

**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER PLANNING DIVISION**

P.O. Box 1105

Richmond, VA 23218-1105

SUBJECT: 2017 Citizen Water Monitoring Grant Request for Proposals
TO: Interested Citizens
FROM: C. Stuart Torbeck Jr., Water Quality Data Liaison
DATE: July 1, 2016
COPIES: Jutta Schneider, John Kennedy, Sandra Mueller

We are pleased to make available the 2017 Citizen Water Quality Monitoring Grant Program Request for Proposals (RFP). The primary purpose of these grants is to provide funding for water quality monitoring groups and individuals to monitor the quality of Virginia's waters. The grant can be used in a variety of ways, including purchasing water quality monitoring equipment, training citizen volunteers, lab analysis costs, and promoting stream monitoring efforts in locations where the Department of Environmental Quality (DEQ) is not currently collecting water quality samples. Applicants can choose from three grant options, but may only apply for one grant. Multiple applications will be rejected.

The grant options include:

1. **Mini-Grant:** Maximum award up to \$1,000. Open only to applicants who have not received a DEQ citizen monitoring grant in the previous three years. The grantee must use at least one-third of the award for equipment and begin water monitoring before the end of the grant period.
2. **Regular Grant:** Maximum award up to \$4,000. Open to any applicants who wish to apply but recommended for organizations already familiar with water quality monitoring. The grantee must submit a Quality Assurance Project Plan (QAPP), use at least one-third of the award for equipment, and begin water monitoring before the end of the grant period.
3. **Coordination Grant:** Maximum award up to \$10,000. Open only to applicants who coordinate at least three member monitoring organizations that total 35 or more volunteers. In addition, monitoring occurs at more than 50 sample sites covering at least three Virginia localities. The grantee must submit a Quality Assurance Project Plan (QAPP), use at least one-third of the award for equipment, and begin water monitoring before the end of the grant period.

For Regular or Coordination Grant applications, any applicant who already has a DEQ approved QAPP will not need to resubmit it unless significant changes have occurred in the scope of project, type of monitoring or analytical methods used. **All grantees must submit a copy of all data generated by their funded project to DEQ.**

The grant application can be downloaded from the DEQ Citizen Monitoring Program Grant web page at www.deq.virginia.gov/Programs/Water/WaterQualityInformationTMDLs/WaterQualityMonitoring/CitizenMonitoring/GrantOpportunities.aspx.

Collaboration between state agencies and volunteer monitors is important in developing monitoring programs that enhance Virginia's ability to assess, protect and restore the Commonwealth's water quality. In addition to offering the Citizen Water Quality Monitoring Grant Program, DEQ also provides technical assistance with developing a water quality monitoring program and/or a QAPP. Questions regarding the Citizen Water Quality Monitoring grant or technical assistance should be directed to Stuart Torbeck, Department of Environmental Quality, P.O. Box 1105, Richmond, Virginia 23218, telephone (804) 698-4461, email charles.torbeck@deq.virginia.gov. Information is also available on the DEQ citizen monitoring website at www.deq.virginia.gov/Programs/Water/WaterQualityInformationTMDLs/WaterQualityMonitoring/CitizenMonitoring.aspx.

**2017 Citizen Water Quality Monitoring Grant Program
Request for Proposals
Deadline August 31, 2016**

Purpose

The purpose of the Citizen Water Quality Monitoring Grant Program is to generate citizen-collected water quality data that is scientifically valid and accurate. The program helps to guide and support citizen water quality monitoring and stewardship activities. Funded projects may focus on any or all of the following five categories:

- 1. List and delist impaired waters on the 303(d) Impaired Waters List and assess overall water quality**
- 2. Identify sources of pollution that may help in Total Maximum Daily Load (TMDL) development**
- 3. Track progress of TMDL or other restoration activities**
- 4. Identify waters for future monitoring by DEQ**
- 5. Educating the community on local impacts to water quality and land use activities**

Background

The Citizen Water Quality Monitoring Grant Program was established by a budget amendment in the 1999 Virginia General Assembly Session. The General Assembly based this budget amendment on the *Citizen Water Quality Monitoring Grant Report* submitted by DEQ regarding the feasibility of a grant to fund citizen monitoring activities. In 2016, the General Assembly allocated a total of \$88,000 in grant funds for eligible activities by citizen monitoring organizations in Virginia.

