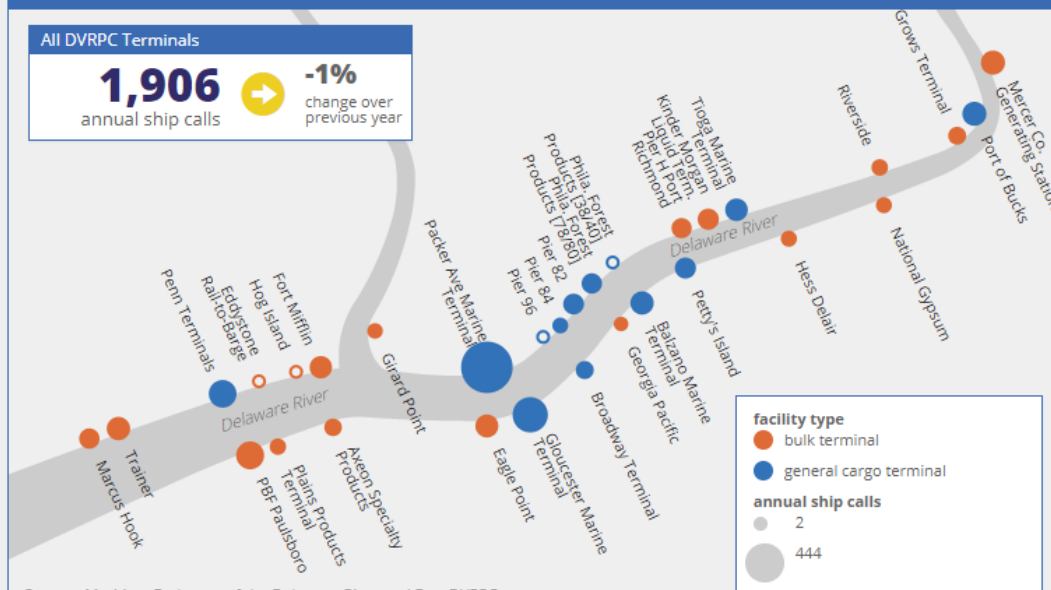
2014 vessel activity by terminal



All DVRPC Terminals

1,906

annual ship calls

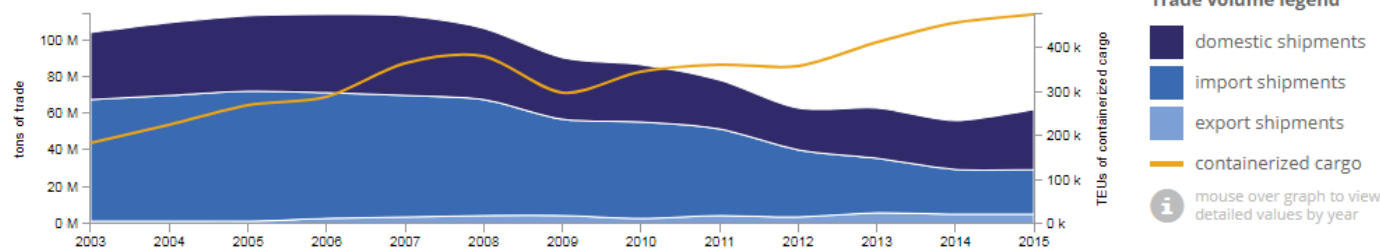
-1%change over
previous year

Source: Maritime Exchange of the Delaware River and Bay, DVRPC

Maritime Activity over time



Trade type by volume 2003 - 2015



Maritime Indicators

select a year:

2014



2014 Annual Indicators

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rank by volume**56.6 M**
total trade (tons)**-10.3%** regional change vs. **5.2%** national change**\$25 B**
total foreign trade**-0.7%** regional change vs. **0.3%** national change**5.3 M**
maritime exports (tons)**-13.8%** regional change vs. **0.4%** national change**18%**export share of
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by volume

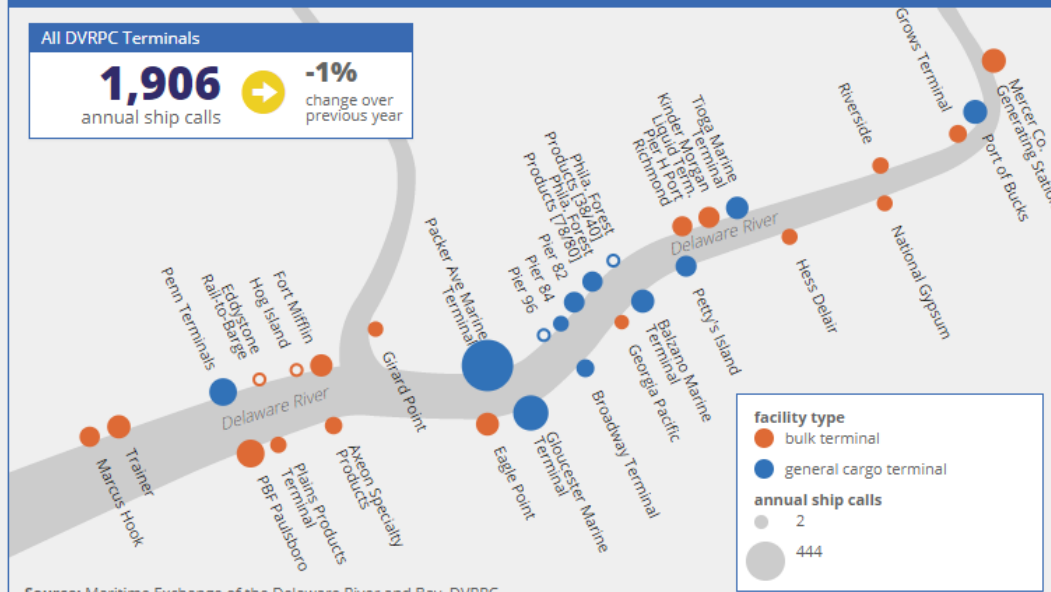
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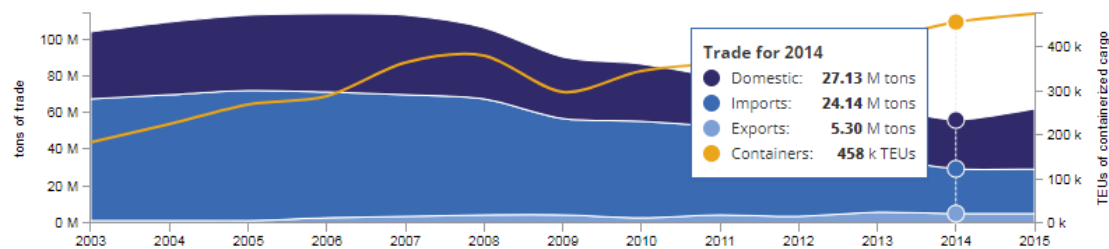
-1%change over
previous year

