SWANA Annual Regulatory Training

DEQ Update

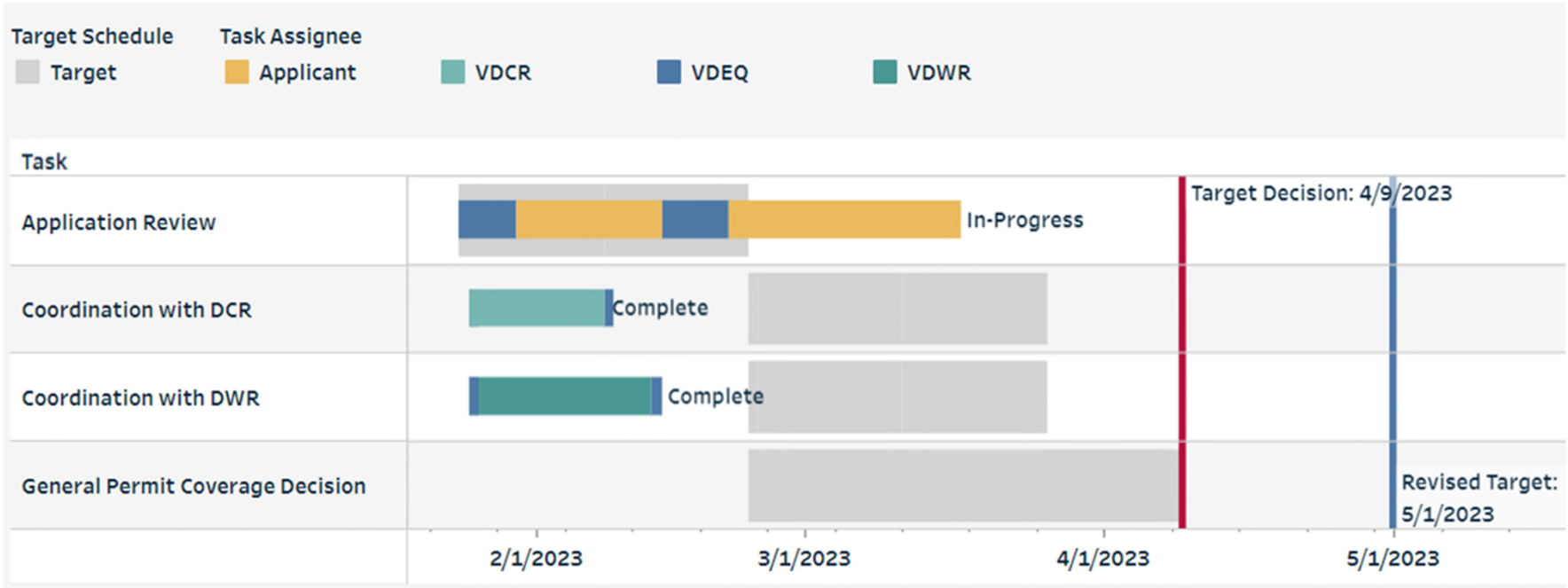
Jeffery Steers
Director of Communications
Virginia Department of Environmental Quality
October 19, 2023

Topics

- PEEP- Public Transparency and a Tool to Increase Efficiency in Permitting
- OneDEQ
- Stormwater
- Environmental Justice Guidance
- Climate Pollution Reduction Grant (CPRG)
- On-line Permitting Tools and Enforcement Tracking Transparency

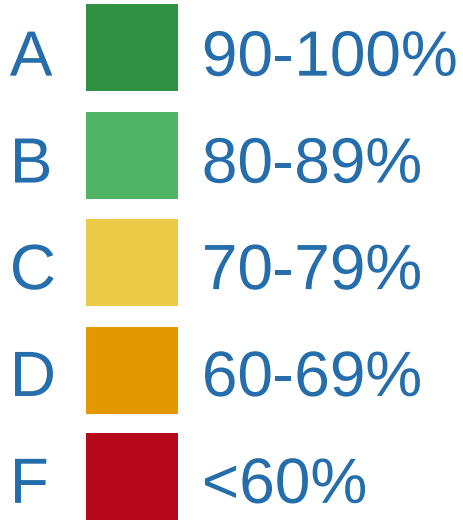
Permitting Enhancement & Evaluation Platform (PEEP)

- Public schedule to track permit review process
- Transparency
- Project management tool



PEEP Internal Reporting Sample

- Drill down on **Performance** from DEQ to Responsible Parties by Office, Program Type, Request Type, or Permit Writer
- Management tool to identify bottleneck points at which to apply resources or improve processes
- Grades based on percent of permits for which we achieve the scheduled goal:

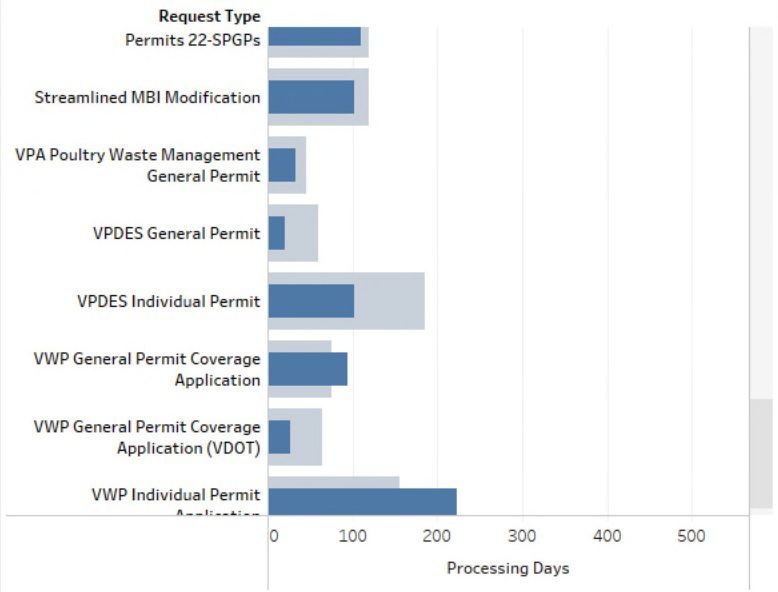


Performance Summary

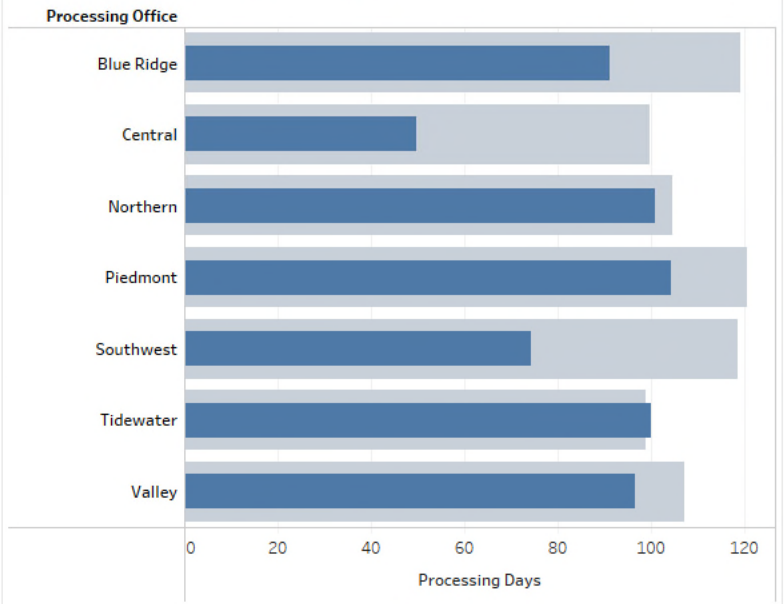
Reset Filters

Filters & Legends | Request Decision Date 8/11/2022 – 10/16/2023 | Media (All) | Program Type (All) | Request Type (All) | Request Number (All) | Currently Viewing Average | Avg. Processing Days | Target Days to Complet...

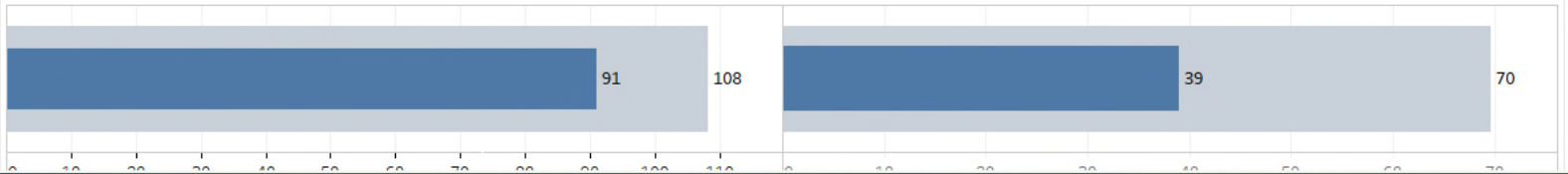
Target vs Actual Request Type



Target vs Actual Processing Office



Overall Processing Days



DEQ Performance Heat Map – Agency Level

Filters & Legends

Request Decision Date: All values

Performance Level: Overall

Show Trend: Monthly

Grade of Percent Completed on Time: A B C D F

No. of Permits Issued/Denied	No. of Overdue Requests	% of Request Meeting Targets
730	225	69 %

