



2025 Citizen Water Monitoring Grant Information Session

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Virginia Department of Environmental Quality

August 8, 2024



Welcome and Agenda

- Introduction to grant program
- Getting started: Study design and developing a monitoring plan
- Developing a budget proposal
- Environmental Data Mapper walkthrough
- Quality assurance
- Virginia Data Explorer walkthrough
- Water quality assessment process
- Questions?

Introductions

- Speakers
 - Meighan Wisswell - Water Monitoring Coordinator & Grant Administrator
 - Joe Morina - Water Quality Assessment Data Coordinator
 - Reid Downer - Water Quality Monitoring Data Coordinator
- Question Moderator
 - Kate Miller- Environmental Justice Coordinator- Blue Ridge, Southwest & Valley Regions
- citizenwater@deq.virginia.gov

Intro to Grant Program

- Consult the Request for Applications (RFA) for info regarding:
 - Background
 - Eligibility
 - Requirements
 - Deliverables
 - Due dates
- [2025 Application package](#)
- DEQ Volunteer Monitoring Program and Citizen Monitoring Grant Program:
 - <https://www.deq.virginia.gov/our-programs/water/water-quality/monitoring/citizen-monitoring>
- Virginia Environmental Data Hub
 - <https://geohub-vadeq.hub.arcgis.com/>

2023 Citizen Monitoring Grant
recipient Goose Creek Association



Intro to Grant Program: Background and Purpose

Goals:

generate volunteer-collected data used by the agency for water quality assessment, improvement, or preservation

educate stakeholders on water quality monitoring and the environment

Intro to Grant Program: Background and Purpose

Provide support for projects focusing on these six general objectives.



List and delist impaired waters on the 303(d) Impaired Waters List and assess overall water quality.



Identify sources of pollution that may help in Total Maximum Daily Load (TMDL) development.



Track progress of TMDL's or other restoration activities.



Identify waters for future monitoring by DEQ.




Educate the community on water quality monitoring and the effects of human activities on water quality.



Provide educational opportunities and water quality monitoring support for underserved and environmental justice communities.

Intro to Grant Program: Eligibility



Any community or watershed-based organization, secondary school, college, or university who uses volunteers to monitor Virginia waters.

Funded activities may begin as soon as Jan. 1, 2025, and must be completed by Dec. 31, 2025.

No match is required.

Intro to Grant Program: Grant Options

Mini Grant

- Max award \$1,000

Regular Grant

- Max award \$5,000
- Data authorization requirements:
 - Education
 - Identify waters for future DEQ monitoring
- At least one parameter at Level II or Level III
- Requires Quality Assurance Project Plan (QAPP)

Intro to Grant Program: Grant Options

Coordination Grant

- Max award \$11,000
- Data authorization requirements:
 - Education
 - Identify waters for future DEQ monitoring
- At least one parameter at Level II or Level III
- Requires Quality Assurance Project Plan (QAPP)

Coordination Driven Track

- At least 3 sub-organizations must be actively engaged in grant project
- At least 35 active volunteers
- Monitoring in at least 3 different Virginia localities
- At least 50 unique sampling locations

Data Driven Track

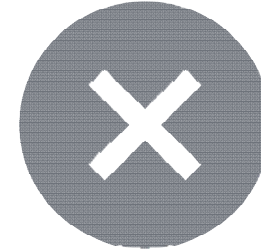
- At least 1000 total Level II & Level III data points, with a least 500 of those being Level III data

Intro to Grant Program: Program Requirements



DO:

- 1) Provide equipment, supplies, or training to volunteer monitors
- 2) Put safety first!
- 3) Sample at representative locations
- 4) Submit a draft QAPP if you will collect Level II or Level III data



DON'T:

- 1) Sample in close proximity to permitted discharges
- 2) Submit more than one application
- 3) Request funding for work conducted solely by another organization