Source: Maritime Exchange of the Delaware River and Bay, DVRPC

Maritime Activity over time



Trade type by volume 2003 - 2015



Trade volume legend

- domestic shipments
- import shipments
- export shipments
- containerized cargo
- mouse over graph to view detailed values by year

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Highway Performance | Truck Travel Time Index (12 AM - 5 AM)



Select performance measure:

Travel Time Index

Average Speed



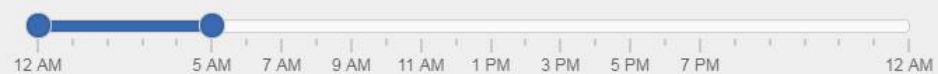
Data legend:



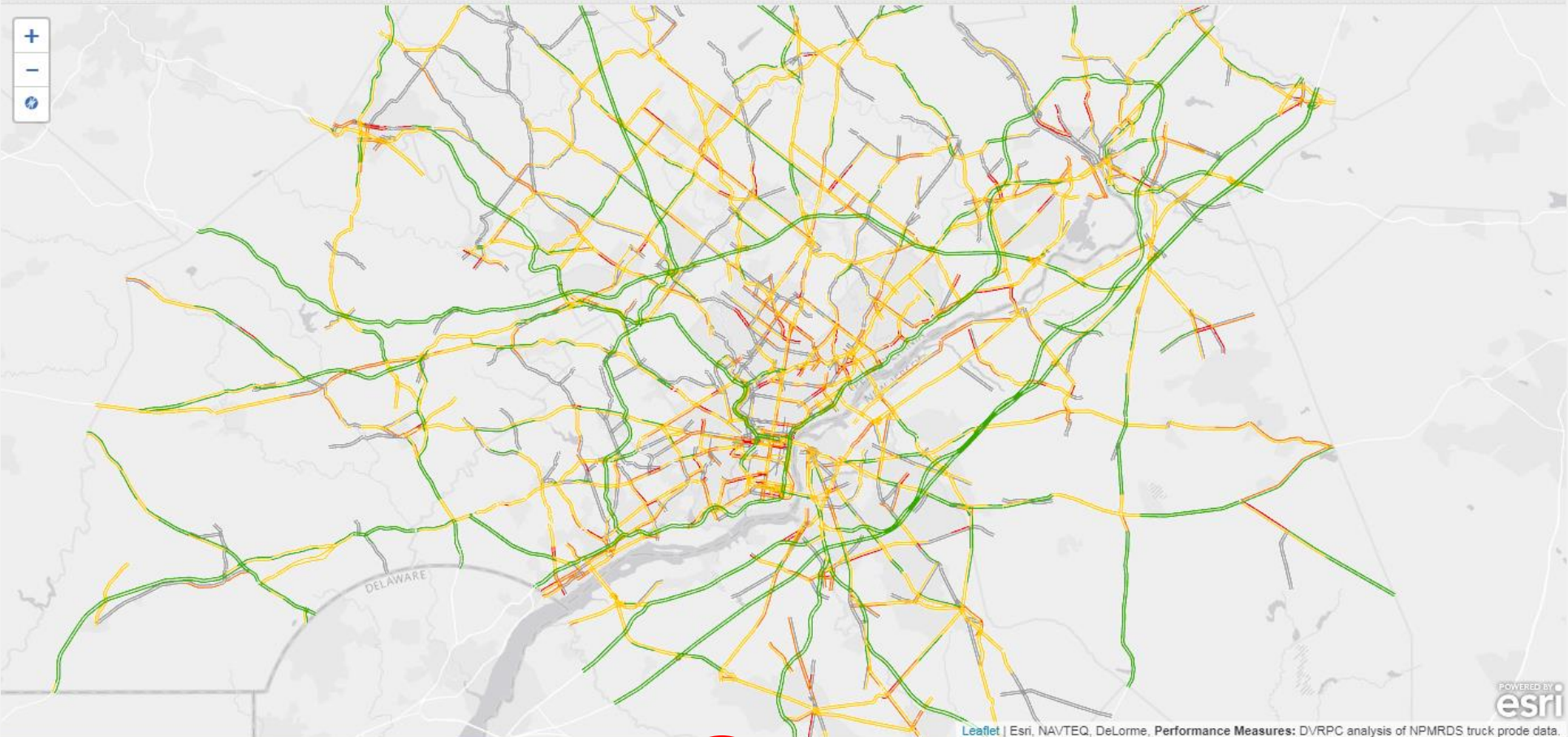
Select time period:

▶ Play

◀ ▶



Highway Performance | Truck Travel Time Index (12 AM - 5 AM)



Select performance measure:

Travel Time Index

Average Speed



Data legend:

Travel Time Index Value

Travel Time Index Value
no data
< 1.1
1.1 - 1.5
1.5 - 2.0
2.0 - 3.0
> 3.0

Select time period:

12 AM

< >

12 AM

5 AM

7 AM

9 AM

11 AM

1 PM

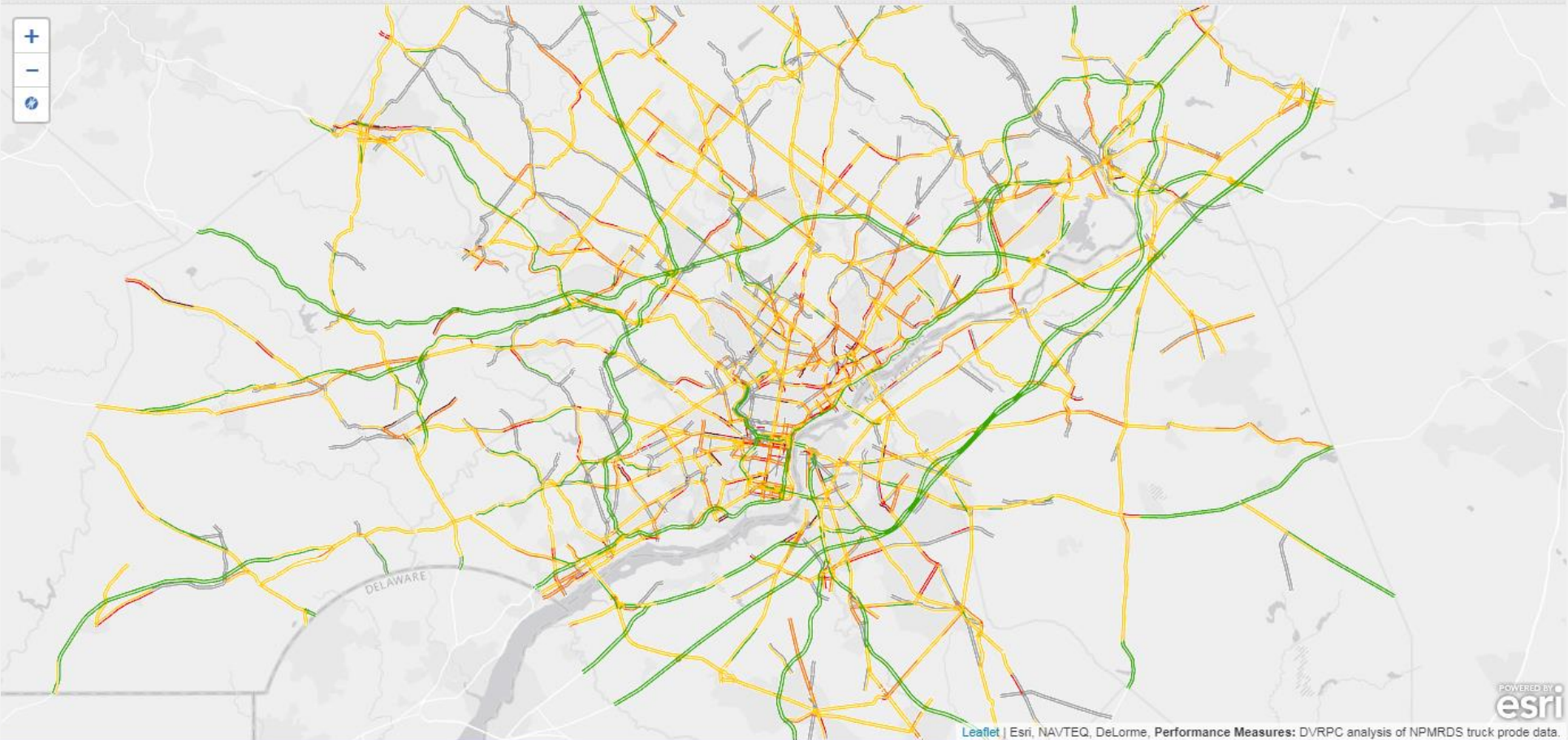
3 PM

5 PM

7 PM

12 AM

Highway Performance | Truck Travel Time Index (5 AM - 7 AM)



Select performance measure:

Travel Time Index

Average Speed

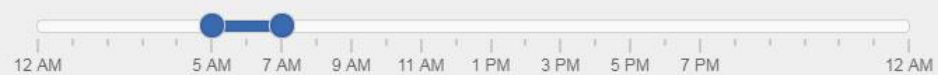


Data legend:

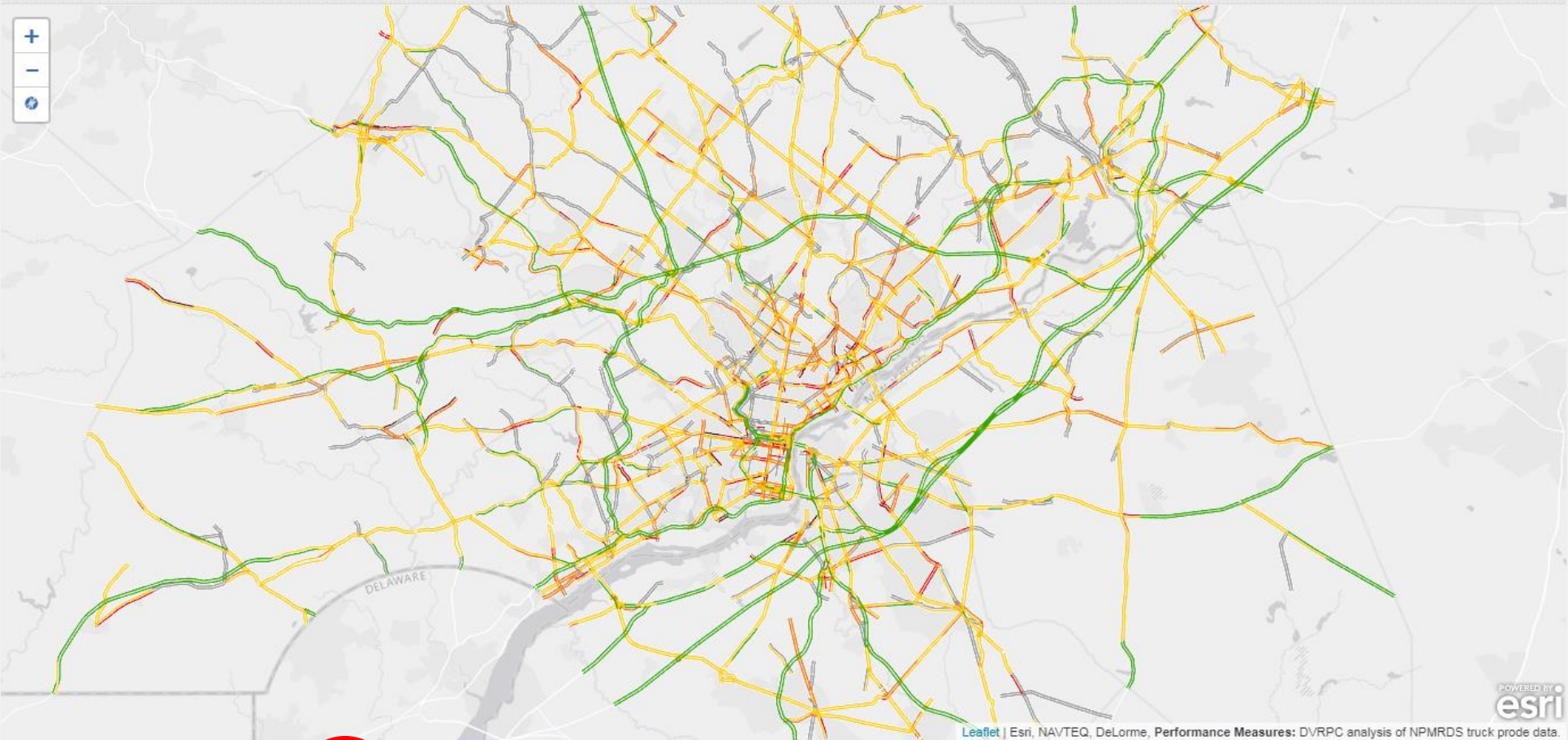


Select time period:

Pause



Highway Performance | Truck Travel Time Index (5 AM - 7 AM)



Select performance measure:

Travel Time Index

Average Speed



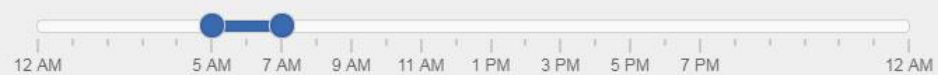
Data legend:



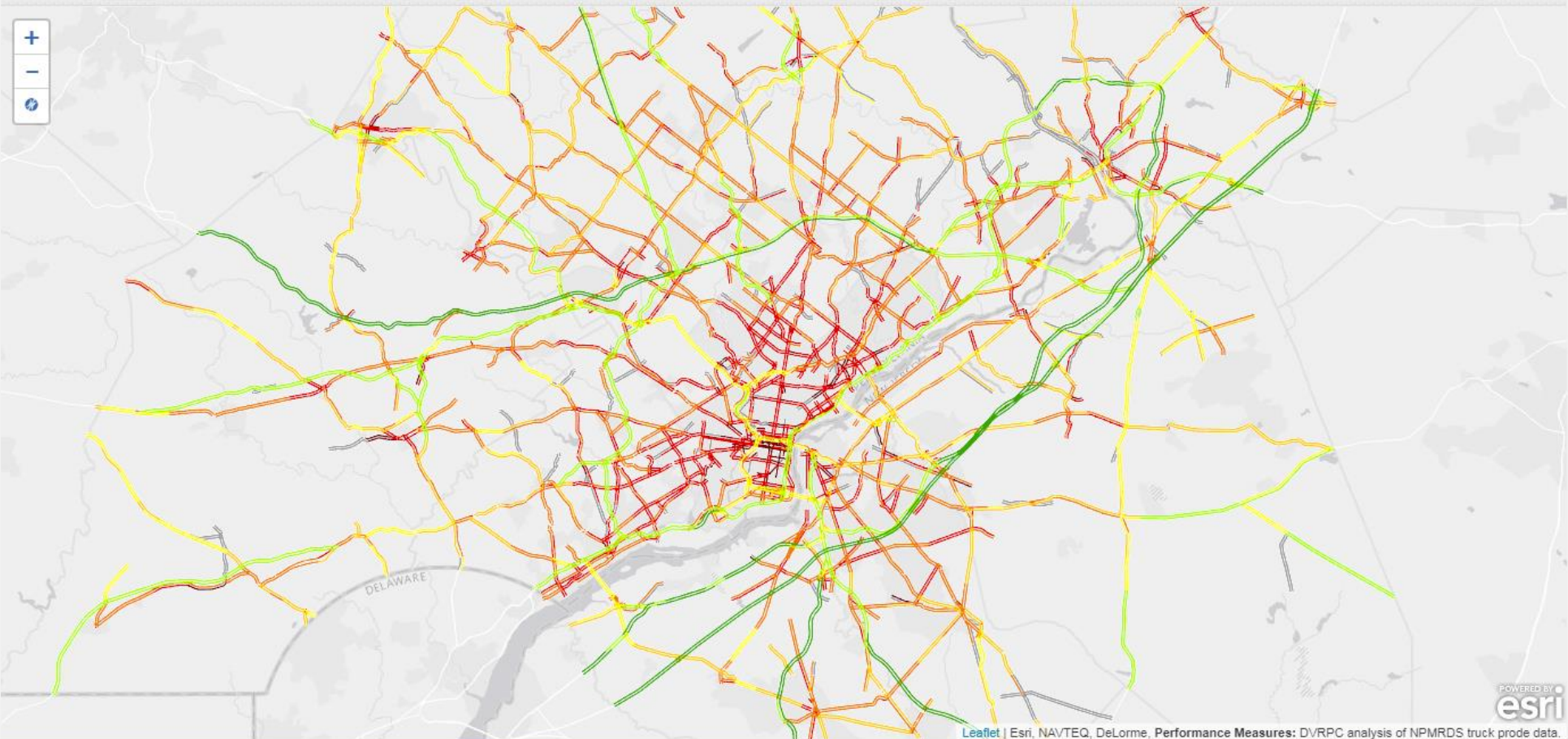
Select time period:

Pause

< >



Highway Performance | Truck Average Speed (9 AM - 11 AM)



Select performance measure:

Travel Time Index

Average Speed



Select time period:

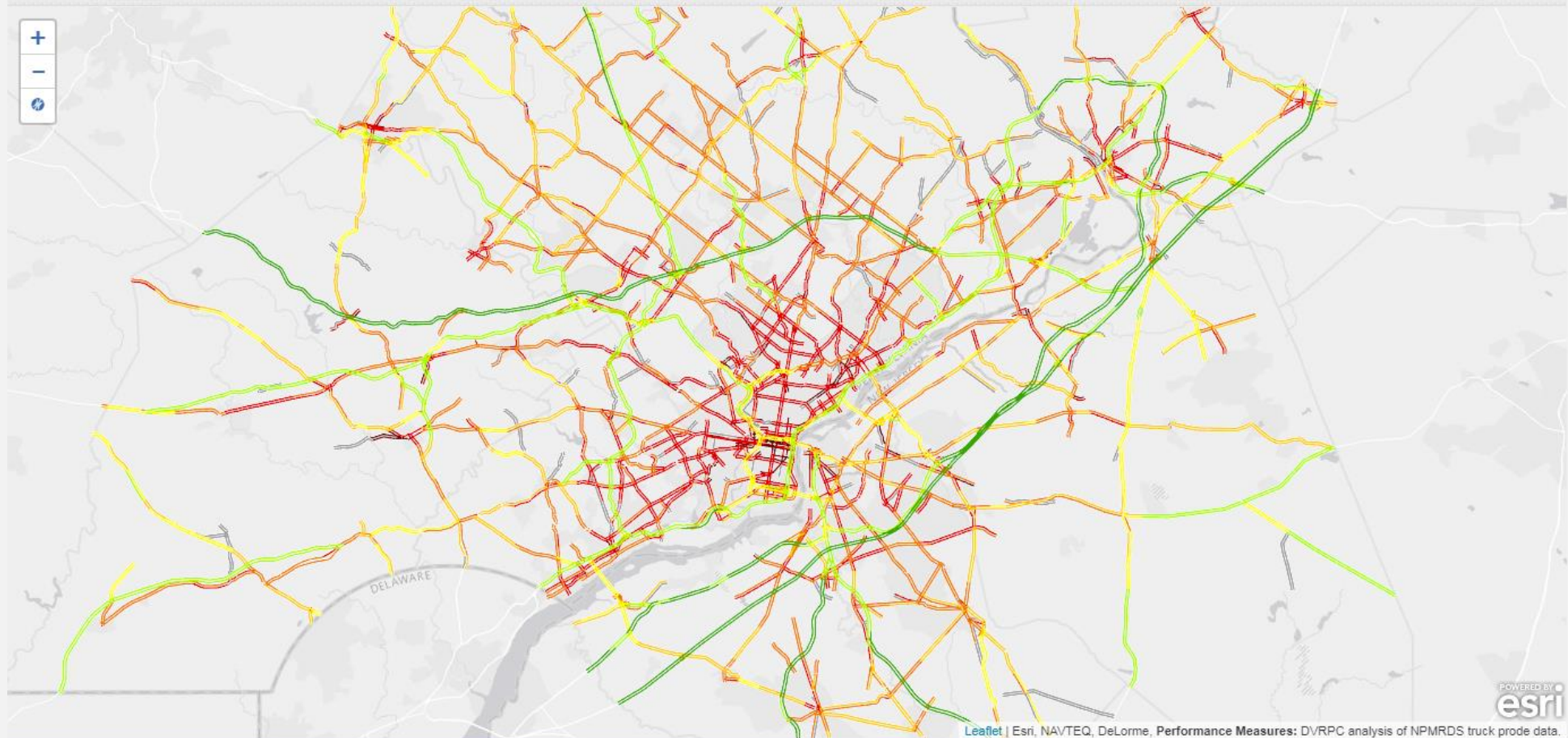
Pause

< >

Data legend:



Highway Performance | Truck Average Speed (11 AM - 1 PM)



Select performance measure:

Travel Time Index

Average Speed



Select time period:

Pause

< >

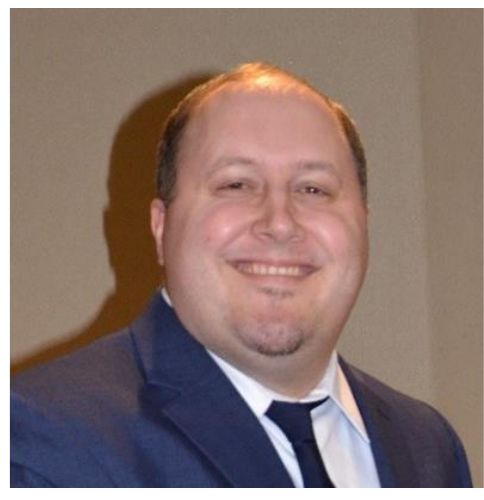
Data legend:

Average Speed (MPH)

no data < 10 10 - 20 20 - 30 30 - 40 40 - 50 50 - 60 > 60

12 AM 5 AM 7 AM 9 AM 11 AM 1 PM 3 PM 5 PM 7 PM 12 AM

Spotlight Presentation: How Rhode Island Used DVRPC's Tool & What They Are Doing Now



Josh O'Neill

Supervising Planner

Rhode Island Statewide Planning

Freight Data and Planning Working Group Chair



“The Rhode Island Freight Finder”

Rhode Island’s Freight and Goods Movement Plan Mapping Application

Josh O’Neill, AICP

Supervising Planner, Division of Statewide Planning

Department of Administration (DOA)



Purpose of a Freight Mapping Application

1

Visualize key freight data for the state for those individuals who won't read a 250 page planning document

2

Help answer basic questions about the freight transportation network for the public

3

Produce an interactive mapping platform relating to freight that members of the RI Freight Advisory Committee can reference for basic data needs

RI Freight Finder Background



Background Rhode Island Freight Finder:

- Division of Statewide Planning staff wanted a way to visually display our 2016/2017 RI Freight Plan data on our state website
- We became aware of the DVRPC's "Philly Freight Finder"
<https://www.dvrpc.org/webmaps/phillyfreightfinder/> as a model for what we wanted to produce and so we set up a couple conference calls with their staff to learn more about how they created their product as well as their "freight scan" projects
- We then developed an in house approach to determine which staff would be needed to utilize and take advantage of the DVRPC open source program "The Open Freight App" and make our own RI mapping product

RI Freight Finder Background



September 13, 2023

Initial Staffing Expertise Needs

- We were fortunate enough to have a GIS Staffer who also had some coding experience
- Because we are a state agency we needed to coordinate with the programmers in our State Department of Information Technology staff for this project
- I led the overall project management and design for the data fields and data layers to include for this mapping project and our GIS staff and DOIT staff “built” the mapping application utilizing the “Open Freight App” template along with our existing in house freight data
- Staff Involved included:
 - Josh O’Neill, AICP Supervising Planner, RI Division of Statewide Planning
 - Christina De Lage Baza, GISP Data Analyst 1, RI Division of Statewide Planning
 - Moises Ramirez, Digital Services Technician, RI Division of Information Technology