General Eligibility

Funds are available to assist in the development and growth of citizen based water quality monitoring activities. Any community or watershed based environmental or conservation organization, secondary school, college, or university who use volunteers to monitor Virginia waters may apply for these funds. The maximum possible grant award is \$10,000. Only one grant may be awarded per grantee per grant year. Grants are awarded on a competitive basis. Because of the limited funds available, partial funding may be awarded to maximize the effectiveness of the program. No match is required to receive the grant, but funding from other sources is encouraged. Grant awardees must be able to provide DEQ with a Federal Tax Identification Number and a Dunn and Bradstreet Number (W9 form attached). Non-profit organizations are *encouraged* to register at no charge with the Virginia e-Procurement Portal eVA. Visit www.eva.virginia.gov to register. **Grant funds cannot be used for office space.** Funded activities can begin as soon as January 1, 2017 and must be completed by December 31, 2017

Eligible Activities

Eligible activities include but are not limited to:

- Water monitoring equipment expenses such as field test kits, probes, nets, sample containers and manuals. Funded projects must monitor in areas representative of the sampled water(s) such as:
 1. Sampling occurs at or near the main area of flow of the waterbody.
 2. Sampling occurs just below the water surface or at deeper depths.
 3. Sample site is well away from DEQ permitted discharge pipes and mixing zones such as those found at wastewater treatment plants.
- Certain administrative costs such as printing of newsletters, educational materials, and related items.
- Staff costs to cover direct volunteer coordination and training shall not exceed 20% of the total grant award.
- If seeking funds to cover mileage reimbursement for volunteer sample collection and sample transport, the IRS rate of \$0.14 per mile for charitable organizations is used. Mileage reimbursement shall not exceed 20% of the total grant request.

- Contractual services such as laboratory analysis and specialized services. The contractor is otherwise not a paid employee of the organization receiving the grant funds.

Any water quality sampling should occur at safe, publically accessible locations such as at bridge crossings or boat ramps. If sampling occurs on private property, landowner permission must be obtained.

Evaluation Criteria

Proposals must be complete and responsive to all applicable sections of the RFP. Proposals that do not fulfill all required solicitation requirements for the grant they are applying for or omit any of the requested contents may receive a reduced evaluation score. Proposals will be grouped based on the type of award being sought and ranked accordingly (Mini-Grant to Mini-Grant, Regular Grant to Regular Grant, etc.) Proposals shall be evaluated by a DEQ appointed committee using the following criteria:

	Point Value
1. Part 1: General Project Description (For Mini, Regular, and Coordination Grants): Project goals and scope, certification that volunteers will be used, requested Budget and Cost Effectiveness, history and future plans of the project, completing Attachments A and B. (This part will be evaluated and scored on Part 1 only, with a maximum score of 70)	70
2. Part 2: Site Selection and Quality Assurance (For Regular and Coordination Grants only): Location of proposed sample sites and relation to other monitoring activities, training needs of volunteers and quality assurance documentation. (This part will be evaluated and scored with Part 1 resulting in a combined maximum score of 140)	70
3. Part 3: Special Conditions (For Coordination Grants only): Number of sub-organizations, geographic area of coverage, proportion of monitoring in unmonitored waters and future plans of project improvement. (This part will be evaluated and scored with Parts 1 and 2, with a maximum score of 200)	60
4. Penalty if not meeting prior grant conditions during the past five (5) years. Applied to the final score total	Up to -50
TOTAL: Up to 200	

Application Procedures

Electronic Submission: Electronic submission of the application is preferred. To submit the application electronically, please e-mail a completed application and attachments to charles.torbeck@deq.virginia.gov. In the subject line of the e-mail, please include the name of the applying organization and the type of grant being sought. Electronic submissions are due no later than **5:00 p.m. on Thursday, August 31.**

Standard Mail Delivery: If delivering my mail, an original and four copies of the application and attachments must be received no later than **5:00 p.m. on Thursday, August 31,** Mail applications to:

Mail Delivery:
 Stuart Torbeck
 VA Dept. of Environmental Quality
 Water Quality Monitoring
 P.O. Box 1105
 Richmond, VA 23218

Street Delivery:
 Stuart Torbeck
 VA Dept. of Environmental Quality
 Water Quality Monitoring
 629 East Main Street
 Richmond, VA 23218

No exceptions can be made to the above deadline. Notification of awards will be made in December 2016. For groups who do not have a Quality Assurance Project Plan (QAPP) and who will collect water quality samples, a QAPP must be submitted for DEQ approval by the deadline listed below. If a QAPP is not developed and approved by DEQ, future grant applications from the organization may be disqualified.

Contractual Agreements

All work to be accomplished through the Citizen Monitoring Grant Program must be legally embodied in a contract between the grantee and DEQ. This contract will serve as a memorandum of agreement in accordance with the Code of Virginia [§62.1-44.19:11](#). Upon submission of both a signed contract agreement and a written request for payment, grant funds will be made available to the grantee. If at any time the grantee organization cannot fulfill the requirements of the contract, the remainder of the grant funds and/or any equipment purchased through the grant must be returned to the DEQ Citizen Monitoring Grant Program for redistribution.

Report Requirements

Progress reports providing updates on the project are required according to the schedule below:

Draft QAPP: February 3, 2017 (draft due to DEQ for review, if a QAPP is required)

Final QAPP: April 7, 2017 (if applicable)

Interim Report: August 1, 2017 (status of grant funds spent, paragraph summary of work completed)

Final Report: February 16, 2018 (all monitoring data must be uploaded to the online DEQ database www.deq.virginia.gov/easi/ or a separate database as directed by DEQ. No other submissions of raw data will be accepted.)

