



## **TPB REGIONAL PUBLIC TRANSPORTATION SUBCOMMITTEE (RPTS)**

Tuesday, January 23, 2024  
12:00 – 1:30 P.M.  
Chair: Melissa Kim, WMATA

### **VIRTUAL MEETING**

#### **AGENDA**

- 12:00 P.M. 1. WELCOME**
- 12:10 P.M. 2. WMATA BETTER BUS NETWORK REDESIGN UPDATE**  
*Melissa Kim, WMATA Regional Mobility Program Manager*  
*William Jones, WMATA Regional Mobility Program Manager*
- 12:30 P.M. 3. VISUALIZE 2050 PLAN UPDATE**  
*Eric Randall, TPB Transportation Engineer*
- 12:45 P.M. 4. REGIONAL TRANSPORTATION RESILIENCE IMPROVEMENT PLAN UPDATE**  
*Katherine Rainone, TPB Resiliency Planner*
- 1:05 P.M. 5. FIRST LOOK AT THE 2023 STATE OF PUBLIC TRANSPORTATION REPORT**  
*Pierre Gaunard, TPB Transportation Planner*
- 1:25 P.M. 6. OTHER BUSINESS**
- 1:30 P.M. 7. ADJOURN**

The next regular meeting of the RPTS is February 27, 2024 and is virtual.

Reasonable accommodations are provided upon request, including alternative formats of meeting materials. Go to [www.mwco.org/accommodations](http://www.mwco.org/accommodations) or call (202) 962-3300 | (202) 962-3213 (TDD) for more info.

# Better Bus Network Redesign Update

Regional Public Transportation Subcommittee

January 23, 2024





# Agenda

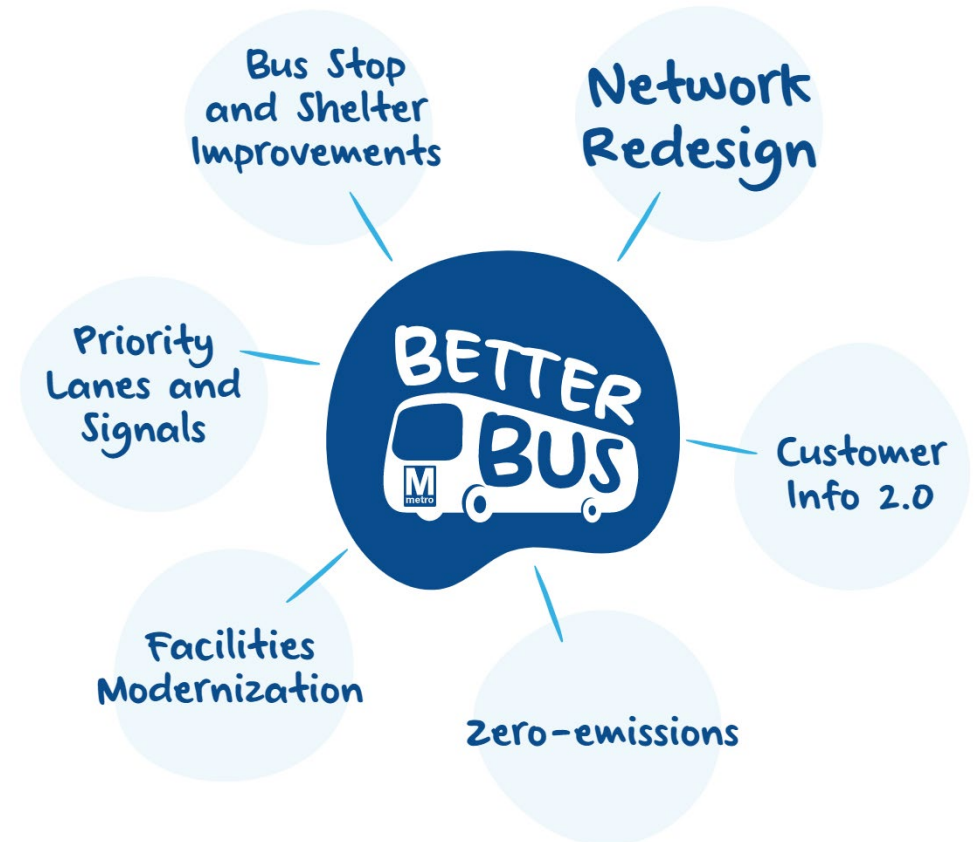
- Project Background and Timeline
- Phase 2 Engagement Results
- Next Steps
- Questions



# Project Background

# What is the Better Bus Network Redesign?

- The Network Redesign is a project to rethink, redesign, and revitalize bus service
- Part of the Better Bus Initiative – which includes many ongoing and future efforts to improve bus service



# Why Redesign the Bus Network?



**To better connect people to where they need to go**



**To promote equity, inclusiveness, and access to opportunity**



**To keep up with our evolving region and the people that live here**



**To create an easy-to-use network, no matter where you are**

# Where We Are

## Project Status

- Shared the draft Visionary Network with the public and stakeholders Spring 2023
- Received 8,000+ route specific comments – Incorporating into Revised Visionary Network and Draft Year One Network

*Shared in Spring 2023*



*Anticipated Sharing in Spring 2024*





# Phase 2 Engagement Results



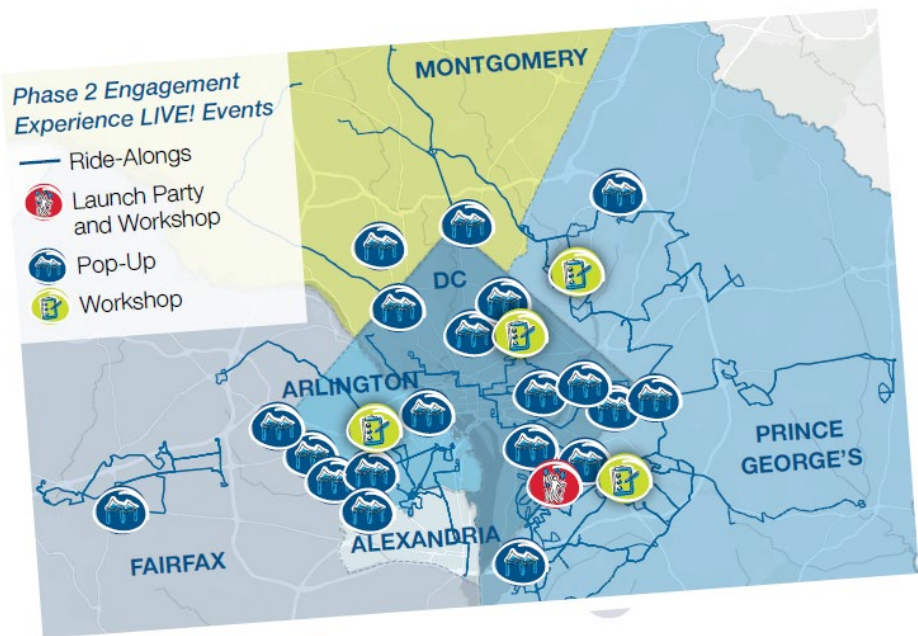


# Experience LIVE! Events

Meeting People in Their Communities



63 events  
62 days



## Workshops



## Pop-Ups



## Bus Ride-Alongs



## Webinars



# Experience LAB

## Interactive Web Experience



**40,489**  
Unique Users

**97,102**  
Page Views  
(10% in Spanish)

**3,278**  
Welcome  
Video Views

# Comment on Your Route Tool

**5,749**  
Comments Received  
Through the "Comment on Your Route Tool"



**1,079**  
Likes



**1,943**  
Need



**2,727**  
Dislikes



# New Trip Planner Tool



Starting Point  
Destination

An Estimated **70,000**  
Origins and  
Destinations Searched

**3.6** Minutes  
Average Per Visit  
(compared to industry standard of 54 seconds)



# Map Library

**31,834**  
Downloads



# Engaging Employees

- Operators desire longer breaks
- Opinions varied about the desired length of routes
- Difficult maneuvers was a key concern, including comments about:
  - Tight turns
  - Narrow Streets
  - Traffic blocking stops a turns
  - General congestion



**500+**

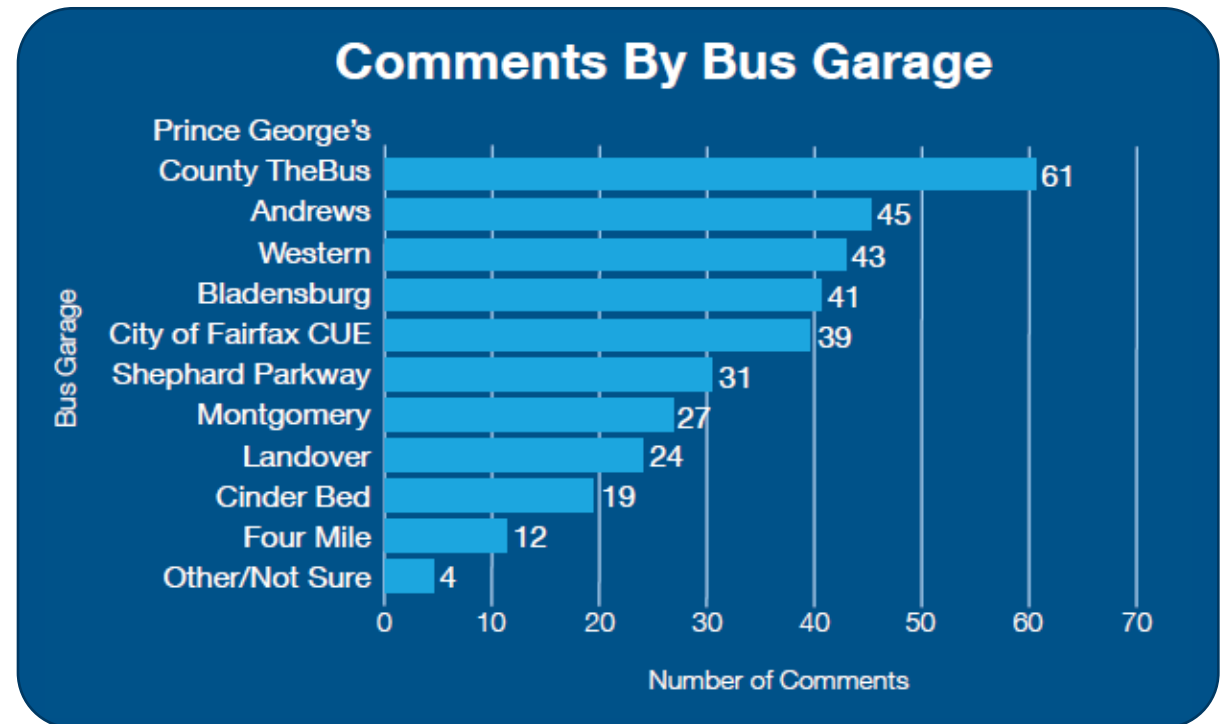
**Bus Operations Staff  
at 11 Preview Parties**

*All nine Metrobus divisions,  
TheBus, and CUE*



**360+**

**Written  
Comments  
Received**





# Phase 2 By The Numbers

**20,000+**  
interactions at 60+  
public events  
(21% non-English)

**500+**  
bus operations staff  
at 11 Preview Parties

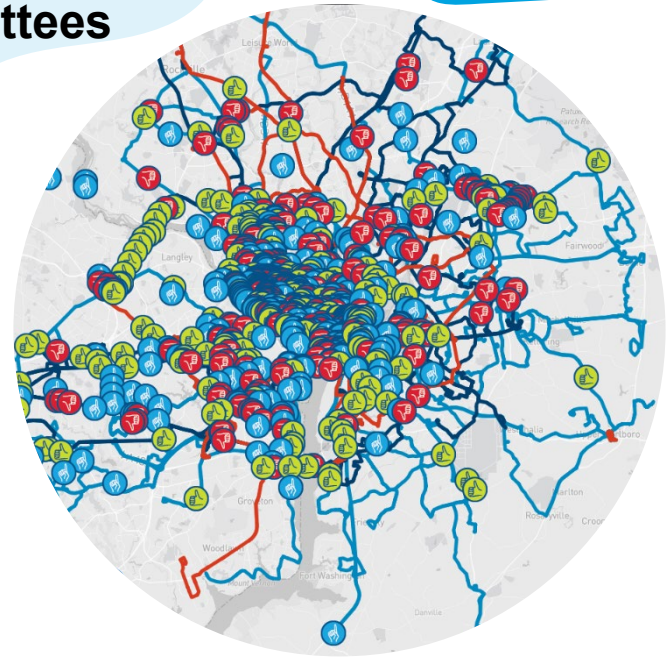
Briefed  
**110+ elected officials**  
and **15+ advocacy**  
groups, CBOs, and  
committees

**8,000+**  
comments on  
routes

*10.5% of daily ridership*



**40,000+** Visitors to the  
Experience Lab page,  
Multilingual advertising  
through **21 outlets**,  
**600,000+** social media  
impressions,



# What we Learned



**20,000+**  
in-person interactions

**600,000+**  
social media impressions



"It would be really beneficial to the residents of this area to have a line that goes more directly to Union Station. This would provide much more convenient access to Amtrak and the Red Line!"

