



DEQ Electronic Resources & Tools

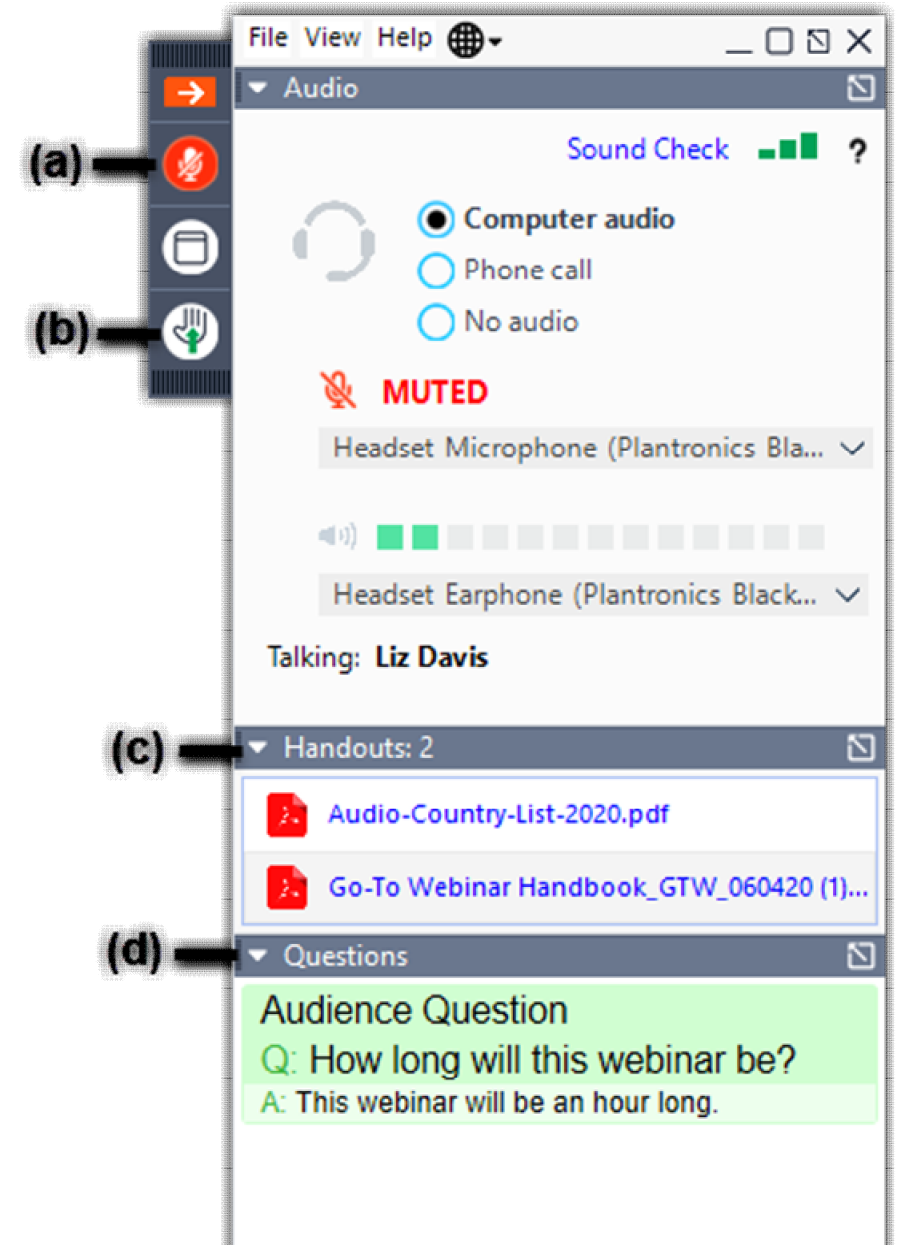
An Overview of GIS, Story Maps, and Data Tracking Tools

Virginia Department of Environmental Quality
October 22, 2024

How to Use GoToWebinar

- (a) Mute button
- (b) Raise hand button
- (c) Handouts available to download
- (d) Questions box

Please be sure to **mute yourself** during the presentation. Thank you!





Agenda

- Purpose & Objectives
- Definitions and Acronyms
- GIS Mapping Tools Overview
- Story Maps Overview
- Database Tools Overview



Poll #1:

Have you
ever used
GIS before?

If so, what kinds
of GIS
applications
have you used?

And what did
you previously
use GIS for?



Definitions and Acronyms

GIS: Geographic Information System

Story Map: A GIS tool that tells a story

VPT: Virginia Permitting Transparency

PEEP: Permitting Enhancement and Evaluation Platform

Purpose & Objectives



Access GIS tools in the VA Environmental Data Hub



Describe various uses for GIS mapping tools



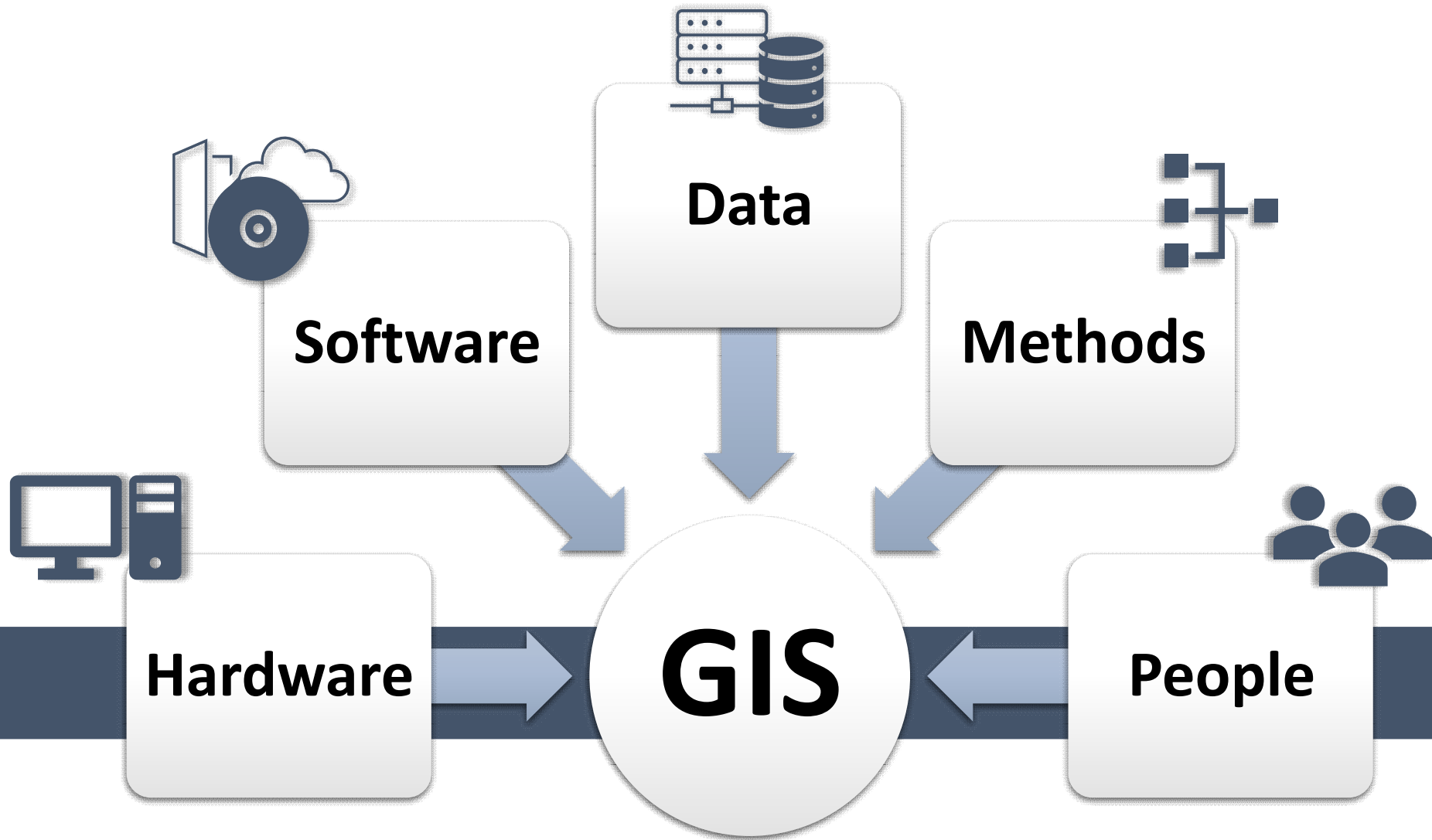
Explain the difference between a GIS mapping tool and a Story Map