In an effort to conserve paper, electronic submission of the final report is encouraged. These reports can be submitted by either a CD or DVD R/RW or by e-mail to Charles.Torbeck@deq.virginia.gov. Final reports should consist of the following*:

1. Report summarizing the project and recorded observations along with a summary budget
2. If applicable- Copies of publications, list of workshops, and related material that utilized grant funds

*If necessary, a hardcopy of these items can be sent to the mailing address listed below.

All water quality data collected using grant funds must be entered on the DEQ online database at www.deq.virginia.gov/easi/ or a separate database as directed by DEQ. Instructions on how to upload this data will be provided when grant awards are announced in December. The database will allow grant recipients to upload water quality data collected during the course of the project. The public can view this data by accessing the website.

If the organization does not continue monitoring beyond the grant period, any equipment, such as meters or unopened reagents purchased with grant funds must be returned to DEQ at the address listed below to be redistributed or used for future training sessions.

Please direct any questions to Stuart Torbeck Virginia DEQ Water Quality Data Liaison, telephone 804-698-4461, e-mail Charles.Torbeck@deq.virginia.gov

Virginia Department of Environmental Quality
Citizen Water Quality Monitoring Grant Program Application - Cover Page

The entire proposal package must be received by **5:00 p.m. on August 31, 2016**, to be considered for the Citizen Water Quality Monitoring Mini-Grant Program. Five copies of the proposal package (one original and four photocopies) are required.

Name of applicant organization (must be able to provide a Federal tax identification number and Duns Bradstreet Number **for the organization**)

Mailing address for organization: _____

Brief description of your organization:

Project contact person: _____

Contact person phone number: _____

Contact person email: _____

Mailing address for grant correspondence: _____

Brief description of monitoring activities/project:

Dates for which funding is requested (cannot start prior to January 1 or end after December 31, 2017)
_____ to _____

Grant Type Requested (**select only one**):

- Mini-Grant (up to \$1,000): Complete only Part 1
- Regular Grant (up to \$4,000): Complete only Parts 1 and 2
- Coordination Grant (up to \$10,000): Complete Parts 1, 2 and 3

Amount requested: \$_____ Total project budget \$_____

All information outlined on the following page must be included in the proposal package.

By checking this box, and typing my name on the signature line, I approve of this application and serves as my digital signature

Signature of Organization's Chief Officer

Print Name Title Date

2017 Citizen Water Quality Monitoring Grant Program Proposal Package Requirements

The complete proposal package should not exceed ten pages (excluding laboratory procedures).

Please be sure that all of the following information is included in this proposal package:

Citizen Water Quality Monitoring Grant Program Application includes:

Cover Page

Application Form (1 or more pages)

Data Use Authorization Form: Fill out and return **Attachment A** to identify how your organization wishes to have DEQ use your monitoring data

Monitoring Plan: Use **Attachment B** to provide a complete preliminary Quality Assurance Monitoring Plan (QAMP)

Federal Tax Identification and Dunn & Bradstreet Numbers: Fill out and return **Attachment D** W9 Request for Taxpayer Identification Number and Certification Form

Electronic submission: If e-mailing the proposal package, the application must be either in a Microsoft Word (.DOC or .DOCX) or compatible format. The e-mail application package can either include a scanned copy of the signed Cover Page (Page 1) or the check box can be clicked on indicating review and approval by the origination president/chief officer. Applications must be received by **5:00 p.m. on August 31, 2016** at the following e-mail address: Charles.Torbeck@deq.virginia.gov

Standard mail submission: If mailing hard copies of the proposal, five complete proposal packages (one original and four copies) must be received by **5:00 p.m. on August 31, 2016** at the following address:

Mail Delivery
Stuart Torbeck
Water Quality Data Liaison
Virginia Dept. of Environmental Quality
P.O. Box 1105
Richmond, Virginia 23218

Street Address
Stuart Torbeck
Water Quality Data Liaison
VA Dept. of Environmental Quality
629 East Main Street
Richmond, Virginia 23218

Please direct any questions to: Stuart Torbeck 804-698-4461 Charles.Torbeck@deq.virginia.gov

Part 1: General Project Description (Required for Mini, Regular, and Coordination Grants)

1. Describe the goals of the project. How will a grant help reach these goals? In addition, fill out and sign Attachment A
Styrophone

2. Will this project involve collecting water quality samples? If so, please describe the group’s monitoring strategy by filling out Attachment B. If the grant will not be used to collect water quality samples, explain how funding the project will improve Virginia citizen volunteer water quality monitoring efforts.

