

Ohio Environmental Education Fund General Grants Awarded in State Fiscal Year 2019

In the fall 2018 and spring 2019 application cycles, Ohio EPA awarded the following 11 new general grants, for a total of \$352,824.

Rural Action (Upgrade Ohio), “UGO Energy Ed,” F-19G-001, \$14,899, Athens, Muskingum and Ross Counties, Audience: General Public, Contact: Sarah Conley-Ballew, sarah@ruralaction.org, (740) 591-1990

The project will introduce local energy experts to library patrons, examine the impact of GHG emissions on air quality, and discuss alternative energy job opportunities. During 12 educational sessions and three Clean Energy Expos, participants will learn how the Ohio EPA measures air quality from four county monitoring stations in southeast Ohio. Students will also be exposed to three DIY demos and clean energy projects created by citizen scientists. Local representatives will talk about renewable products and technologies that are being developed in Southeast Ohio. Sessions will encourage participants to evaluate their role in the clean energy economy and explore direct connections to employers; clean air and emissions reduction; and employment in electric vehicle infrastructure, EV repair and renewable energy products / manufacturing.

Arthur Morgan Institute for Community Solutions, “Soils for Life, Southwestern Ohio,” F19G-002, \$49,479, Clark and Greene Counties, Audience: PreKindergarten – University, Contact: David Diamond, daviddiamond@communitysolution.org, (937) 286-2511

The project will provide a two-day training for at least 35 schoolteachers in southwestern Ohio about new developments in soil science and the agricultural and land-use practices that build healthy soils. Teachers will then work with up to 800 students to teach them about soils in place-based activities that engage and empower them. Up to 300 of students from Yellow Springs, Springfield, and Xenia will participate in field trips to Agraria, a 128-acre farm that is being converted into a research facility, resource for farmers and educational center. While there, they will have the opportunity to view the restoration of Jacoby Creek, participate in soil and water sampling, and learn how to use equipment related to testing. Parent and community nights at the end of school sessions will enable students to present their projects and findings to the public.

Boys & Girls Clubs of Cleveland, “Nature in the 216,” F19G-010, \$25,935, Cuyahoga and Lake Counties, Audience: Pre-school to University, Contact: Renata Brown, rbrown@clevekids.org, (216) 883-2106

The project will utilize museum programs, assets, and expertise to explore a 4.5-acre nature preserve being installed at the Boys & Girls Club facility. Professional development focusing on topics that include Cleveland Museum of Natural History’s (CMNH) Nature in the City curriculum will be provided for all Boys & Girls Club of Cleveland (BGCC) K-8 instructors and Mound STEM School teachers. CMNH will provide educational programs to Boys & Girls Club students, including a Neighborhood Wildlife assembly and an Ohio Birds of Prey assembly. BGCC staff will also create a learning kit with teaching materials on ecological areas and biodiversity for clubs to borrow. Students will also will learn about Environmental Engineering Careers as restoration activities take place on the Morgana Run Nature Preserve. CMNH will also host a Career Day to learn about environmental careers, such as curators, researchers, educators, and others.

Cuyahoga River Community Planning dba Cuyahoga River Restoration, “Win the War on Weeds: Invasives Detection and Control for Communities,” F19G-014, \$38,205, Cuyahoga, Geauga, Lake, Lorain, Portage and Summit Counties, Audience: Regulated Community, Contact: Carolyn Krause, krausec@cuyahogariver.org, (216) 241-2414

The project will equip public land managers, grounds keepers, and contractors across Northeast Ohio with training on invasive weed control using alternatives to toxic chemicals. The project will feature two identical workshops and site demonstration tours, one on the east side and one on the west side of Cleveland's metro area. A comprehensive database of invasive weed control practices and policies of northeast Ohio communities will be compiled. Participants in the workshops will review a draft and provide input on a new invasive species identification and control guide/handbook specifically geared toward their needs, then published and distributed at the end of the project. Two webinars will be presented and recorded so that others who could not attend, or who operate in other areas can benefit and replicate the work. An anticipated 900 people will be reached through the program.

Mill Creek Alliance, “Mill Creek Alliance Water Quality Education and Monitoring,” F19G-015, \$29,341, Butler and Hamilton Counties, Audience: Pre-school to University, Contact: Alan Edwards, alan@groundworkcincinnati.org, (513) 731-8400

The Water Quality Program will educate citizens, students, and elected officials on the quality of water throughout the Mill Creek watershed so as to better inform them on best management practices and strategic watershed planning. Updating

the program through adoption of new testing parameters (Chlorophyll and Optical Brightness) and technology (adoption of electronic data storage in lab and streamlining of electronic data collection in the field) will bring it in line with our sister programs throughout the region. The creation of the Blue Team youth workforce development program will strengthen Mill Creek Alliance's Green Corps workforce development program through the addition of hands-on education regarding scientific procedures from both the field sampling and laboratory testing to training and certification in level 2 surface water chemistry. The Blue Team would also allow for a closer collaboration with the University of Cincinnati, exposing students to hands-on field science and careers.