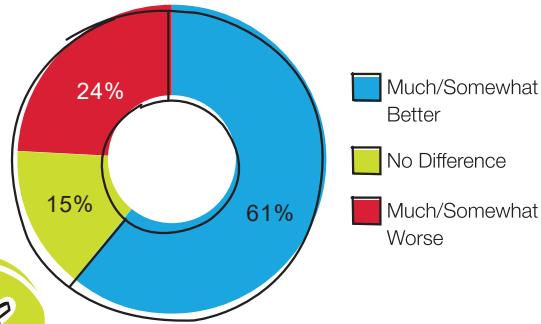


"I love the VA487! Beauregard Ave is a busy corridor and having an extra route that gets on I-395 earlier at Seminary Road instead of King Street will be great!"

## The Visionary Network will make the bus better

61% of respondents had a positive impression of the draft Visionary Network.

### Overall Impressions of the Visionary Network



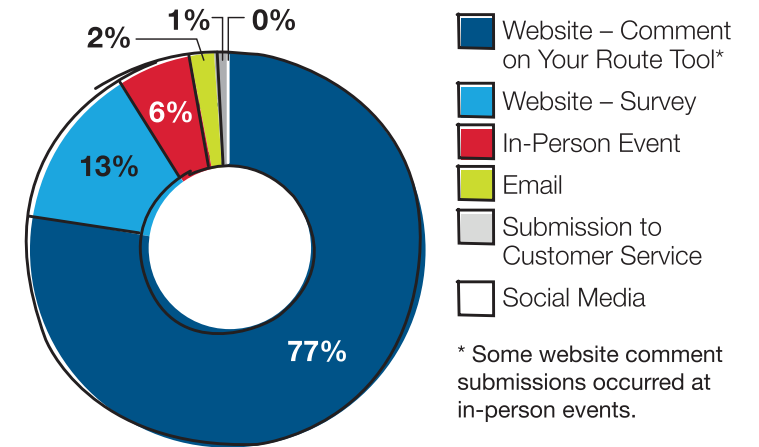
**40,000**  
unique website users

**8,000+**  
comments on routes

**20+**  
features in local, regional, and national news outlets

## We received more than 8,000 comments on routes

Comments came from a variety of sources:



\* Some website comment submissions occurred at in-person events.



# How We're Using this Input

- We ensured that **comments received through various inputs** – on the map, verbally at events, web survey, etc. – were **compatible** and **easy to integrate**
- We created a **comment dashboard**
- Our bus service planners read every single one of the **8,000+ comments!**



With a focus on collecting specific comments and an understanding of preferences, we now have the information we need to create the future bus network that the region deserves.



Route*	Name	Similar Current Routes	Comment Summary
DC108	Duke Ellington Bridge – Anacostia	90, 92, 96	<ul style="list-style-type: none"> <li>• Many comments requesting bus lanes on U Street NW/Florida Avenue NW</li> <li>• Strong support for both the DC108 and DC109 routes going to Adams Morgan; some comments requesting the route continue to Woodley Park to offer a direct Metrorail connection (or further into Northwest DC) rather than ending at the Duke Ellington Bridge terminal</li> <li>• Several comments requesting that either the DC108 or DC109 routes travel to Navy Yard</li> </ul>



# Network Design



# Revised Visionary Network at a Glance

Revisions to the Visionary Network were made based on:



- Comments and ideas from the public, stakeholders and elected officials
- Data on travel needs and demand



Revisions continue to prioritize **equity, connectivity, and the customer and operator experience**



Expanded frequent service



More service all day/all week



Increase crosstown & cross-county connections



Service is easier to understand along major routes



Direct, frequent routes connecting key destinations & transit hubs



Extended service beyond jurisdictional borders





# What is a Year One Network?

**Transformative** bus service that

- Is **equitable**,
- Provides a base network that can be **built upon in the future**,
- Reallocates resources to best meet **goals for bus service**, and
- Can be delivered with **resources available today**



The Year One Network is the **first step** to implement the Visionary Network



# Next Steps



# Next Steps

- Finalizing Revised Visionary and draft Year One networks
- Develop engagement plans, tools and materials



# Thank you!

# Questions?



# VISUALIZE 2050

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## Regional Transportation Plan Update

Eric Randall, TPB Transportation Engineer

TPB Regional Public Transportation Subcommittee  
January 23, 2024

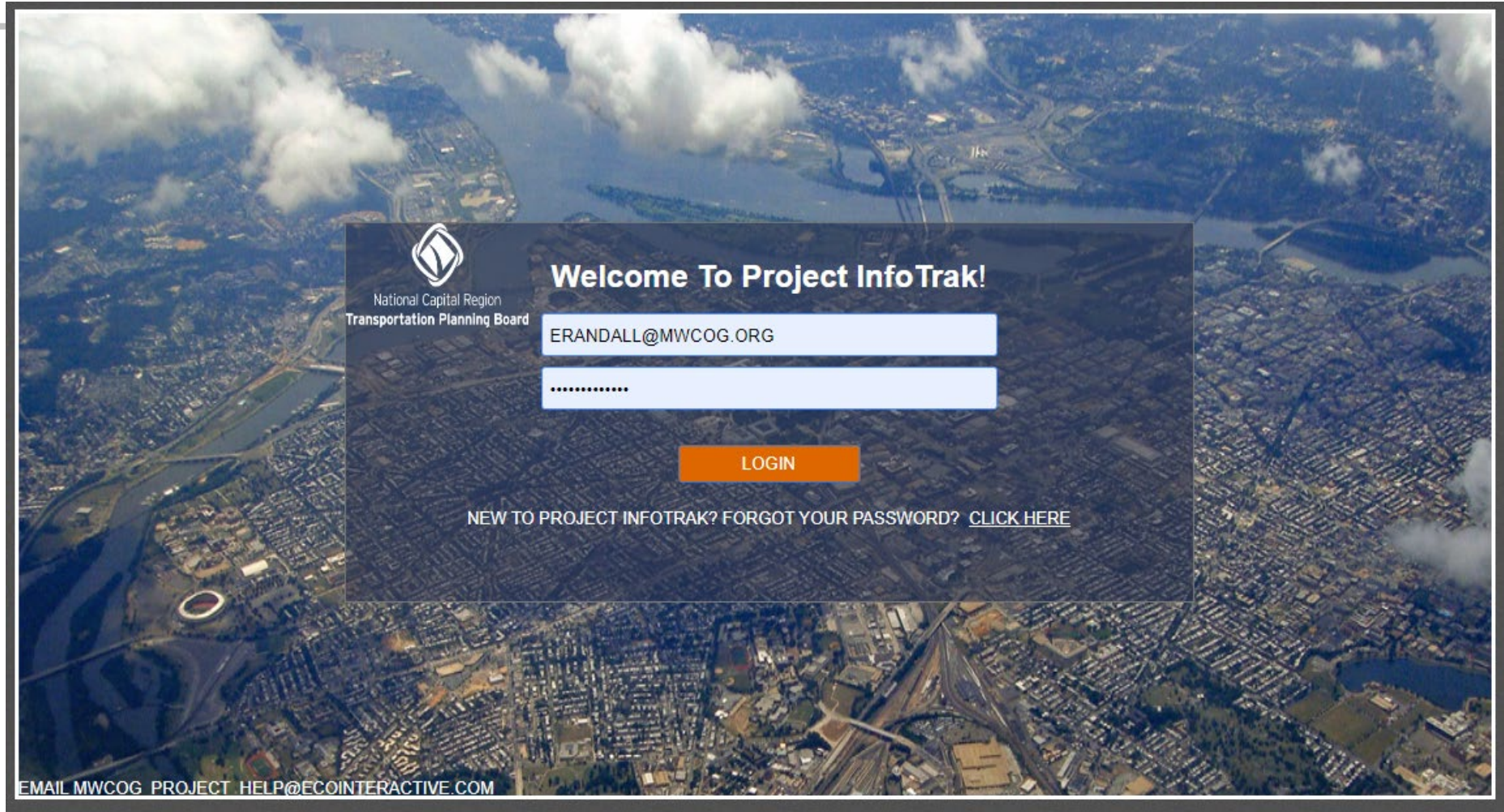
# Visualize 2050 Due Dates

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- Project Inputs were due December 29, 2023 for the Visualize 2050 regional transportation plan (LRTP) and the Air Quality Conformity (AQC) process
  - Highway Projects
  - Transit Projects:
    - Bus Rapid Transit
    - Transitways
    - Rail Track and Bridges
- [Transit Service Assumptions](#) due March 1, 2024
  - Metrorail, MARC and VRE, BRT Projects, other



# Project Inputs to the PIT



# Project Type in PIT Database

Primary Record Type - All	
<b>Infrastructure</b>	
Bicycle/Pedestrian - Bike/Travel lane reduction	Bus/BRT - Capital/Expansion
Bicycle/Pedestrian - Bike/Ped	Bus/BRT - Capital/SGR
Road - Access Mgmt	Bus/BRT - Maintenance
Road - Add Capacity/Widening	Bus/BRT - Passenger facilities
Road - HOV/Managed Lanes	Bus/BRT - Regional Fare collection
Road - Interchange improvements	Rail/Fixed Guideways - At-Grade Crossing
Road - Intersection improvements	Rail/Fixed Guideways - Capital/Expansion
Road - ITS/Technology	Rail/Fixed Guideways - Capital/SGR
Road - New Construction	Rail/Fixed Guideways - Grade Separation
Road - Recons/Rehab/Maintenance/Resurface	Rail/Fixed Guideways - Maintenance
Road - Signal/Signs	Rail/Fixed Guideways - Metrorail/Commuter Rail
Bridge - New Construction	Rail/Fixed Guideways - Streetcar/Light rail
Bridge - Prev. Maint	Freight - Freight Movements
Bridge - Rehab	TDM/Micromobility - Park and Ride
Bridge - Rehab + Add Cap	Other - Alt Fuel Infrastructure
Bridge - Replace	Other - Intermodal Facilities
Bridge - Replace + Add Cap	Other - Regional Fare Collection
	Other - Federal Lands Highway Program
<b>Program/Service</b>	<b>Administrative</b>
Bus/BRT - Operating	Debt Service
Rail/Fixed Guideways - Operating	Training
TDM/Micromobility - Ridesharing	Grouping Category
TDM/Micromobility - Vanpool	
<b>Study</b>	<b>Other</b>
Study/Planning/Research	Other

Transit Inputs





# Visualize 2050 Schedule: January - February

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- TPB staff working to distribute a draft conformity table to agencies for review by January 26.
- Final project inputs for the AQC analysis due to TPB staff for inclusion in comment period documentation by February 15.
- TPB staff will reconcile draft financial analysis results and produce preliminary financial plan to reflect project submissions.



# Visualize 2050 Schedule: March - April

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## March 1, 2024

- Public comment period starts March 1 and runs through March 30 on projects and AQC scope of work.
- The TPB Technical Committee will review projects submitted for inclusion in the conformity analysis, the draft financial plan and the draft AQC scope of work.
- The TPB will receive a briefing at its March meeting.

## April 2024

- The TPB will receive a summary of the public comments on the draft inputs to the plan and AQC analysis; agencies sponsoring the projects will have the opportunity to discuss and advise staff on responses.



# Visualize 2050 Schedule: May through 2025

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## May 2024

- The TPB will be asked to accept the comments and approve the inputs and scope, authorizing staff to commence Air Quality Conformity technical analysis.

## Winter 2024

- Final Transportation Improvement Program (TIP) inputs for the FY 2026-2029 TIP due January 2025.
- TPB staff complete Air Quality Conformity technical analysis and draft report, financial plan, draft performance analysis for the plan and TIP.

## April 2025

- Public comment period on the plan, TIP and the results of AQC analysis April 1 – April 30
- The TPB Technical Committee and TPB will review the draft results of AQC analysis for the plan and FY 2026-2029 TIP during their meetings.

## June 2025

- The TPB will be asked to approve the results of the AQC analysis and adopt the updated plan and the FY 2026-2029 TIP.