Overall Permit Performance: % of On Time Requests

Month of Request Decision Date

	Aug '22	Sep '22	Oct '22	Nov '22	Dec '22	Jan '23	Feb '23	Mar '23	Apr '23	May '23	Jun '23	Jul '23	Aug '23	Sep '23
DEQ	100 %	100 %	95 %	86 %	69 %	63 %	44 %	58 %	55 %	60 %	67 %	71 %	67 %	71 %

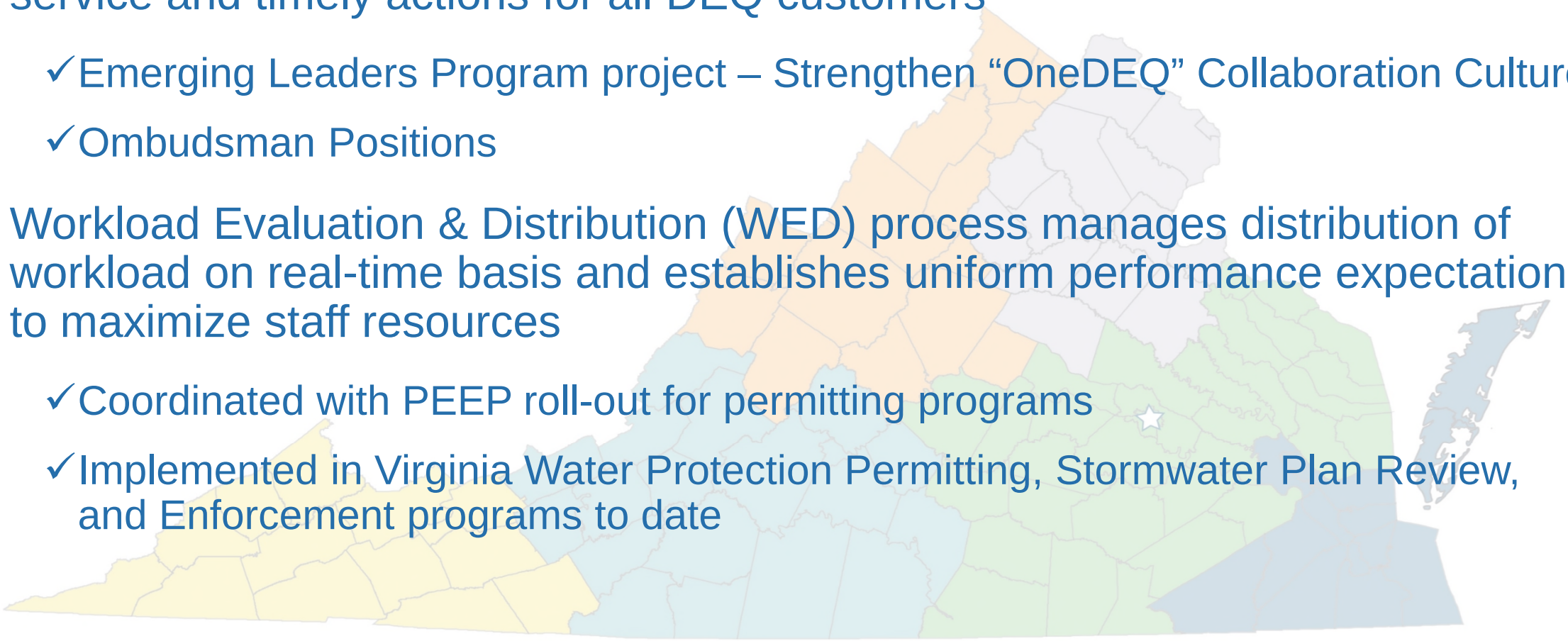
DEQ-Only Permit Performance: % of On Time Requests

Month of Request Decision Date

	Aug '22	Sep '22	Oct '22	Nov '22	Dec '22	Jan '23	Feb '23	Mar '23	Apr '23	May '23	Jun '23	Jul '23	Aug '23	Sep '23
DEQ	100 %	96 %	95 %	96 %	85 %	96 %	86 %	97 %	95 %	96 %	97 %	95 %	92 %	91 %

One DEQ – In Place – Cultural Change

- DEQ employees are working collaboratively to ensure responsive customer service and timely actions for all DEQ customers
  - ✓Emerging Leaders Program project – Strengthen “OneDEQ” Collaboration Culture
  - ✓Ombudsman Positions
- Workload Evaluation & Distribution (WED) process manages distribution of workload on real-time basis and establishes uniform performance expectations to maximize staff resources
  - ✓Coordinated with PEEP roll-out for permitting programs
  - ✓Implemented in Virginia Water Protection Permitting, Stormwater Plan Review, and Enforcement programs to date



One Stormwater Handbook

to

- Produce Best In Class Stormwater Handbook
- Update & Consolidate Stormwater Information
- VRRM Update
- ESC/SWM Regulation Consolidation
- 2024 Construction General Permit (CGP) Reissuance

deq.virginia.gov/permits-regulations/permits/water/stormwater-construction

Multipronged Solution

Improvement	Status
1. All current documents on website	Completed
2. New SWM Handbook	To Be Completed - End of 2023 – Effective 7/1/2024
3. SWM Guidance – “Cliff Notes”	Effective 2/20/2023
4. Streamlined SWM Plan Review Guidance	Effective 2/20/2023
5. Virginia Runoff Reduction Method (VRRM) Update	Informal Comment Period Ends 8/21/2023
6. SWM/ESC Reg Consolidation - HB1250 & SB673 (2016) • HB2390 & SB1168 Approval (2023)	SWCB Approved 6/22/2023 • Effective 7/1/2024
7. Agribusiness SWM	Effective 7/1/2023
8. Recruiting Staff	Very successful- 90% staffing achieved 7/1/2023
9. Construction General Permit (CGP)	Automated 7/1/2023

Environmental Justice Draft Guidance: Overview

- Creates procedures to ensure fair treatment and meaningful involvement throughout DEQ's permitting processes
- Informal public comment period ended on May 1, 2023
- Environmental Justice in the Permitting Process – Link to Draft Guidance:

What is the Climate Pollution Reduction Grant Program

- Climate planning and mitigation program administered by EPA
- Small part (1%) of the much larger Inflation Reduction Act (IRA)
- CPRG has two phases
  - Climate action planning ($250 million)
  - Project implementation ($4.6 billion)
- DEQ designated the lead state agency
- Progress to date
  - Grant application submitted to EPA – 4/28
  - EPA notice of grant award – 6/26
  - $3 million statewide planning grant

CPRG Purpose and DEQ Workplan

- EPA grant purpose and emphasis on three key components
  - Climate planning (near and long term)
  - Climate mitigation (emission reductions)
  - Outreach and engagement
- DEQ workplan key elements
  - Overall goals
  - Responsible and coordinating entities
  - Deliverables
  - Budget
  - Project timeline

Priority Climate Action Plan (due 3/24)

- PCAP Components
  - o Potential near-term and high impact projects
  - o Sector specific or overall GHG emissions inventory
  - o Low-income and disadvantaged community (LIDAC) benefits analysis
  - o Authority to implement
- High priority implementation projects
- PCAP is key to the competitive implementation grant phase
- Catalog of “shovel ready” local projects

Comprehensive Climate Action Plan (due 7/25)

- More traditional air quality plan
- CCAP components
  - o Updated statewide GHG inventory
  - o GHG emission projections
  - o GHG reduction targets or goals
  - o Quantified reduction strategies
  - o Statewide benefits analysis
  - o LIDAC benefits analysis
  - o Workforce analysis
- More focus on technical and benefits analyses

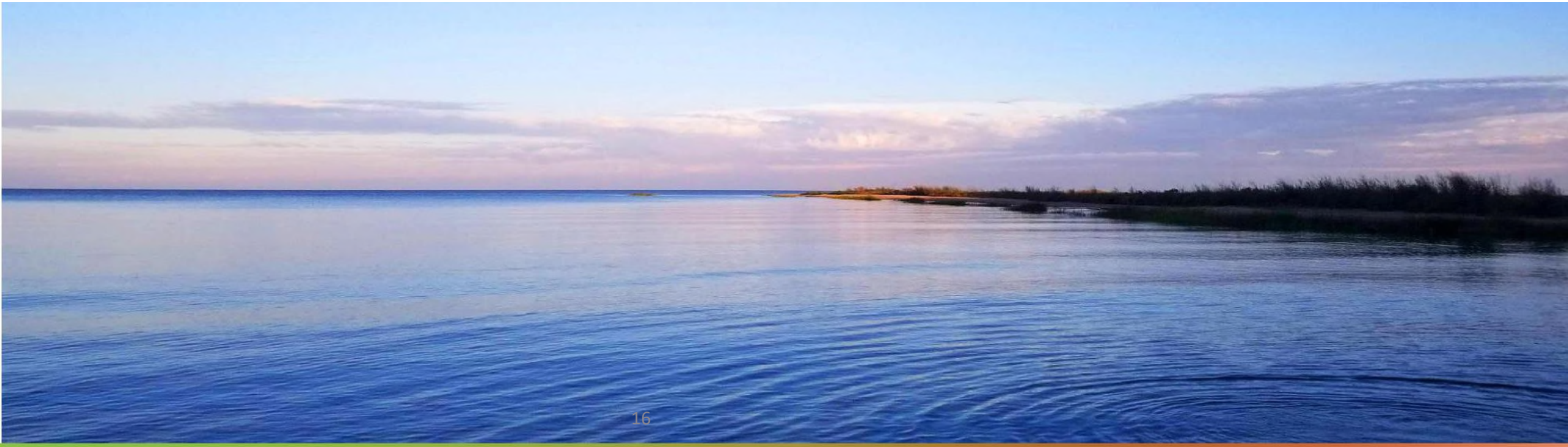
The Process Forward

- EPA Implementation Grant Notice of Funding Opportunity (NOFO)
  - Released 9/20/23
  - Identifies eligible entities
  - Includes project size categories
  - Subject of next webinar
- Additional webinars through the end of 2023

