

The Volunteer Water Information Network (VWIN)

*FY 2017 Buncombe County Community
Funding*

The Environmental Quality Institute

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Application Form

Project Name*

Name of Project

The Volunteer Water Information Network (VWIN)

Amount Requested*

Amount Requested

\$9,600.00

Service Area*

Which Commissioner Districts are served by this program?

Access a map of Buncombe County Commissioner districts [here](#).

- District 1
- District 2
- District 3

Which county sustainability goal aligns best with the goals of this project?*

Based on the Buncombe County Sustainability Plan, select a Category, Goal & Objective that align with the focus of the project and the specific results that will be achieved.

Access the Buncombe County Sustainability Plan [here](#).

Environment > Partnerships for Conservation/Preservation/Restoration of Natural Resources > Conserve and protect water resources

If applicable, select a second sustainability goal that aligns with project goals.

Result 2 is optional - Select if project aligns with more than one Sustainability Category, Goal & Objective.

[Unanswered]

If applicable, select a third sustainability goal that aligns with project goals.

Result 3 is optional - Select if project aligns with more than one Sustainability Category, Goal & Objective.

Project Description

Project Description*

Description of Project

The Environmental Quality Institute (EQI) partners with local governments and nonprofits through The Volunteer Water Information Network (VWIN) to conduct stream and lake monitoring throughout western North Carolina (WNC). EQI requests \$9,600 to continue monthly chemical monitoring at a portion of VWIN sites in Buncombe County (20 of 52 total sites) for July 2016 through June 2017. Trained volunteers collect stream water samples at fixed locations throughout the county on the first Saturday of each month. Samples are analyzed at EQI's state-certified laboratory for ammonia-nitrogen, nitrite-nitrate-nitrogen, orthophosphate, pH, alkalinity, conductivity, turbidity, and total suspended solids.

VWIN's standardized protocols allow comparisons of stream conditions between sites across the region. By highlighting high quality waterways to be protected and raising red flags regarding water quality declines throughout the county, VWIN helps watershed managers use their limited resources most effectively. Data uses may include support for grant applications, identification of locations for BMPs or stream restoration, citizen education, or sewer line maintenance. This partnership of regional water professionals helps to conserve and protect water resources in nine counties in WNC.

How many people will this project serve?*

State the number of individuals or households in Buncombe County that will be served by this project. Also state the number of people that will experience the desired result. For example, if dropout prevention services are being delivered to 100 students, how many will successfully graduate from high school?

VWIN provides water chemistry data to watershed managers who have the ability to improve water quality in their focus areas. For Buncombe County this includes staff at the Soil and Water Conservation District (SWCD), Metropolitan Sewerage District (MSD), the City of Asheville Stormwater Services Division, and Asheville GreenWorks, all of which contribute to the project costs. Data is available to the public (technical reports or spreadsheets) at EQI's website or upon request. Annual reports are also sent to stakeholders such as the NC DEQ, the Buncombe County Cooperative Extension Service, local nonprofits who work in water quality, and VWIN volunteers. Volunteers are trained by EQI staff to collect monthly samples and receive information about local water quality. There are approximately 25 volunteers collecting Buncombe County VWIN samples. Community collaboration and citizen education are critical to the long-term success of local stream monitoring.

Describe the people this project will serve.*

Characterize the demographics of the project's target population in terms such as age, gender, income, race, ethnicity, geographic area, etc. Include information about method of referral/recruitment of the target population.

VWIN focuses on natural resource protection rather than a particular population within the county. Monthly stream water monitoring is performed at 52 sites in communities throughout Buncombe County. These sites include rural watersheds such as Newfound and Sandymush Creeks in the northwestern part of the county, Cane and Bent Creeks in south, and the Ivy River in the northeast. They also include urban streams such as Town Branch, Smith Mill Creek, Reed Creek, and several other developed tributaries to the Swannanoa and French Broad Rivers.

All county residents benefit from efforts to conserve and protect water resources. Children and adults of all incomes, gender, and ethnicity participate in recreational opportunities that healthy waterways provide, such as fishing, swimming, hiking, and boating. The entire county also enjoys the financial benefits from tourists attracted to Buncombe County's natural resources.

What key steps will you take to achieve the results of this project?*

Describe the core elements of your implementation plan, including milestones that will take place within the funding timeframe.

EQI staff will continue to recruit, train, and coordinate VWIN volunteers, as well as collect and deliver monthly samples. Lab staff will test each sample for ammonia-nitrogen, nitrite-nitrate-nitrogen, orthophosphate, total suspended solids, turbidity, conductivity, pH, and alkalinity. Analytical results will be assured by the completion of all NC Wastewater Certification requirements. Proper methodology, equipment, quality control procedures, and record keeping will ensure accurate and defensible data. The results will be sent monthly to county partners to show current water quality conditions. EQI's director will write an annual report to communicate spatial and temporal trends in water chemistry, as well as interpret the data in a historical, regional, and ecological context. The report will be distributed to all interested parties and posted on EQI's website to maximize public access.