RI Freight Finder Background

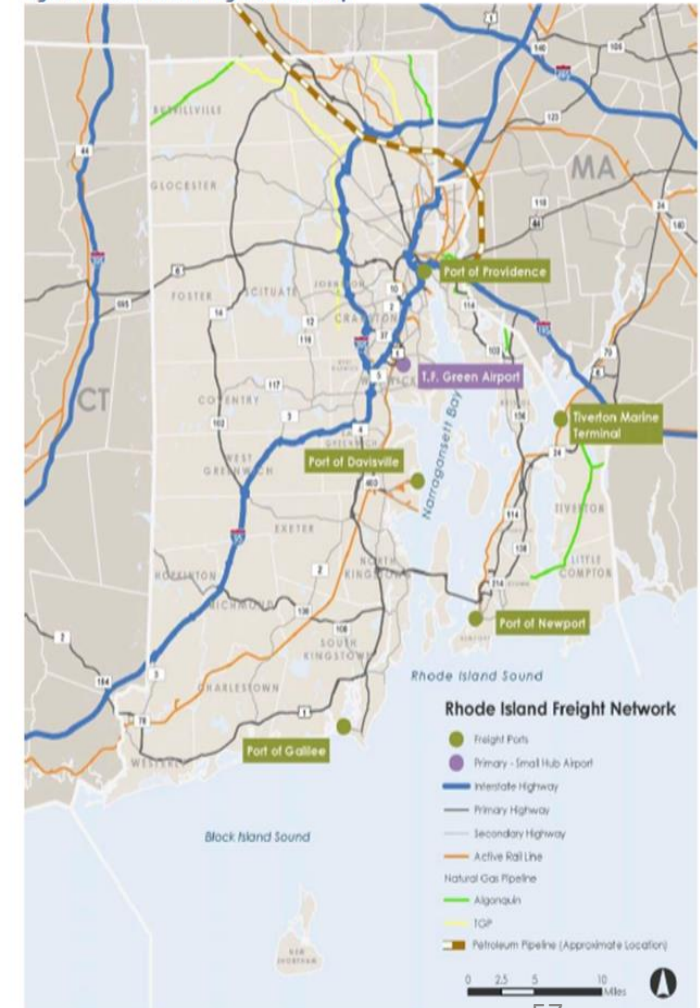


Approach to Mapping Application Data Layers:

- Staff reviewed all mapping data layers included within the 2016/2017 RI Freight Plan and realized some of the data needed to be recreated for this application
- Freight Rail lines were re-created for better accuracy and consultation with our Port Partners at the Quonset Business Park
- A map of freight related businesses was developed utilizing an annual business survey conducted by the Providence Business News.
- Their survey datasets can be purchased in excel and pdf formats for relatively cheap prices and proved to be good information for the mapper.

FREIGHT FORWARD:
STATE OF RHODE ISLAND FREIGHT AND GOODS MOVEMENT PLAN

Figure 19: Rhode Island Freight Network Map



So How Does It Work?

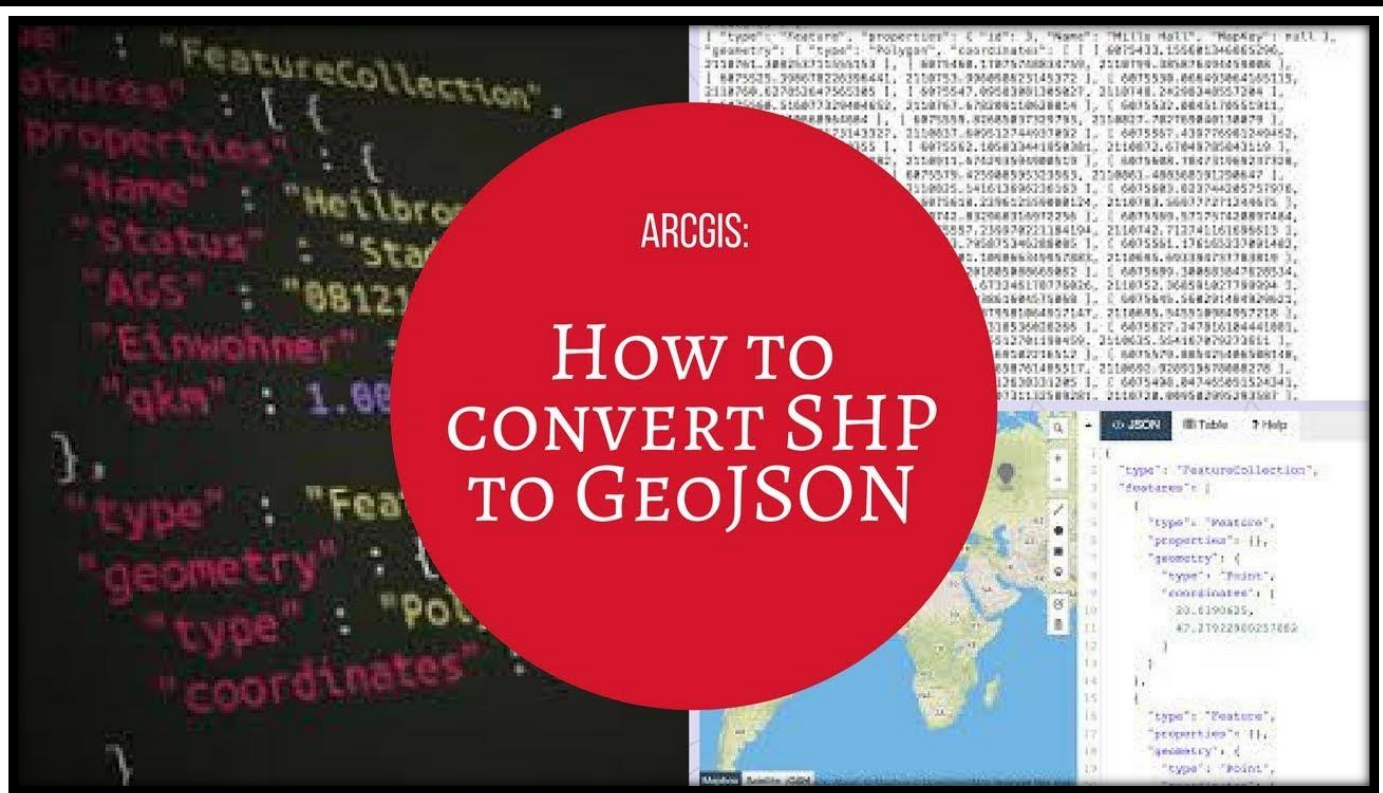
- **Basic Description of the DVRPC Open Freight Application:**
 - Open Source, downloadable application with a full documentation guide on how to set it up
 - The project requires a computer programmer or IT staffer with coding skills who is familiar with common web languages like HTML, CSS, Javascript, and JQuery web language libraries
 - The Application itself needs a modern web browser, Leaflet Javascript Map Library, JQuery, and Bootstrap framework
 - Consultant support may be required for agencies that do not regularly coordinate with IT staff or have an IT agency to work with



What Are Some Issues We Encountered Along the Way?