View the status of a permit application in VPT / PEEP



Know the difference between PREP and emergency reports

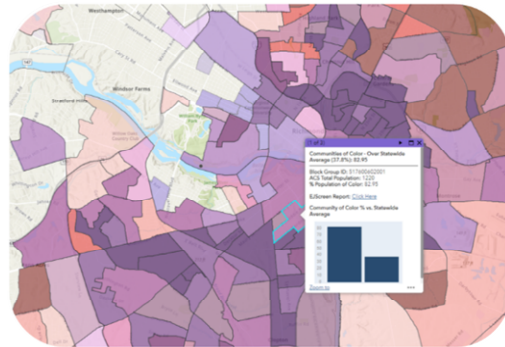


5 Parts of a Geographic Information System (GIS)

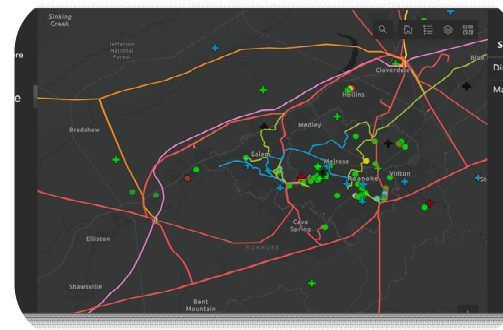
Overview of DEQ GIS Mapping Tools



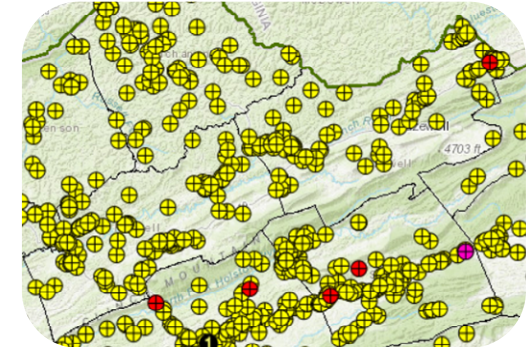
[Environmental Data Mapper \(EDM\)](#)



[Virginia EJScreen+](#)



[Virginia Brownfields Dashboard](#)

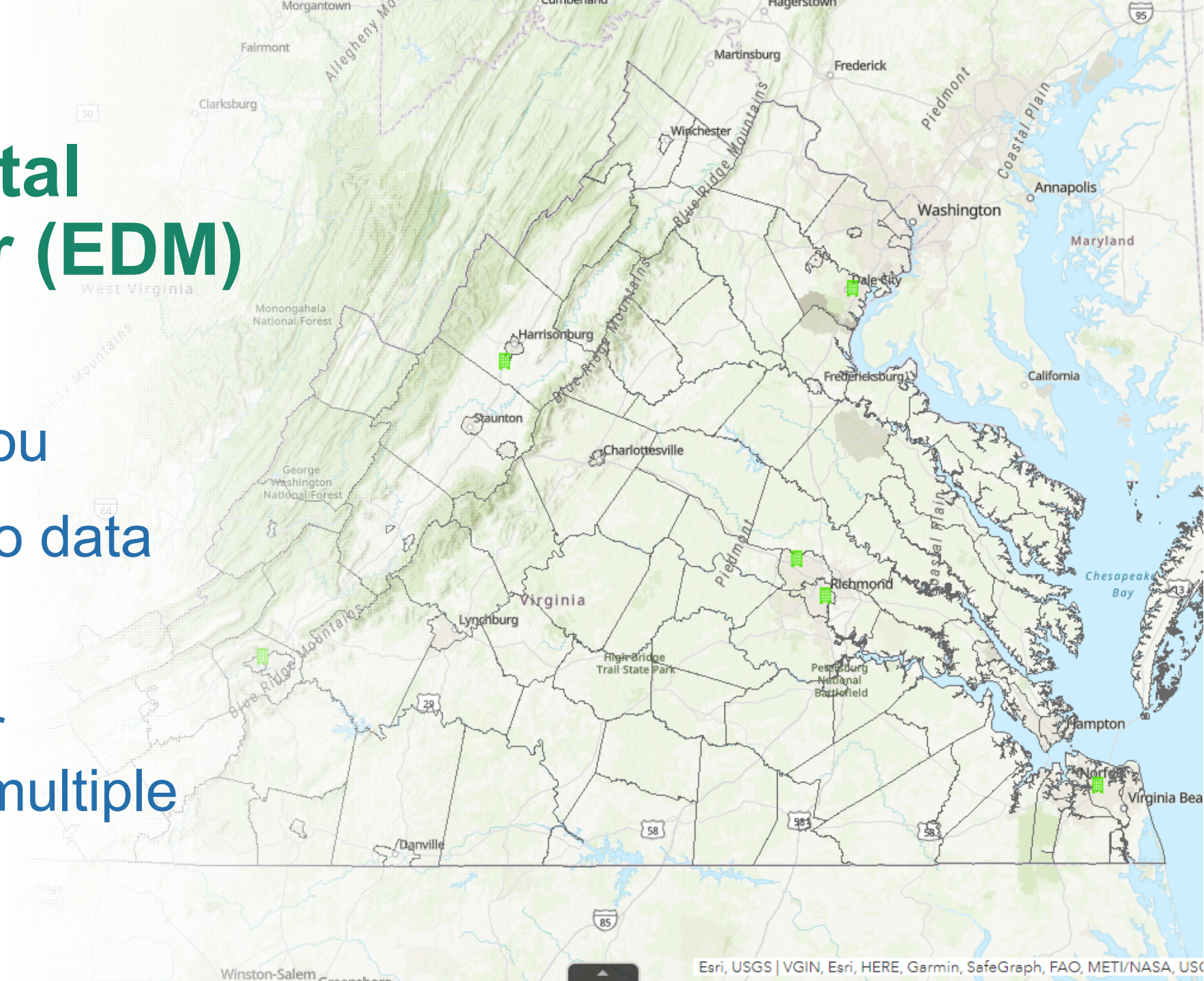


[Pollution Response & Preparedness \(PReP\)](#)

Poll #2 – Have you ever used any of these DEQ GIS Tools?