3. What items/activities will be funded with this grant?

4. Provide a budget that you wish to use the award for. Attach additional pages as needed.

Equipment Costs (please specify):	_____	\$
Laboratory Costs (please specify):	_____	\$
Contractual Services (please specify):	_____	\$
Administrative Costs (please specify):	_____	\$
Other (please specify):	_____	\$
Total:	_____	\$

Discuss Cost Effectiveness.

5. Is this a volunteer based project (e.g. unpaid volunteers collecting water quality samples)? How many volunteers are currently or planned to be committed to this project? Describe any partnerships with other organizations or agencies that this project will develop or enhance.

6. Is the proposed project new or a continuation of an existing project? What is the expected lifespan of the project beyond the proposed grant term?

7. Describe how the project will continue beyond this grant period if future DEQ funding is not available?

---MINI-GRANT APPLICANTS: STOP HERE---

Part 2: Site Selection & Quality Assurance (Required for Regular and Coordination Grants)

- 1. Identify watershed(s) in which the project is located (6th Order NWBD HUC designation) along with the waterbody name.** Please refer to Attachment C and the online map at:
www.deq.virginia.gov/ConnectWithDEQ/VEGIS.aspx
- 2. Are one or more project sample sites located on an impaired waterbody segment (provide waterbody name and impairment cause)? If located on an impaired waterbody, how will this project help restore water quality?** Please refer to Attachment C and the online map at:
www.deq.virginia.gov/ConnectWithDEQ/VEGIS.aspx
- 3. Referring to Attachment 1, will this project generate Level II or III data? If so, list the parameters and identify how many of the proposed sites will be in waterbody segments that were recently monitored by DEQ or other organizations?** Please refer to Attachment C and the online map at:
www.deq.virginia.gov/ConnectWithDEQ/VEGIS.aspx
- 4. Will the group develop or enhance a DEQ approved Quality Assurance Project Plan (QAPP)? If a QAPP has already been filed with DEQ, when was it approved?**
- 5. Have volunteers already been trained in the methods proposed under this grant application? If training has not yet been provided, how will training be delivered?**
- 6. If a laboratory is being used to analyze samples, does it have a valid Virginia Environmental Laboratory Accreditation Program (VELAP) certificate or was it inspected by DEQ within the past two years?** Include the VELAP certificate number or date of last DEQ inspection.
- 7. Please provide any other information the committee can use to consider this grant proposal.** Some examples include: prior experience in water quality monitoring, partnerships with other monitoring organizations, coordination with DEQ, etc.

---REGULAR GRANT APPLICANTS: STOP HERE---

Part 3: Special Conditions (Required for Coordination Grants)

- 1. List the member sub-organizations and approximate number of active volunteer monitors the project will involve. To qualify, at least three member sub-organizations and 35 or more volunteer monitors must take part in the proposed project.** A qualified sub-organization is an independent organization that uses the same sampling and testing methods of the applicant organization and submits the data to the applicant organization. Volunteer monitors are non-paid volunteers who will collect water quality samples based on the monitoring plan in Attachment B.
- 2. List the counties or incorporated cities/towns the proposed project will take place in.** To qualify, water monitoring sample stations are located in at least three counties and/or incorporated cities/towns. Projects that cover a larger geographic area are prioritized over smaller projects.
- 3. Referring to Attachment C, the project must generate at least one parameter of Level II or III data. In addition, at least options 4 and 5 must be selected in the data use form in Attachment A.** Projects that provide more Level II or III parameters of sites worth of data to DEQ are given higher priority compared to smaller or more limited projects.
- 4. Using information found in Part 2 of this application, how many and what percentage of the proposed sampling sites are not located in waterbody segments sampled by DEQ or other monitoring organizations?** Higher priority is given to projects with a greater number of sites not in previously monitored waterbody segments
- 5. If the proposal is a continuation of a a previously funded Citizen Monitoring Grant project, are there plans to improve the size or scope of the project?** For example, are additional stations planned? Will the number of monitored parameters be increased to include more Level II or III quality data? Will more monitoring stations be moved away from DEQ or other previously monitored segments? Include a timeline these improvements are scheduled to occur. Note these improvements can occur beyond the proposed grant term.

Levels of Volunteer Collected Water Quality Data in Virginia

In Virginia, the Department of Environmental Quality (DEQ) has developed three levels of data quality for citizen and other non-DEQ water quality monitoring data based upon both the level of data quality and the authorized uses of the data provided to the agency. In addition to agency needs, collected data may also be used to educate the community, to assist local governments in land use planning, to supplement data for university and professional studies, and to assist local soil and water conservation districts in prioritizing watershed work for best management practices.