Intro to Grant Program: Application Requirements

Application due August 31, 2024

email to citizenwater@deq.virginia.gov

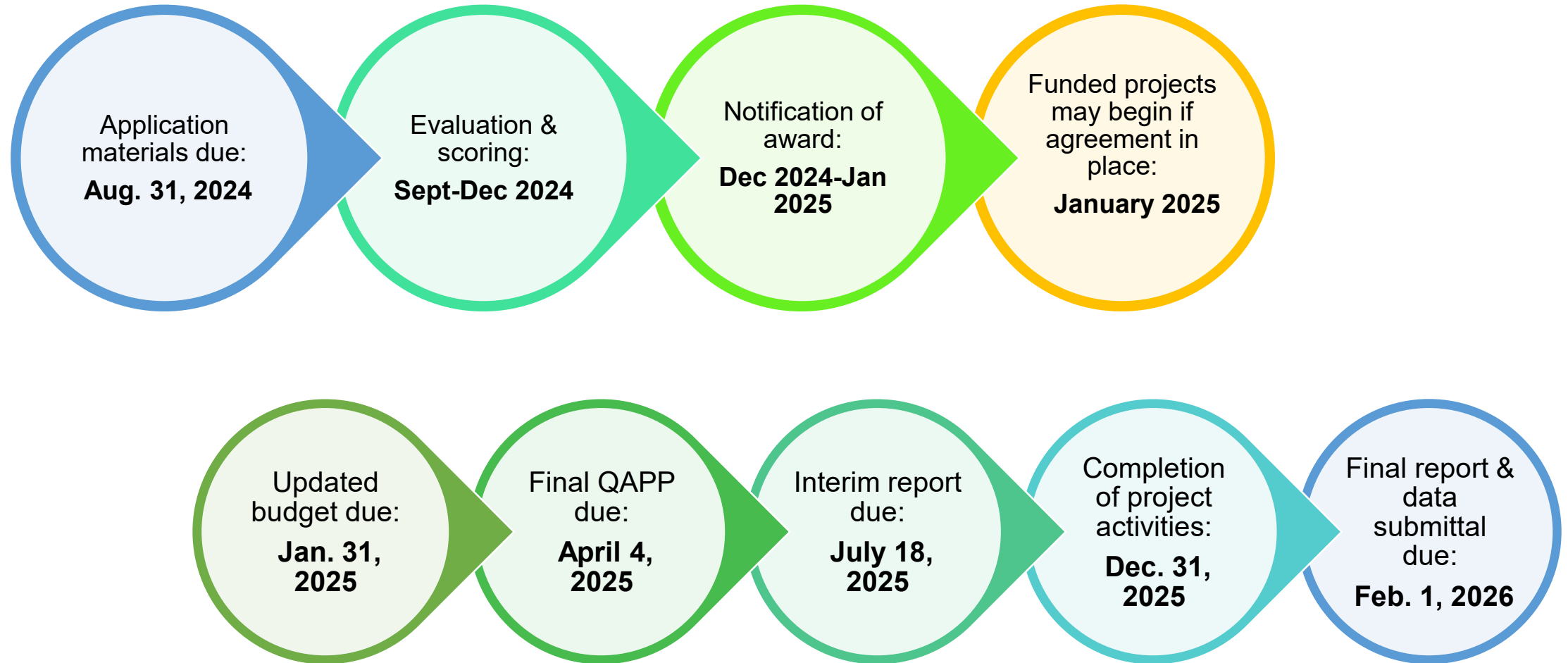
Completed application packet should include:

- Completed application PDF
- Budget proposal workbook (only tab 2- Proposed Budget is due with the application)
- Data Use Authorization Form (if project will generate data)
- Monitoring plan workbook (where applicable)
- Draft QAPP (if collecting Level II or Level III data)

Additional requirements:

- [COV W9 form](#) must be uploaded in the [Virginia e-Procurement Portal \(eVA\)](#)
- Applicants without a supplier account in eVA must register and create an account

Intro to Grant Program: Timeline



Intro to Grant Program: Updates and Process Changes in 2025 Cycle

- DEQ will perform initial screening of monitoring plans for stations located within 400 feet of outfalls
- Draft QAPP documents must be submitted with the application
- Updated budget should be submitted by Jan. 31, 2025
- Report guidelines updated
- COV W9 submission is now online
- Updated exceptional proposals metric to prioritize those that minimize monitoring overlap and duplication