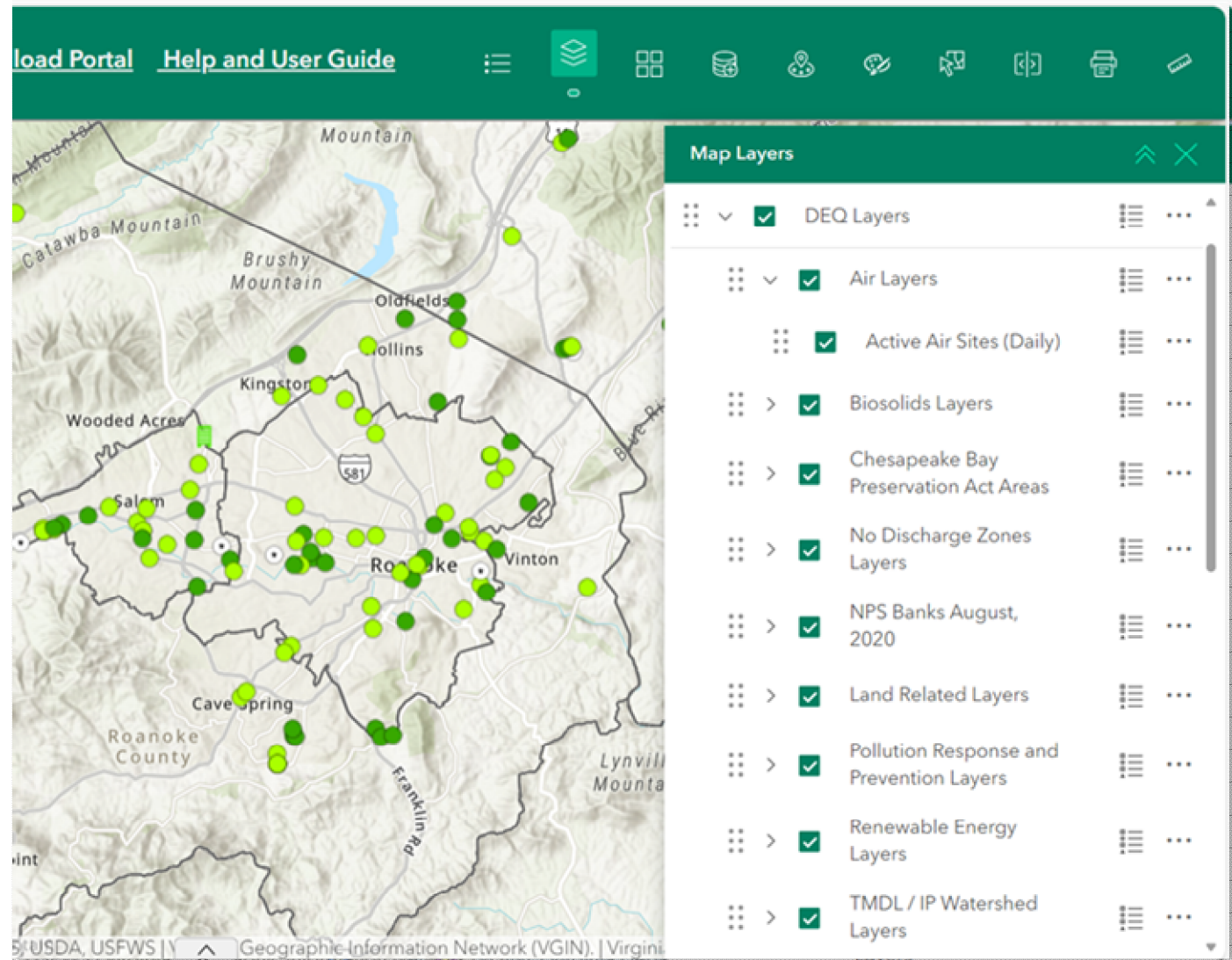
Environmental Data Mapper (EDM)

- Designed for you
- Direct access to data
- Interactive
- Brings together datasets from multiple sources



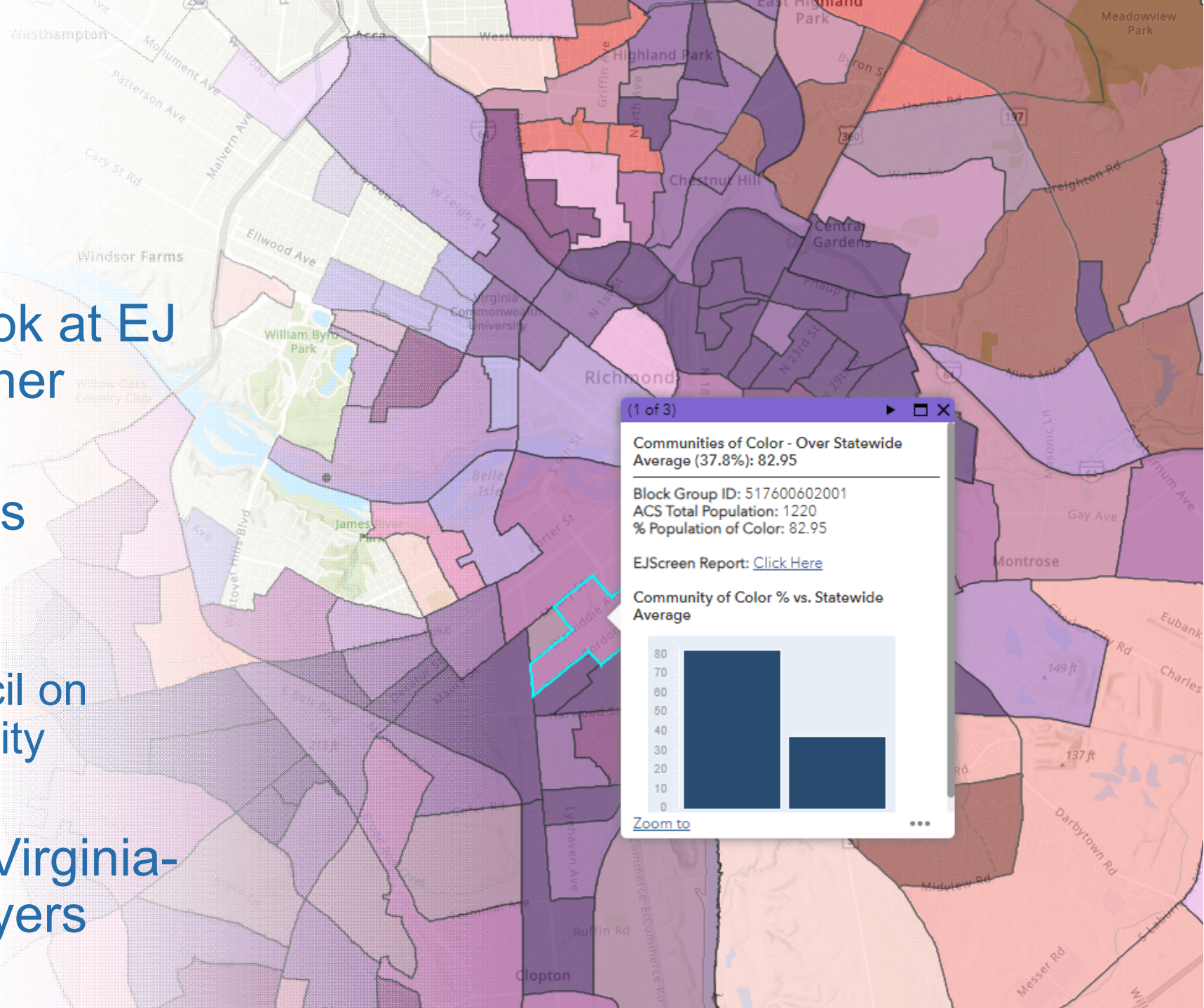
How Might You Use EDM?

- Volunteer Water Quality Monitoring
- Finding information about permitted facilities
- Near Me tool