<u>Level</u>	<u>Appropriate Data Uses</u>	<u>QA/QC Protocols</u>
III	<ul style="list-style-type: none"> • List or delist waters on the 303(d) Impaired waters list • Assess waters for 305(b) Report • Use with DEQ data for TMDL development • All uses listed in Levels I and II 	<ul style="list-style-type: none"> • DEQ-approved Quality Assurance Project Plan (QAPP) and field or lab Standard Operating Procedures (SOP) • Field and/or laboratory audit required • Group provides calibration and quality control associated information to DEQ when submitting data. This information must meet the specific criteria stated in the QAPP
II	<ul style="list-style-type: none"> • Identify waters for DEQ follow-up monitoring • Track performance of TMDL implementation • All uses listed in Level I 	<ul style="list-style-type: none"> • DEQ-approved Quality Assurance Project Plan and approved field or lab SOPs • At this level, there may be deviation from an approved method if it can be demonstrated that the method collects data of similar quality to an approved method
I	<ul style="list-style-type: none"> • Education • Baseline Conditions • Notification of Possible Pollution Events • Local Land Use Decisions • Special Studies 	<ul style="list-style-type: none"> • No Quality Assurance Project Plan (QAPP) or SOP required by DEQ • Uniform methodology recommended • QAPP, SOPs and/or lab methods do not meet DEQ quality assurance/quality control requirements or, • There is no Virginia Water Quality Standard for the parameter*

* Virginia does not have water quality standards for the following commonly monitored parameters: **nitrate** (except for waterbodies used for drinking water purposes), **nitrite**, Total Kjeldahl Nitrogen (TKN), orthophosphate, suspended solids, total nitrogen, total phosphorus (except for lakes and salt waterbodies), water clarity (turbidity/Secchi depth).

Monitors are encouraged to adopt Level II or III methods (e.g. samples sent to an accredited laboratory for analysis or otherwise follow DEQ recognized methods) in the event Virginia adopts such standards, so the data could be used in the future.



Use Authorization Form for Water Quality Data

Name of Group or Organization:				Date:	
Name of Submitter:				Role or Title (QA officer, leader, etc.)	
Type(s) of Monitoring Conducted by Organization?		<input type="checkbox"/> Chemical (pH, dissolved oxygen nutrients, etc.)	<input type="checkbox"/> Physical (Temperature, stream flow, etc.)	<input type="checkbox"/> Biological (Macroinvertebrate, E. coli, etc.)	
Type of Organization	<input type="checkbox"/> Citizen Volunteer	<input type="checkbox"/> Federal Agency	<input type="checkbox"/> State Agency	<input type="checkbox"/> Local Agency	
	<input type="checkbox"/> Business or Industry	<input type="checkbox"/> College or University	<input type="checkbox"/> Other (Name):		

On behalf of the group identified above, we agree that the Virginia Department of Environmental Quality (DEQ) may use water quality monitoring data we generate per our selection(s) below. Our choice(s) will remain in effect unless or until our organization submits changes in the future.

Options for Uses of Your Data (may select more than one):

Information about each of the three levels of citizen data is available on the previous page

- 1. List and delist impaired waters on the 303(d) Impaired Waters List and assess water quality**
Data recognized by DEQ as Level III can be used to list or delist water on the 303(d) impaired waters list. We understand that 303(d) listed waters do not meet minimum water quality standards in Virginia and a Total Maximum Daily Load (TMDL) may eventually be developed to improve water quality. Water quality data can be used to assess overall water quality as part of 305(b) water quality assessment report developed by DEQ every two years.
- 2. Source identification for TMDL development for waters already listed as impaired**
Level III data can be used in conjunction with DEQ monitored data to identify sources of pollution for 303(d) listed waters for TMDL development. We understand that our data will not be used by itself, without water quality data collected by DEQ, wherever possible.
- 3. Track progress of a TMDL Implementation Plan and other restoration**
Level II or III data can be used to track the progress of restoration in a TMDL waterbody including installed Best Management Practices or to identify areas where other restoration efforts are taking place.
- 4. Identify waters for future DEQ monitoring**
Level II or III data can be used to identify a waterbody for follow-up monitoring by DEQ. We understand that DEQ may not be able to monitor at these locations and/or assess water quality for some period of time.
- 5. Educate land owners on the water quality impacts of land use activities**
All levels of data can be used to help in educating the community about water quality and land use activities.

Signature (if submitting by mail): _____

By checking this box, and typing my name on the signature line, I authorize the use of the data as specified and serves as my digital signature

Mail: VA DEQ Stuart Torbeck (11 th floor) P. O. Box 1105 Richmond, VA. 23218	E-mail: Charles.Torbeck@deq.virginia.gov
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Citizen Water Quality Monitoring Grant Program Application Monitoring Plan

Organization name:	
Date:	
Watershed(s) monitored:	

Please list the specific Goals of monitoring project:

Identify primary data users, how the data will be used, and how data will be reported. Remember monitoring data must be reported to DEQ using the online database (www.deq.virginia.gov/easi/):

Monitoring Sites (Use additional sheets if necessary): Contact Stuart Torbeck if assistance is needed

Site #*	Purpose	Sample Site Description (Ex. 100 meters upstream of Route 453 Bridge)	Sampling Frequency (ex. once per month, etc)	Latitude	Longitude