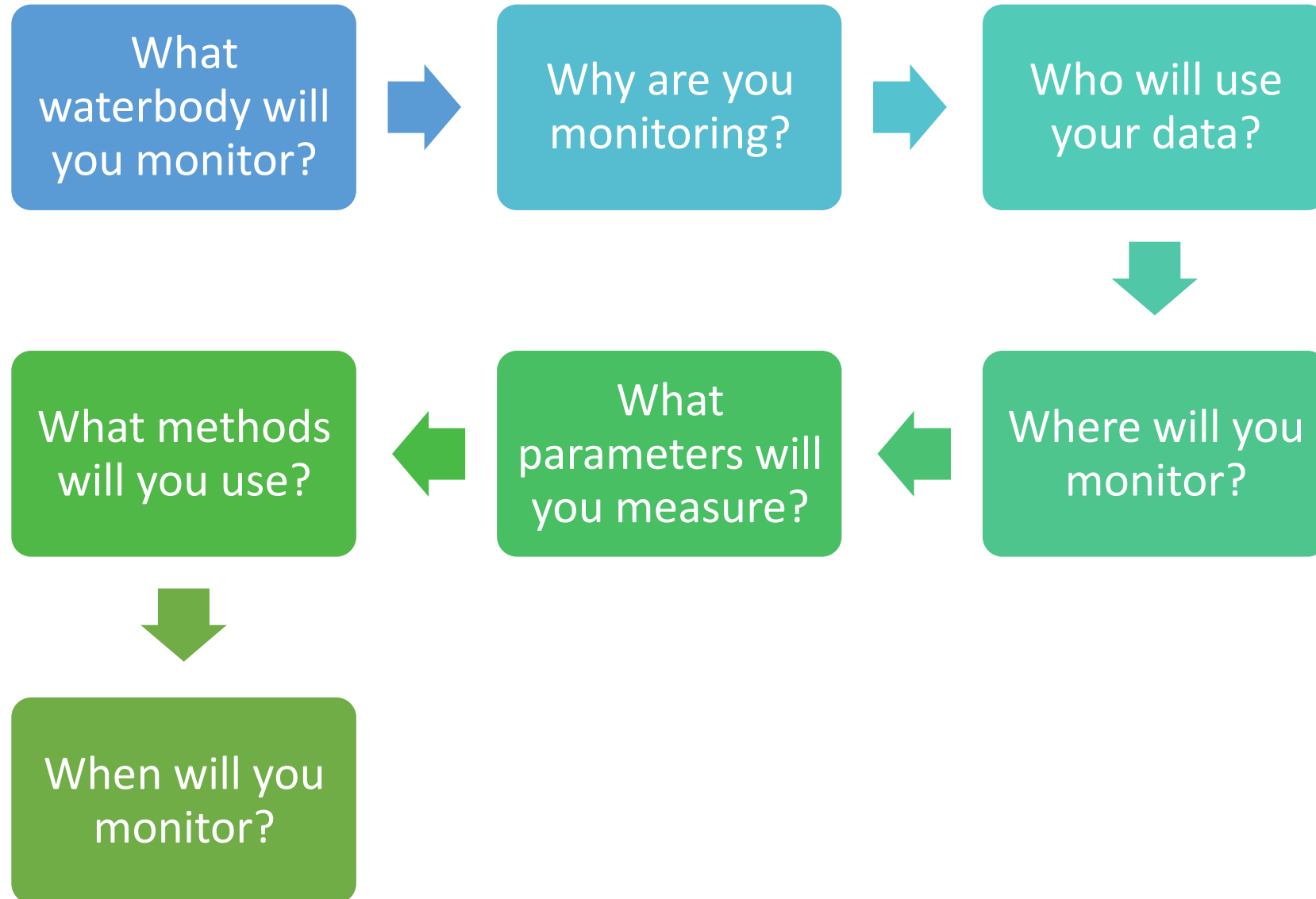


2023 Citizen Monitoring Grant
recipient Roanoke College

Poll Question

Have you applied for a DEQ Citizen
Monitoring Grant in the past?


Getting Started: Study Design and Developing a Monitoring Plan



Microsoft Excel ribbon with tabs: File, Insert, Page Layout, Formulas, Data, Form, Review, View, Automate, Developer, Help, Kofax PDF, SAS. Font settings: Arial Black, size 24. Ribbon groups include Font, Alignment, Number, Styles, Conditional Formatting, and Format as Table.