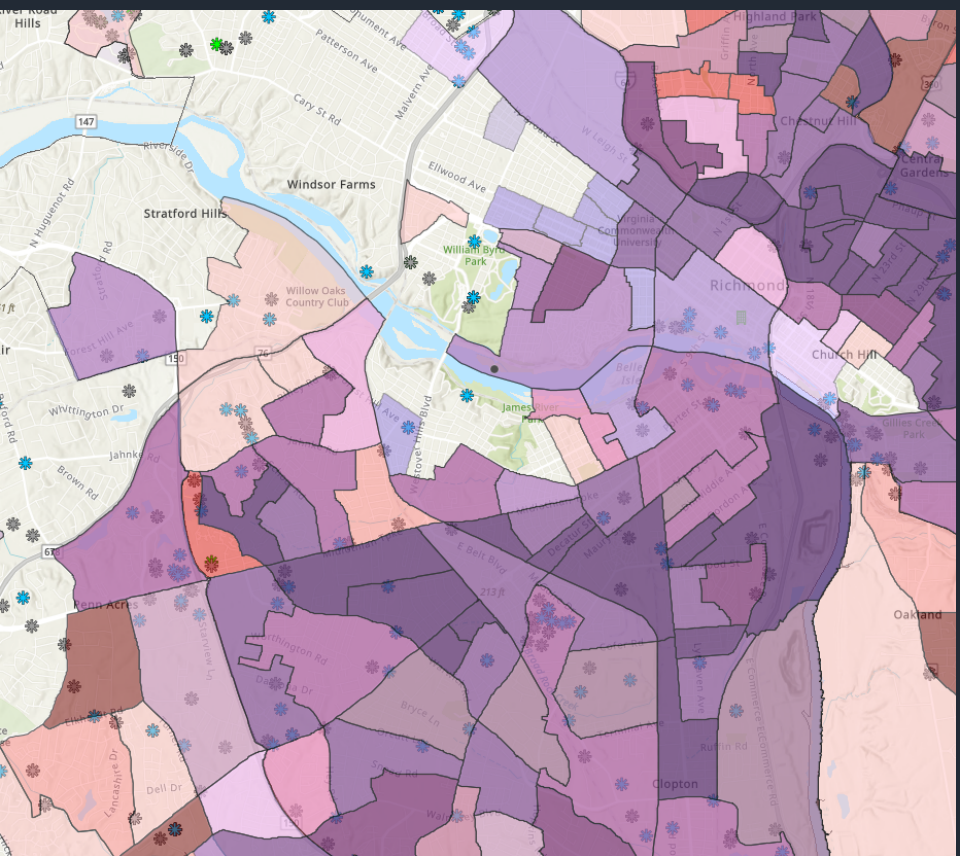
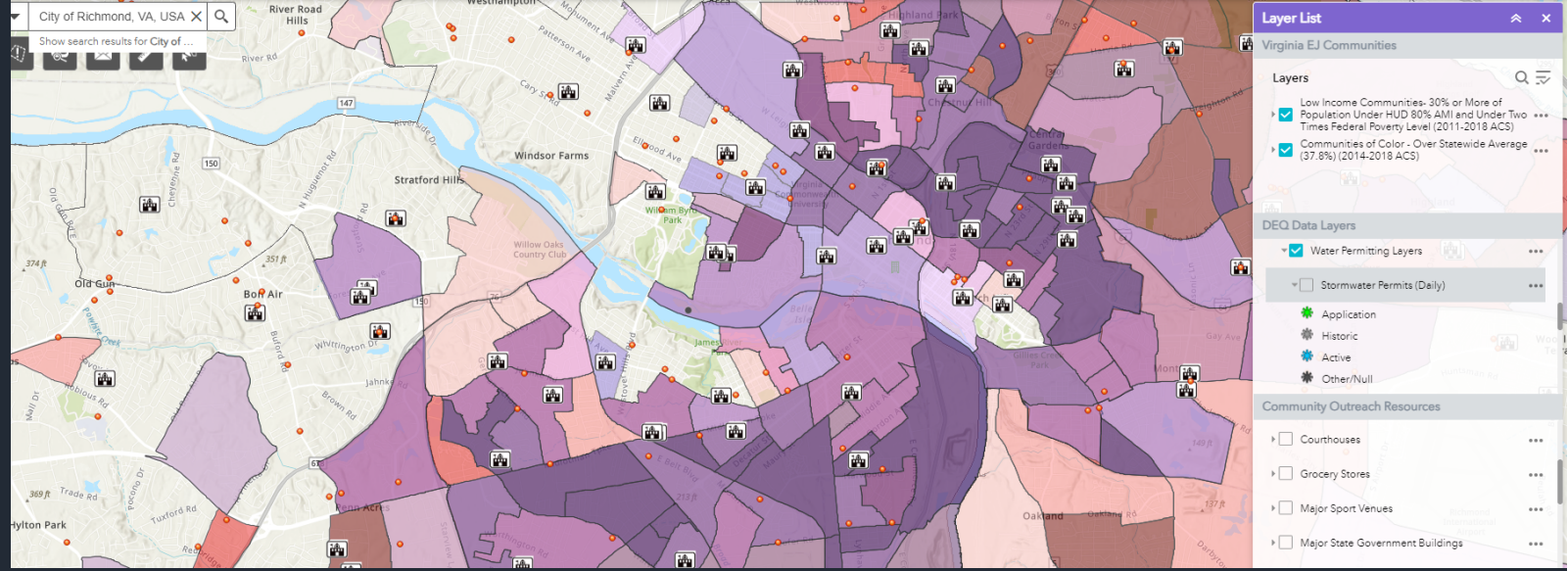


Virginia EJScreen+

- Screening tool to look at EJ layers along with other environmental data
- Federal agency tools
 - EPA EJScreen
 - CDC EJ Index Map
 - White House Council on Environmental Quality CEJST
- DEQ's version has Virginia-specific data and layers



Virginia EJScreen+ Layers



There are four categories of layers in EJSCREEN+

- Virginia EJ Communities
- DEQ Data Layers
- Community Outreach Resources
- EPA EJScreen Data Layers and Reference Layers

Poll #3:

What do you think brownfields are?

A – Empty areas with dead vegetation or bare soil.



B – Lots that have been vacant a long time.



C – Property with contamination that makes it hard to redevelop.



D – Special farms where chocolate milk cows are raised.

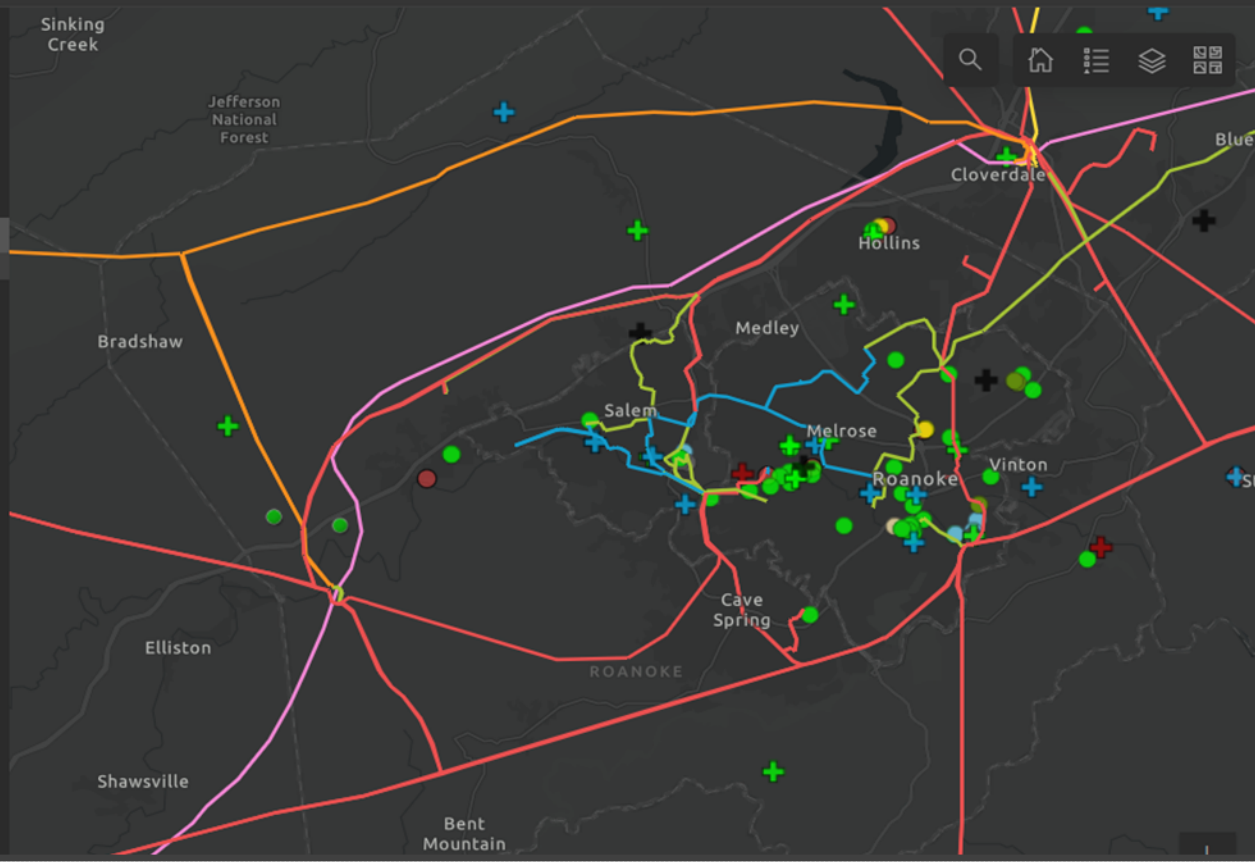
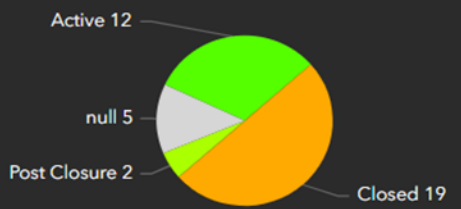


There are thousands of Brownfields redevelopment opportunities across the Commonwealth!
Contact [Meade Anderson](#) - (804) 659-1341 for more information.