## **Eric Randall**

TPB Transportation Engineer

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[mwkog.org](http://mwkog.org)

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777 North Capitol Street NE, Suite 300

Washington, DC 20002



National Capital Region  
**Transportation Planning Board**

# TRANSPORTATION RESILIENCE PLANNING UPDATE

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## Transportation Resilience Improvement Plan (TRIP) Progress Update

Katherine Rainone, AICP  
Transportation Planner

Regional Public Transportation Subcommittee Meeting  
January 23, 2024

# Today's Agenda

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- Resilience/Vulnerability, TRIP/PROTECT overview
- Regional TRIP process/timeline
- Risk-based vulnerability assessment – methodology and preliminary results
- Other TRIP components completed to date
- Next steps



# Vulnerability and Resilience Defined

- **Vulnerability** is the degree to which a system **is susceptible to, or unable to cope with adverse effects** of natural hazards
- **Resilience** is the ability **to anticipate, prepare for, and adapt** to changing conditions and **withstand, respond to, and recover** rapidly from disruptions from natural hazards



Motorists stranded on a section of Canal Road in Washington DC due to flash flooding on July 8, 2019 (WTOP, 2019)



# PROTECT Program

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- Projects in the TRIP will be eligible for a **7% cost-share reduction** for the Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (**PROTECT**) Discretionary Grant Program
  - Additional **3% reduction** if incorporated into the TPB long-range transportation plan
- The TRIP must include several required elements, including but not limited to:
  - Address immediate and long-range planning activities and investments related to resilience
  - Demonstrate a systemic approach to resilience
  - Include risk-based assessment of vulnerabilities to current and future weather events and natural disasters
- **PROTECT** aims to help make surface transportation more resilient to natural hazards, including climate change, sea level rise, flooding, extreme weather events, and other natural disasters through support of planning activities, resilience improvements, community resilience and evacuation routes, and at-risk coastal infrastructure





# TRIP Objectives and Purpose

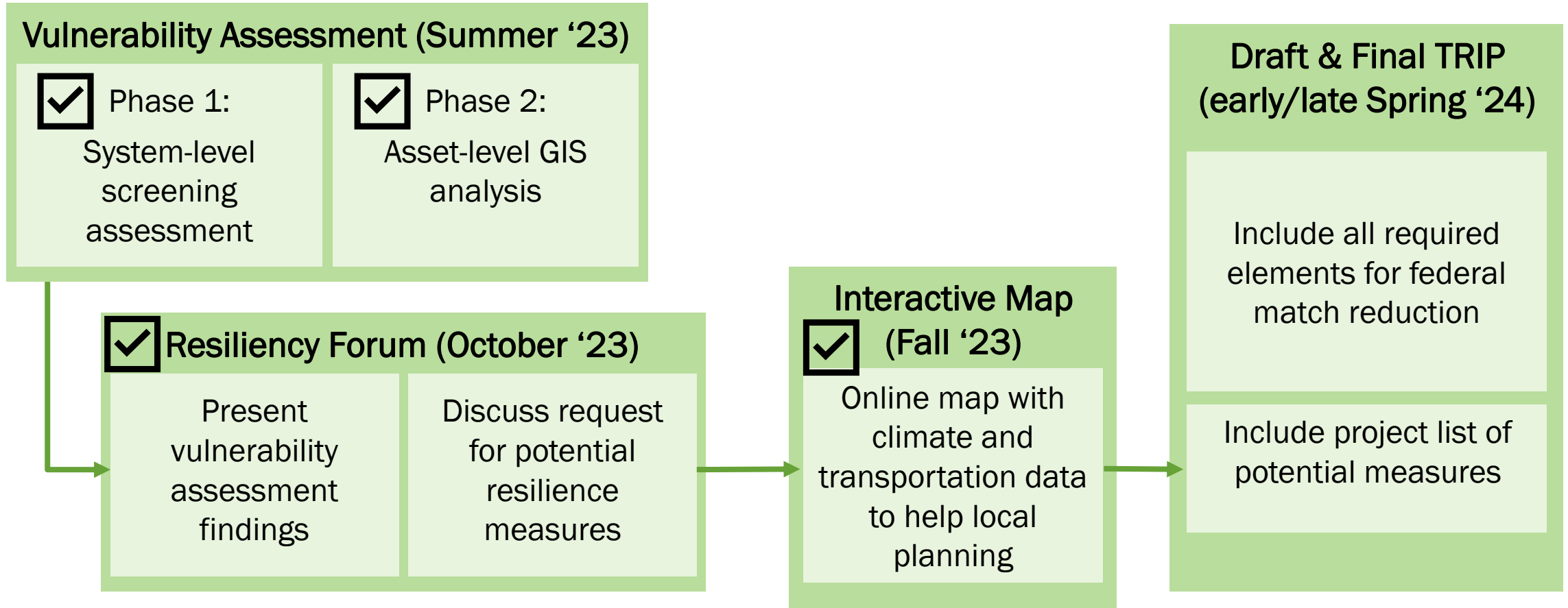
- Develop a Transportation Resilience Improvement Plan (TRIP) in collaboration with member organizations that will:
  - Contribute to member organizations' understanding of and planning for climate change risk and resilience
  - Identify priorities for resilience investment
  - Better position the region for federal funding and match reduction under the PROTECT program



Damage to Hunter Mill Road in Fairfax County from Tropical Storm Lee (Flicker/VDOT, 2011)



# Process and Timeline








# Regional Stakeholder Participation

- **Working Group** – quarterly meetings
  - State DOTs
  - Locality representatives
  - Transit agencies
- **Regional Transportation Resilience Forum**
  - Wider audience than working group
    - Regional partners
    - Advocacy groups
    - MPO representatives from outside our region



# Phase 1: System-Level Analysis

TABLE 1. SUMMARY SYSTEM-LEVEL ANALYSIS RESULTS FOR MWCOG REGION (INFRASTRUCTURE IMPACTS ON LEFT; SERVICE AND CUSTOMER IMPACTS ON RIGHT)

					
	Extreme Heat	Inland Flooding	Coastal Flooding	Extreme Winter	Extreme Wind
Roads and highways					
Bridges					
Public transit					
Active transport					
Airport					
Maritime					
Stormwater					



Legend:

High sensitivity	Medium sensitivity	Low sensitivity	Impacts to infrastructure	Impacts to customers and service

### Pairs that moved on to Phase 2:

- **Extreme heat:** Public transit, active transport
- **Inland flooding:** Roads and highways, bridges, public transit, stormwater
- **Coastal flooding:** Roads and highways, bridges, public transit, stormwater, maritime
- **Extreme winter:** Public transit, active transportation
- **Extreme wind:** Roads and highways, public transit



## Phase 2: Asset-Level Analysis (Literature Review)

For flagged Phase 1 pairs not well suited to a GIS analysis, we completed a qualitative literature review, with a focus on:

- Historical trends and future conditions for each hazard
- Previous events and impacts for each pair

Literature Review Pairs	
<ul style="list-style-type: none"><li>• Inland flooding:<ul style="list-style-type: none"><li>• Stormwater</li></ul></li></ul>	<ul style="list-style-type: none"><li>• Extreme winter:<ul style="list-style-type: none"><li>• Public transit</li><li>• Active transportation</li></ul></li></ul>
<ul style="list-style-type: none"><li>• Coastal flooding<ul style="list-style-type: none"><li>• Stormwater</li><li>• Maritime</li></ul></li></ul>	<ul style="list-style-type: none"><li>• Extreme wind:<ul style="list-style-type: none"><li>• Roads and highways</li><li>• Public transit</li></ul></li></ul>



# Phase 2: Asset-Level Analysis (GIS Analysis)

- For pairs with available data: Completing an asset-level GIS analysis using asset-specific data, **exposure indicators**, and **criticality indicators**

## GIS Pairs

- Extreme heat:
  - Public transit
- Inland flooding:
  - Roads and highways
  - Bridges
  - Public transit
- Coastal flooding:
  - Roads and highways
  - Bridges
  - Public transit

## Key Climate Datasets

Hazard	Dataset
Temperature	Land Surface Temperature
Inland Flooding	FEMA 100/500 Year Floodplain Maps
Sea Level Rise	NOAA Digital Coast 2 Ft Sea Level Rise

## Key Criticality Elements

Criticality Element
MWCOG Equity Emphasis Areas (for all pairs)
Functional Class (for roads and bridges)
Detour Length (for bridges)



# Preliminary Results

Table 20: Assets with medium-high vulnerability.

	Bus	Rail Line	Rail Stop	Roads	Bridges
Number of assets with medium-high vulnerability to multiple hazards	140	13 miles	1	7.3 miles	N/A

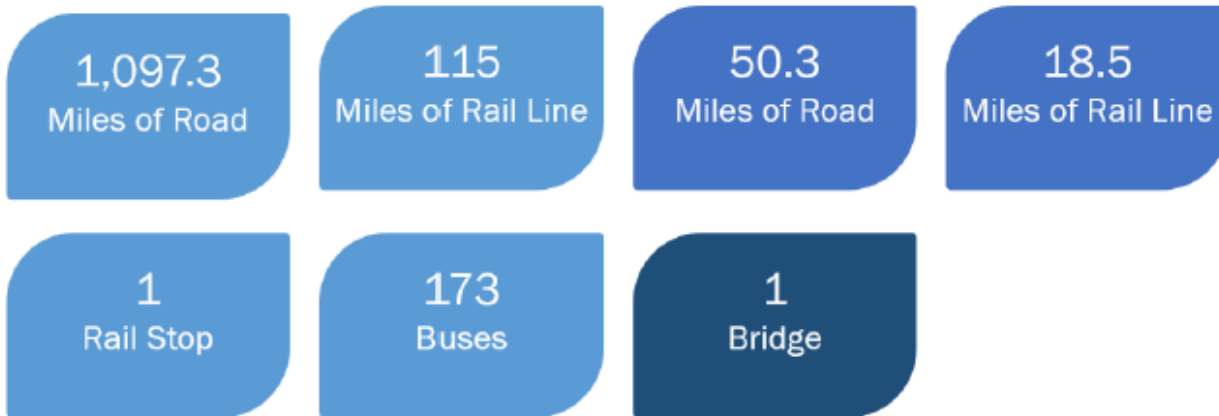


Figure 7. Summary of assets with high vulnerability to inland flooding (light blue) and sea level rise (medium blue). Bridge flood vulnerability was based on condition data (dark blue). Some assets are vulnerable to both hazards and are counted in both categories.