- Public review and comment on the draft PCAP – timing TBD
- Continuous collection of input throughout the process

Get Involved

- DEQ dedicated CPRG webpage is online
  https://www.deq.virginia.gov/our-programs/air/greenhouse-gases/climate-pollution-reduction-grant
- Contains planning process information and resource links
- Dedicated email address for questions, comments, suggestions – **CPRG@deq.virginia.gov**



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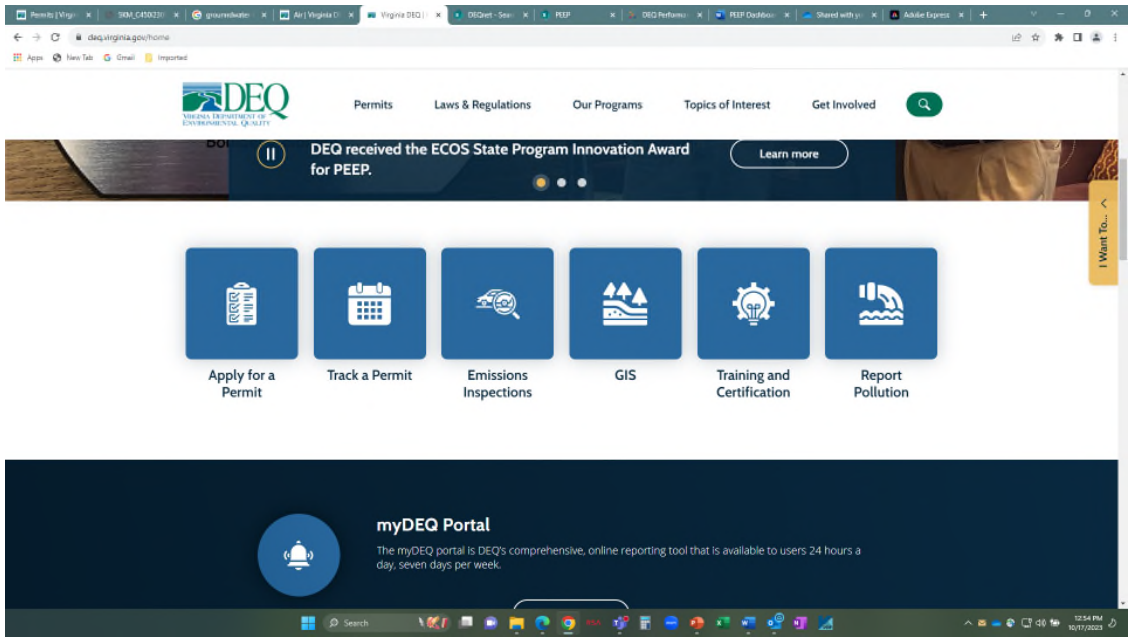
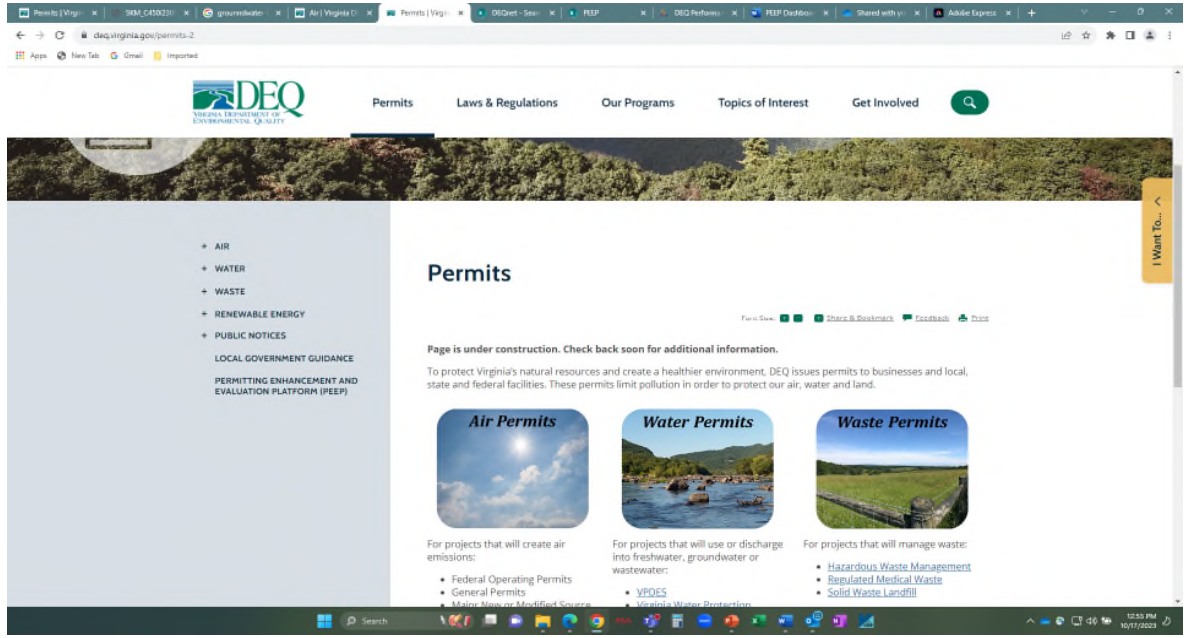
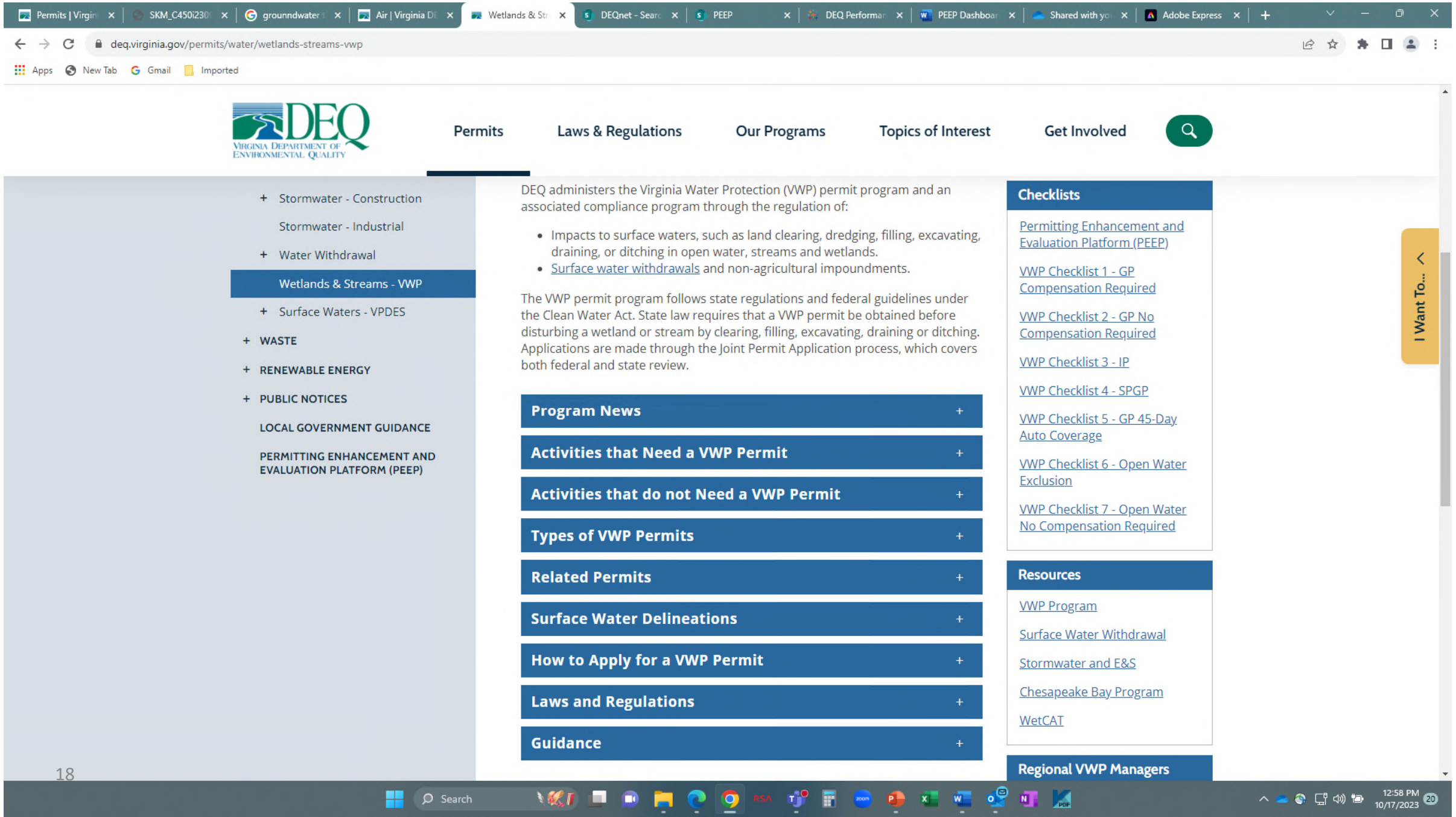
On-Line Permitting Tools