- Contract Language is Important!!!
 - Our 2016/2017 RI Freight and Goods Movement Consultant contract did not include the state retaining ownership of all GIS databases and map files
- This meant that we did not have many of the state data layers associated with the maps in the Plan
- As mentioned above, we did re-create several sets of map data and refined information included in the Plan such as information relating to ports, rail lines, and truck parking.
- The officially designated freight corridors for RI had to be re-created in-house as well





ARCGIS:

HOW TO CONVERT SHP TO GEOJSON

- The “Open Freight App” cannot utilize GIS “layer” formats or geodatabases. All GIS data had to be converted into GeoJSON format before sending to our IT staff.
- In 2018, our ArcGIS Desktop did not have the easy ability to convert data layers to GeoJSON format
- Also, data formats like GeoJSON don't contain any styling information, so you can't utilize the regular ESRI symbology in the mapping application
- Luckily with ArcPro this is a more straightforward conversion process now
- This does however highlight the styling “constraints” of the existing “Open Freight Application”

What Are Some Issues We Encountered Along the Way?

Freight_Corridors

Primary Highway Freight System Network / Intermodal Connections

Interstate / Urban / Rural Corridors

Corridor Field Value	R-G-B	Line Width
Primary Highway Freight System Network (PHFS)	132-0-168	3
PHFS Intermodal Connections	132-0-168	3
Interstate not on PHFS	202-122-245	3
Critical Urban Corridors	202-122-245	3
Critical Rural Corridors	202-122-245	3

Freight Rail:

Below is the Red-Green-Blue for the rail lines as well as a snip-it of the symbology.

Rail

Rail Layer	R-G-B	Line Width
Rail	230-135-0	4

Ports and Commercial Harbors:

Below is the Red-Green-Blue for the fill and outline color as well as a snip-it of the symbology.

Ports and Commercial Harbors

Ports and Commercial Harbors Layer	R-G-B	Width
Fill color	122-182-245	NA
Outline color	89-130-224	0.5

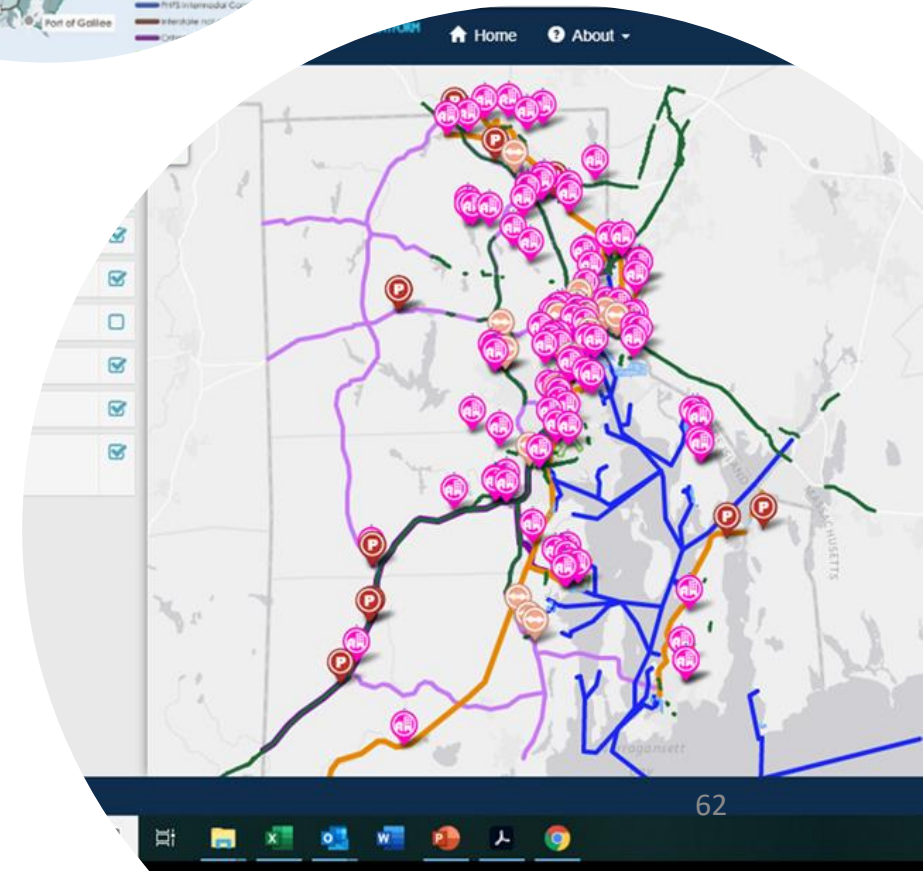
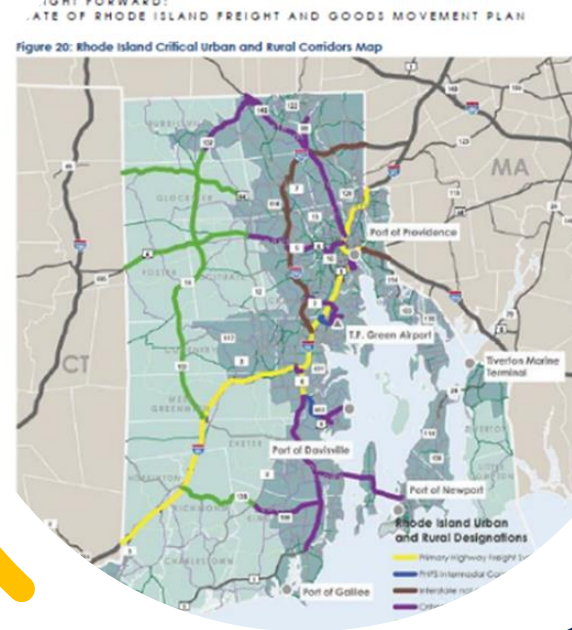
What Are Some Issues We Encountered Along the Way?

- We actually ended up using QGIS software to convert shapefiles into GeoJSON format as ArcMap conversion wasn't working.
- To match the Esri ArcMap symbology the Red-Green-Blue (R-G-B) numbers were collected for both fill and outline colors as well as line width and shared with IT so that they could code it within the GeoJSON layer.
- So we had to create these "RGB" tables to share for each GIS layer included in the final mapper

Additional Considerations

- What freight information is “critical” enough to be displayed in the mapper? How do you narrow down the list?
- We started with some of the freight network base layers in our 2016/2017 Plan and then expanded
- We utilized truck volume data from our state travel demand model and state AADT (data now woefully out of date)
- We decided to include pipeline data but with a “scale dependency”. Some concerns were voiced about homeland security issues with finer grained detailed pipeline data.