Getting Started: Study Design and Developing a Monitoring Plan

2025 Monitoring Plan



2025 Monitoring Plan

Your Organization Name

GRANT TYPE

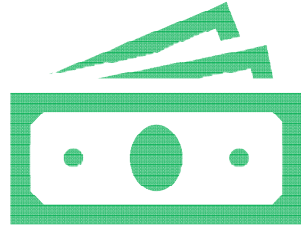
For Coordination Grant Applicants- LIST SUBORGANIZATIONS:

Instructions: *Instructions and sampling described in the monitoring plan should be limited to those by this grant. Please do not include any affiliations or sampling that will not be supported by funds awarded by DEQ.*

Monitoring plans should be updated regularly and contain accurate, reliable information

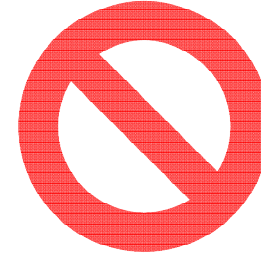
STATION ID	STATION STATUS: NEW OR ESTABLISHED (ACTIVE)	LATITUDE	LONGITUDE	CITY OR COUNTY	WATERBODY NAME	SAMPLE SITE DESCRIPTION	SAMPLE COLLECTION LOCATION	MONITORING FREQUENCY	PARTICULARS
ur organization's station identifier.	Choose one station status.	<i>As close to the sample point as possible in decimal degrees. For example: 37.527778</i>	<i>As close to the sample point as possible in decimal degrees. For example: 77.435000</i>	<i>Please confirm this in the EDM. Refer to Attachment B: EDM User Guide</i>	<i>Please confirm this in the EDM. Refer to Attachment B: EDM User Guide</i>	<i>This description must be specific enough for someone to locate the site without coordinates. For example: Rocky Creek 100 meters upstream of Route 453 Bridge.</i>	<i>For example: mid channel in stream, from streambank, from bridge, etc.</i>	<i>For example: once per month.</i>	<i>For example: suspended solids.</i>

Developing a Budget Proposal



DO:

- 1) Allocate at least 80% of the total budget request for equipment, laboratory, or contractual costs
- 2) Be specific!
- 3) Itemize
- 4) Submit an updated budget if awarded partial funding



DON'T:

- 1) Allocate more than 20% of the total budget request for administrative costs including facilities, fees, or staff time for volunteer coordination or training
- 2) Request funding for rent/purchase of office space
- 3) Request funding for lodging

Poll Question

Have you used the Environmental Data Mapper before?

Environmental Data Mapper

Environmental Data Mapper (EDM)

Introduced in early 2021, the EDM is DEQ's long-term interactive web mapping utility designed for citizens and stakeholders. The EDM is the replacement for DEQ's legacy VEGIS WIMBY web mapping application and serves to allow users direct, interactive access to DEQ's geospatial data.

[Go to the Environmental Data Mapper](#)



