## Lake Restoration Efforts

The Commonwealth's lake protection and restoration program is supported by various State and Federally funded programs. State funding sources include the Growing Greener Plus Grant Program, the Environmental Stewardship Fund (ESF), and DCNR's TreeVitalize program. Additionally, cooperative efforts by outside agencies to include but are not limited to the U.S. Fish and Wildlife Service (USFWS), U.S. Army Corps of Engineers (USACOE), the Pennsylvania Lake Management Society (PALMS), the Pennsylvania Fish and Boat Commission (PFBC), County Conservation Districts, and neighboring state agencies such as the Ohio Department of Natural Resources (ODNR) have supported lake restoration efforts. Federally funded programs such as the Environmental Protection Agency's (EPA) 319 Grant Program have also supported the Commonwealth's protection and restoration efforts. Other funding sources could include EPA Section 104(b)3 grants, the Natural Resource Conservation Service, the Chesapeake Bay Program, and PENNVEST.

Overall program goals are to protect and restore lake water quality. To meet these goals, actions are executed in Phases – Phase I to III. Phase I is to complete an assessment of the lake by gathering data, determining impairment status, and identifying pollution sources. Phase II is to develop a plan of action to remediate and restore water quality by implementing Best Management Practices (BMP), implementing Total Maximum Daily Loads (TMDL), and/or prescribing control measures. Phase III is to follow-up to monitor the efficacy of BMPs, TMDLs, and other control efforts.

Projects for the period October 1, 2019 through September 30, 2021 are summarized in Table 1. When determining projects to be funded, lakes are prioritized according to public use and lake benefit, impairment status and watershed impairment status. During this period, \$2,511,899 had been spent on Phase II and Phase III projects. A variety of project types were completed on 16 lakes across the Commonwealth. Restorative efforts included shoreline buffering, shoreline stabilization, in-lake habitat installations, dam rehabilitation, dredging, invasive species management, and implementation of watershed BMPs to include Comprehensive Nutrient Management Plans, stream exclusion fencing, waste storage facilities, roof runoff management, critical area planting, and livestock use area protection.

Funding Source	Funding Amount	Lake Name	County	Project Description	Project Period	Phase
DCNR	\$14,058.84	Beltzville Lake	Carbon	Shoreline Buffer and In-lake Habitat	Completed October 2020	II
DEP Growing Greener	\$20,340.00	Chapman Lake	Warren	Shoreline Stabilization (PALMS Mini Grant)	Through 2019	Ш
EPA 319	\$243,159.00	Frances Slocum Lake	Luzerne	Watershed BMPs	August 2016 to December 2019	П
DCNR	\$25,000.00	Glendale Lake	Cambria	Shoreline Stabilization	June 2020	П
DEP Growing Greener	\$20,400.00	Harveys Lake	Luzerne	Hydrilla Management (PALMS Mini Grant)	Through 2019	Ш
DCNR ESF	\$6,354.00	Hopewell Lake	Chester	Hydrilla Management	May 2020 to Present	П
DEP Growing Greener	\$18,426.00	Kyle Lake	Jefferson	Shoreline Stabilization (PALMS Mini Grant)	Through 2019	П
DEP Growing Greener	\$14,875.00	Lake Alden	Wayne	Hydrilla Management (PALMS Mini Grant)	Summer 2019	Ш
DCNR	\$30,000.00	Lake Arthur	Butler	Shoreline Stabilization	July 2021	II
DCNR ESF	\$13,869.80	Memorial Lake	Lebanon	Hydrilla Management	September 2019 to Present	II
DCNR TreeVitalize	\$5,135.00	Nockamixon Lake	Bucks	Shoreline Buffer	October 2020	П
DEP Growing Greener	\$5,000.00	Pine Run Reservoir	Mercer	Water Chestnut Management (PALMS Mini Grant)	June 2020	II
USFWS GLRI, DCNR, ODNR, USACOE	\$590,000.00	Pymatuning Lake	Crawford	Hydrilla Management	October 2019 to September 2021	Ш
EPA 319	\$7,919.20	Speedwell Forge Lake	Lancaster	DEP Assessment Post-Dam Repair/Restoration	March 2020 - March 2021	Ш
DCNR	\$1,471,668.00	Whipple Dam Lake	Huntingdon	Lake Rehabilitation and Dredging	September 2019 to November 2020	Ш
DCNR	\$25,694.16	Yellow Creek Lake	Indiana	Shoreline Stabilization	October 2020	II

## **Table 1.** Completed Lake Restoration Projects – Period 10/1/2019 to 9/30/2021.