**US EPA Region 2**

**Citizen Science Equipment Loan Program**

**REQUEST FOR PROPOSALS**

**Water Monitoring**

**for New York & New Jersey**

**April 2020**

[www.epa.gov/citizenscience](http://www.epa.gov/citizenscience)

**I. PURPOSE OF THE EPA EQUIPMENT LOAN PROGRAM FOR CITIZEN SCIENCE WATER MONITORING**

The U.S. Environmental Protection Agency (EPA) has identified improving water quality as one of its highest priorities. The agency recognizes the value of monitoring data in guiding EPA, States and Tribal Nations in efforts to improve the health of the Nation's waters. There are waters, however, that States, Tribal Nations and EPA are not able to monitor at all or only on a very limited basis. In U.S EPA Region 2, volunteer water monitoring groups have played a valuable role in supplementing available monitoring data to our state regulatory agencies for over twenty-five years.

The focus in U.S EPA Region 2 has been on citizen scientists/non-profit organizations who have been, or are interested in, collecting data to better understand their local environment and address issues of concern to them. These projects conducted by volunteers with or without the assistance of government or academia, have been remarkably successful in expanding scientific knowledge, raising people’s awareness about their environment and leveraging change over the past decade.

With this equipment loan program, U.S EPA Region 2 will continue to support the work of the non-profit organizations (e.g., volunteer monitoring organizations, citizen science groups, non-government organizations, universities, local governments, etc.) to meet the goal of expanding the number of water bodies which are monitored within their communities.

In **2020**, priority will be given to Tribal Nations, non-profit organizations monitoring urban waters and/or waters in Environmental Justice areas and organizations that currently provide monitoring data to agencies. The ultimate goal of the citizen science equipment loan program is to provide the tools and a framework to enable citizens to take an active role in their community and watershed by providing quality data to enhance environmental stewardship, create healthy and sustainable communities, and to collaborate with government at all levels in protecting the environment. The equipment loan program will allow citizen scientists to have access to uniform monitoring equipment to collect data that can have a meaningful impact in their communities.

**II. EQUIPMENT AVAILABLE FOR LOAN**

This loan program is restricted to equipment onl, and does not include expendable sampling or analysis supplies (e.g. gloves, calibration standards, disposable pipettes, reagents, etc.). EPA cannot loan computers or cameras.

The equipment loaned in **2020** will be limited to water quality meters, equipment to run laboratory bacterial tests, GPS units, turbidity tubes, and manta trawls for microplastics. The available list of equipment may be expanded in subsequent years to allow non-profit organizations access to other types of water quality monitoring, as well as air monitoring. There will be five (5) sets of bacterial equipment, eight (8) sets of water quality equipment and one (1) manta trawl to loan this year in New York and New Jersey.

**III. ELIGIBILITY OF CITIZEN SCIENCE MONITORING GROUPS**

The equipment loan program is open to all non-profit organizations (e.g., volunteer monitoring organizations, citizen science groups, non-government organizations, universities, local governments, etc.) in U.S EPA Region 2 (New York, New Jersey, Puerto Rico, and the US Virgin Islands) and Tribal Nations throughout Region 2. This RFA is written specifically for New York and New Jersey; while Puerto Rico and the US Virgin Islands has a separate RFA period. The equipment loan program is open to organizations with a wide spectrum of experience levels – those that are just getting started as well as those with extensive experience.

As part of the loan program, interested organizations are required to prepare a Quality Assurance Project Plan (QAPP). The QAPP is required and is a tool to guide the outlining of project objectives, specifics of sample collection and analysis, including proposed sampling schedule, and the intended use of the data. The data use must be indicated on the application in order for EPA Region 2 to assess what level of documentation is required. EPA Region 2 will inform you of these requirements upon review of the application. If you have already prepared a QAPP, it is highly suggested you submit this with your application.