* If not known, estimate the number of sites, the purpose for these sites (there can be more than one purpose), and possible sample locations

Chemical Parameter	Methodology (i.e. LaMotte model #, HACH model #, EPA Method #, etc.)
Dissolved Oxygen	
pH	
Ammonia-Nitrogen	
Nitrate-Nitrogen	
Total Nitrogen	
Total Phosphorus	
Ortho Phosphorus	
Alkalinity	
Turbidity	
Conductivity	
Other (specify)	
Other (specify)	

Physical Parameter	Methodology (i.e. thermometer, stream transect, etc.)
Temperature	
Stream Flow	
Other (specify)	

Biological Parameter	Methodology (i.e. VA SOS Modified Method, Coliscan Easygel, etc.)
Macroinvertebrate	
E. coli Bacteria	
Other (Specify)	

If grant funds are requested for laboratory analysis, have these laboratory SOPs and Quality Assurance/ Quality Control procedures been submitted to DEQ (either previously or with this proposal package)?

If a laboratory is being used to analyze samples, what is the name and location of the laboratory?

Section 1: General Information

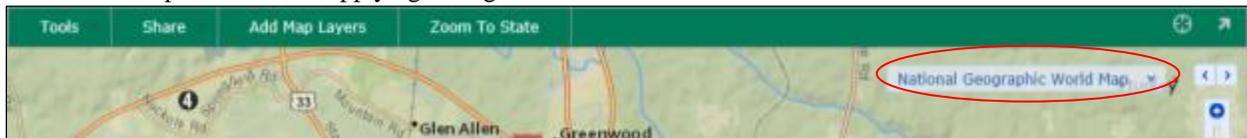
This file is used to help find essential information when submitting a DEQ Citizen Monitoring Grant application.

Go to www.deq.virginia.gov/ConnectWithDEQ/VEGIS.aspx and select the most recent version of Impaired Waters (303D Data) GIS application and then Any Use Map Service. This will open a map of impaired waterways and sampling stations in the latest 305(b)/303(d) report. This map is part of the Virginia Environmental Geographic Information Systems (VEGIS) run by DEQ.

Section 2: Impaired Waters 303(d) Any Use GIS Map

Section 2.1: Types of Maps

In the upper right corner, there is a drop down menu with different types of maps that are viewable. Below are the most useful maps to use when applying for a grant.



Topos: A good choice to find waterbody names, road route numbers and elevation (topography) of an area. Note this layer cannot zoom in as far as others.

Road: Useful to find names of nearby roads and to measure distances or obtain coordinates.

Aerials: There are two aerial options, the “most recent” and “with labels”. The “with labels” map shows information like names of roadways and waterbodies on an older aerial photo map. The “most recent” shows the most recent aerial photo taken without the names of roadways and waterbodies. Either map is useful to double check a site to make sure it looks like the correct location, such as finding the actual location of a bridge crossing.

None (White): This map shows a white screen behind the selected layer. This is useful when viewing the 6th Order NWDB HUC layer.

Section 2.2: Latitude and Longitude

The bottom right portion of the map shows the latitude and longitude. The mouse cursor will report a coordinate when placed on the map. The default map coordinate is Degrees Minutes Seconds. To change this, click on the **Deg Min Sec** drop down menu to select **Decimal Degrees**. Decimal Degrees is the required format for reporting station locations. For decimal degrees, it is important to use a negative (-) sign in front of the longitude. For example 38.88301 -78.44831 is a valid coordinate.



Section 2.3: Tools

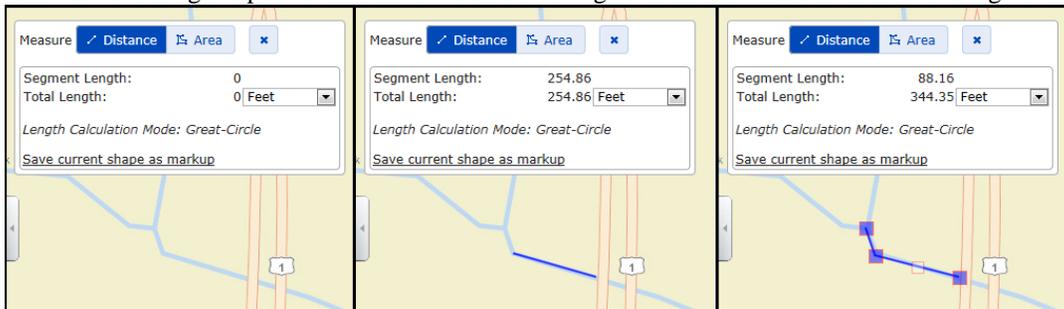
On the green toolbar on the top part of the map, there is a **Tools** icon. These tools are useful to narrow down searches to obtain specific information, to measure distances or to zoom to specific coordinates.