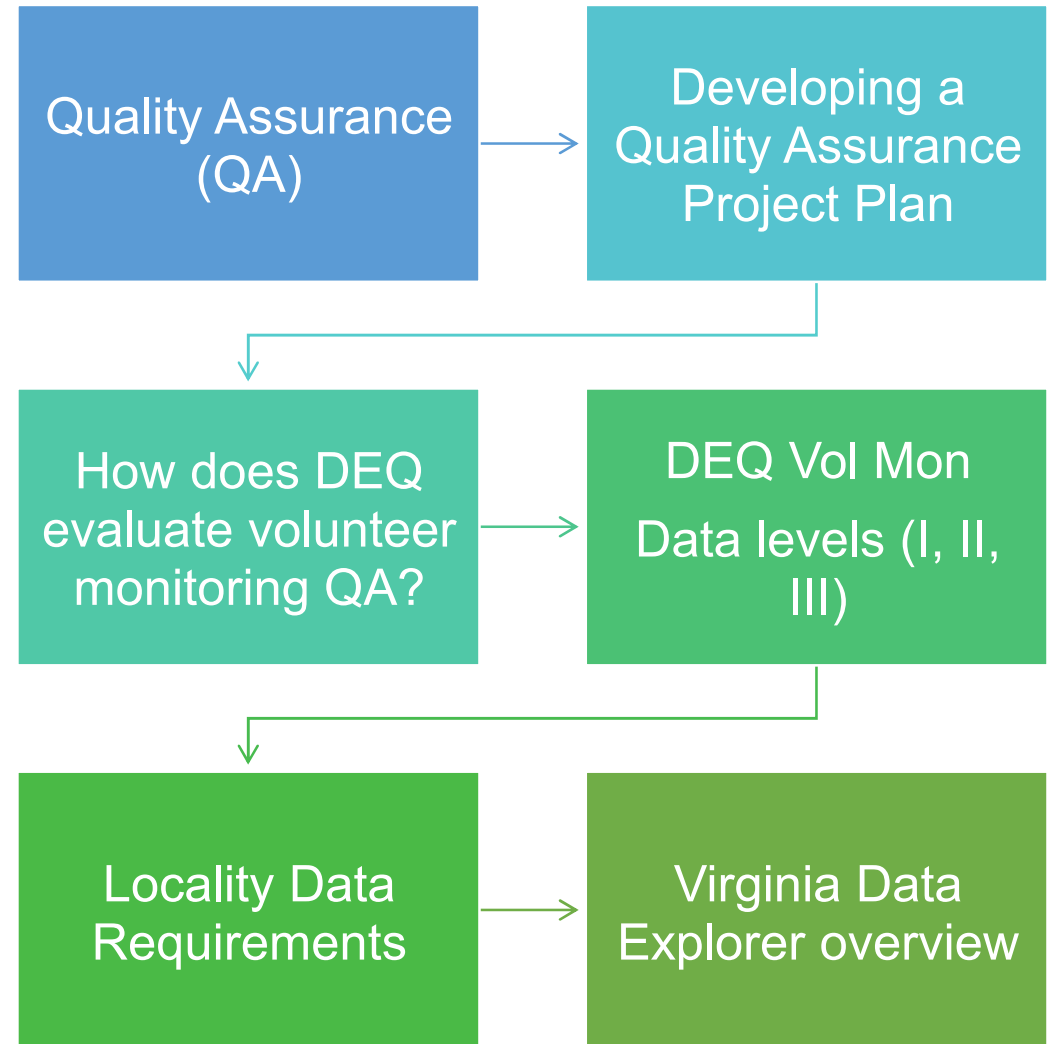
Environmental Data Mapper
User Guide found in the RFA

<https://apps.deq.virginia.gov/EDM/>

An aerial photograph of a coastline. The left side shows clear turquoise water with white waves crashing onto a dark, narrow beach. The right side is dominated by a dense, dark forest with a textured canopy.

Questions?

Volunteer Monitoring Data at DEQ



What is QA?

Quality Assurance: A system of ensuring the quality of a product (e.g., data) by means of planning, quality control, assessment, and reporting, which measure and demonstrate the **accuracy** (how close to the true value?) and **precision** (how consistent are measurements?) of processes.

Planning:

- Monitoring plan
- Documents: (QAPP/SOP)
- Station recon
- Training

Quality Control (QC):

- Calibration
- Blank samples
- Replicate samples
- Matrix spikes
- Data checks

QA Assessment:

- Audits
- Data review

Reporting:

- Data logs and forms
- QC results
- Store, manage, share data and results

How do we communicate these elements to data users and to volunteer monitors and staff?

QA Documents: QAPPs and SOPs

	QAPP - Quality Assurance Project Plan	SOP - Standard Operating Procedures
What is it?	<ul style="list-style-type: none"> • Formal document (review/approval process) • Monitoring plan info (when, where, why, how?) • Documents measures to systematically ensure data quality. 	<ul style="list-style-type: none"> • A detailed description of processes and methods. • Lab and field activities and materials. • Think: instructions manual or recipe for volunteers and/or staff.
Why?	<p>For data users:</p> <ul style="list-style-type: none"> • Comprehensive overview of a project and a program's plan to ensure data quality. • Ensure that data can be used for its intended purposes by data users. 	<p>For monitors:</p> <ul style="list-style-type: none"> • Ensure that the activities are performed and recorded uniformly. • Provides detailed step-by-step instructions that ensure that QA requirements are met. (QAPP elements are followed consistently)

Who is required to submit a QAPP?