The U.S. EPA Region 2 has created a Guidance for the Development of a QAPP for Citizen Science Projects. The QAPP uses a template format and includes a citizen science project example. The new guidance complies with EPA Quality Assurance (QA) requirements but streamlines existing guidance for ease of preparation and use. The QAPP Guidance can be accessed at <https://www.epa.gov/citizen-science/quality-assurance-template-citizen-science-projects>. A project specific template will be provided to the selected organizations.

For the duration of the loan, selected organizations will be required to share regular monthly updates with EPA Region 2, via an online form, to inform the region of the use of the equipment and the progress of the project. Upon completion of the loan, all organizations are required to provide a Final Report with the U.S. EPA Region 2. This requirement comes in the context of gathering citizen science information to support the Agency’s efforts in determining how best to work with communities to promote an understanding of the data they collect and assist the U.S. EPA Region 2 in evaluating future needs for our Equipment Loan Program. Organizations will be asked to assess and assure the quality of their own data and provide a copy of the data in Excel format.

**IV. SELECTION PROCESS**

Non-Profit Organizations that are eligible include:

* Volunteer monitoring organizations, citizen science groups, non-government organizations, universities, local governments, etc.
* All organizations operating within Region 2 may apply to the equipment loan program. Priority will be given to Tribal Nations, sites in Environmental Justice communities and organizations that currently provide monitoring data to State or Tribal agencies.
* Organizations who perform monitoring and need equipment, both new and established. Evidence of a commitment to undertake monitoring with a goal of producing data for long-term use, and meeting Quality Assurance and data use requirements is necessary.
  + If the applicant is a prior recipient of the equipment loan program, they must have satisfied all the loan requirements in their participating year.
  + If the applicant is a prior EPA grantee, they must be in good standing with their grant program.

Minimum criteria for ranking applications include the following:

* Complete application: Applications with incomplete or missing information may not be considered. Make sure all required information is provided. Applications will be considered as they are received, with no follow-up for missing information.
* Once applicants meet the eligibility requirements, the technical portion of the applications will be ranked based on the following criteria:
  + A defined project scope is presented
  + The project addresses local environmental concerns or public health issues
  + Critical parameter measurements are specified for the project
  + The project’s outcome will impact a community in a significant way
  + The organization is qualified to carry out their proposed project

**V. CONDITIONS OF EQUIPMENT LOAN AGREEMENT**

1. Equipment can only be loaned on a short-term basis (**May – December 2020 for NY/NJ recipients**) and its use and return will be coordinated with EPA Region 2.
2. If selected, applicant is required to prepare a Quality Assurance Project Plan (QAPP), outlining the project objectives, specifics of sample collection and analysis, including proposed sampling schedule, and the intended use of the data. This QAPP must be submitted to EPA prior to the start of the applicant’s project.
3. Based on experience, each applicant is required to participate in the EPA equipment training prior to the start of sampling.
4. A loan agreement (**See separate attachment:** **Form 1780/Terms and Conditions**) will be signed by the responsible leader/point of contact from the organization upon completion of the training before acquiring equipment.
5. Applicant must be able to purchase their own sampling and analysis supplies (i.e. YSI calibration solutions, deionized water, IDEXX quanti-trays, reagents, etc.). Using grant money to purchase these is acceptable, so long as doing so is not in violation of the specific grant requirements.
6. Applicant agrees to maintain equipment in good working condition.
7. Equipment will be labeled as belonging to EPA and will remain EPA equipment for the duration of the loan.
8. Applicant agrees to send regular monthly updates to EPA Region 2 to inform them of the use of the equipment and the progress of the project.
9. Applicant agrees to notify EPA of loss or damage to the equipment. Damaged equipment may be repaired by EPA or may need to be returned to EPA without replacement, depending upon circumstances.
10. Applicant agrees to return the loaned equipment to EPA Region 2 within the approved timeframe.
11. Each applicant agrees to provide a **Final Report to EPA** (**Attachment 1**) detailing the objectives, results and impacts of their study. Partnering with a state or local agency and providing data that can be entered into EPA's national water quality database is encouraged.