Clermont Soil and Water Conservation District, "Southwest Ohio Agricultural Conservation Menu," F19G-016, \$17,141, Brown, Clermont, Clinton and Highland Counties, Audience: Regulated Community, Contact: Becky McClatchey, rmcclatchey@clermontcountyohio.gov, (513) 732-7075

Soil and Water Conservation Districts will collaborate to develop a web-based platform to communicate information on conservation programs and to help local farmers understand the connection between, nutrient management, watershed health and Harmful Algal Blooms. The platform will be a highly organized, user-friendly clearinghouse of information on conservation programs. The SW Ohio Conservation Menu will provide additional features, including access to a locally-developed web application that provides fertilizer recommendations based on soil quality test results. The platform will also provide interactive modules for local farmers to share information and discuss various issues relating to agricultural BMPs. Soil and water quality test kits will be distributed during two fertilizer app training sessions. A survey will be sent to all platform participants when they initially register to measure knowledge and attitudes toward nutrient management. A 2nd survey will be sent to registered users 6 months after the site goes live to measure any changes. The project's goal is to reach 200 farmers in the East Fork watershed during the project, with this number increasing annually as the partners continue to promote and improve the Menu.

Black Swamp Bird Observatory, "Ohio Young Birders Club Expansion," S19G-029, \$35,000, Ottawa County, Audience: Pre-school to University, Contact: Laura Guerard, lauraguerard@bsbo.org, (419) 898-4070

Black Swamp Bird Observatory (BSBO) developed the Ohio Young Birders Club (OYBC) in 2006 to encourage, educate, and empower Ohio's youth leaders in research, education, and conservation disciplines. The OYBC program explores the value of healthy environments, and ultimately inspires youth members to advocate for conservation. Chapter Advisors coordinate monthly outdoor activities for members, including field trips and service projects. Examples of service projects include: Ohio Lights Out monitoring, conducting a "BioBlitz" to

inventory all flora and fauna in specific habitats, habitat restoration, nest box construction and monitoring, invasive plant removal, design and installation of bird feeder systems at schools, bird population monitoring, and public education through speeches and presentations. Students provide content for OYBC's newsletter, GOLDEN-WINGS, and participate in OYBC's keystone event, the annual Ohio Young Birders Conference.

Hefner Museum, Miami University - Biology, "Sowing SEEDS II," S19G-031, \$39,234, Butler County, Audience: Pre-school to University, Contact: Julia Eileen Robinson, robins48@miamioh.edu, (513) 529-4618

We seek support for Sowing SEEDS II (Science, Environmental Education, Discovery and Synthesis), a two-year program. Using Hefner Museum's discovery center, the Imaginarium, we propose to continue the Early Childhood Environmental Educator Certificate, previously supported by OEEF, and to expand our credential program to include a Middle Childhood Environmental Educator Certificate for students teaching grades 4-9. Both certificate programs will stress effective pedagogy and content knowledge. After completing training, undergraduates will become certified environmental educators for their grade levels and receive an Outdoor Area Kit (OAK) to use in their teaching experiences. Like a mighty oak that sows its seeds widely, this program exhibits farreaching benefits. As undergraduates, every cohort of teachers will positively impact 2,000 young children; each individual will reach 25 children/year. By June 2029, 32 participants will have positively influenced 6,200 children.

The Nature Conservancy, "Engaging Teachers and Students in the Oak Openings," S19G-037, \$39,278, Lucas County, Audience: Pre-school to University, Contact: Ashlee Decker, ashlee.decker@tnc.org, (419) 455-4192

Approximately 30 primary and secondary school teachers working in the Oak Openings Region will be trained and receive materials and/or bus funding to implement existing Oak Openings lesson plans. Created through a Stranahan Foundation grant, these lesson plans meet the current Ohio Department of Education's learning standards. The lesson plans can be viewed at www.oakopenings.org/resources/educators. Using the Oak Openings lesson plans, at least 600 students will learn the value and uniqueness of their local ecosystem, i.e. one of the worlds "Last Great Places". Teachers will demonstrate successful implementation of the lesson plans by creating an Oak Openings digital portfolio that will be reviewed by the Green Ribbon Initiative Education and Outreach subcommittee and shared via an Oak Openings Education Summit. This project meets the OEEF education priority of encouraging and explaining the importance of habitat restoration efforts to increase biodiversity.

St. Clair Superior Development Corporation, “Microgrid Engineers of Tomorrow,” S19G-041, \$23,112, Cuyahoga County, Audience: Pre-school to University, Contact: Philip Hewitt, phewitt@stclairsuperior.org, (216) 881-0644

The first objective of Microgrid Engineers of Tomorrow is to expose 40 teens to the environmental sciences and careers in environmental engineering through the lens of sustainable community development projects that affect the most pressing environmental issues in Ohio's inner cities. Students will complete career planning exercises, paired with professional speakers and field trips highlighting environmental engineering career paths. Finally, utilizing the St. Clair Plaza as a hands-on classroom, the teens will complete photovoltaic training and gain hands-on education assembling a real residential capacity microgrid.

HSTW Ohio Network, “Rural STEM Collaborative Energy and the Environment,” S19G-045, \$41,200, Ashland, Huron, Lorain, Medina and Wayne Counties, Audience: Pre-school to University, Contact: Diana Lee Rogers, hstwdr@gmail.com, (614) 668-0686

The project will provide opportunities for 250 underserved/underrepresented rural middle school students from five rural school districts in northeast Ohio, to think big and look toward the future as they explore sustainable solutions to our energy needs and investigate the impact of energy on our lives and the world. Students will design and model alternative energy sources and evaluate options for reducing energy consumption while focusing on clean water, clean air and a sustainable world. District leaders will collaborate. Teachers will be networked and trained in Project Lead the Way (PLTW): Energy and the Environment, Project WET and Project WILD. The curriculum is aligned with Ohio Learning Standards in Science, and builds on existing efforts by the five rural school districts to build a K-12 STEM education pipeline with local, state and national STEM/EE partners and businesses. A replicable model will be shared with other rural schools, HSTW network, Ohio School Boards and OSLN.

For more information, contact:



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