Level II or III data: require a QAPP



Regular and Coordination Grant applicants

Mini-grant applicants submitting level II or III data

QAPP and SOP Resources

Volunteer Monitoring Methods Manual

Chapter 1: Planning

- Monitoring Plan

Chapter 2: Developing a QAPP

Appendix 8: Monitoring Plan Worksheets

Appendix 12: QAPP Template

EPA

QA Handbook and Toolkit:

<https://www.epa.gov/participatoryscience/quality-assurance-handbook-and-toolkit-participatory-science-projects>

QAPP Template



Permits

Laws & Regulations

Our Programs

Topics of Interest

Get Involved



RENEWABLE ENERGY

+ ENFORCEMENT

+ POLLUTION RESPONSE

DISASTER PREPAREDNESS

+ ENVIRONMENTAL IMPACT REVIEW

ENVIRONMENTAL JUSTICE

+ TRAINING & CERTIFICATION

+ SMALL BUSINESS ASSISTANCE

A webinar for interested applicants will be held on August 8, 2024. You can register [at this link](#) to attend the webinar, or receive a recording of the webinar if unable to attend.

Submit Your Monitoring Data to DEQ +

Develop a Quality Assurance Plan -

A Quality Assurance Project Plan (QAPP) documents all of the quality assurance procedures used to ensure the data generated is scientifically valid and is a requirement of many grants, including the Regular and Coordination tier grants offered in the DEQ Citizen Monitoring Grant.

DEQ must approve a QAPP before data can be used for assessment or watershed modeling purposes.

To assist with the QAPP process, DEQ has developed a [template](#) that organizations can use to develop their own, project specific QAPP.

Start Your Own Water Monitoring Project +

How does DEQ Use Volunteer Monitoring Data?

Organized in a three-level system

- **Level I, II, III**

Data levels depend on:

- **Methods:** approved EPA or standard method?
- **QA Requirements:**
 - Method and parameter specific
 - Documentation (QAPP, SOP)
- **Water Quality Standards:** Is there a Virginia water quality standard for the parameter of interest?

Level I Data

Requirements	Data Use
<ul style="list-style-type: none">• QAPP and/or SOP not required• No numeric Virginia water quality standard required	<ul style="list-style-type: none">• Education• cursory, unofficial checks for possible pollution events• Not used for DEQ agency business

Level II Data

Requirements	Data Use
<ul style="list-style-type: none">• DEQ approved QAPP and SOP<ul style="list-style-type: none">• Submitted prior to sampling• No numeric Virginia water quality standard required• Satisfy method-specific QA requirements<ul style="list-style-type: none">• Level II methods (not required to have an EPA or standard method)• Resource: Volunteer Monitoring Methods Manual	<ul style="list-style-type: none">• Identify waters for DEQ follow up monitoring• Track performance of TMDL implementation• Level I uses

Level III Data

Requirements	Data Use
<ul style="list-style-type: none">• DEQ approved QAPP and SOP<ul style="list-style-type: none">• Submitted prior to sampling• Numeric Virginia water quality standard in place• Approved method (EPA, standard methods)• Satisfy method-specific QA requirements• Field and/or lab audit	<ul style="list-style-type: none">• List or delist waters on the 303(d) impaired waters list (Integrated Report)• Assess waters for 305(b) Report (Integrated Report)• Use with DEQ data for TMDL development• Level I and II uses

Station Locality Information: Geographic coordinates

Collect coordinates at actual sampling location

Collect with GPS unit, phone, other devices

QA: Plot points (online or GIS software) and ensure they fall where expected

Can't collect coordinates at sampling location?

Collect coordinates nearby

QA: Plot points and collect new coordinates at georeferenced sampling location

Station Locality Information: Locality description

Waterbody name

Named Stream: Laurel Creek

Unnamed streams:

- Unnamed tributary to Laurel Creek;
- UT to Laurel Ck

Location on waterbody

Reference confluence: ~0.2 miles upstream of confluence with Mill Branch

Reference a road crossing or bridge: Upstream side of Rt. 60 bridge

DON'T include personal information (names, street address, phone number, etc.)

Station Locality Information: QA

Plot points and review

- 1) Located on/at a waterbody?
- 2) Located at sampling location?
- 3) Do coordinates match the description?
- 4) Does the description contain the required elements?

e.g.:

Laurel Creek ~0.2 miles upstream of confluence with Mill Branch

Virginia Data Explorer



Home About Contact Resources

Register Log in

Welcome to the Virginia Data Explorer!