**VI. APPLICATION PROCEDURE & SCHEDULE**

Online applications are preferred. You may apply online here: <https://forms.gle/YRDPRbLPuWThCkM19>

Any relevant documents, including but not limited to a copy of the site map, QAPP, etc. should be emailed directly to the Citizen Science Coordinator, Rachael Leta-Graham: [graham.rachael@epa.gov](mailto:graham.rachael@epa.gov).

Applications are also available as an editable document upon request.

Once applications are received, the Equipment Loan Application Review Committee will review and make recommendations on selections. If selected, the Committee will follow up to discuss next steps, including the development of a QAPP and user experience level ad training.

**Applications will be accepted through close of business March 27, 2020** with selections to be announced by **April 27, 2020** for **New York and New Jersey** applicants.

Attachment 1

**Final Report Template**

**US EPA Region 2 Citizen Science Equipment Loan Program**

**Loanee Annual Report**

**Title and Signature Page**

**{Title of Your Project}**

{Your Organization}

*Project Manager:*

*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

*Signature/Date*

*Name/Title*

*Project QA Manager:*

*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

*Signature/Date*

*Name/Title*

Add additional signatures lines as needed. At a minimum, include the personnel listed above.

**List of Appendices**

Required Appendices:

Appendix 1: Data Spreadsheets – electronic copy only

Appendix 2: EPA Region 2 Citizen Science Equipment Loan Program Final Report Form {add all monthly report forms together}

Optional Appendices (if applicable):

Appendix 3: Field Sampling and Chain of Custody Datasheets

Appendix 4: Field Instrument Calibration Sheets

Appendix 5: Laboratory Datasheets

**Citizen Science**

**Project Description**

{Please provide a summary of how your project was conducted. For example, the number of samples collected, number of stations visited, number of people trained, etc. Please also provide an explanation for any major changes made to the project, i.e. could not sample from “Location 1” due to access issues, changed our analyte to e.coli instead of enterococcus due to water type, etc. Please also provide a timeline and appropriate photos. Do not provide results, as this is the next section.}

**Impacted Community/Area**

{Please provide the name of the community/area and a brief history. This can be as short or long as you like and you will describe the problem you addressed in other sections below.}

**Summary of Results**

{State the results of your project here. For example, the DO was extremely high in some areas, you had problems with volunteer retention, e.coli was not as high as expected, etc. If the data was compared to any action levels or standards, include those comparisons here. If you did not collect all samples planned (i.e. 85% complete), please state that and explain here. If any data was rejected, explain why here.}

**Conclusions & Next Steps**

{State who used or is using the data and what decisions/conclusions they have made based on the data. Also please tell us how your project made a positive impact to the community 😊}

**Appendix 2**

**EPA Region 2 Citizen Science Equipment Loan Program Final Report Form**

|  |  |
| --- | --- |
| Organization |  |
| Project Start Date: |  |
| Project End Date: |  |
| Number of People Engaged in Sampling: |  |
| Approximate Number of Hours Sampling: |  |

|  |  |
| --- | --- |
| Sampling - Only fill out the fields relevant to your project. | |
| Number of Stations Visited: |  |
| Number of YSI Readings Taken:  *(one recording of all parameters, not individual)* |  |
| Number of Turbidity Tube Readings Recorded: |  |
| Number of Samples Collected for: | |
| Pathogens: |  |
| Microplastics: |  |
| Other (please identify type): |  |

|  |  |
| --- | --- |
| Analysis - Only fill out the fields relevant to your project. | |
| Number of Pathogen Samples Analyzed for: | |
| Enterococcus: |  |
| E.coli & Total Coliforms: |  |
| Number of Microplastic Samples Processed: |  |

|  |  |
| --- | --- |
| Issues |  |
| Please identify any issues relating to the equipment or EPA Region 2’s program: |  |