deq.virginia.gov/permits/water/wetlands-streams-vwp
DEQ
Virginia Department of Environmental Quality
Permits
Laws & Regulations
Our Programs
Topics of Interest
Get Involved
+ Stormwater - Construction
Stormwater - Industrial
+ Water Withdrawal
Wetlands & Streams - VWP
+ Surface Waters - VPDES
+ WASTE
+ RENEWABLE ENERGY
+ PUBLIC NOTICES
LOCAL GOVERNMENT GUIDANCE
PERMITTING ENHANCEMENT AND EVALUATION PLATFORM (PEEP)
DEQ administers the Virginia Water Protection (VWP) permit program and an associated compliance program through the regulation of:
Impacts to surface waters, such as land clearing, dredging, filling, excavating, draining, or ditching in open water, streams and wetlands.
Surface water withdrawals and non-agricultural impoundments.
The VWP permit program follows state regulations and federal guidelines under the Clean Water Act. State law requires that a VWP permit be obtained before disturbing a wetland or stream by clearing, filling, excavating, draining or ditching. Applications are made through the Joint Permit Application process, which covers both federal and state review.
Program News +
Activities that Need a VWP Permit +
Activities that do not Need a VWP Permit +
Types of VWP Permits +
Related Permits +
Surface Water Delineations +
How to Apply for a VWP Permit +
Laws and Regulations +
Guidance +
Checklists
Permitting Enhancement and Evaluation Platform (PEEP)
VWP Checklist 1 - GP Compensation Required
VWP Checklist 2 - GP No Compensation Required
VWP Checklist 3 - IP
VWP Checklist 4 - SPGP
VWP Checklist 5 - GP 45-Day Auto Coverage
VWP Checklist 6 - Open Water Exclusion
VWP Checklist 7 - Open Water No Compensation Required
Resources
VWP Program
Surface Water Withdrawal
Stormwater and E&S
Chesapeake Bay Program
WetCAT
Regional VWP Managers
I Want To...
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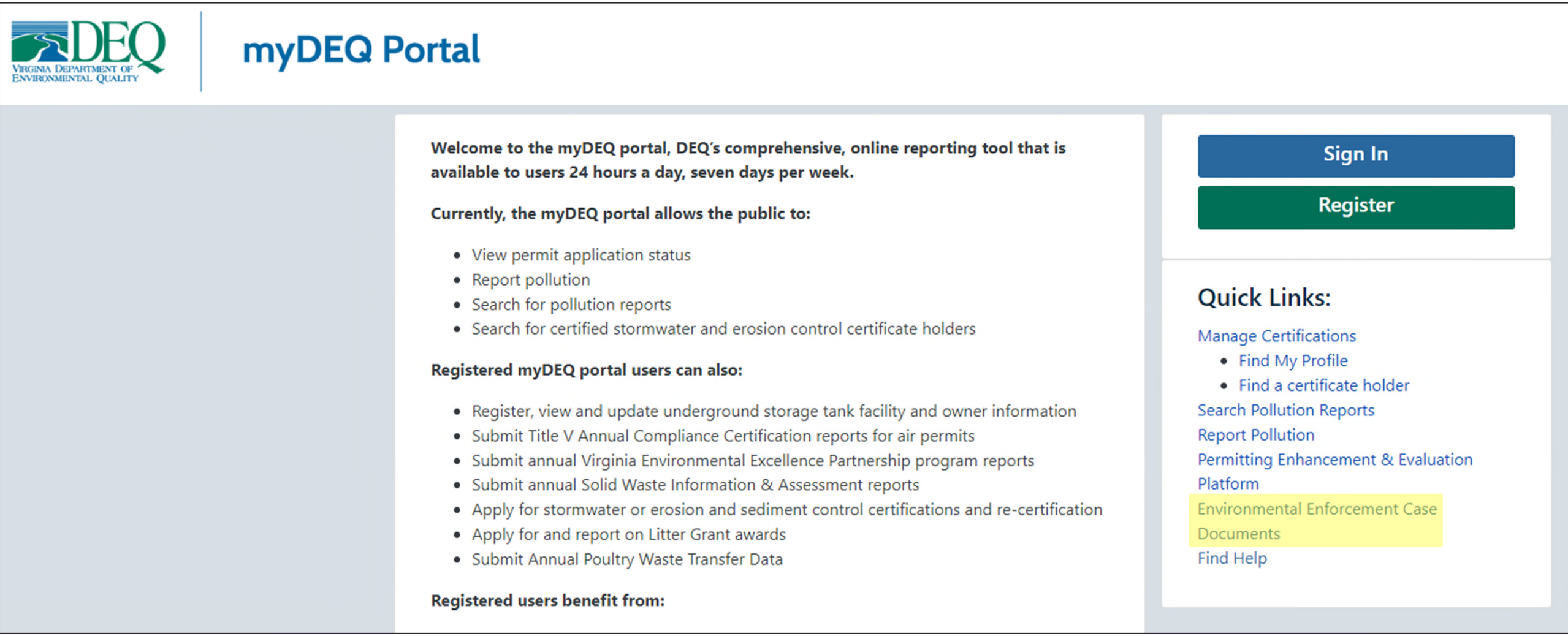
Enforcement Transparency



Home / Enforcement Case Documents

Virginia DEQ Enforcement Cases

Total Number of Cases
2,022

Average Days
462

Reset

Filters & Legends

Region Office Name: (All)
County: (All)
Enforcement Action Type: (All)
Case Status: (All)
Enforcement Rep: (All)
Enforcement Action Num...: (All)

Case Info - Basic Details on Enforcement Cases

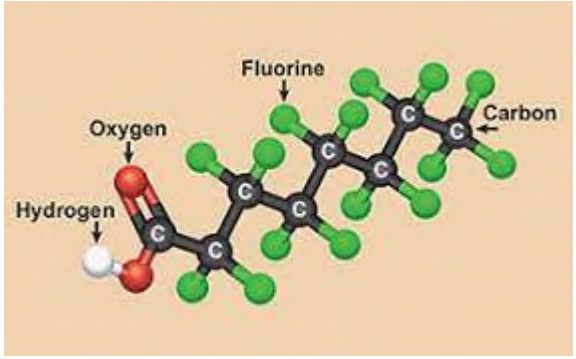
Enforcement Action Number	Legal Name	Facility Name	Media Program	County	Enforcement Rep	Case Status	Number of Days	Cash Portion of Civil Charge	Final SEP Value
BR07-0919	Cooper Construction, Incorporated, Al M.	Cooper Construction, Incorporated, Al M.	VWPP	Roanoke County	Steven B Wright	Terminated	822	$50,750.00	$0.00
BR09-1004	Farmville, Town of	Farmville SLF - SWP 195	Solid Waste	Prince Edward County	Jefferson D Reynolds	Terminated	658	$9,000.00	$0.00
BR10-0820	Blue Ridge Fiberboard, Inc.	Blue Ridge Fiberboard, Inc. - LF	Hazardous Waste	Pittsylvania County	David M Miles	Terminated	264	$0.00	$0.00
BR11-0414	Nutri-Blend, Inc.	G.D. and Frances Gilliam - 22.01 acre tract	VPA	Campbell County	Jeffrey L Hurst	Terminated	137	$0.00	$0.00

SWANA Annual Regulatory Training

DEQ's Perspective on Per- and Polyfluoroalkyl Substances (PFAS)

Current and Future State

Jeffery Steers
Director of Communications
Virginia Department of Environmental Quality
October 19, 2023



What types of sites are potential PFAS sources?

- Fire Training Facilities--AFFF
- Fire Stations--AFFF
- Military bases/DOD sites--AFFF
- Airports--AFFF
- Refineries--AFFF
- Chemical Facilities--AFFF
- Landfills (especially pre 1991 unlined landfills)
  - 1991 EPA promulgated rules that mandated that landfills be lined on the sides and bottom before waste is deposited
- Biosolids (agricultural use)
- Rail Yards
- Plating Facilities
- Textile/Carpet manufacturers
- Residential areas with septic systems





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Industrial Sectors as PFAS sources

Industrial Sector	Example Uses
Textiles & Leather	Factory- or consumer-applied coating to repel water, oil, and stains. Applications include protective clothing and outerwear, umbrellas, tents, sails, architectural materials, carpets, and upholstery.
Paper Products	Surface coatings to repel grease and moisture. Uses include non-food paper packaging (for example, cardboard, carbonless forms, maskg papers) and food-contact materials (for example, pizza boxes, fast food wrappers, microwave popcorn bags, baking papers, pet food bags).
Metal Plating & Etching	Corrosion prevention, mechanical wear reduction, aesthetic eenhancement, surfactant, wetting agent/fume suppressant for chrome, copper, nickel and tin electroplating, and post plating cleaner.
Wire Manufacturing	Coating and insulation.
Industrial Surfactants, Resins, Molds, Plastics	Manufacture of plastics and fluoropolymers, rubber, and compression mold release coatings; plumbing fluxing agents; fluoroplastic coatings, composite resins, and flame retardant for polycarbonate.
Photolithography, Semiconductor Industry	Photoresists, top anti-reflective coatings, bottom anti-reflective coatings, and etchants, with other uses including surfactants, wetting agents, and photo-acid generation.