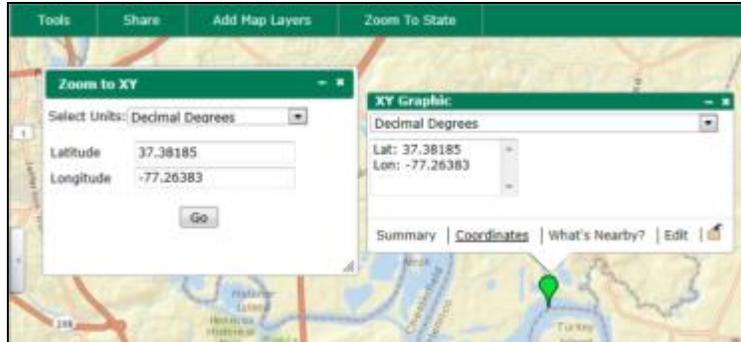
The most useful tools are:

Attribute Search: Search the GIS database by attributes such as waterbody name and monitoring station ID. After selecting this tool a pop up box will appear, click on the layers box to select a layer. Then choose the attribute and value to search.

Measure: Use this tool to measure distances along waterways or roads. **This tool will help develop a good station description such as “200 feet upstream of Route 60 bridge”** After selecting this tool a pop up box will appear, click on the map to start the measurement, zero’s will appear next to **Segment Length** and **Total Length** (Left box below). Move the cursor along the path to measure and click once to anchor the segment to the location the cursor is pointing to. Move the mouse to draw a straight line (Middle box below). Click the mouse button to add another anchor point to draw a line segment in a different direction, such as following the path of a stream. Double clicking finishes the measurement for the segment.

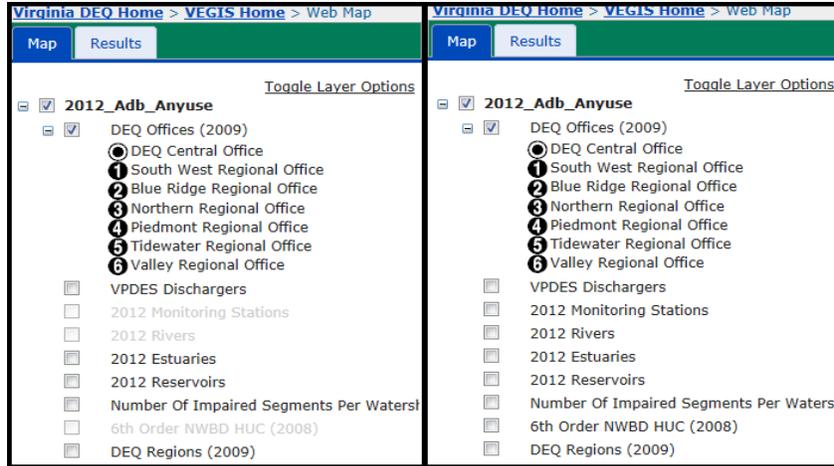


Zoom to XY: Useful to verify station Latitude/Longitude coordinates. After selecting this tool a pop up box will appear. Decimal degrees are the default unit and must be used when submitting station data. Copy and paste or type in the coordinates to search, and click “go”. A second pop up box will appear, connected to the point of those coordinates.



Section 2.4: Map Layers Sidebar

The left side of the screen contains several map layers. There are multiple layers a user can view. For the purposes of the grant application, only select layers are covered in this help file. To view a layer, click on the box to the left of the layer name, a check mark will appear on selected layers. Note that some layers are not viewable at certain zoom levels (grayed out text). Zooming in will activate map layers (black text)



VPDES Dischargers: By clicking on this layer, users can see the locations of DEQ permitted wastewater and industrial facilities. Applicants should avoid sampling near these areas when applying for a grant as monitoring does not represent actual conditions. In addition, these locations are routinely monitored by DEQ and the permitted facility.

6th Order NWBD HUC: This shows the 4 digit VA HUC 6 identifier. These are best seen on the None (White) map type to get an orientation to where the HUC boundaries are and to view the identifier number. Once identified, switching to the Road Map, gives a better perspective on the HUC 6 boundaries compared to the sampling sites or waterways.



Monitoring Stations: This layer shows the locations of monitoring sites over the past six years. This information is useful to avoid sampling in areas already sampled by DEQ or another organization. Below is a listing and brief description of the unique layers of the Any Use map.

Ambient : Chemical data from DEQ monitoring stations, stations typically monitored every other month for two years before rotating to another station.