Describe the evidence of success that backs this project's approach.*

What evidence of success (i.e. evidence-based research, practice model, accreditation, industry standards, and/or other framework) are you using as a basis for your project design?

Local efforts are best suited to address local water issues. EQI has a 26-year history of water monitoring in WNC. In 1990 VWIN monitoring began in Buncombe County, with partial funding from the County. It is included in the County Sustainability Plan (page 8-5). The data are backed by a strong quality control program and state laboratory certification. The scale of VWIN monitoring allows the results to be interpreted in a regional framework. VWIN helps to improve water quality by providing nonprofits and local governments with technical support and reliable, long-term data. EQI's data and volunteer observations are also used as screening tools so that NC DEQ can provide more in-depth surveys of pollution sources and stressors. Monitoring results are used to demonstrate need, justify restoration projects, and provide an edge in fundraising efforts focused on improving water quality in WNC. The program also promotes volunteerism and educates residents about local water resources.

Describe your data collection, tracking, and reporting procedures.*

Explain your methods for documenting project, service and client information. Include a description of any software or other tools utilized.

VWIN volunteers fill out forms describing who took the samples where and when, and note specific habitat observations at the sites. Laboratory results and sampling details are recorded on MS Excel spreadsheets and are distributed monthly to VWIN partners. EQI also notifies partners of testing anomalies, as has been done in the past few years for the Little Ivy River, Dingle Creek, and the French Broad River. Statistical analyses are performed annually, including the identification of trends in water chemistry. VWIN assigns grades for each parameter per site and gives an overall rating for each site. These ratings can be used to highlight improvements or declines at each site and compare Buncombe County sites to others in WNC. EQI maintains regular communication with partner organizations.

Explain your technological resources and capacity.*

Explain your current technological strengths and barriers and how this impacts your ability to track data and report outcomes. Who is responsible for adaptation and use of technology within your organization?

EQI occupies a 1,200 square-foot laboratory in a building near Biltmore Village in Asheville. EQI's space contains plumbed lab benches, fume hoods, an emergency shower, and an eyewash stand. Laboratory equipment includes spectrophotometers for nutrient analysis, meters for pH, turbidity, and conductivity, atomic absorption spectrometers for metals analysis, and other standard equipment. Computer workstations are provided with appropriate software. The Executive Director works at the lab full-time, along with part-time college interns and Federal Work Study students. The Director is responsible for maintaining and upgrading equipment; major upgrades in the near future are not anticipated. Funding for consumable supplies is included in the budget for this grant and includes items such as chemical reagents, standards, gloves, filters, and replacement glassware.

Organizational Profile

How does the proposed project support your mission and strategic plan?*

State your mission and the date of your most recent strategic plan, and explain how the proposed project helps advance your organizational goals.

EQI is a research institute whose mission is to provide objective scientific analyses to help communities, government agencies, and nonprofits understand complex environmental issues. A strategic plan was drafted and implemented November 14, 2012 and is revisited at quarterly meetings of the Board of Directors. Organizational goals related to the VWIN project include (1) generating comprehensive, reliable, and objective data on water quality in WNC, (2) providing that data to local governments and nonprofits to drive environmental improvements, and (3) educating the public about regional water quality. VWIN currently includes monitoring at 160 stream and lake sites in WNC. By maintaining VWIN monitoring in Buncombe County, EQI will continue to generate baseline data, identify deviations, and provide the data to local watershed managers. In recent years, EQI staff has been increasingly involved in STEM education and outreach efforts at schools and public events.

What expertise/accomplishments do you have that are relevant to the proposed project?*

List your organization's strengths as well as accomplishments from the past 3 years that position the organization to be successful with the proposed project.

EQI's Board of Directors includes professors from local colleges, leaders of environmental nonprofits, and stream-monitoring volunteers, bringing a wide range of expertise in water quality. EQI became a host site for an AmeriCorps Project Conserve member in 2014. This position is focusing efforts on volunteer coordination and public outreach. VWIN volunteers spend more than 250 hours per year sampling in Buncombe County. All volunteers contribute in-kind for their time and travel expenses, helping to minimize the cost of the program. In addition to VWIN, EQI coordinates a biomonitoring project called the Stream Monitoring Information Exchange (SMIE). The SMIE project includes invertebrate sampling at 16 stream sites in Buncombe County alone (of 40 total sites in five counties) each spring and fall, with most sites co-located at VWIN locations. In 2014, EQI developed an interactive monitoring map for the public to access water quality ratings online (maps.eqilab.org).

Describe partners that are critical to the success of your organization.*

List any external partners, intermediaries or advisors important to your success, and describe their role and evidence of their commitment. Describe successful collaborations with these people or groups.