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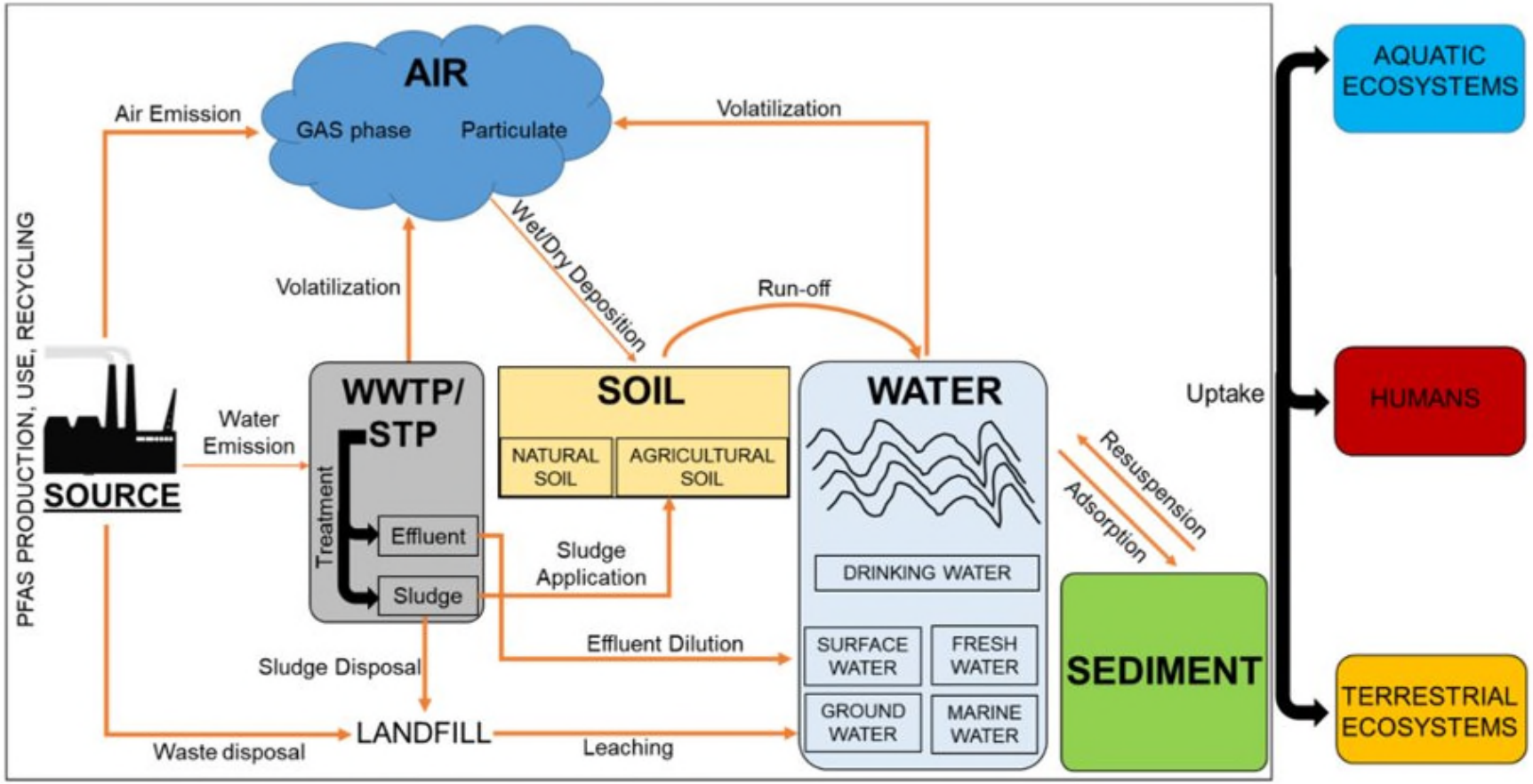
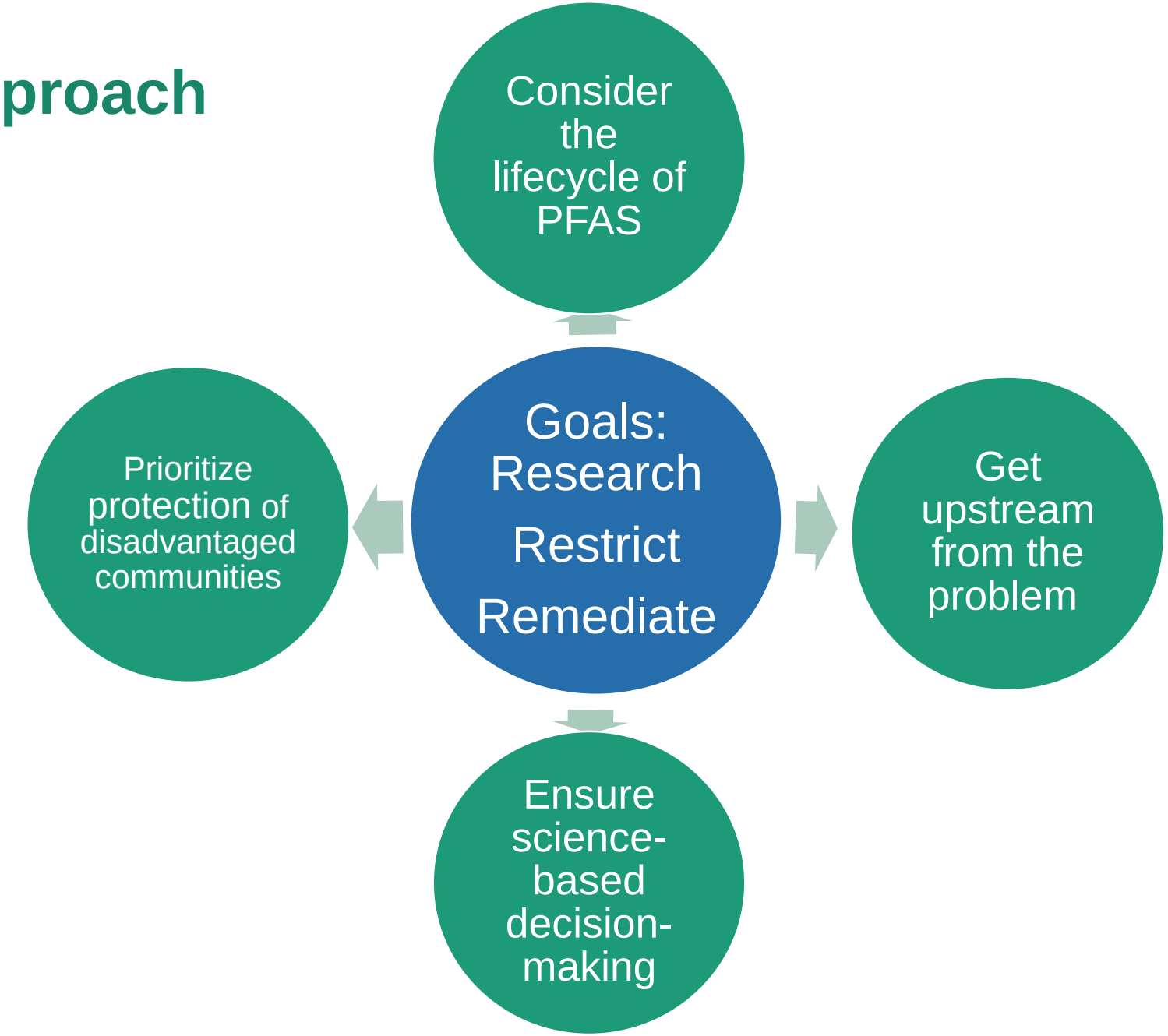
PFAS Environmental Distribution and Exposure Routes