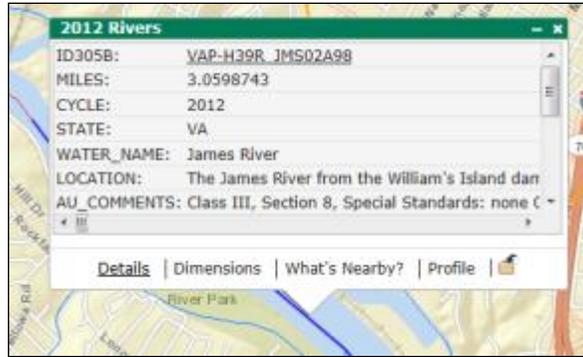
- 🌿 **Ambient/Biological** : Stations where water chemistry and benthic macroinvertebrate samples are collected. Usually sampled once or twice before rotating to another station.
- 🌿 **Ambient/Biological/Fish Tissue** : Water chemistry, macroinvertebrate and fish tissue samples are collected. Usually sampled once or twice before rotating to another station.
- ▲ **Biological** : Stations where benthic macroinvertebrate samples are collected. Usually only sampled once or twice for one year before moving on to sample another location.
- 🌿 **Biological/Fish Tissue** : Stations where macroinvertebrate and fish tissue samples are collected. Usually sampled once or twice before moving on to sample another location.
- 🌟 **Citizen Monitoring** : Sites monitored by citizen groups who submitted data to DEQ.
- 🌟 **Other Non-Agency Monitoring** : Sites monitored by other non-citizen volunteer groups.
- 📌 **Federal** : Stations monitored by Federal Agencies (e.g. U.S. Geological Survey, and U.S. Forestry Service). Monitoring programs and duration varies.
- 🐟 **Fish Tissue** : Stations where fish tissue samples are collected to test for PCB or mercury contamination. Sites usually sampled once or twice before moving to another site.
- ★ **Trend** : Stations sampled monthly every year by DEQ to collect water chemistry data.
- **VDH-BEACH** : Stations located at public beach areas where the Virginia Department of Health collects bacteria samples used for swimming advisories.

Note: By clicking on a station icon when selecting the Monitoring Stations layer, an information box will pop up which has various information such as, Station ID, watershed, Lat/Long coordinates, and the number of samples taken for certain parameters.



Estuaries, Reservoirs, or Rivers layers: Gives information on each of the waterways. It is categorized by the following parameters:

- 🟢 Waterbodies that fully support all water quality uses: aquatic life, fish consumption, public water supply, recreation (swimming), shellfish consumption, or wildlife uses. **Such waters are of lower priority for volunteer sampling unless the group is concerned that land use changes may be affecting water quality.**
- 🟠 Waterbodies that have not been monitored or are unknown to support one or more water quality uses. **These waters are of high priority for volunteer monitoring as DEQ can use the information to either set up a monitoring station or use the submitted data to assess water quality conditions.**
- 🔴 Segments that do not support one or more water quality use. Volunteers monitoring can help locate the source of pollutants or assist with TMDL implementation efforts.



Note: By clicking on a waterway, an information box will pop up which has information such as: ID305B, miles, water name, location, impairments and possible impairment sources. The ID305B category is a clickable file. Doing so will open a detailed overview of the waterbody and impairments.



2012 Impaired Waters

Category 4 & 5 by 2012 Impaired Area ID*

James River Basin

Cause Group Code: **H03R-04-PCB - James River**

Location:	The James River from Big Island dam (below Blue Ridge Parkway) downstream to the I-95 bridge James River Bridge in Richmond including its tributaries Hardware River up to Rt. 6 bridge and State River up the Rt. 676 bridge.
City/County	Albemarle Co., Amherst Co., Appomattox Co., Bedford Co., Buckingham Co., Campbell Co., Chesterfield Co., Cumberland Co., Fluvanna Co., Goochland Co., Henrico Co., Lynchburg City, Nelson Co., Powhatan Co., Richmond City
Use(s):	Fish Consumption
Cause(s) / VA Category:	PCB in Fish Tissue / 5A

The rivers are considered impaired of the Fish Consumption Use due to a VDH fish consumption restriction for PCBs. No more than two meals/month of gizzard shad, carp, American eel, flathead catfish, or quillback carpsucker are recommended. Visit the VDH website for more details.
<http://www.vdh.state.va.us/FEHControl/fishingadvisories.asp>

A portion of the segment was first listed in the 2004 segment but was expanded during the 2006 cycle based on the current condemnation (12/13/2004). The original 2016 TMDL due date was maintained.

The impairment is based on the results of DEQ's fish tissue monitoring program which indicated PCB exceedances at multiple stations including 2-JMS157.26, 2B-JMS118.99, 2-JMS127.50, 2C-JMS110.00 and 2-JMS256.54 with PCBs in 4 Species, 2-JMS213.00 (2005 FT/Sediment) with PCBs in 3 Species and 2-JMS176.63 (2005 FT/Sediment) with PCBs in 2 Species.

Assessment Unit	Water name	Location Description	Cause Category	Cause Name	Cycle First Listed	TMDL Schedule	Size
VAP-H39R_JMS01A98	James River	The James River from its confluence with the Rivanna River at river mile 166.01 downstream to the confluence with Big Lickinghole Creek at river mile 143.35.	5A	PCB in Fish Tissue	2006	2016	22.88