VRP Site | RCRA | Solid Waste

60 7 38

Solid Waste Operation Status



Superfund Sites	
Site_Name	County
Dixie Cave...	Roanoke
Matthews ...	Roanoke

USA States Generalized
US_Electric_Power_Transmission_Lines
Electric_Power_Transmission_Lines_shp

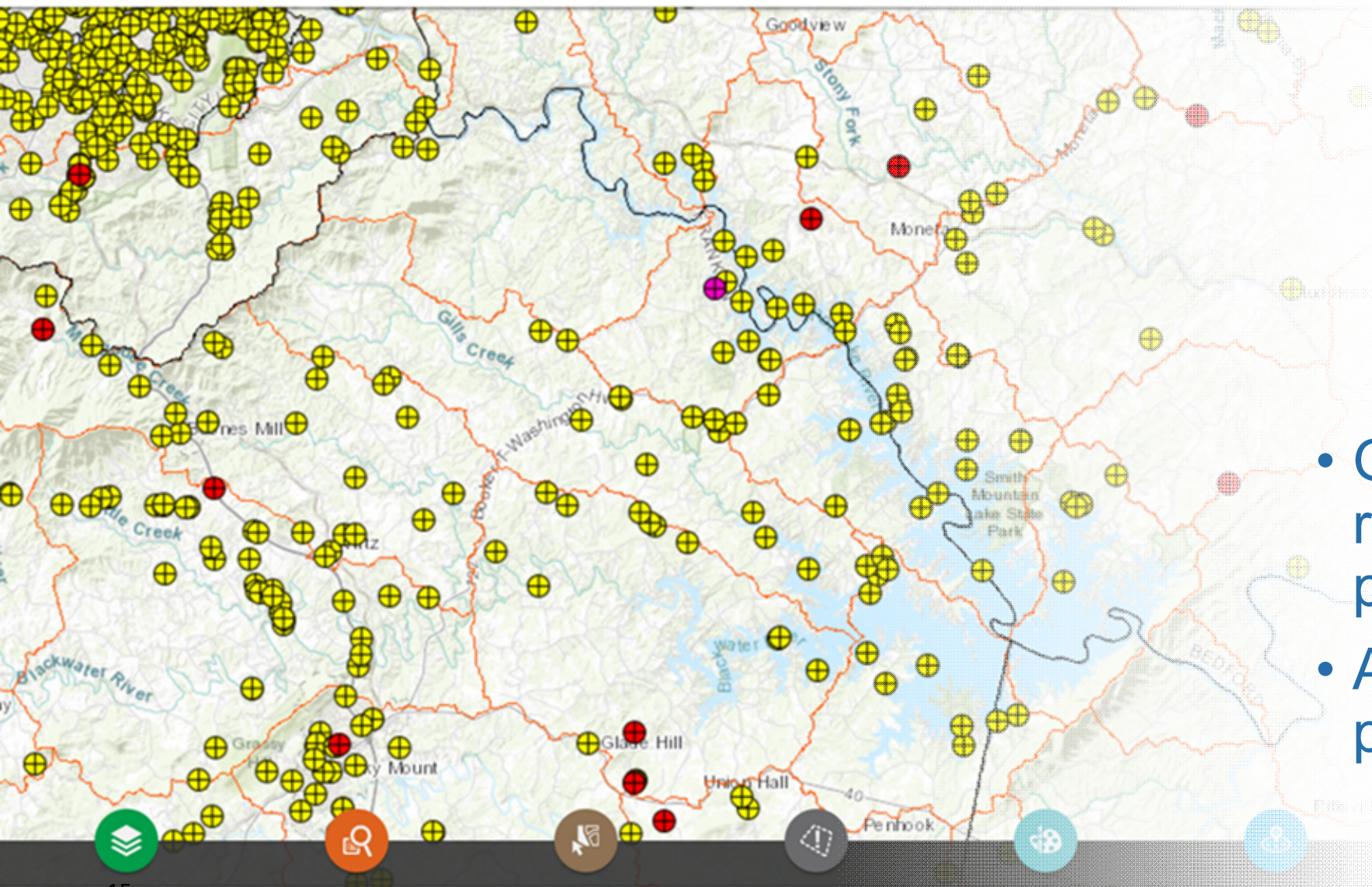
Superfund Sites

- Under 100 (Kilovolts)
- 100-161 (Kilovolts)
- 220-287 (Kilovolts)
- 345 (Kilovolts)
- 500 (kilovolts)
- 735 and Above (Kilovolts)
- Not Availal

Virginia Brownfields Dashboard

- In development by DEQ and the Virginia Department of Energy, with data from both agencies
- In beta (early release) so feedback on the tool is welcome! What would you like to see?

Search



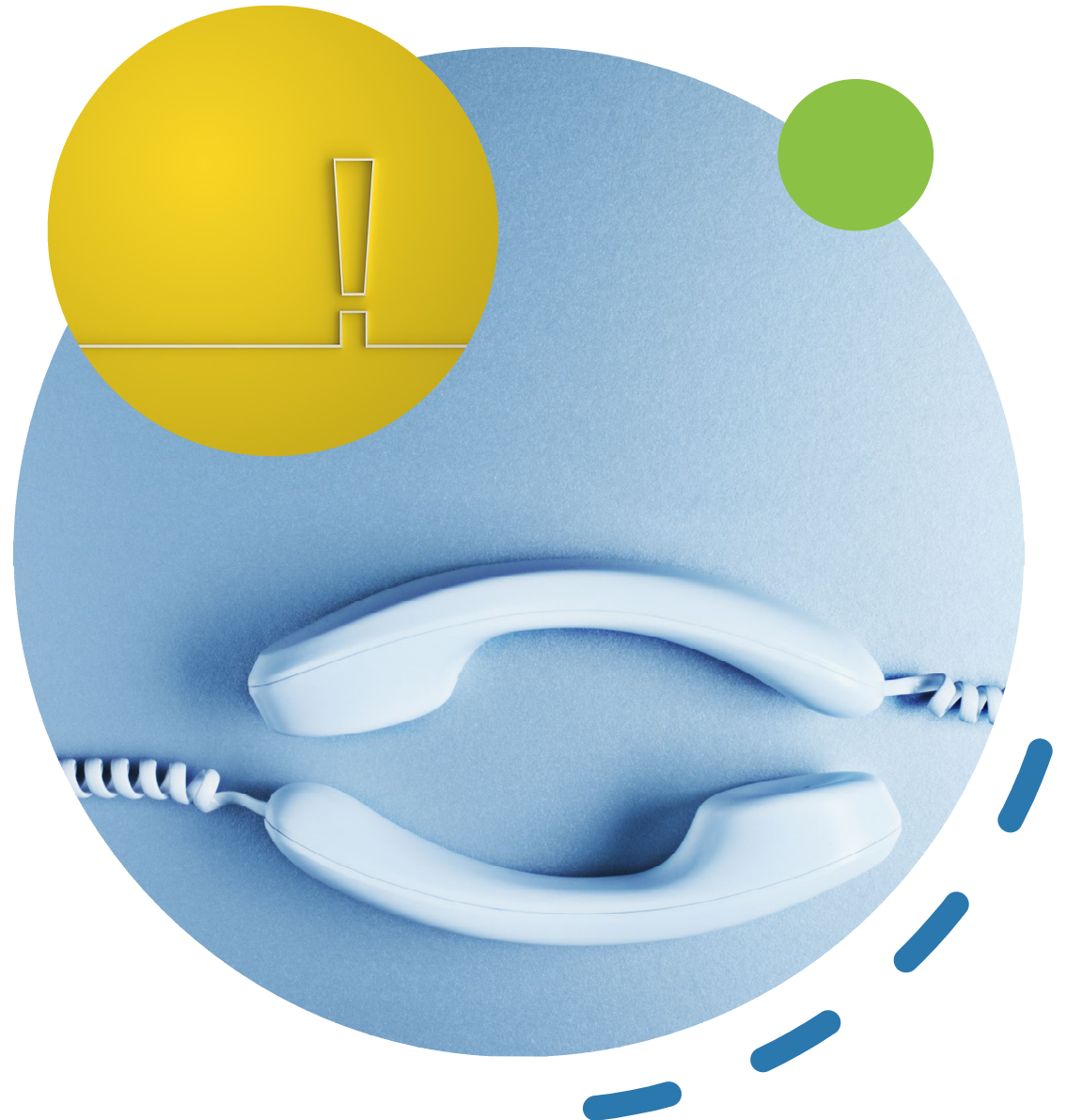
Pollution Response & Preparedness (PREP)