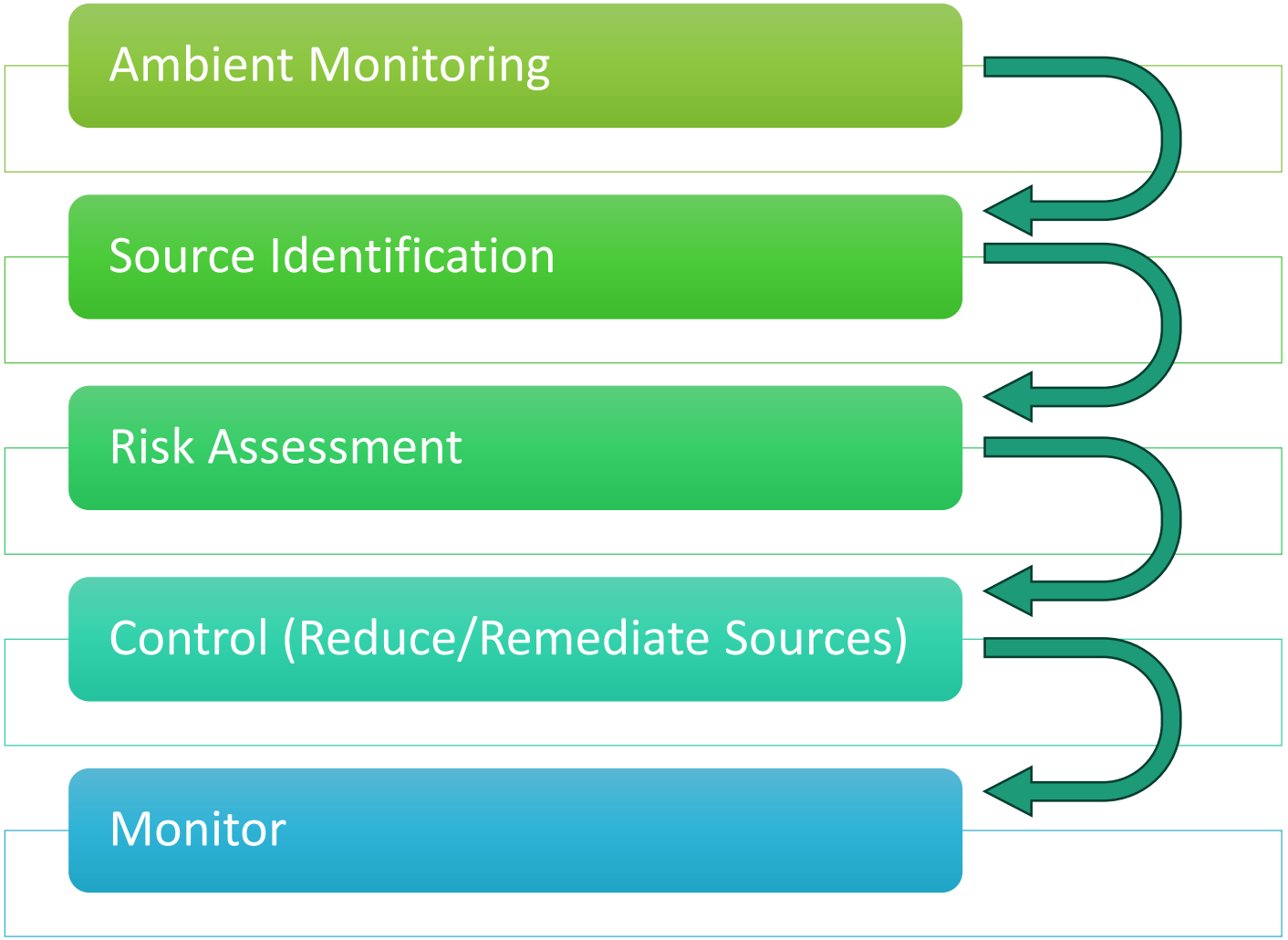
EPA's Approach



Now and…when?

- **Uncertainty**
- Slow federal movement
  - Evolving science
  - Risk-based priority response
  - Cost benefit analysis
  - National capacity for testing and treatment
- Virginia
  - Fed. research/standards → VA response
  - Sampling waters and identifying high risk sources

DEQ's response



2021-2024 PFAS Federal Actions Watchlist

2021

- Denial/Withdrawal of TSCA LVEs
- More Stringent Existing & New Chemical Manufacturing, Importation, and End-Use
- TSCA Reviews, Inventory Re-reviews, Rules, and Orders
- TSCA Section 4 Test Orders
- PFAS Categories Identification
- Final Toxicity Assessment for PFBS & GenX
- Increased Enforcement/Oversight via RCRA, TSCA, CWA, SDWA, CERCLA
- Total Adsorbable Fluorine (TAD) Method for Wastewater

2022

- National Ambient Water Quality Criteria for Aquatic Life
- Health Advisories for PFBS & GenX
- Voluntary Stewardship Program for Industry
- Hazardous Air Pollutant Designation
- Expanded TRI Reporting/Chemicals of Special Concern Designation
- Soil Leaching Analytical Method
- Multimedia Test Methods for 40 PFAS
- IRIS Assessments for PFBA, PFHxS, PFHxA, PFNA, PFDA
- Annual Progress Report on PFAS Strategic Roadmap
- Final ELG Plan 15
- National Fish Tissue Surveys
- Drinking Water Treatment Technologies

2023

- CERCLA Hazardous Substance Designation/Cost Recovery
- TSCA 2011 Retroactive Reporting
- UCMR 5 Implementation
- Additional Health Advisories
- NPDES Permitting
- Update Guidance on Destroying & Disposing PFAS
- Fish Consumption Advisory PFAS List

2024

- National Primary Drinking Water Regulations
- National Ambient Water Quality Criteria for Human Health
- Additional Health Advisories
- Effluent Limitation Guidelines
- Drinking Water Methods Updates
- Biosolids Risk Assessment

Courtesy of Trihydro

DEQ Virginia Department of Environmental Quality

EPA Proposed MCL and Hazard Index

Hazard Index (HI)

- Used to evaluate potential health risks from exposure to chemical mixtures.
- This approach has been used in other EPA programs, such as CERCLA but this is the first time it has been used for a drinking water standard.

PFAS	MCLG	MCL
PFOA	Zero	4 ppt
PFOS	Zero	4 ppt
PFBS	1.0 (unitless) Hazard Index	1.0 (unitless) Hazard Index
PFNA		
GenX		

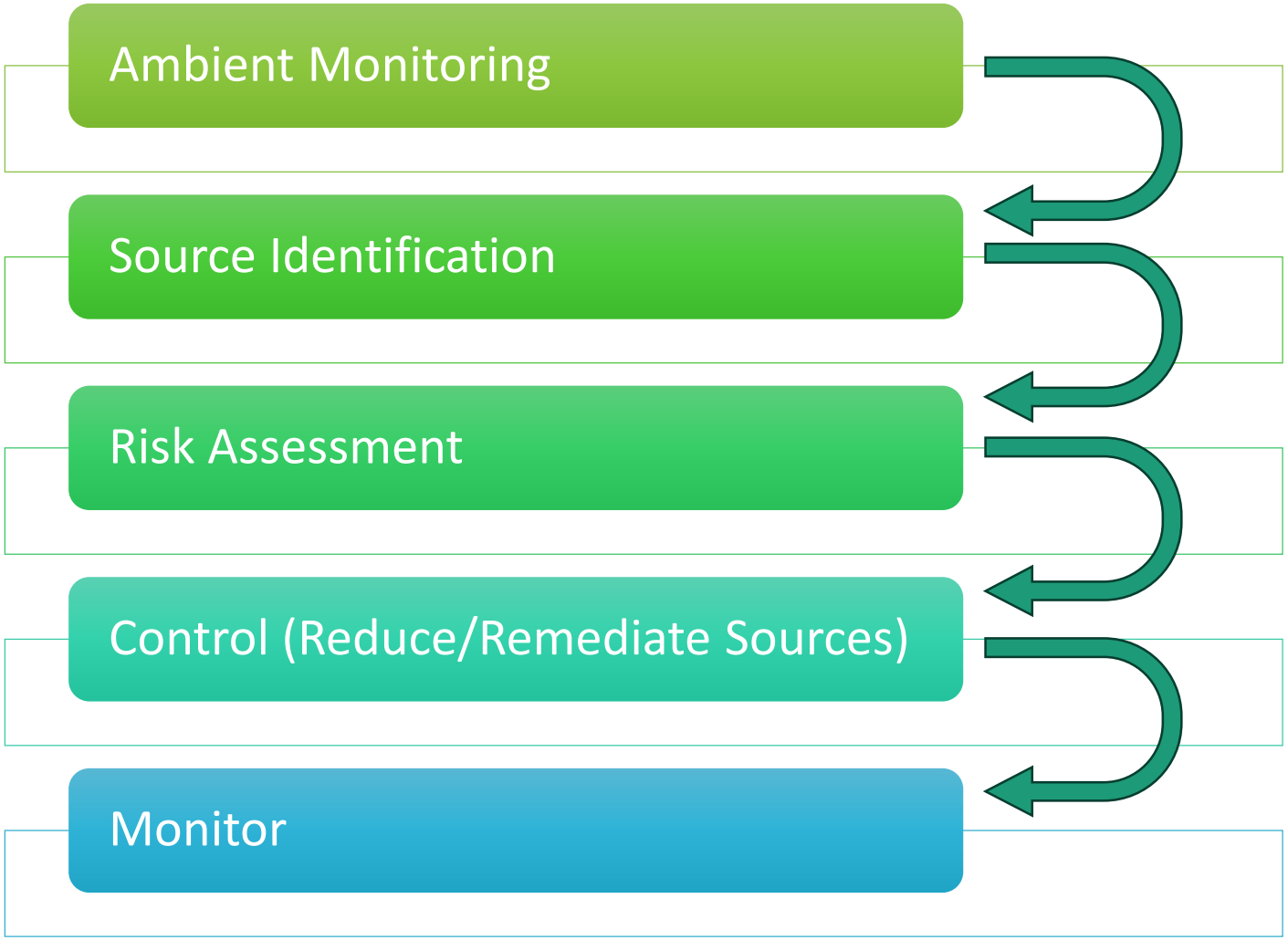
Hazard Index

- If the combination of those four ratios is above 1.0, then water systems will be expected to reduce the levels of these PFAS.
- Depending on the level of contamination found, water systems may need to take action even if only one of the four PFAS is present.
- Solid waste groundwater protection standards are calculated similarly

$$\text{Hazard Index} = \left(\frac{[\text{GenX}_{\text{water}}]}{[10\ \text{ppt}]}\right) + \left(\frac{[\text{PFBS}_{\text{water}}]}{[2000\ \text{ppt}]}\right) + \left(\frac{[\text{PFNA}_{\text{water}}]}{[10\ \text{ppt}]}\right) + \left(\frac{[\text{PFHxS}_{\text{water}}]}{[9.0\ \text{ppt}]}\right)$$

$$HI = \sum_{i} HQ_i$$

DEQ's response



EPA PFAS Analytical Methods

Drinking Water

- Method 537
- Method 537.1
- Method 533

Non-Potable Water and Other Environmental Media

- Method 8327
- Draft Method 1633

Air

- OTM 45
- SW 846
- TO-15

Total PFAS load

- Total Organic Fluorine (TOF),
- Total Organic Precursors (TOP)