Vulnerability of Rail Lines to Extreme Heat

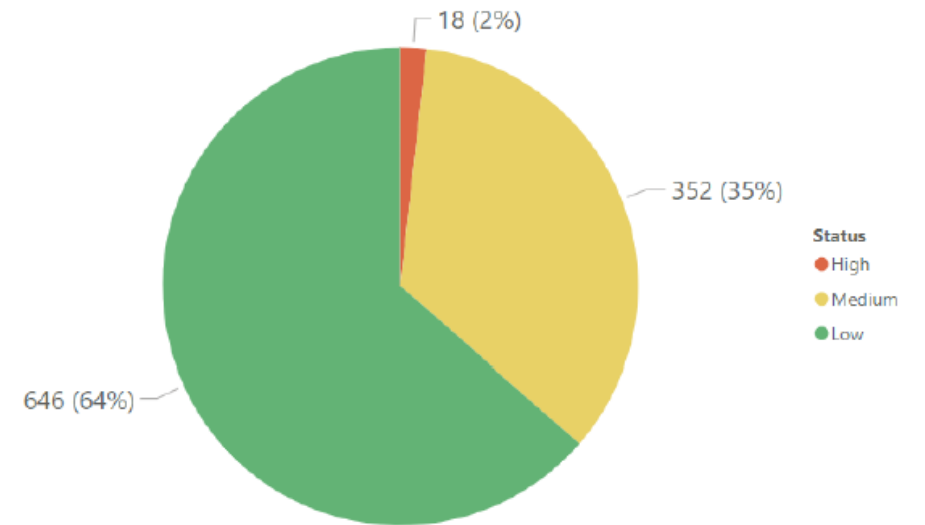
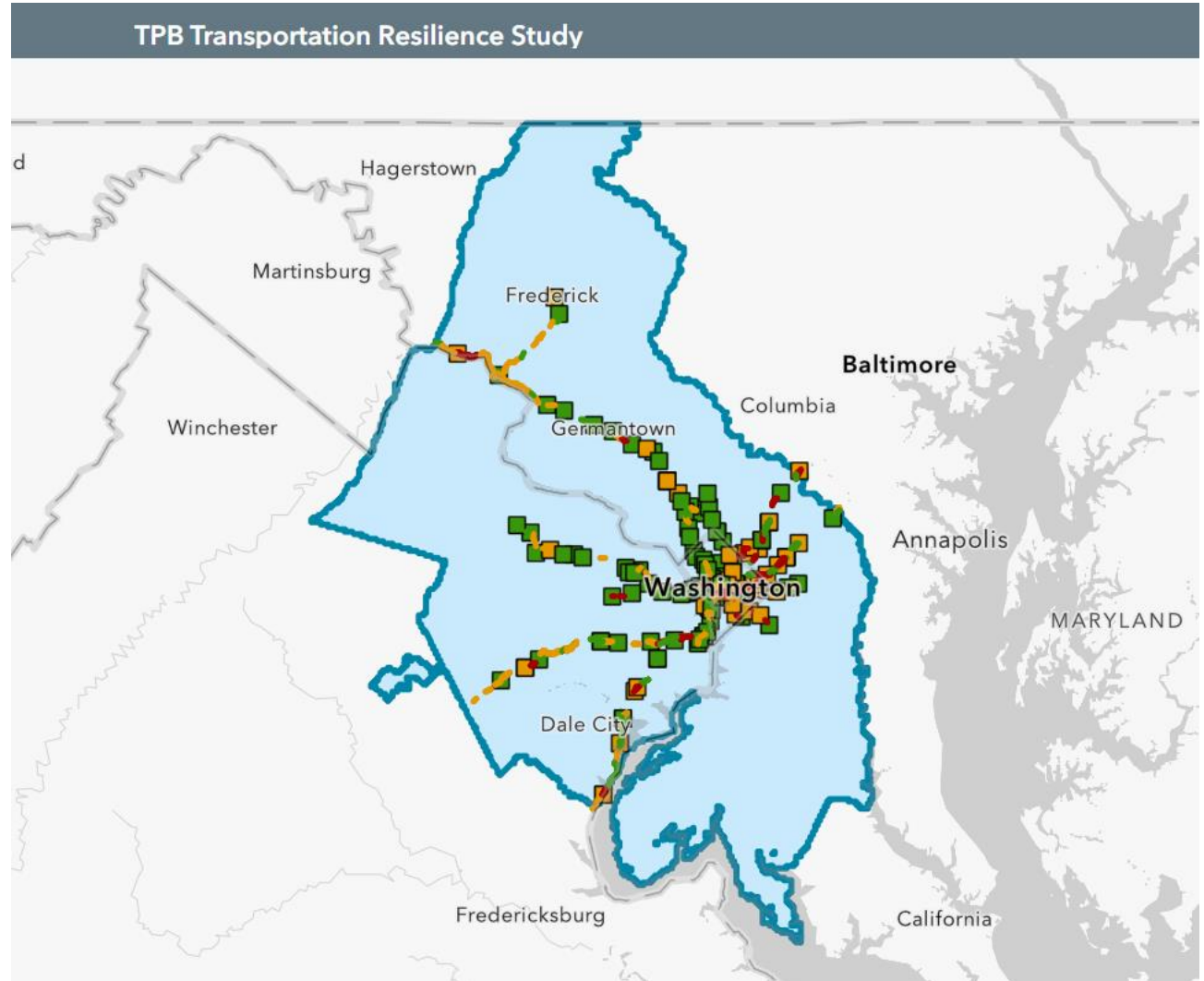


Figure 2. Breakdown of rail lines with low, medium, and high vulnerability to extreme heat.

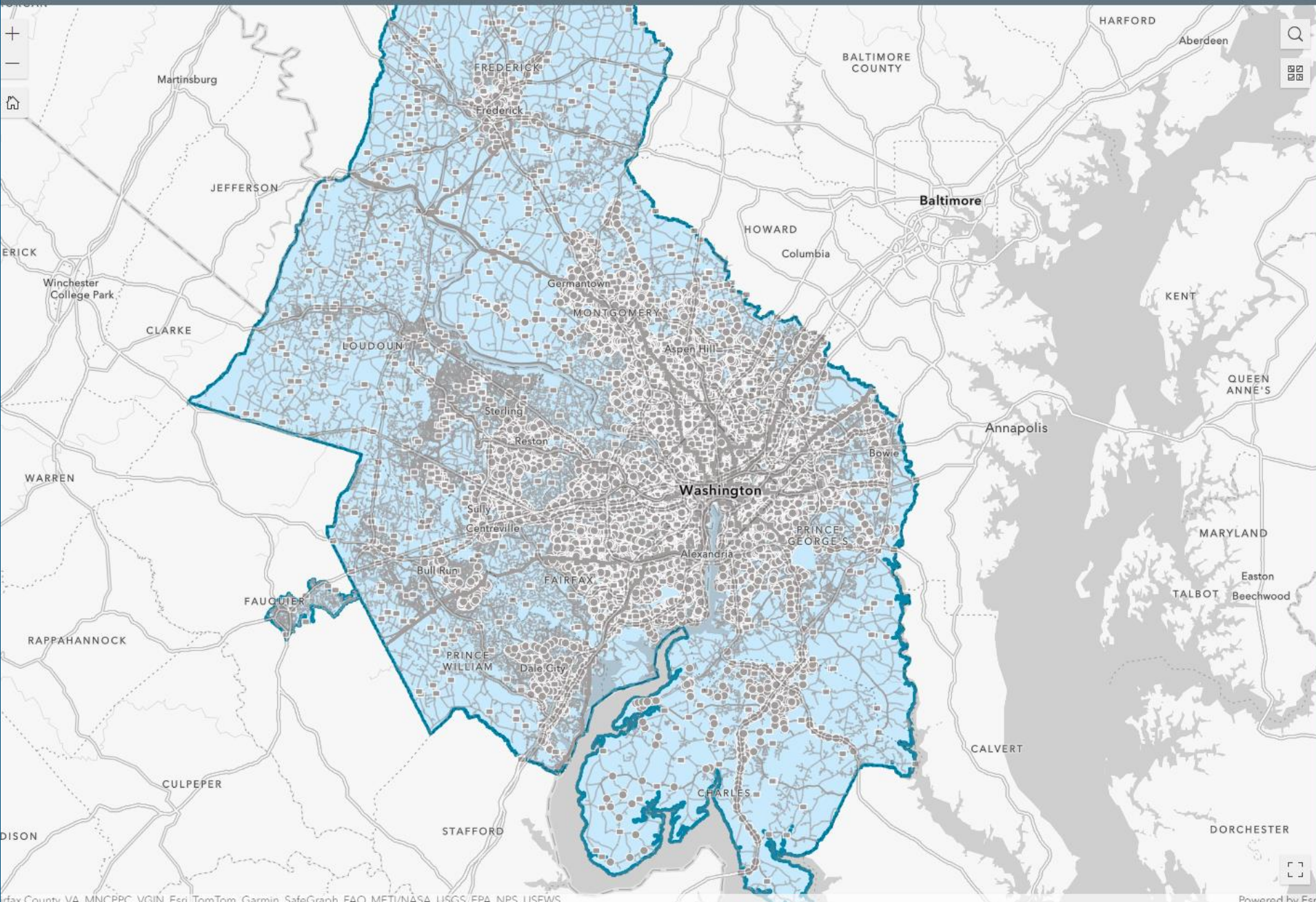


# Interactive Mapping Tool

- The results of the Vulnerability Assessment have been integrated into an [Interactive Mapping Tool](#) on the TPB ArcGIS website
- The Mapping Tool layers transportation asset, climate, and equity spatial data to identify highly vulnerable assets
- Agencies can use the Mapping Tool to evaluate their assets and services





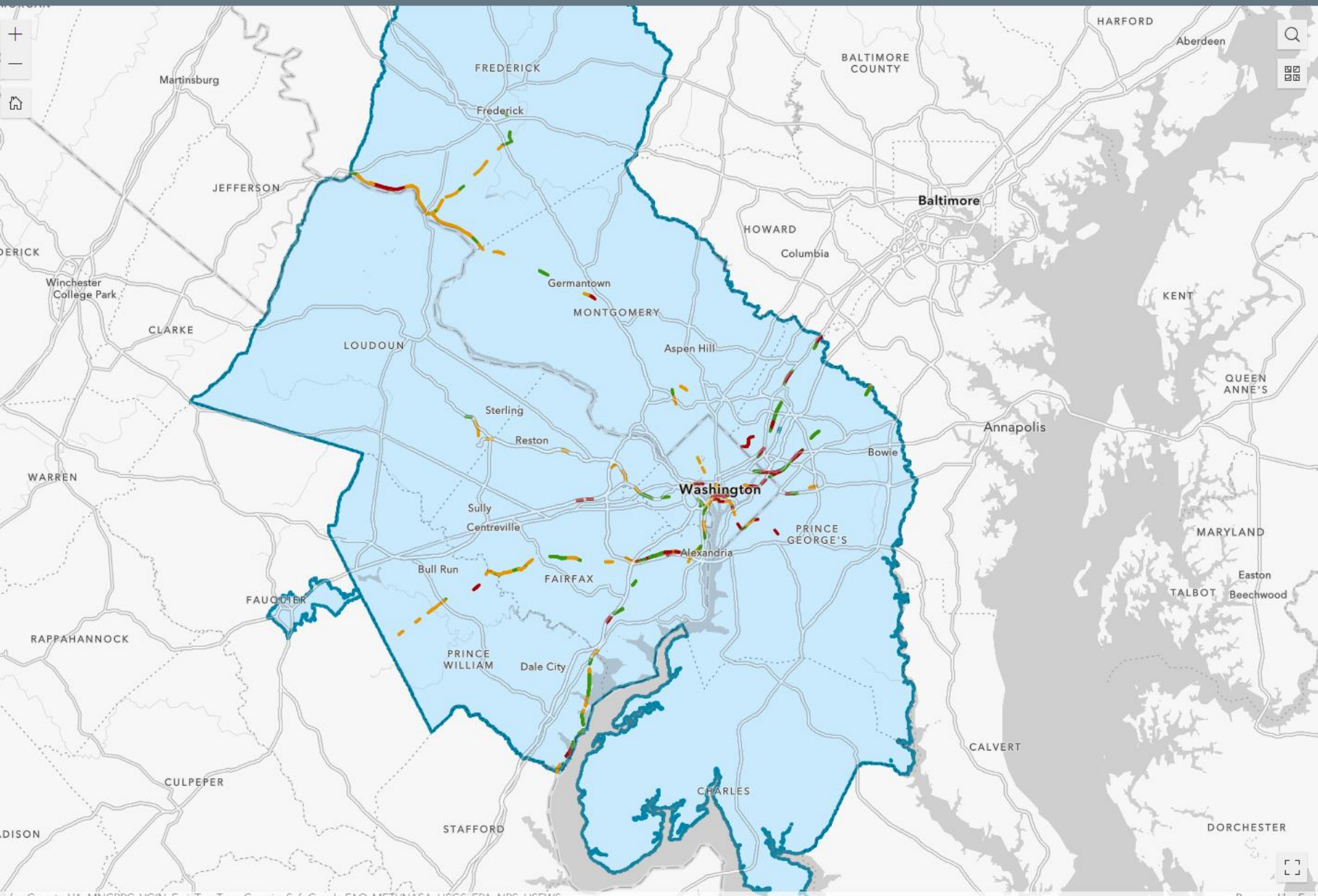


Layers	Legend
<input type="checkbox"/>	Inland Flooding Risk Score - Rail Routes ...
<input type="checkbox"/>	SLR Risk Score - Rail Routes ...
<input type="checkbox"/>	Temperature Risk Score - Rail Routes ...
<input checked="" type="checkbox"/>	<b>Rail Routes</b> ...
<input type="checkbox"/>	Inland Flooding Risk Score - Rail Stops ...
<input type="checkbox"/>	Temperature Risk Score - Rail Stops ...
<input checked="" type="checkbox"/>	<b>Rail Stops</b> ...
<input type="checkbox"/>	Inland Flooding Risk Score - Bridges ...
<input checked="" type="checkbox"/>	<b>Bridges</b> ...
<input type="checkbox"/>	Inland Flooding Risk Score - Bus Stops ...
<input type="checkbox"/>	Temperature Risk Score - Bus Stops ...
<input checked="" type="checkbox"/>	<b>Bus Stops</b> ...
<input type="checkbox"/>	Inland Flooding Risk Score - Roads ...
<input type="checkbox"/>	SLR Risk Score - Roads ...
<input checked="" type="checkbox"/>	<b>Roads</b> ...
<input checked="" type="checkbox"/>	<b>Active Transportation</b> ...
<input type="checkbox"/>	Inland Flooding Zones - Hazard ...
<input checked="" type="checkbox"/>	<b>Median Surface Temperature (°F) - Hazard</b> ...
<input type="checkbox"/>	Strong Wind Events (NRI) - Hazard ...
<input type="checkbox"/>	Sea Level Rise (ft.) - Hazard ...
<input type="checkbox"/>	Tree Canopy Coverage (MRLC) ...