- Geospatial representation of all pollution reports
- Anyone can file a pollution report

PReP Reports vs. Emergency Reports

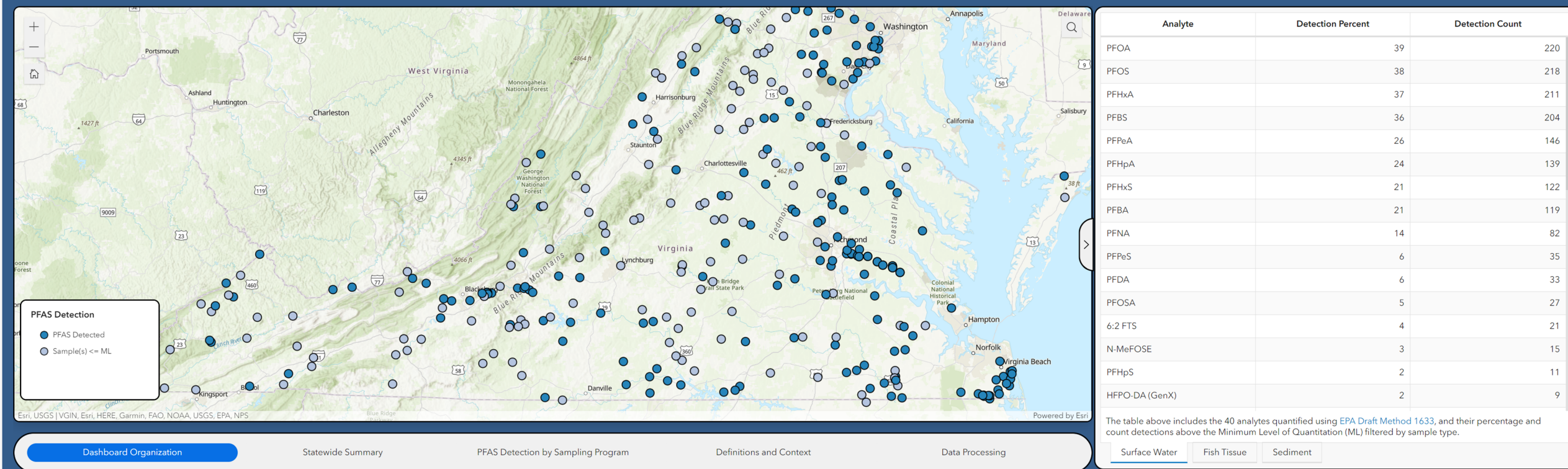
- Report to DEQ and/or your locality
 - Small quantity oil spills
 - Fish kills
 - Non-emergency hazardous materials releases
- Report to 911
 - Fires
 - Vehicle accidents
- Report to Virginia Emergency Operations Center (1-800-468-8892)
 - Release or discharge of motor vehicle fluids from **commercial** vehicles
 - Release of **cargo** containing oil or hazardous materials

Still unsure? Contact your local DEQ Office!



A red flag pin is stuck into a map background. The map shows a network of streets and some green spaces. The flag is red with a silver pin.

Poll #4 – Which GIS Tool would you like us to demonstrate?

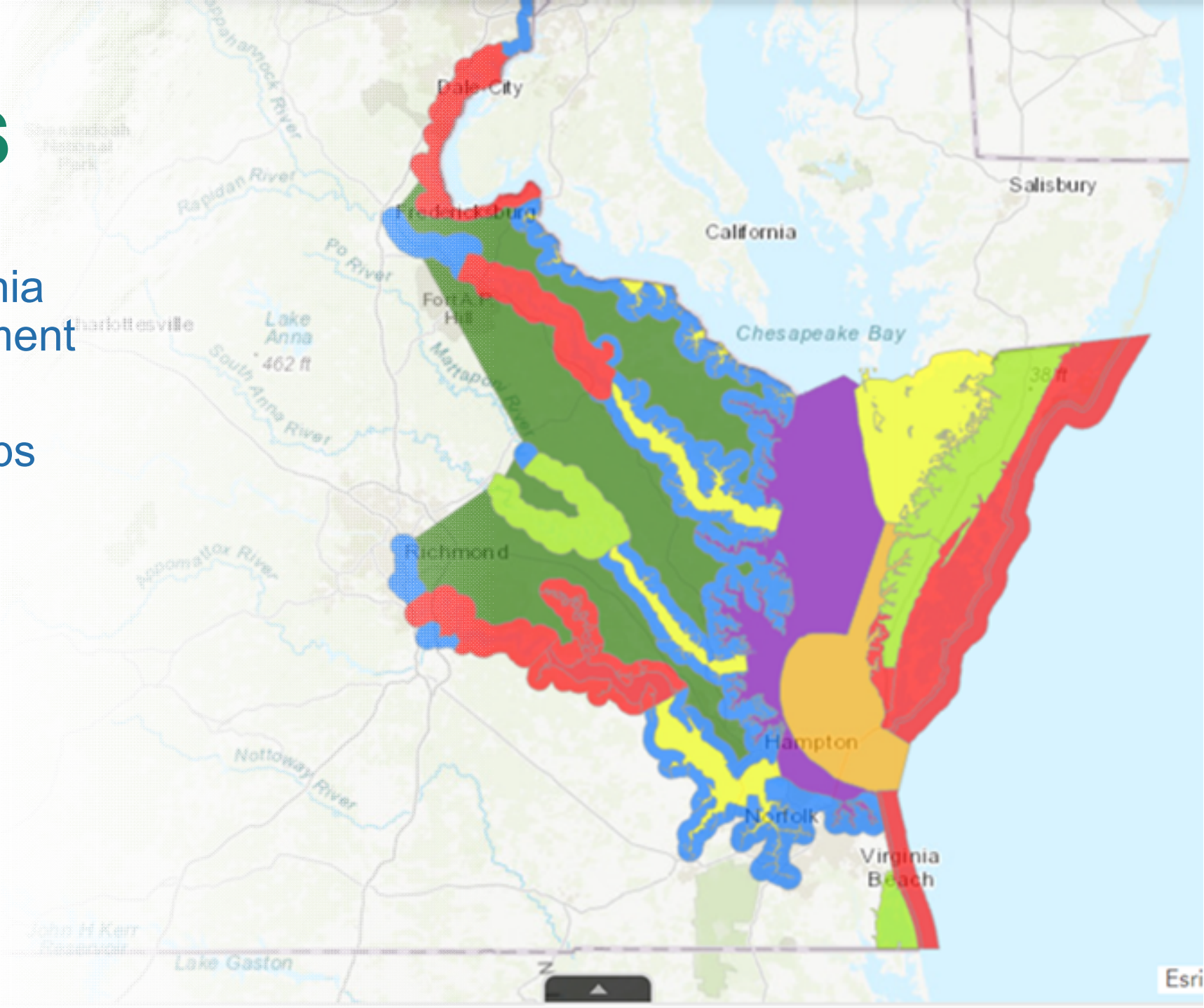


Statewide PFAS Sampling Dashboard

- **PFAS:** Per- and Polyfluoroalkyl Substances (“forever chemicals”)
- Presents PFAS detection and concentrations
- Will be updated to reflect how sampling results relate to water quality criteria *once they are developed by EPA and adopted by Virginia.*

Coastal GEMS

- Developed by the Virginia Coastal Zone Management Program
- Resource data and maps
- Laws and policies
- Resource facts
- Includes data such as
 - Wildlife
 - Conservation Planning
 - Coastal Populations
 - Shellfish Management
 - ...much more



Overview of DEQ Story Maps

- **Story Map:** Interactive tool that includes GIS maps and embedded data that helps tell a story, provides important context and shares content that matters in a more meaningful way.