Source: EPA Analytical Methods

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Future PFAS MCLs & Groundwater Monitoring

Definition of MCLs

- 250.A.6.b.(1) For constituents for which a maximum contaminant level (MCL) has been promulgated under § 1412 of the Safe Drinking Water Act (40 CFR Part 141) or by VDH regulation, the MCL for that constituent shall be automatically established as the groundwater protection standard upon submission of the proposed standards

Sampling list

- Update the solid waste groundwater sampling list (Table 3.1 columns A, B, and C) to **include the emergent constituents**

Sampling Requirement

- Becomes effective during next regularly scheduled sampling event once MCLs are established

HB586

- 2020 Acts of Assembly Chapter 611 (HB586) required Health Commissioner to convene a work group to study the presence of PFOA, PFOS, PFBA, PFHpA, PFHxS, PFNA, and other PFAS in public drinking water
- 63 water samples from 45 waterworks in study
- Study found PFAS above the practical quantitation level (PQL) at 15 of 63 sample locations
- Samples from 48 locations did not contain any PFAS (or, if PFAS were present, they were below the PQL). In most cases, the PQL was 3.5 parts per trillion.

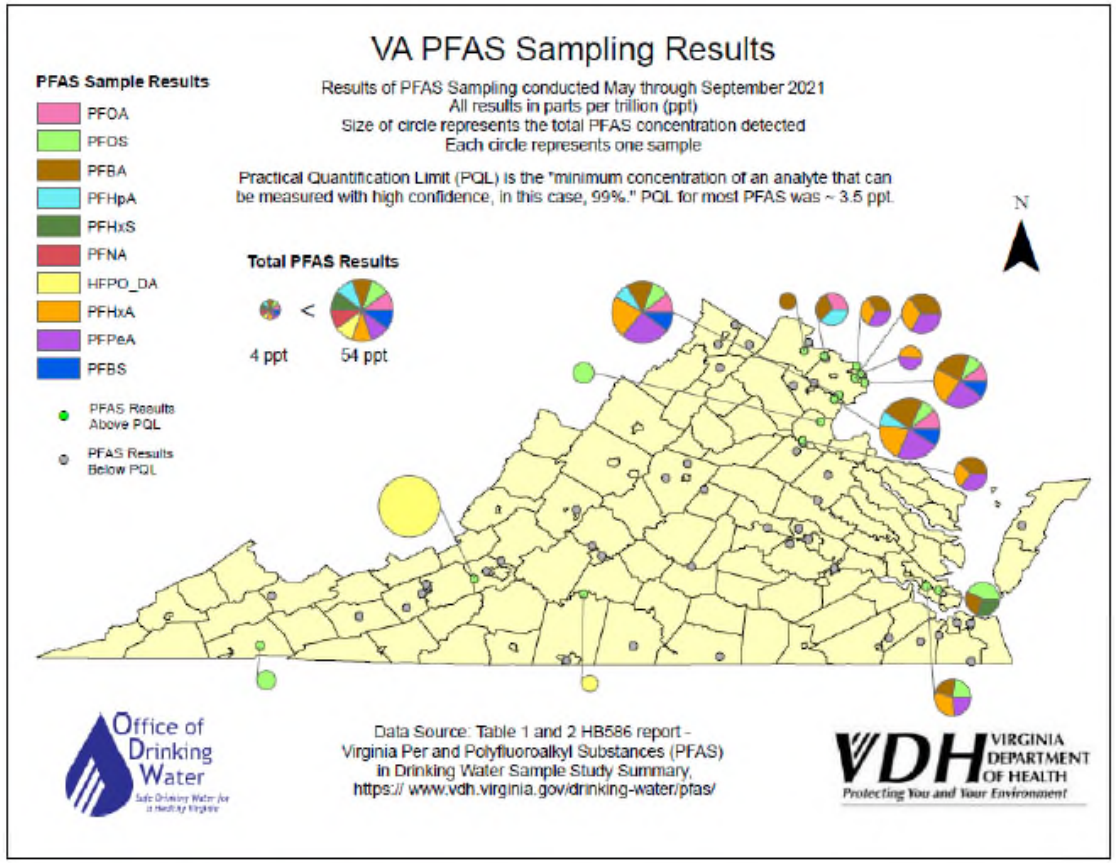
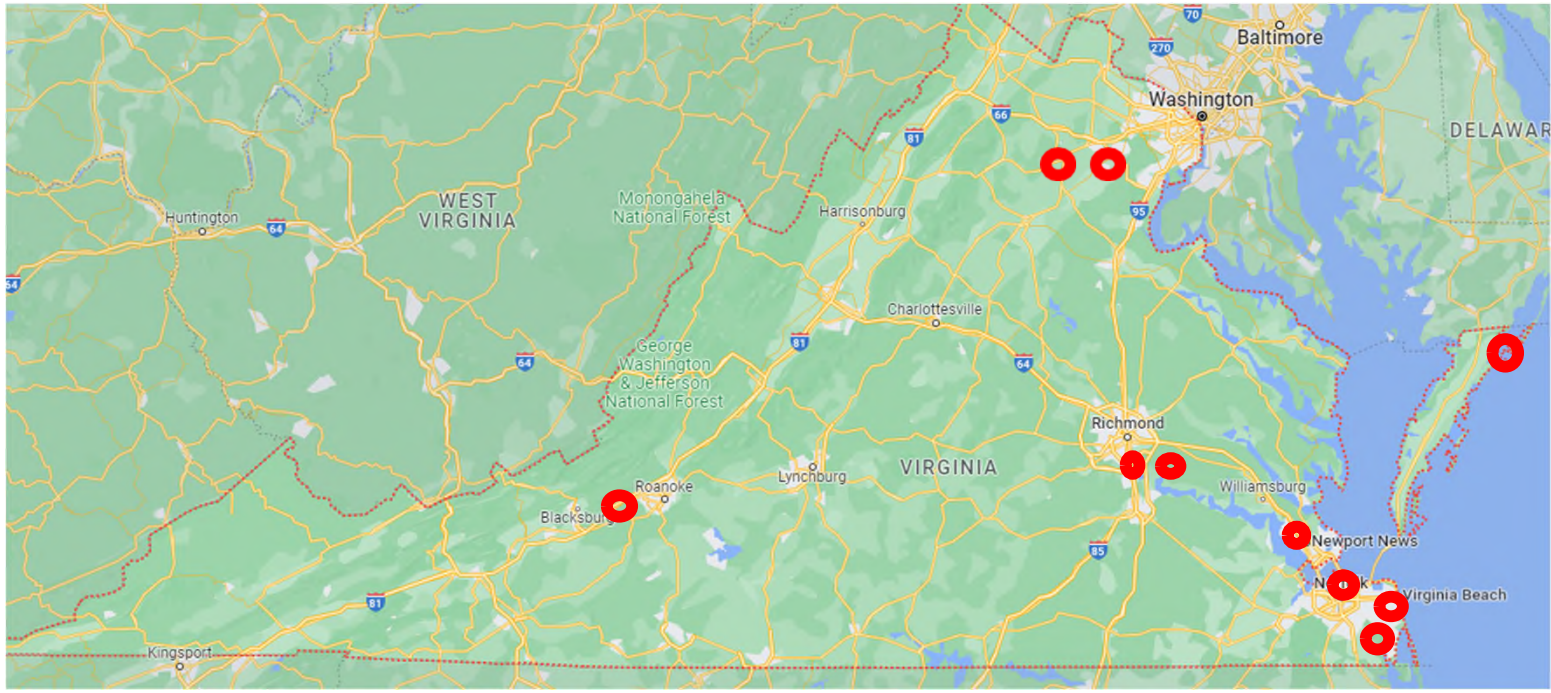


Figure 2. PFAS Sampling Results.

PFAS in Virginia: Known Contamination Sites

- DuPont Spruance plant
- NASA's Wallops Island facility,
- Norfolk Naval Station
- Oceana Naval Station
- Joint Base Langley-Eustis
- Fentress Auxiliary Landing Field
- Vint Hill Farms Station
- White Oak Swamp watershed of the Chickahominy River
- Roanoke River/Spring Hollow Reservoir
- Upper Occoquan watershed



DEQ's Response Plan to PFAS

- Broad Identification of Possible Sources
  - Wastewater and stormwater discharges
    - awaiting federal regulatory guidance on approved test method and water quality criteria
  - Landfill leachate
  - Biosolid
    - awaiting federal guidance including risk assessment
  - Firefighting form sites
- Investigation of Confirmed Impacts to Environmental Media
  - Coordination with local, state, federal partners
  - Develop risk communication plans with partners
  - Identification of potential responsible parties (PRPs)
    - Comprehensive Environmental Compensation & Liability Act (CERCLA) issues
- Ambient Surveillance of Surface & Ground Water Monitoring

Managing construction near contaminated sites

How risk adverse are you?