VWIN monitoring in Buncombe County is primarily funded by the Metropolitan Sewerage District, the Buncombe County Service Foundation, the City of Asheville's Stormwater Services Division, and Asheville GreenWorks. Buncombe County SWCD uses the data to inform their technical assistance and programs related to sedimentation and nutrient management, as well as stormwater and erosion control. The Newfound Creek and Ivy River watersheds have been high priority areas for the SWCD over the years. MSD uses the data to improve water quality by enabling quicker responses to unreported sewer line ruptures. The City monitors data from urban streams to manage stormwater pollution. Other regional VWIN partners that contribute funding for this regional project include the Madison County SWCD, Town of Lake Lure, Haywood Waterways Association, MountainTrue, Friends of Lake Glenville, Lake James Environmental Association, Mountain Valleys RC&D, Equinox Environmental, and the Town of Lake Santeetlah.

Financial Information

Nonprofit financial assurance requirements:

Financial statements, prepared using a recognizable basis of accounting (i.e., modified accrual) and IRS Form 990s must be submitted to Buncombe County annually.

- Organizations with annual revenues of \$300,000 or greater must submit financial statements audited in accordance with generally accepted auditing standards.
- Those with revenues between \$100,000 and \$300,000 must submit financial statements reviewed in accordance with SSARS 19.
- Those with revenues of less than \$100,000 must submit non-disclosure financial statements compiled in accordance with SSARS 19.

All financial statements must be reported on by a certified public accountant and include a full balance sheet, income statement, and cash flow statement.

These requirements are considered minimum requirements. Organizations may submit a higher level of assurance than is required.

IRS Form 990 - Upload Here

Click Choose File to upload a copy of the 990 form you most recently completed.

EQI 990EZ 2014.pdf

If your organization does not have a 990, briefly state the reason.

Include a statement of intent to comply with nonprofit financial assurance requirements as listed above.

Financial Statements - Upload here

Click Choose File to upload a copy of the most recently completed financial statements (audit, compilation or review).

EQI 2014 Compilation Report-Accrual.pdf

If your organization does not have financial statements, briefly state the reason.

Include a statement of intent to comply with nonprofit financial assurance requirements as listed above.

Complete Budget Worksheet - Upload Here*

Download the budget form [Here](#).

Complete the budget form for this project/program and the overall agency. Save it to your computer, then upload it by clicking Choose File.

2017 VWIN Project Budget.pdf

Budget Narrative*

Describe all differences between current year and proposed year. List all pending funding sources with expected date of notification. Please detail any other information that may help clarify the budget.

EQI was granted \$8,000 (of \$9,660 requested) from Buncombe County for the FY2016. At the request of Gary Higgins with the SWCD, this proposal is for \$9,600 (\$480/site/year) for 20 sites. This amount avoids the elimination of any monitoring locations. In 2010 the lowest commercial lab prices for the same analyses amounted to \$780/site/year and did not include sample collection, delivery, or detailed reporting. Buncombe County VWIN revenue pays for EQI staff, occupancy, and laboratory supplies.

EQI's fiscal year is from January through December. The County funding line for the proposed budget year includes \$4,000 from the previous grant cycle plus \$4,800 from the current proposal. All VWIN service fees are being increased by 15% starting in early 2016. Committed funding from the City, MSD, and GreenWorks will total \$16,338. Differences in the net organizational income between 2015 and 2016 are due to the timing of invoices for VWIN projects.

What (if any) portion of requested funds will be used to support capital expenses?*

Capital projects are defined as those used to acquire or upgrade physical assets such as property, buildings, or equipment. Please detail.

No funds will be used to support capital expenses.

Employee Wages

Please provide information about the wage breakdowns of your employees. Living wage for Buncombe County has been identified as \$11.00 per hour for employees with employer-provided health insurance and \$12.50 per hour for employees without.

Employees with employer-provided health insurance*

List the number of employees in your organization with employer-provided health insurance in each wage category. For salaried employees, use hourly wage equivalents.

\$7.25 - \$10.99 per hour

\$11.00 - \$14.99 per hour

\$15.00 - \$19.99 per hour

\$20.00 - \$24.99 per hour

\$25.00 - \$29.99 per hour

\$30.00 - \$34.99 per hour

\$35.00 - \$39.99 per hour

\$40.00+ per hour

Zero.

Employees without employer-provided health insurance*

List the number of employees in your organization without employer-provided health insurance in each wage category. For salaried employees, use hourly wage equivalents.

\$7.25 - \$12.49 per hour

\$12.50 - \$14.99 per hour

\$15.00 - \$19.99 per hour

\$20.00 - \$24.99 per hour

\$25.00 - \$29.99 per hour

\$30.00 - \$34.99 per hour

\$35.00 - \$39.99 per hour

\$40.00+ per hour

EQI's one employee is in the \$20.00-\$24.99 wage category, and does not receive employer-provided health insurance.