Middle
Chickahominy
PFAS Study



Water Quality
Success Stories
of Virginia



Virginia Draft
Watershed
Implementation
Plan (WIP) III



Overview of DEQ Database Tools

The screenshot shows the 'Virginia DEQ Enforcement Cases' search interface. It features a 'County' dropdown menu set to '(All)' and a 'Region Office' dropdown menu set to '(All)'. Below these, there is a 'Filters & Legends' section with an 'Enforcement Action Number' dropdown menu set to '(All)'. The interface is clean and professional, with a green header and a white background.

Enforcement Case Documents

The screenshot shows the 'DEQ Portal Dashboard > PReP Search' interface. It features a 'PReP Report Search' section with a search bar. Below the search bar, there are fields for 'IR Number' and 'Incident Date From'. A 'City / County (Fips)' dropdown menu is set to 'Alexandria City'. At the bottom, there is a link to 'Please see the [Pollution Data and Reporting](#) page for additional information regarding reporting p' and an 'Export All Reports' button.

Pollution Reports

The screenshot shows the 'Virginia Permitting Transparency' search interface. It features a search bar for 'Agent Name, or Facility Name' and a date range selector for 'Application Received Date Range'. Below the search bar, there are dropdown menus for 'Permit Type' and 'Locality'. A 'Search Permit Applications' button is prominently displayed. Below the search bar, there is a table with columns: Agent Name, Facility, Agency, Program Type, Permit Type, Permit Number, Locality, Received Date, and Status. The table displays several rows of data, including entries for 'DEET - Line 27 Station Bayside 115kV Rebuild' and 'DEET - Line 27 Station Bayside 115kV Rebuild'.

Virginia Permitting Transparency

The screenshot shows the 'Permitting Enhancement and Evaluation Platform' search interface. It features a search bar for 'Facility Name' and a date range selector for 'Request Status'. Below the search bar, there are dropdown menus for 'Program Type' and 'Request Type'. A 'Search' button is prominently displayed. Below the search bar, there is a map of Virginia showing the locations of various facilities. Below the map, there is a table with columns: Locality, Facility Name, Requester, Agent, Request Number, Request Type, and Status. The table displays several rows of data, including entries for 'Eastern Shore Solar Project', 'US Navy - Surface Combat Systems Center', and 'Belmont Condominiums'.

Permitting Enhancement and Evaluation Platform




Enforcement Cases on myDEQ Portal

- Enforcement actions and records database
- myDEQ Portal
- Filter and download results

[Home](#) / Enforcement Case Documents

This Enforcement Case Documents page is part of DEQ's initiative to provide greater transparency among our stakeholders. This first iteration is optimized for Windows browsers and Android devices. iOS users will not be able to see the dashboard. We are working on addressing those issues in the next month.

Virginia DEQ Enforcement Cases

[Reset](#)

County

(All)

Region Office Name

(All)

Media Program

(All)

Enforcement Rep

(All)

Legal Name

(All)

Filters & Legends

Enforcement Action Number

(All)

Enforcement Action Type

(All)

Case Status

(All)

Cash Portion of Civil Charge

\$0.00

\$2,150,000.00

Case Info - Basic Details on Enforcement Cases

Search Pollution Reports on myDEQ Portal

- Pollution Report data
- myDEQ Portal
- Filter and download results

The screenshot shows the myDEQ Portal interface. At the top, there is a header with the DEQ logo and the text "myDEQ Portal". A "Home" link is visible in the top right corner. Below the header, a breadcrumb trail shows "DEQ Portal Dashboard" and "PReP Search". The main section is titled "PReP Report Search". It contains three input fields: "IR Number", "Incident Date From", and "Incident Date To". The "Incident Date From" and "Incident Date To" fields have calendar icons to their right. Below these fields is a dropdown menu for "City / County (Fips)" with the placeholder text "Please select a City/County". A note below the dropdown states: "Please see the [Pollution Data and Reporting](#) page for additional information regarding reporting pollution, searching data records, and terms of use." At the bottom, there are three buttons: "Export All Reports" (with a download icon), "New Pollution Report" (with a plus icon), and "Search" (with a magnifying glass icon).

Virginia Permitting Transparency (VPT)

- Permit tracking system for the Commonwealth of Virginia
- Over 50 types of permits
- Multiple Commonwealth agencies (currently six)

Application or Permit Number, Applicant Name, Agent Name, or Facility Name

Application Received Date Range

Start mm/dd/yyyy

End mm/dd/yyyy

Agency Name

Program Type

Permit Type

Locality

None Selected

None Selected

None Selected

None Selected

Search Permit Applications

Reset



What is PEEP?

- Permitting Enhancement and Evaluation Platform
- Award-winning initiative
- Transparency in permitting
- Efficiency in permitting

PEEP Tracking

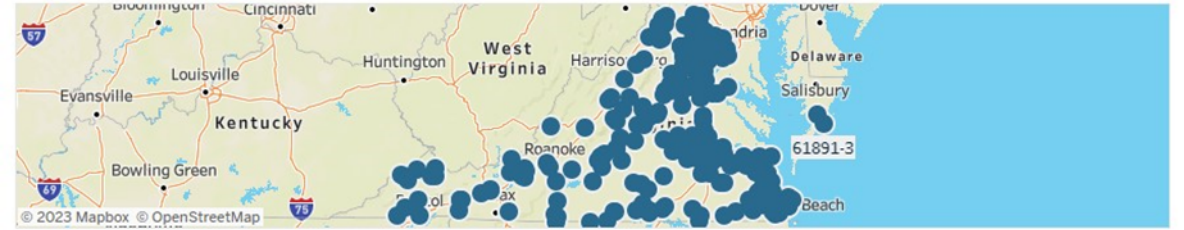
- Virginia Water Protection Permit (VWPP) Program
- Wetland and Stream Channel Mitigation Banking
- Air Permitting
- Surface Water Withdrawal
- Nutrient Banking
- Municipal Separate Storm Sewer System (MS4) Permitting
- Stormwater and Erosion and Sediment Control Plan Review
- Virginia Pollution Abatement (VPA) Permitting
- Virginia Pollutant Discharge Elimination System (VPDES)
- Renewable Energy Permitting
- Land Protection / Waste Permitting
- Groundwater Withdrawal Permitting

Request Search

Filters & Legends

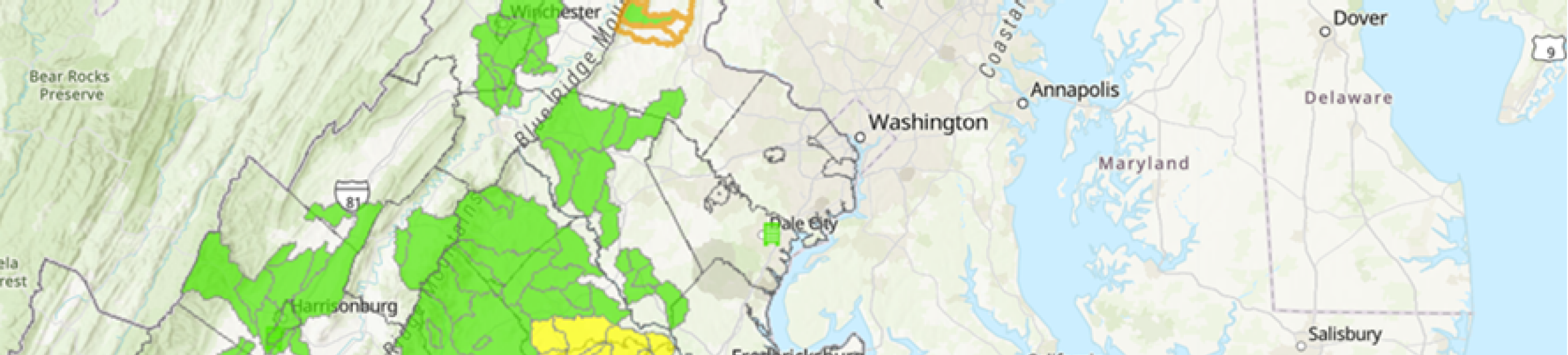
Media (All)	Program Type (All)	Request Type (All)
Facility Name (All)	Locality (All)	Requestor (All)
Request Status In-Progress	Request Number (All)	Agent (All)