Click the button below to add data to the map. Once the data layer is added, click the layer's 'Actions' button and 'Add to map'.

[+ Click to add data](#)



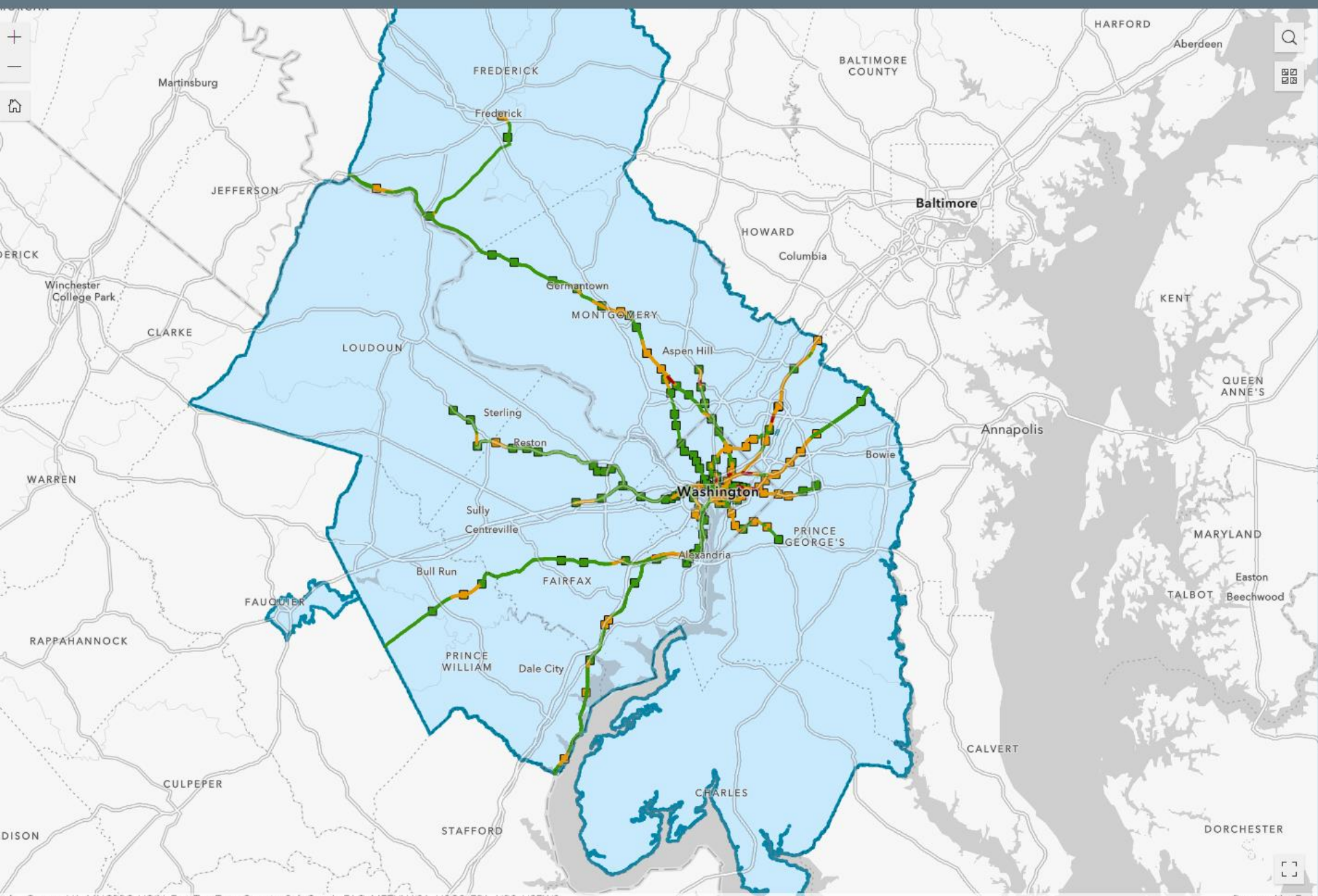
- | Layers   | Legend |
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| <input checked="" type="checkbox"/> Inland Flooding Risk Score - Rail Routes | ...    |
| <input type="checkbox"/> SLR Risk Score - Rail Routes                        | ...    |
| <input type="checkbox"/> Temperature Risk Score - Rail Routes                | ...    |
| <input type="checkbox"/> Rail Routes   | ...    |
| <input type="checkbox"/> Inland Flooding Risk Score - Rail Stops             | ...    |
| <input type="checkbox"/> Temperature Risk Score - Rail Stops                 | ...    |
| <input type="checkbox"/> Rail Stops  | ...    |
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| <input type="checkbox"/> Bridges   | ...    |
| <input type="checkbox"/> Inland Flooding Risk Score - Bus Stops              | ...    |
| <input type="checkbox"/> Temperature Risk Score - Bus Stops                  | ...    |
| <input type="checkbox"/> Bus Stops   | ...    |
| <input type="checkbox"/> Inland Flooding Risk Score - Roads                  | ...    |
| <input type="checkbox"/> SLR Risk Score - Roads                              | ...    |
| <input type="checkbox"/> Roads   | ...    |
| <input type="checkbox"/> Active Transportation                               | ...    |
| <input type="checkbox"/> Inland Flooding Zones - Hazard                      | ...    |
| <input checked="" type="checkbox"/> Median Surface Temperature (°F) - Hazard | ...    |
| <input type="checkbox"/> Strong Wind Events (NRI) - Hazard                   | ...    |
| <input type="checkbox"/> Sea Level Rise (ft.) - Hazard                       | ...    |
| <input type="checkbox"/> Tree Canopy Coverage (MRLC)                         | ...    |




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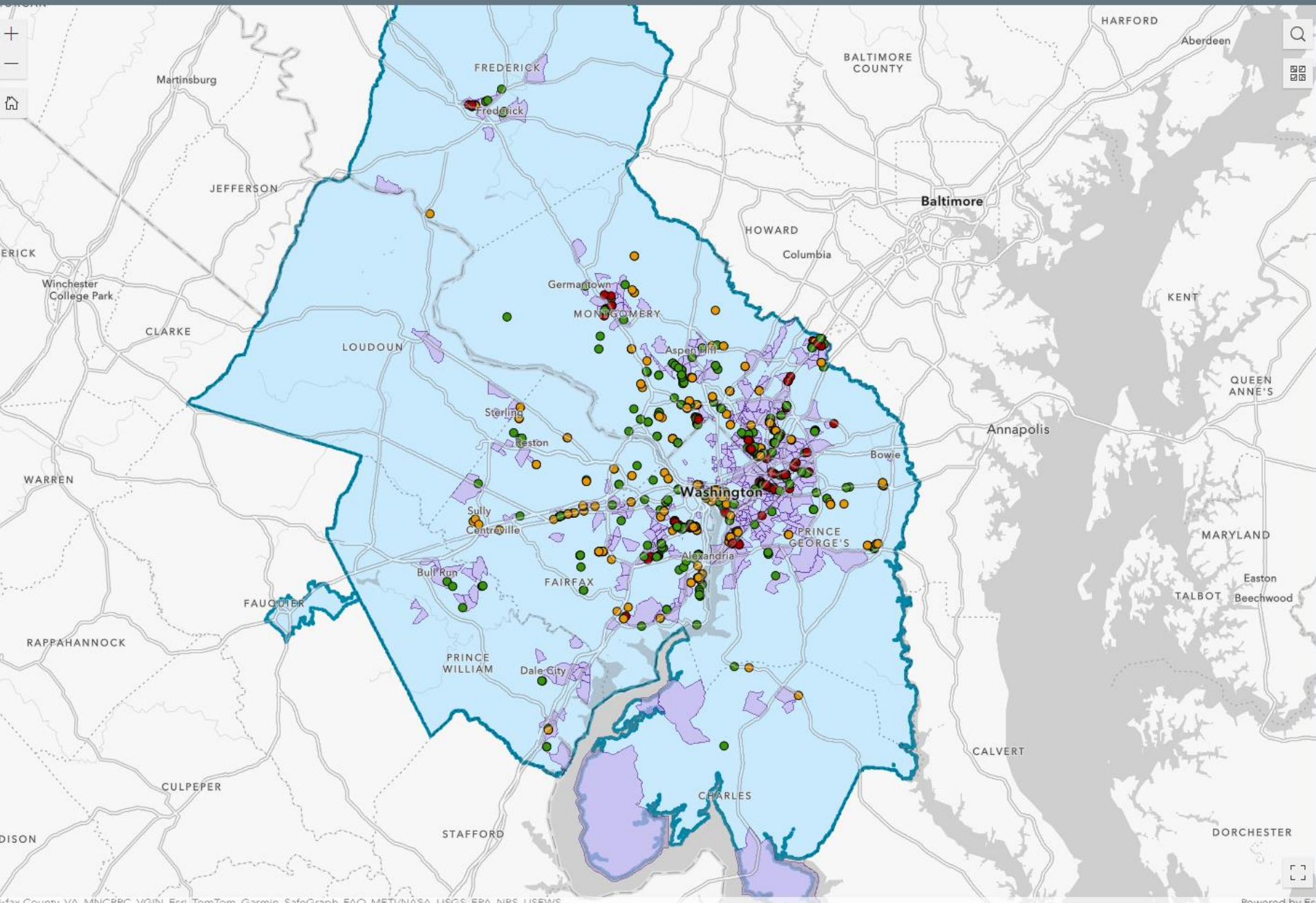


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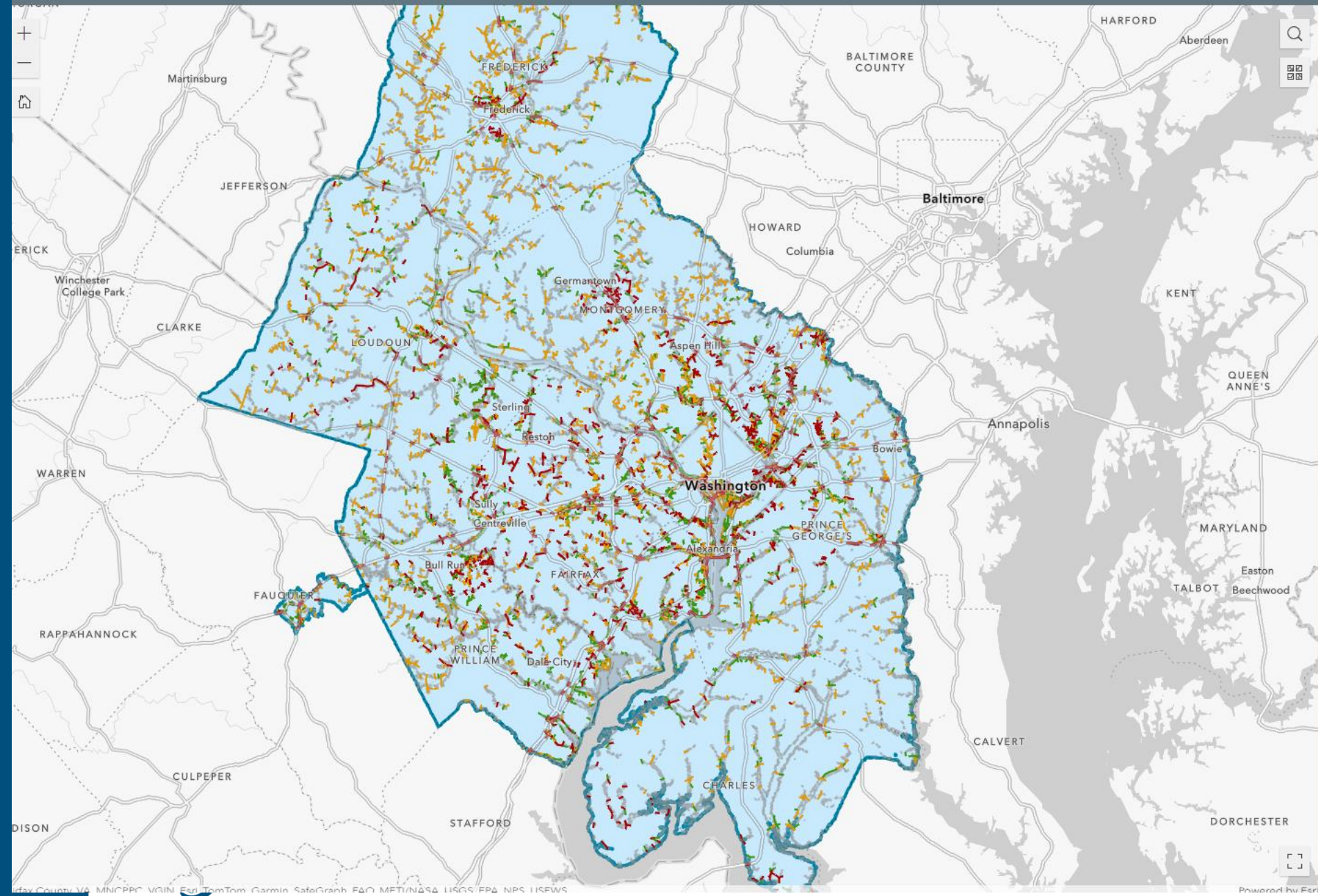


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<input type="checkbox"/> Strong Wind Events (NRI) - Hazard	...
<input type="checkbox"/> Sea Level Rise (ft.) - Hazard	...
<input type="checkbox"/> Tree Canopy Coverage (MRLC)	...
<input checked="" type="checkbox"/> Equity Emphasis Areas	...
<input checked="" type="checkbox"/> Transportation Planning Board (TPB) Boundary	...