- Phase I and II site assessments beginning to include PFAS
- Take care when interpreting data
- Note that PFAS contaminated media is not *currently* regulated as a waste unless other regulated contaminants are found

Soils Management

- Understand ramifications of future hazardous substance designation under CERCLA
- Decision on need for PFAS data
  - Know potential sources near project
  - Landfills are beginning to ask for data
- Measured approach to testing
  - Screening using Total Fluorine
- Manage on-site without becoming a generator
- Future inclusion into DEQ's Contaminated Media Guidance ????

Treatment Challenges

- Low Volatility (rules out stripping)
- Moderate solubility
- Strength of C-F bond
- Treatment efficiency must be very high because of low (ppt) remediation objectives

Treatment technologies

Ex-situ technologies

- Sorption/ion exchange
  - Carbon (can be effective for some PFAS, but can be inefficient)
  - Ion exchange resins (costly)

In-situ technologies

- Emerging(?) technologies
  - Carbon injection
    - PRB or source area
  - Electro-Chemical Oxidation

Emerging technologies

- Reverse osmosis
- Membrane filtration
- Thermal Treatment
- SAFF – Surface Activation Foam Fractionation

Future Liability

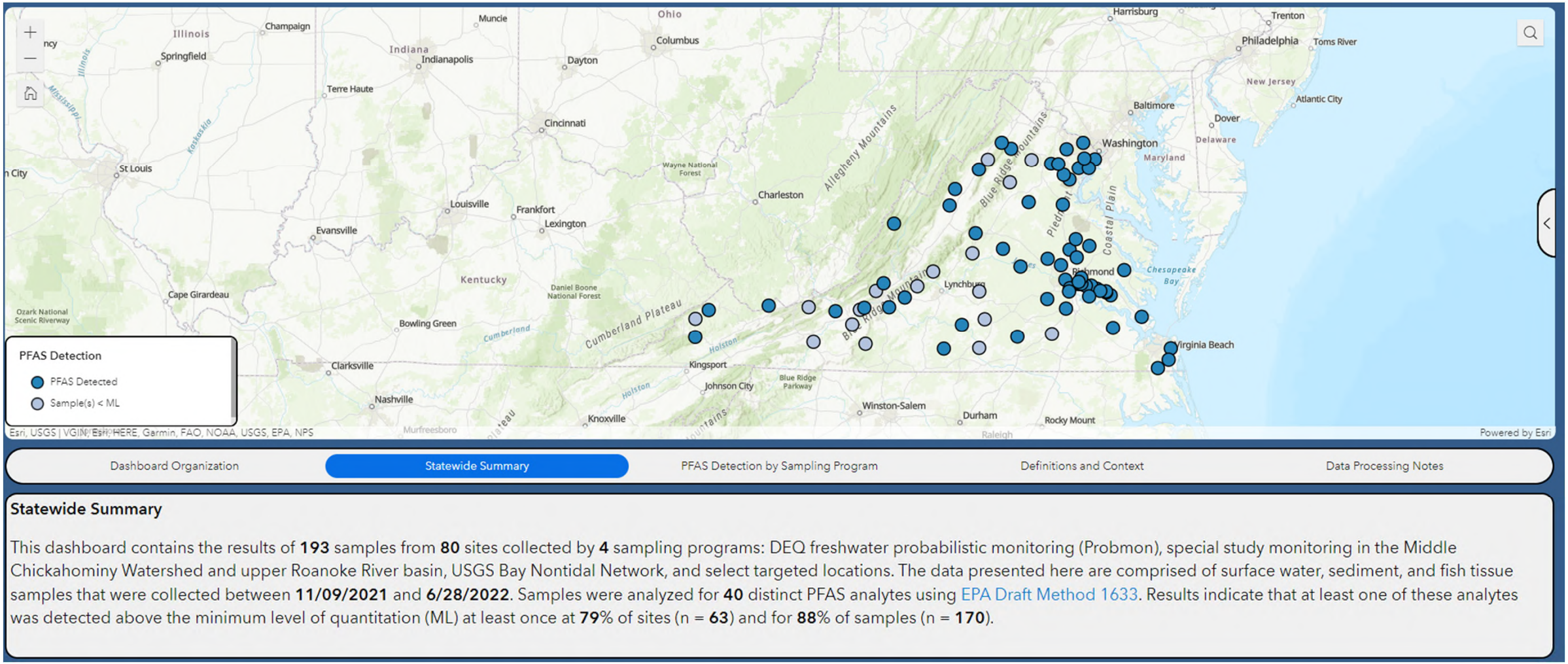
- Issues associated with generating and managing a hazardous waste (RCRA)
- CERCLA/Superfund and PFAS
  - EPA proposing designation as a hazardous substance
    - Opens up joint and several liability for past handling of media containing PFAS compounds
- Need to understand and manage your risk

PFAS Tracking Tool

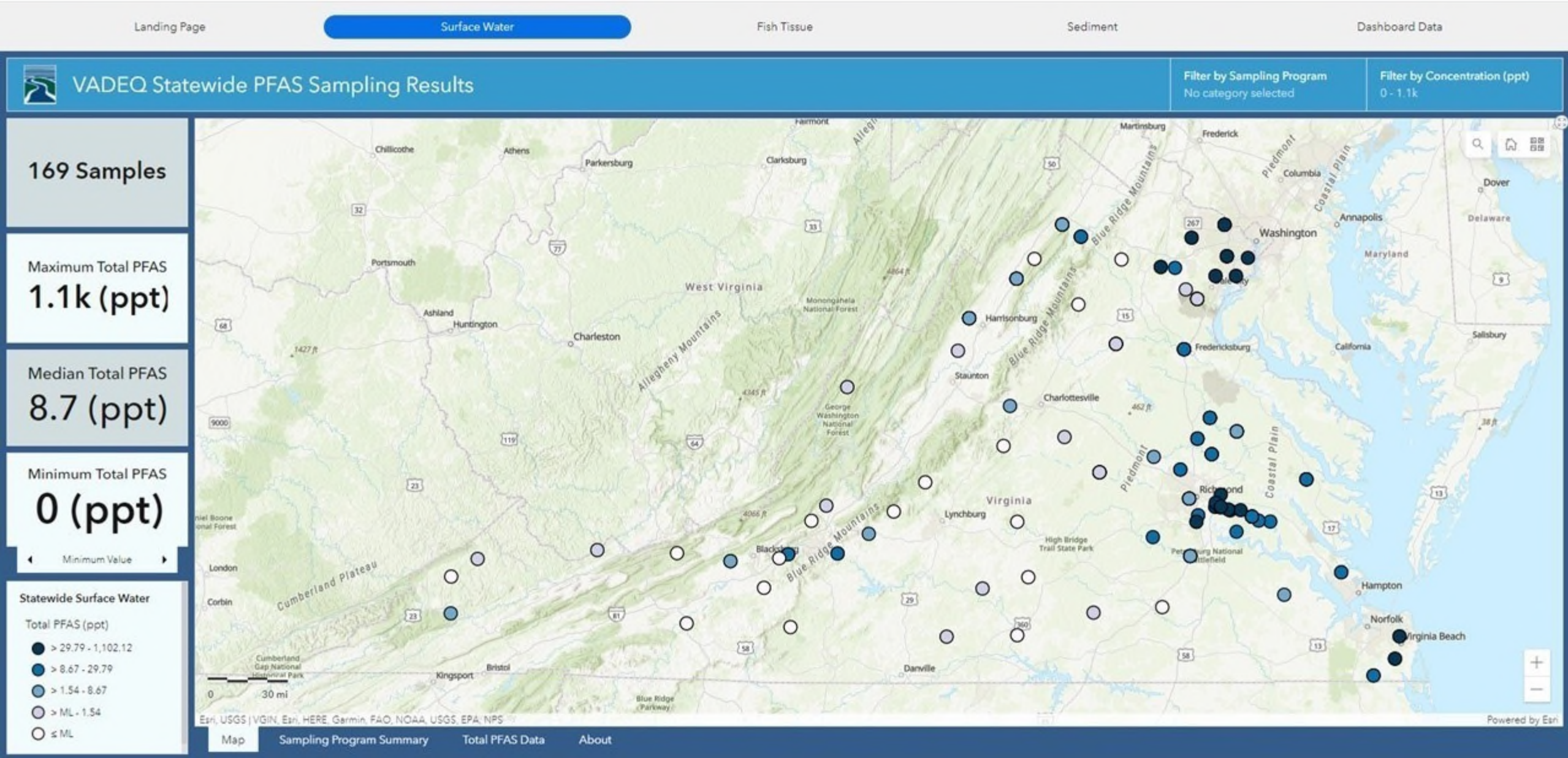
- Online tool launched on March 29, 2023, regularly updated as data becomes available
- Fully interactive map integrating DEQ generated data
  - Surface and groundwater ambient monitoring
  - Fish tissue
  - Sediment
- Can filter data by freshwater probable monitoring stations, USGS nontidal stations and special studies
- Future data my include
  - VPDES point source effluent monitoring
  - Virginia Department of Health source water survelience monitoring
  - Biosolids at land application sites

PFAS in Virginia: Statewide PFAS Sampling

- Statewide PFAS Sampling Dashboard



PFAS Tracking Tool



Contact Info:

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