The Virginia Data Explorer is a tool for storing and sharing data collected by a network of citizen and non-agency groups who monitor water quality and benthic macroinvertebrates in Virginia in partnership with the [Virginia Department of Environmental Quality](#) and the [Chesapeake Monitoring Cooperative](#). This is a Virginia-specific extension of the CMC Data Explorer that includes waters monitored in Virginia that are outside of the Chesapeake Bay Watershed. Virginia citizen and non-agency groups' data collected within the Chesapeake Bay watershed and outside of Virginia can be viewed and accessed in the [Chesapeake Data Explorer](#).

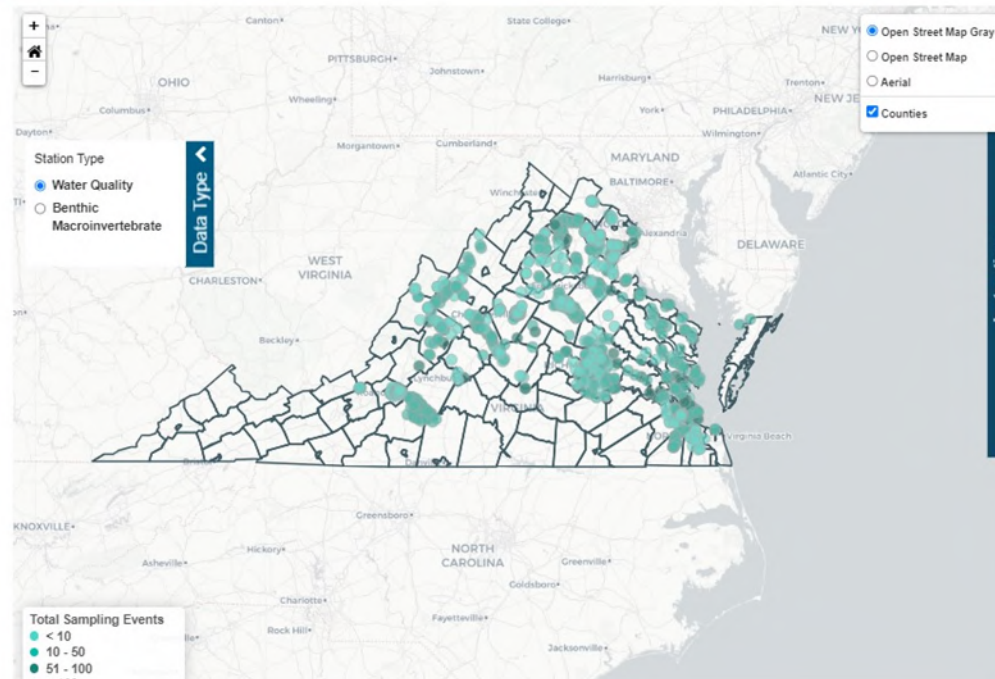
For more information on citizen and non-agency monitoring in Virginia, visit Virginia DEQ's [Citizen Monitoring website](#).

Data are identified by method and quality assurance level using the [CMC tiered framework](#) and are owned by the data provider(s) and not the Chesapeake Monitoring Cooperative. Data users are:

- Responsible for [properly citing](#) the original data provider. Contact information for data providers can be found [HERE](#).
- Responsible for using provided data in a manner consistent to the quality assurance of the provided data.

Use the **Map** tab to view Water Quality or Benthic Macroinvertebrate data throughout the watershed. Use the **Query** tab to download data and metadata files.

Map Query



<https://cmc.vims.edu/va>

An aerial photograph of a coastline. The left side shows clear turquoise water with white waves crashing onto a dark, narrow beach. The right side is dominated by a dense, dark green forest with a textured canopy.

Questions?

Water Quality Assessment Process

2024 Integrated Report

- Snapshot of the health of surface waters
- Compare water quality data to criteria to determine if waters are impaired
- Happens every even numbered year
- Data assessed across a 6-year window*



Goshen Pass – Maury River

Volunteer Contributions

How does DEQ use
volunteer monitoring data?