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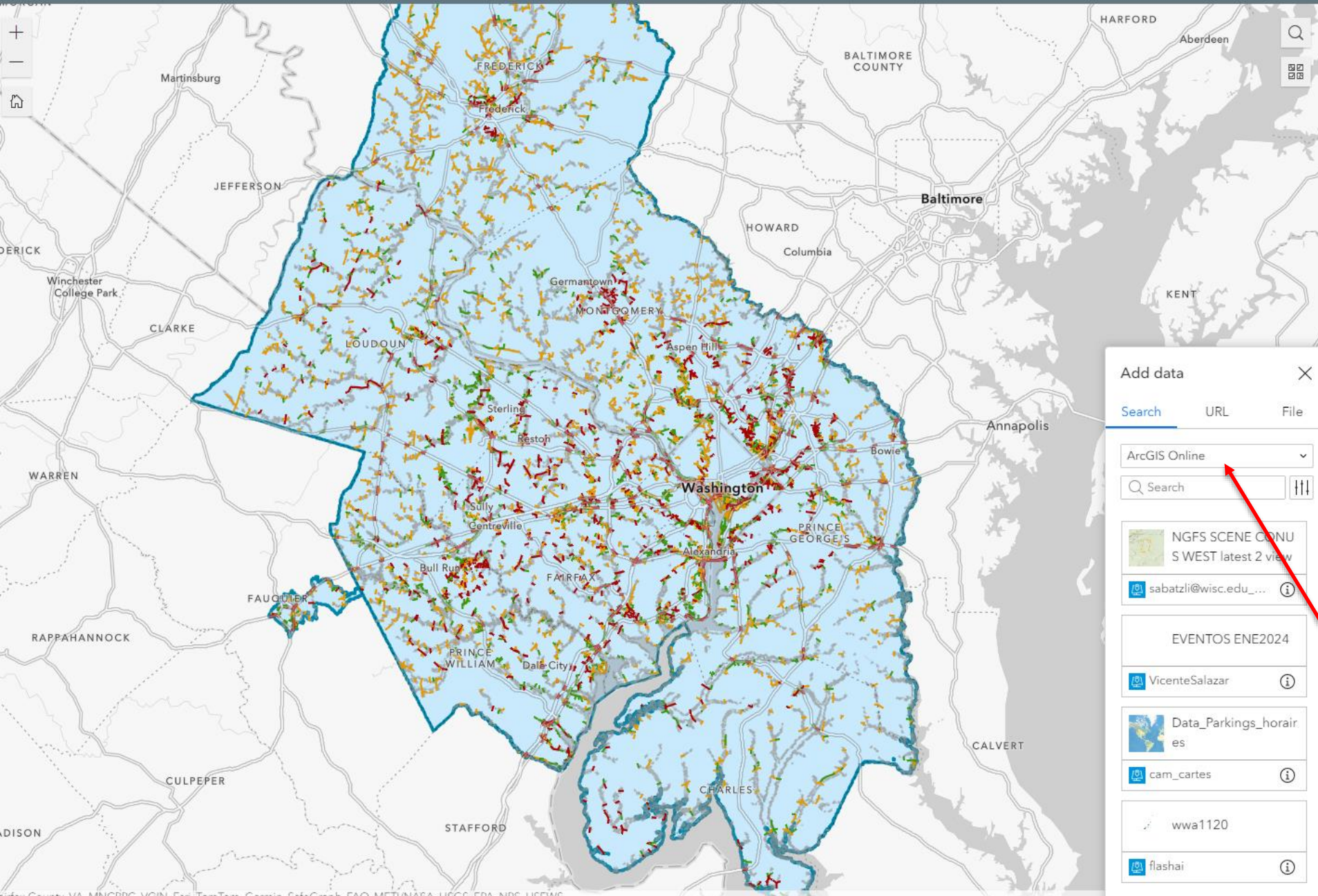
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<input type="checkbox"/>	Inland Flooding Risk Score - Rail Stops ...
<input type="checkbox"/>	Temperature Risk Score - Rail Stops ...
<input type="checkbox"/>	Rail Stops ...
<input type="checkbox"/>	Inland Flooding Risk Score - Bridges ...
<input type="checkbox"/>	Bridges ...
<input type="checkbox"/>	Inland Flooding Risk Score - Bus Stops ...
<input type="checkbox"/>	Temperature Risk Score - Bus Stops ...
<input type="checkbox"/>	Bus Stops ...
<input checked="" type="checkbox"/>	Inland Flooding Risk Score - Roads ...
<input checked="" type="checkbox"/>	SLR Risk Score - Roads ...
<input type="checkbox"/>	Roads ...
<input type="checkbox"/>	Active Transportation ...
<input checked="" type="checkbox"/>	Inland Flooding Zones - Hazard ...
<input type="checkbox"/>	Median Surface Temperature (°F) - Hazard ...
<input type="checkbox"/>	Strong Wind Events (NRI) - Hazard ...
<input type="checkbox"/>	Sea Level Rise (ft.) - Hazard ...
<input type="checkbox"/>	Tree Canopy Coverage (MRLC) ...
<input type="checkbox"/>	Equity Emphasis Areas ...
<input checked="" type="checkbox"/>	Transportation Planning Board (TPB) Boundary ...

Click the button below to add data to the map. Once the data layer is added, click the layer's 'Actions' button and 'Add to map'.

[+ Click to add data](#)



**Layers** | Legend

- Inland Flooding Risk Score - Rail Stops ...
- Temperature Risk Score - Rail Stops ...
- Rail Stops ...
- Inland Flooding Risk Score - Bridges ...
- Bridges ...
- Inland Flooding Risk Score - Bus Stops ...
- Temperature Risk Score - Bus Stops ...
- Details ...
- Export >
- Bus Stops ...
- Inland Flooding Risk Score - Roads ...
- SLR Risk Score - Roads ...
- Roads ...
- Active Transportation ...
- Inland Flooding Zones - Hazard ...
- Median Surface Temperature (°F) - Hazard ...
- Strong Wind Events (NRI) - Hazard ...
- Sea Level Rise (ft.) - Hazard ...
- Tree Canopy Coverage (MRLC) ...
- Equity Emphasis Areas ...
- Transportation Planning Board (TPB) Boundary ...

**Add data** [X]

Search | URL | File

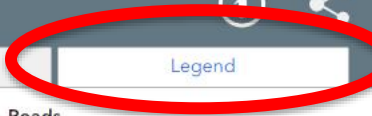
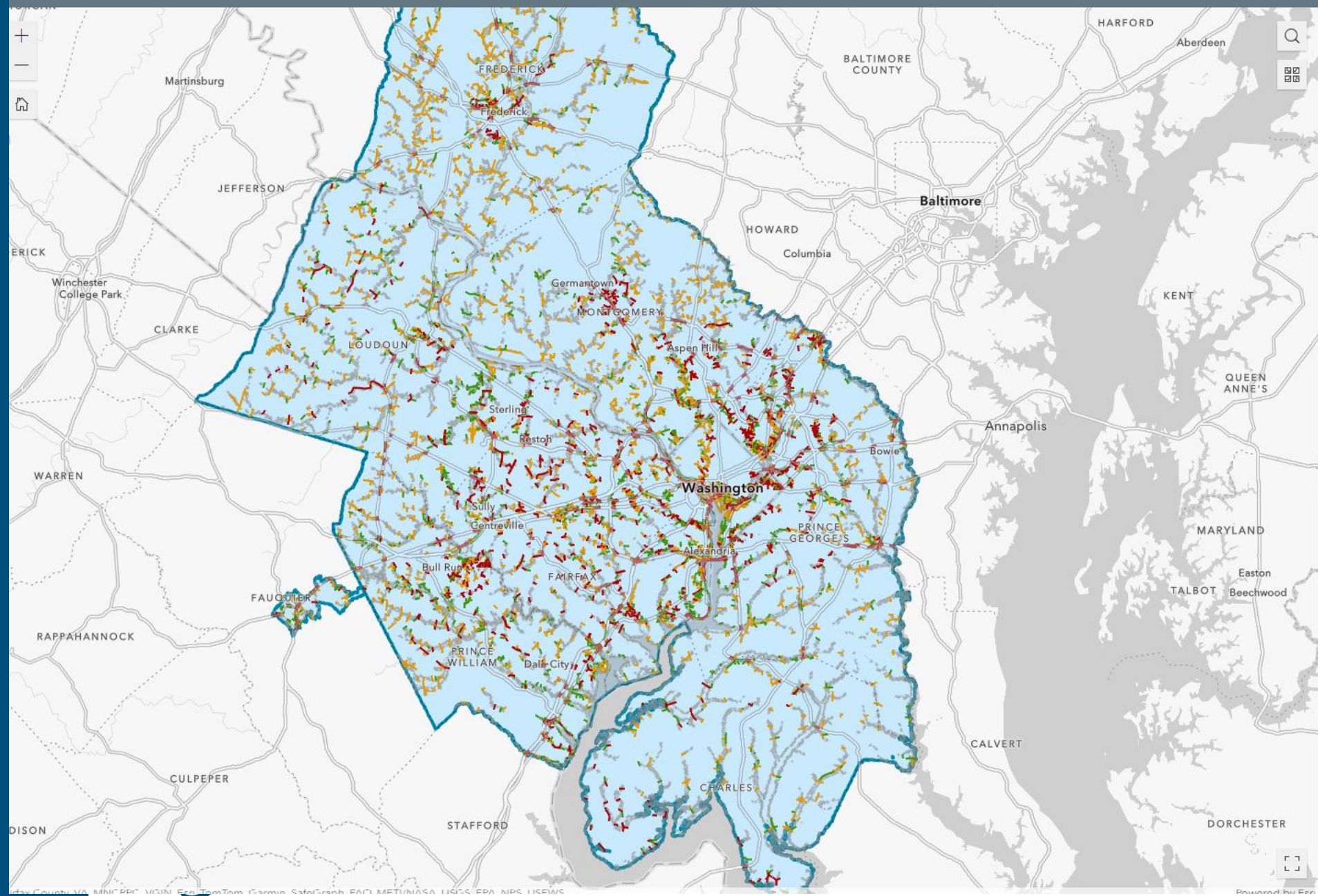
ArcGIS Online [v]

Q Search [ ] [ ]

- NGFS SCENE CONUS WEST latest 2 view  
sabatzli@wisc.edu...
- EVENTOS ENE2024  
VicenteSalazar
- Data\_Parkings\_horaires  
cam\_cartes
- wwa1120  
flashai

Click the button below to add data to the map. Once the data layer is added, click the layer's 'Actions' button and 'Add to map'.