September 13, 2023



Things We Would Have Liked to Have:

- We have some very detailed narratives about our Ports in our State Freight and Goods Movement Plan
- We would have liked to have added ship call data and some line data for shipping routes within the mapper but the closest we were able to include were “navigable waterways”
- Even that data didn’t include updated dredged depths or restrictions based on shell fishing or other environmental concerns



RI Freight Finder Mapping Demonstration

- Pause Now For Mapping Demonstration !

<https://datadoa.ri.gov/plan/ri-freight-finder/index.html>



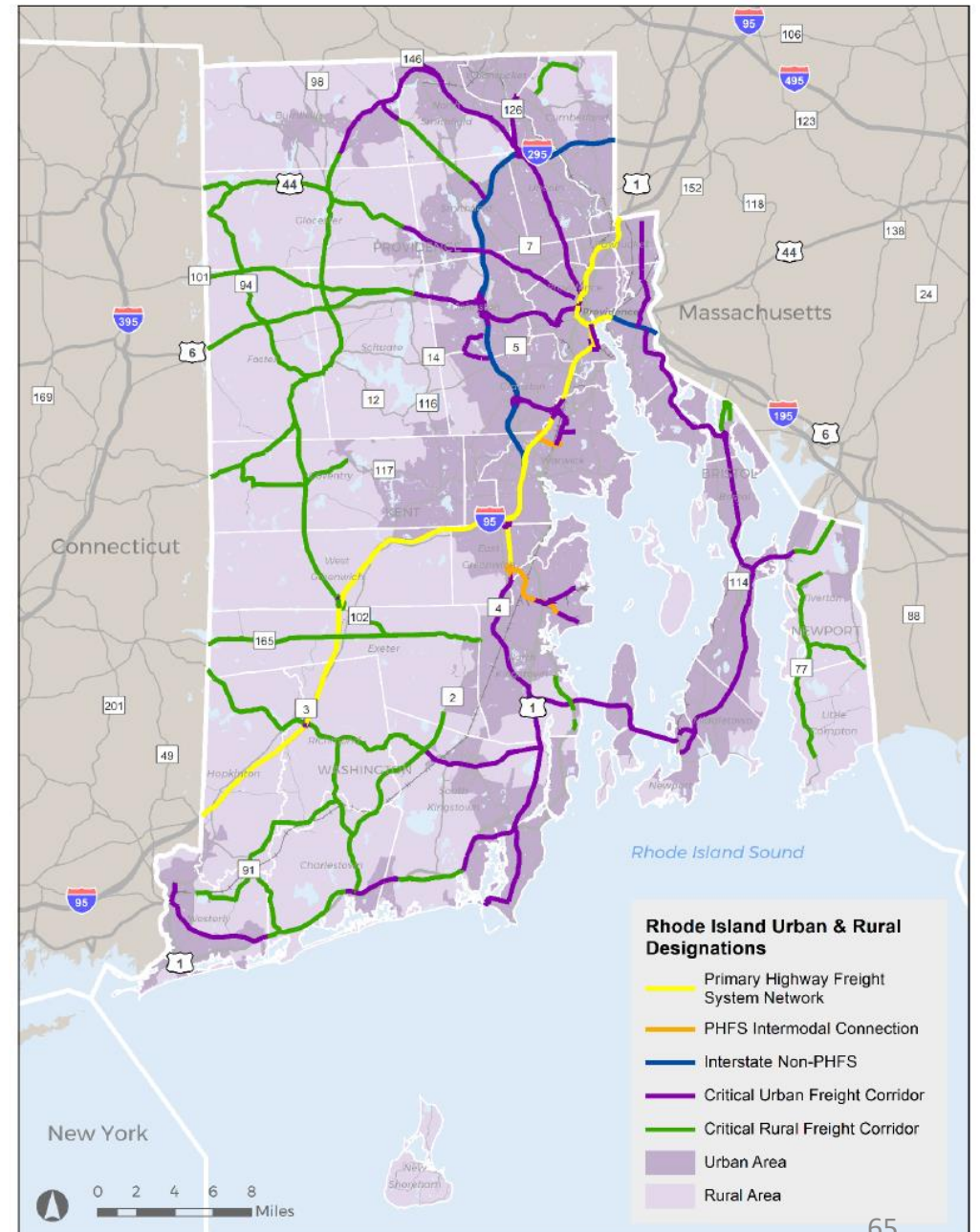
Next Steps

New 2022 Freight Plan Data:

- Rhode Island completed its update of the 2022 Freight and Goods Movement Plan this year (June 2023) with the adoption of a revised version including multiple appendix studies - statewide truck parking study, freight commodity flow forecast to 2050, Update to RI Freight Corridors
- All of this new data will now need to be incorporated into the “RI Freight Finder” mapping application

September 13, 2023

Figure 3: Rhode Island Critical Urban and Rural Freight Corridors Map





Next Steps

- Focus will be on new truck volume data, truck parking data, updated freight corridors
- We would like to update the RI freight businesses data layer, but may need a better data source than the Providence Business News. Transearch and other Private Companies may be utilized for data purchase.
- As a MPO, we would need to included this as a project in our next Work Program (UPWP) beginning July 1, 2024.



Questions?

Joshua O'Neill, AICP

Supervising Planner

RI Department of Administration

Division of Statewide Planning

235 Promenade Street, Suite 230

Providence, RI 02908

(401) 222-4849

Polling Question 1

1. Do you find this product to be a useful?
 - a. Yes
 - b. No
 - c. Other (please provide)

Polling Question 2

2. Do you find this to be easy to understand?
 - a. Yes
 - b. No
 - c. Other (please provide)



Questions for the Audience/Roundtable Discussion

- What other information would you like to see included?
- What data needs would your agency have to produce a similar mapper?





Future Working Group Activities

Upcoming Freight Activities

SAVE THE DATE



- October 24, 2023 - Trucking Discussion (Virtual)
 - Part of hybrid TIS Summit
- December 13, 2023 – Freight Data & Planning Working Group Meeting
 - 1:30pm-3:00pm, ET
 - Topic – in development



THE EASTERN
TRANSPORTATION
COALITION

CONNECTING FOR SOLUTIONS



THANK YOU

Marygrace Parker, Freight Program Director
The Eastern Transportation Coalition
mgparker@tetcoalition.org