☒ In-Progress

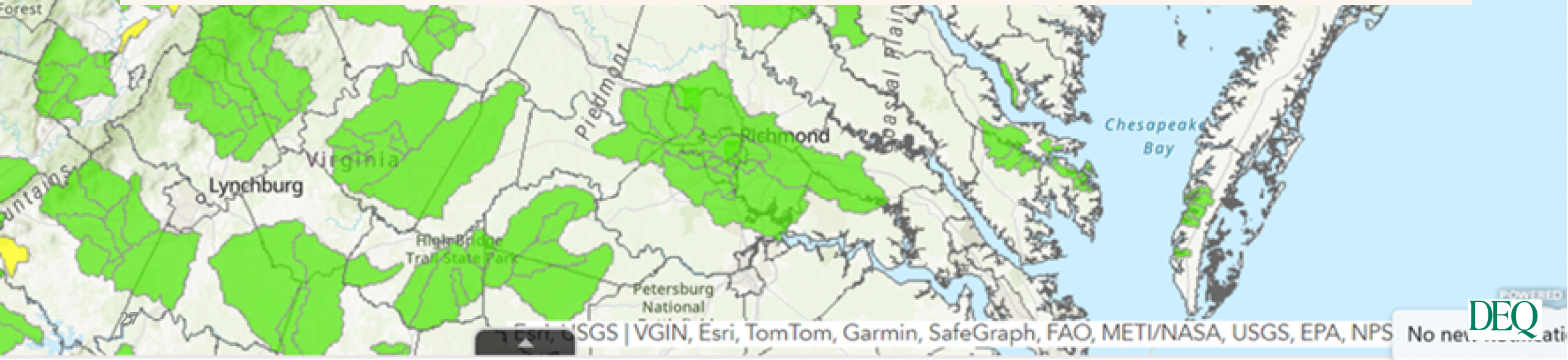


Search Results

Locality	Facility Name	Requestor	Agent	Request Number	Request Type	
Accomack County	Eastern Shore Solar Project	Dominion Energy Services, Inc., Eastern S...	Dominion Energy Virginia	23-0615	VWP Individual Permit Application	View Details
Accomack County	US Navy - Surface Combat Systems Center	US Navy - Surface Combat Systems Center	T-Solutions Inc.	61891-3	Article 6 Minor NSR - No Public Interest	View Details
Albemarle County	Belmont Condominiums	Belmont and Carlton Holdings, LLC	TNT Environmental, ..	WP4-22-2693	State Programmatic General Permits 22-SPGPs	View Details
Albemarle County	Briery Creek Mitigation Bank	Doug Sowers	Virginia Wetland Consulting LC	MBS000027-001	Mitigation Banking Instrument	View Details
Albemarle County	Innisfree Village	Innisfree Stream Mitigation Bank LLC	Stantec Consulting Serv..	MBH000009-001	Monitoring Year	View Details

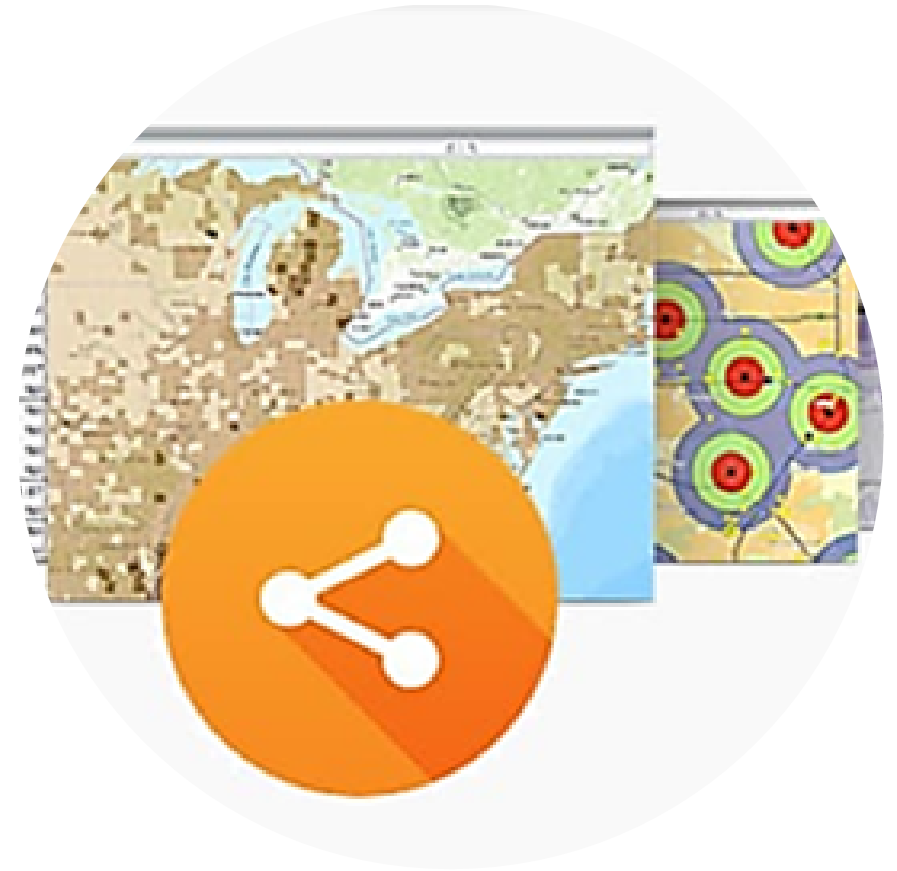


Poll #5 – Which Database Tool would you like us to demonstrate?



Open Data Portal

- Provides a DEQ Data Catalog with datasets and their associated fact sheets
- There are data sets specific to:
 - Air
 - Land
 - Pollution Response and Prevention
 - Water
 - Renewable Energy



DEQ Data Sets by Media



Air

- Active Air Sites
- Air Sites Emissions (Totals) Current Reporting Year



Renewable Energy

- Renewable Energy Permits
- Coastal Avian Protection Zones (CAPZ)



Land

- Alternate Water Supplies – CFU (Carbon Filtration Unit) Sites
- Non-NPL (National Priority List) Federal Facilities
- Petroleum Release Sites
- Petroleum Registered Tank Facilities
- Solid Waste Permits
- VRP (Voluntary Remediation Program) Site Addresses



Pollution Response & Prevention

- PREP (Pollution Response Program) Reports
- VEEP (Virginia Environmental Excellence Program) Facilities



Water (Data Set Categories Only)

- Implementation (IP) Watershed and Total Maximum Daily Load (TMDL)
- Land Application / Beneficial Reuse (Biosolids)
- NPS Banks and Virginia Watershed
- Water Permitting
- Water Quality Assessment (WQA) Integrated Report (IR)
- Groundwater Monitoring / Characterization
- Water Quality Monitoring and Water Quality Standards (WQS)

Purpose & Objectives (recap)



Access GIS tools in the VA Environmental Data Hub



Describe various uses for GIS mapping tools



Explain the difference between a GIS mapping tool and a Story Map



View the status of a permit application in VPT / PEEP




Know the difference between PREP and emergency reports

Poll #6:

**Which of the
tools we went
over tonight do
you think you
might use?**



- 
- Which DEQ Resources were new to you?
 - Are there any DEQ Resources you would like to see featured in a more in-depth webinar or presentation?

Final Questions?