**+ Click to add data**



Layers Legend

**Inland Flooding Risk Score - Roads**

Inland Flooding Risk Score

- > 2.49 - 3
- Medium: 2.0 to 2.49
- 0.01 - 1.99

---

**SLR Risk Score - Roads**

SLR Risk Score

- High: 2.5 to 3.0
- Medium: 2.0 to 2.49
- Low: 0.01 - 1.99

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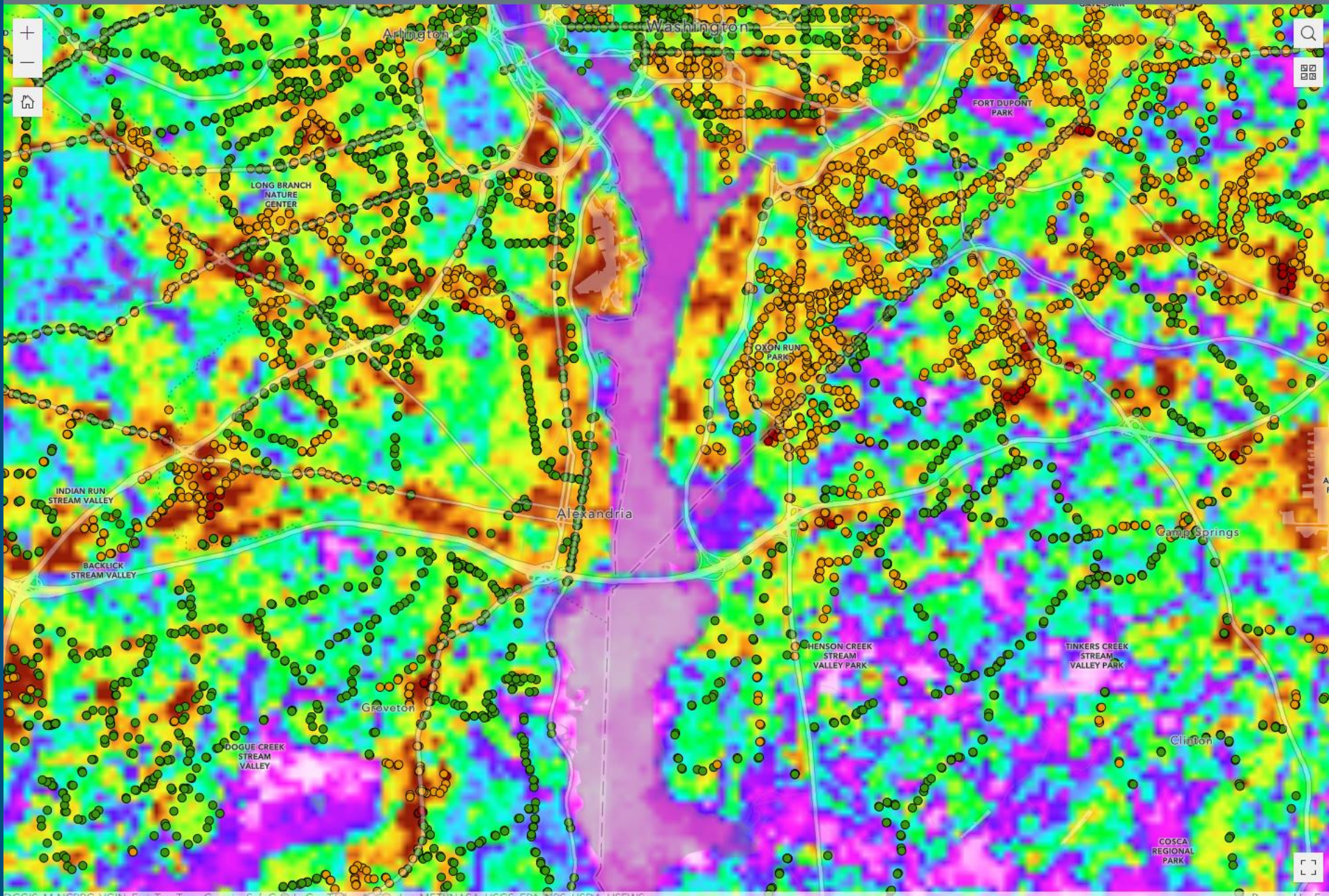
**Inland Flooding Zones - Hazard**

- 100
- 500
- Extreme Scenario

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**Transportation Planning Board (TPB) Boundary**

- TPB Boundary



Layers	Legend
<input type="checkbox"/>	Inland Flooding Risk Score - Rail Routes ...
<input type="checkbox"/>	SLR Risk Score - Rail Routes ...
<input type="checkbox"/>	Temperature Risk Score - Rail Routes ...
<input type="checkbox"/>	Rail Routes ...
<input type="checkbox"/>	Inland Flooding Risk Score - Rail Stops ...
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<input type="checkbox"/>	Bridges ...
<input type="checkbox"/>	Inland Flooding Risk Score - Bus Stops ...
<input checked="" type="checkbox"/>	Temperature Risk Score - Bus Stops ...
<input type="checkbox"/>	Bus Stops ...
<input type="checkbox"/>	Inland Flooding Risk Score - Roads ...
<input type="checkbox"/>	SLR Risk Score - Roads ...
<input type="checkbox"/>	Roads ...
<input type="checkbox"/>	Active Transportation ...



Click the button below to add data to the map. Once the data layer is added, click the layer's 'Actions' button and 'Add to map'.

[+ Click to add data](#)



# TRIP Project List

- The TRIP project list will be established using a project request form, which has been shared with this group and beyond to solicit project submissions
- The list of resilience projects should address, but are not limited to, the identified priority vulnerabilities
- The following resilience criteria will be used to help define a good/reasonable resilience project:

Resilience Criteria	Description
Eligible transportation asset	Roads and highways, bridges, public transit infrastructure, active transportation infrastructure, airports, maritime infrastructure, and stormwater infrastructure.
Qualifying project type for PROTECT	<ul style="list-style-type: none"> <li>• Resilience Planning (e.g., resilience planning activities, capacity building)</li> <li>• Resilience Improvements (e.g., improving drainage, elevating bridges)</li> <li>• Community Resilience and Evacuation Routes (e.g., redundant evacuation routes)</li> <li>• At-Risk Coastal Infrastructure – (e.g., relocate coastal highway infrastructure)</li> </ul>
Targets high priority risks	The proposed project protects the most vulnerable and critical assets/services identified via the MWCOG Climate Vulnerability Assessment or identified through local studies and assessments, or areas with historic evidence of natural hazard damage.
Reduces climate risks	The proposed project reduces the risks associated with one or more climate hazards: extreme heat, inland flooding, coastal flooding, extreme winter conditions, and extreme wind.





Flooding at Greenbelt Metro Station, August 2022. Source: Washingtonian

## Next Steps

- Continue to collect resilience project submissions
- Finalize project list once submission window closes (end of January 2024)
- Working Group meetings #3 & #4
- Draft and final version of plan
- Continued collaboration with member localities, state DOTs, other regions creating their own TRIPs
- Future Improvements



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# Additional slides

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# Phase 2 GIS Methodology: Extreme Heat



- Extreme heat & public transit
  - **Exposure indicator:** Land surface temperature (70% weighting)
  - **Criticality indicator:** MWCOG Equity Emphasis Areas (30% weighting)

Scoring Scale for Exposure

Indicator Value	Score
Top 1/3 of surface temperatures	3
Middle tier of surface temperatures (1/3-2/3) experienced in the study area	2
Bottom 1/3 of surface temperatures experienced in the study area	1

Scoring Scale for Criticality

Indicator Value	Score
Located in Equity Emphasis Area	3
Not located in Equity Emphasis Area	1



# Phase 2 GIS Methodology: Inland Flooding



- Inland flooding & roads and highways, bridges, and public transit
  - **Exposure indicator:** Located in FEMA Floodplain; or Bridge-specific indicators (70% weighting)
  - **Criticality indicator:** MWCOG Equity Emphasis Areas; Functional classification (roads and bridges only) (30% weighting)

## Scoring Scale for Exposure

Indicator Value	Score
Located in the 100-year floodplain	3
Located in the 500-year floodplain	2
Located in the 500-year floodplain + differential buffer	1
Not inundated	0

## Scoring Scale for Criticality Indicators

Indicator	Indicator Value	Score
MWCOG Equity Emphasis Area	Located in Equity Emphasis Area	3
	Not located in Equity Emphasis Area	1
Functional Classification	Interstate, Other freeways or expressways	3
	Other principal arterial	2
	Major and minor collector, minor arterial local	1

# Phase 2 GIS Methodology: Coastal Flooding



- Coastal flooding was analyzed for **roads and highways, bridges, and public transit**
  - Exposure indicator:** Depth of inundation from a 2 feet sea level rise scenario; or Bridge-specific indicators (70% weighting)
  - Criticality indicator:** MWCOG Equity Emphasis Areas; Functional classification (for roads and bridges only) (30% weighting)

## Scoring Scale for Exposure

Indicator Value	Score
Inundation of $\geq 1$ ft	3
Inundation of $0.5 < x \leq 1$ ft	2
Inundation of $0 < x \leq 0.5$ ft	1
Not inundated	0

## Scoring Scale for Criticality Indicators

Indicator	Indicator Value	Score
MWCOG Equity Emphasis Area	Located in Equity Emphasis Area	3
	Not located in Equity Emphasis Area	1
Functional Classification	Interstate, Other freeways or expressways	3
	Other principal arterial	2
	Major and minor collector, minor arterial local	1



# Phase 2: Asset-Level Analysis (GIS Analysis)

Asset	High (2.5-3)	Medium (2-2.5)	Low (0-2)
Bridges	Flood: 1	Flood: 39	Flood: 1,281
Bus stops	Temp: 196 SLR: 0 Flood: 173	Temp: 6,468 SLR: 0 Flood: 877	Temp: 15,560 SLR: 0 Flood: 378 (excluding 0s)
Rail Routes	Temp: 36 SLR: 37 Flood: 233	Temp: 716 SLR: 83 Flood: 322	Temp: 1,320 SLR: 4 (excluding 0s) Flood: 258 (excluding 0s)
Rail Stops	Temp: 0 SLR: 0 Flood: 1	Temp: 53 SLR: 0 Flood: 6	Temp: 107 SLR: 0 Flood: 4 (excluding 0s)
Roads	SLR: 123 Flood: 2,844	SLR: 49 Flood: 3,869	SLR: 44 (excluding 0s) Flood: 2,682 (excluding 0s)





# GETTING STARTED: STATE OF PUBLIC TRANSPORTATION REPORT 2023

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Pierre Gaunard  
TPB Transportation Planner

Regional Public Transportation Subcommittee  
January 24, 2023



# Agenda

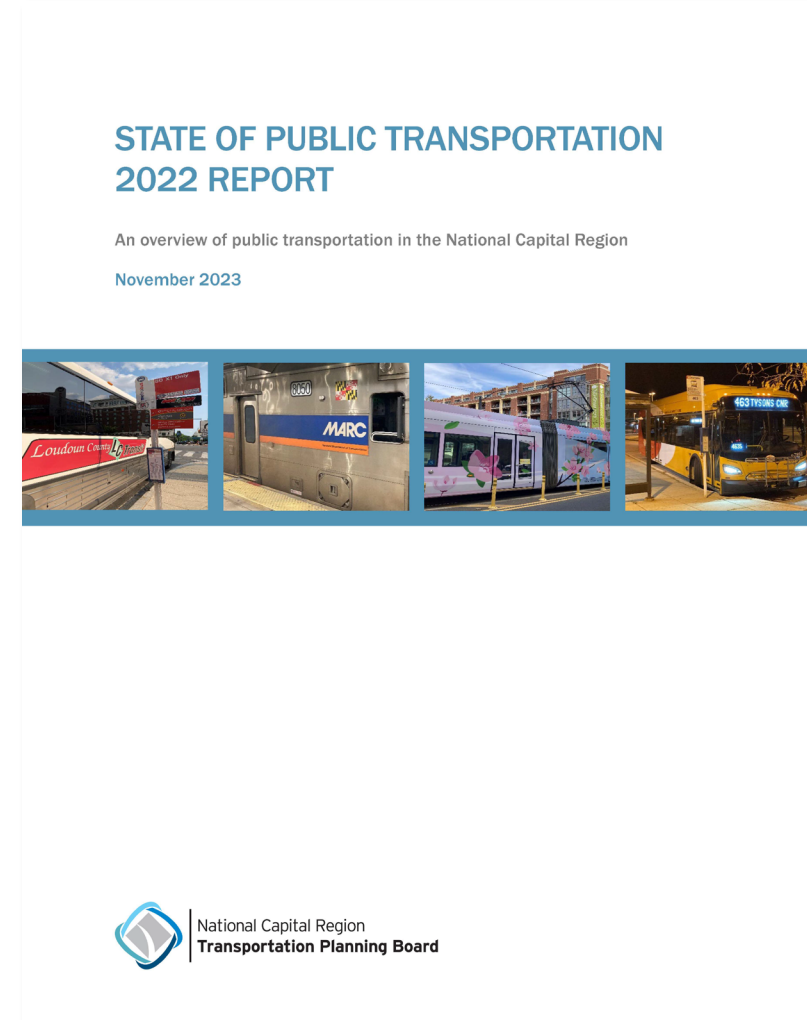
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- Purpose
- Background on the State of Public Transportation Report (SOPT)
- Summary of 2023 Report Structure and Changes
- Preview NTD Data for 2023 Report
- Review Trends
- Next Steps



# Purpose

- Snapshot of public transportation activities in the region
- Highlights regional accomplishments during CY2023
- NOTE: Relies on 2022 transit ridership and financial data taken from the 2022 National Transit Database published in October 2023
- Other data and content comes from TPB RPTS meetings, input from organizational representatives, and web research



# Background on the SOPT Report

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- Arose from the need to represent the interests of public transportation agencies to the TPB:
  - “The State of Public Transportation report was proposed as part of the TPB’s response to FTA’s guidance on the MAP-21 requirement that the interests of providers of public transportation be represented on the MPO policy board. The report will be an annual work product summarizing the region’s public transportation data and information **for the benefit of members of the TPB, other stakeholders, and the general public.**” – Draft Agency Questionnaire
- First report was the 2018 edition, it had five parts, and was 39 pages long.
- The 2022 report (5<sup>th</sup> Anniversary!) included seven parts and was 75 pages long.