- You decide!
- Multiple options,
depending on QA level

[2025 DEQ Data Use Form](#)
[\(virginia.gov\)](#)



Volunteer Contributions

2024 Integrated Report

Jan 2017 – Dec 2022

Section 3.4

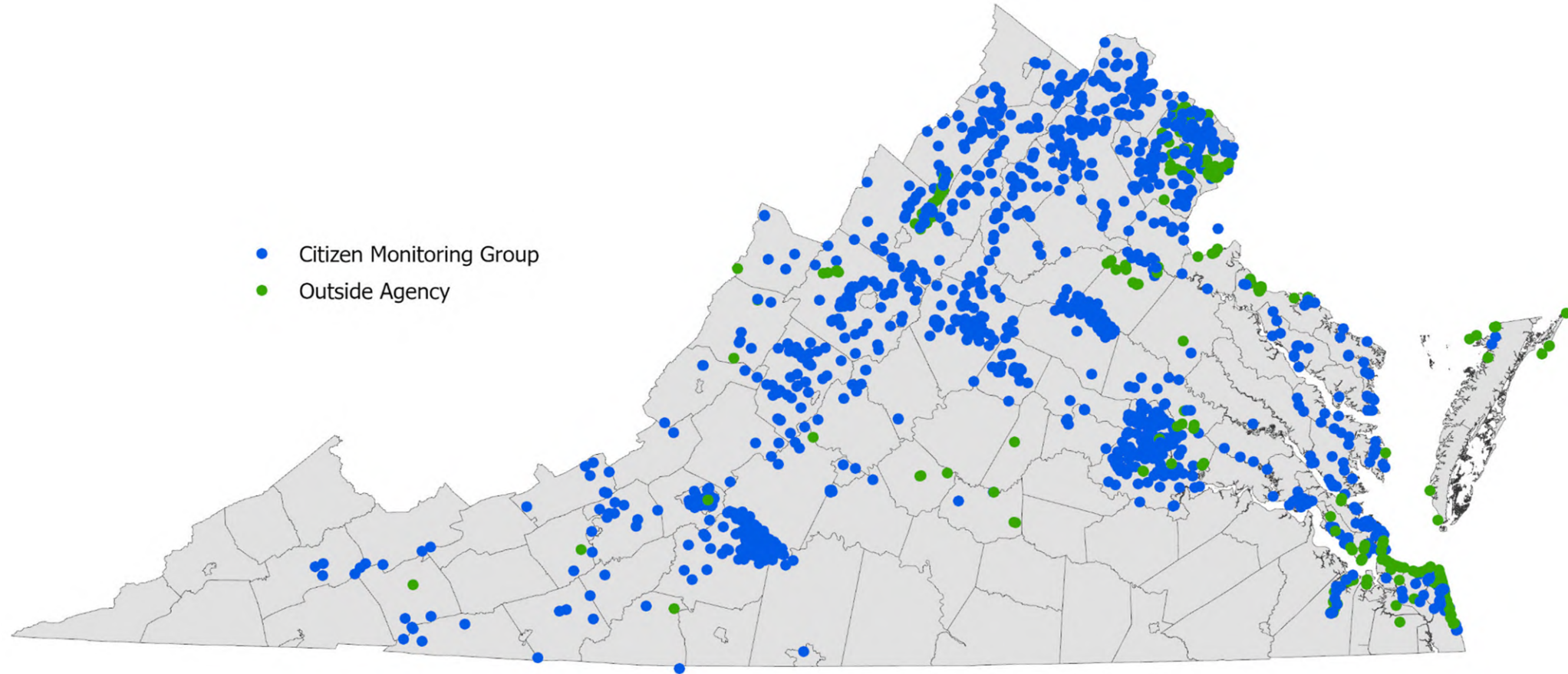
Volunteer data collected at >
1,000 stations

- 78 volunteer monitoring groups
- Over 22,000 sampling events
 - > 20,000 acres – lakes
 - > 2,000 miles – rivers/streams
 - > 70 square miles – estuaries



2024 Citizen Monitoring Grant recipient
Izaak Walton League

Volunteer Contributions to Assessment



Volunteer and outside-agency monitoring sites represented by data submitted for the 2024 Integrated Report.

Poll Question

1. Would you be interested in future RFA/program info sessions with wider topic coverage in an in-person format?
 - a. Yes, I would be interested
 - b. No, this format works best for me
 - c. No, I wouldn't be interested in future sessions



All application materials due
August 31, 2024

Questions?

Email us:

citizenwater@deq.virginia.gov