# Structure of the Report

- Part I: Summary
- Part II: In Focus - Public Transportation Resilience and Sustainability Efforts
- Part III: Public Transportation Agency Profiles
- Part IV: Other Public Transit Services
- Part V: Regional Public Transportation Organizations
- Part VI: Public Transportation Accomplishments
- Part VII: Transportation Planning Board



## District Department of Transportation - DC Circulator

<https://dccirculator.com/>

### Overview

The DC Circulator, operated by DDOT, began operating in 2005 as a local transit service intended to complement the existing Metrobus and Metrorail operations serving the Washington, DC metropolitan area. In conjunction with regional partners, DDOT's goal is to promote economic activity by facilitating visitor access to neighborhoods in Washington, DC and to improve mobility for downtown workers during the workday.

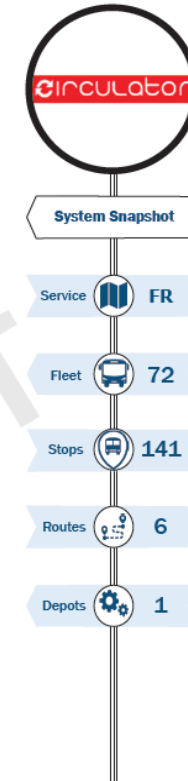
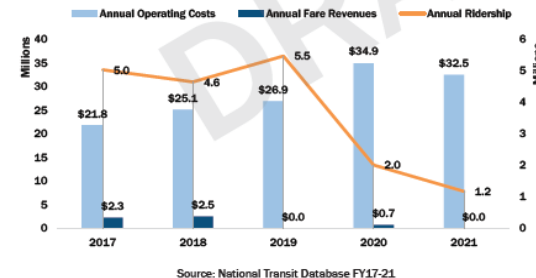
### Recent Accomplishments

Released the Transit Development Plan (TDP) 2020 Update, which evaluated the operations and performance of the Circulator system since the TDP 2017 Update, and potential system expansion to Ward 7. Selected the Union Station to Deanwood route as the preferred route.

Completed the DC Circulator Electrification Plan, which outlines a strategy to reach full fleet electrification using battery-electric buses by 2030.

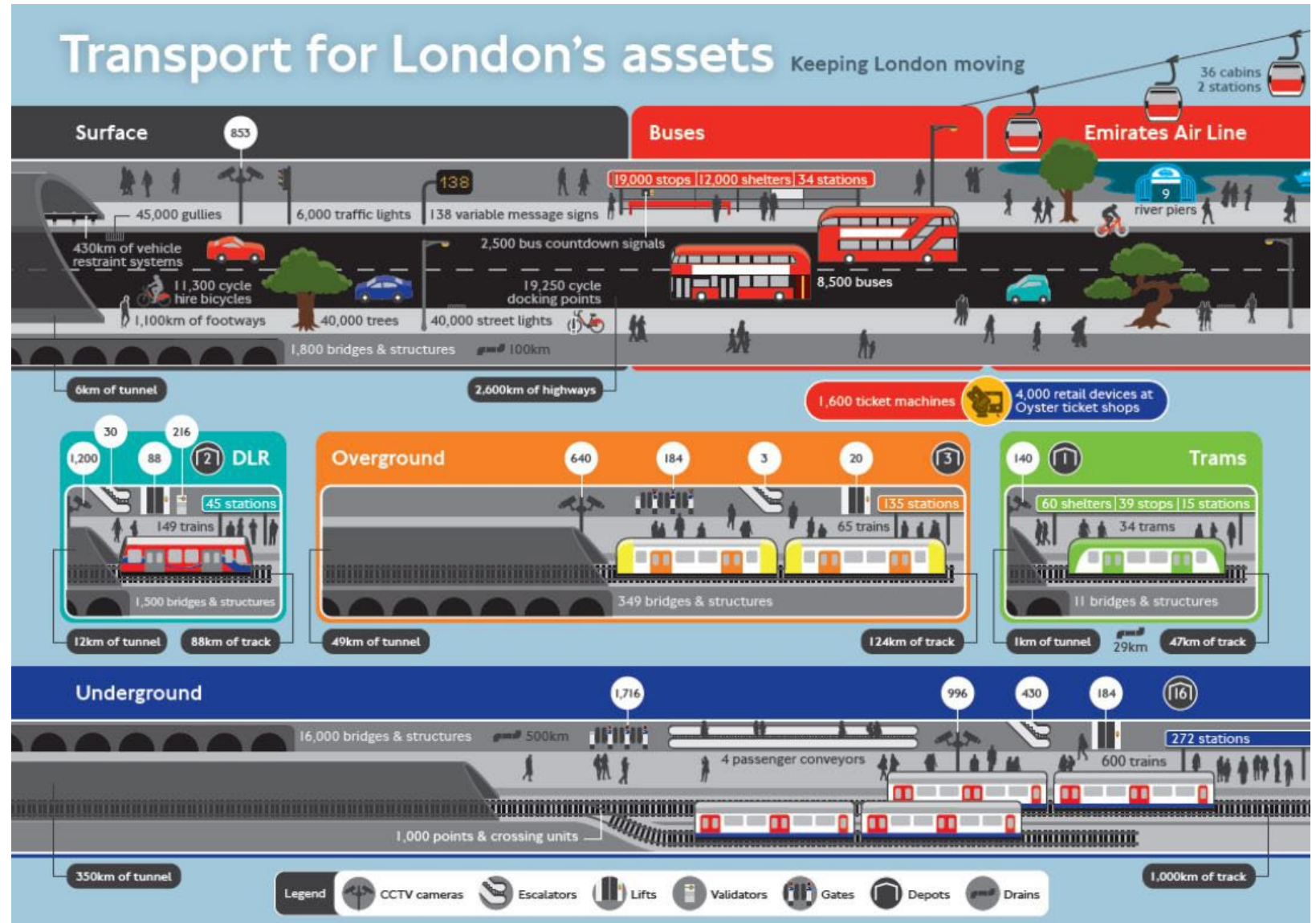
Awarded a Lo-No Emissions grant for \$9,590,000 by the Federal Transit Administration.

### Provider Data



## Other Planned Content

- More Graphics:
  - Regional Transit Asset Infographic
  - Updated Pictures for Each Agency
  - More pictures and graphic data representation, including in later sections

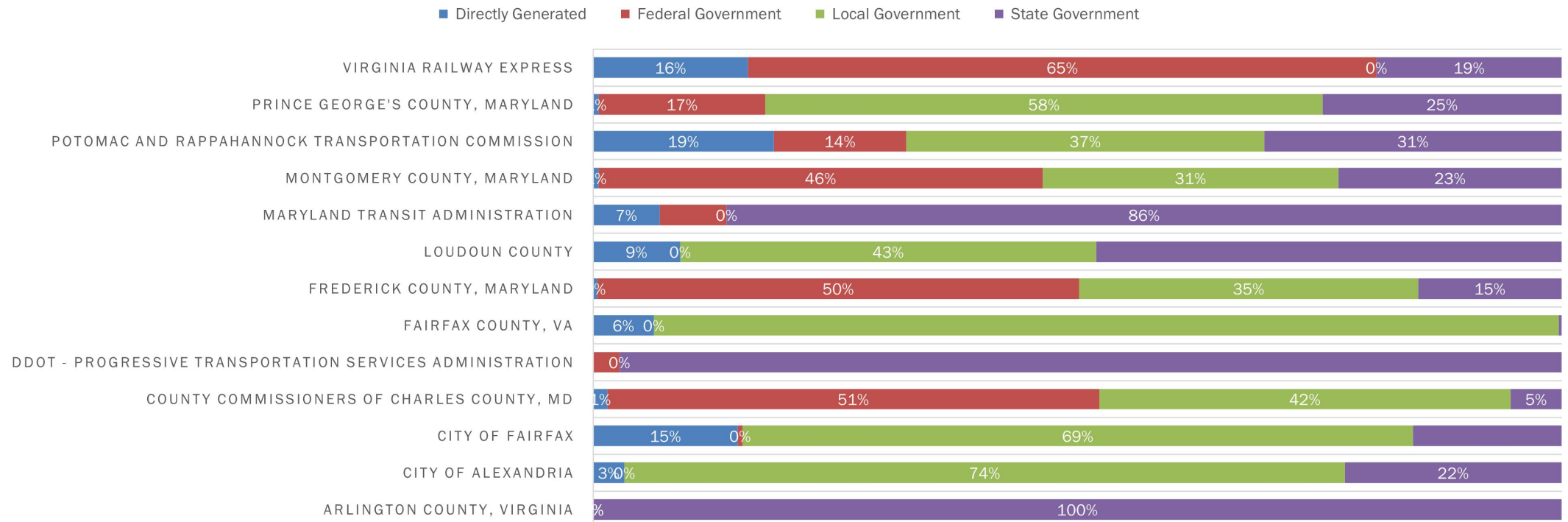


Source: <https://www.ianvisits.co.uk/articles/tfl-funding-crunch-could-cost-london-over-12-billion-over-next-decade-49908/>



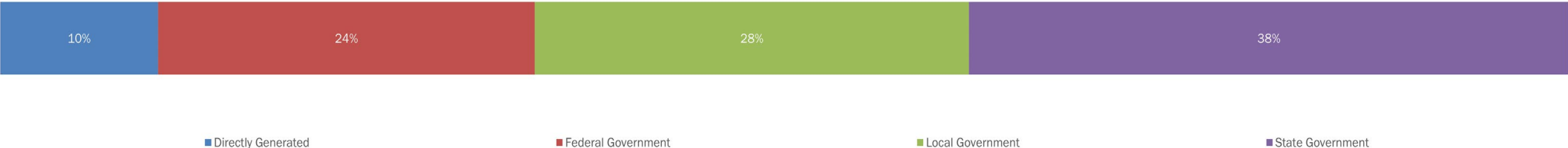
# 2022 NTD Data in 2023 SOPT Report

## NCR TRANSIT SERVICE PROVIDERS' FY22 REVENUE SOURCES

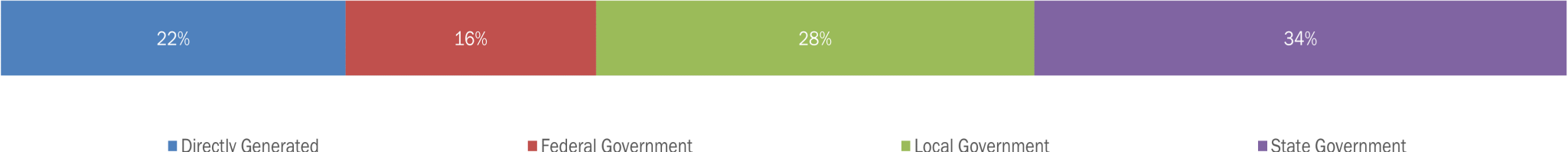


# Agency Funding Source Breakdown – Regional Perspective

2022 Regional Funding Distribution



2019 Regional Funding Distribution



Source: 2019 and 2022 NTD Agency Data



# Ridership Trends

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- Top 6 Agencies By Ridership (Make Up 97% of Service)
  1. Metrobus (72%)
  2. Ride On (13%)
  3. Fairfax Connector (6%)
  4. DASH (3%)
  5. DC Circulator (2%)
  6. ART (2%)
- Metrobus remained busier than Metrorail with 79,512,639 trips versus 76,077,714
  - Much closer than in 2021 when there was a 15.7 million trip difference
- DC Circulator rose one spot to #5, edging ART by <100,000 unlinked trips
- Every agency/mode but two saw an increase in ridership versus 2021
- VRE and MARC each saw 58% and 61% increases in trips from 2021



# Next Steps

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## Timeline

- Winter 2023:
  - Receive and process questionnaires to gather information from public transit providers
  - Catalog 2023's major transit events and operator accomplishments in the region
- Spring 2024:
  - Provide drafts to internal staff and RPTS for input, questions, or comments
  - Presentations to TPB Tech and RPTS
- Summer 2024:
  - Final report published in June 2024



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