

Lake Restoration Efforts

The Commonwealth's lake protection and restoration program is mainly supported by EPA's Nonpoint Source Program (Section 319 of the Clean Water Act) and the State's Environmental Stewardship Program, through Growing Greener grants. Other funding sources include EPA Section 104(b)3 grants, the Natural Resources Conservation Service (NRCS) PL566 program, and other programs such as the Chesapeake Bay Program and PENNVEST (Clean Water State Revolving Funds). DCNR also funds in-lake restoration practices for State Park lakes. Various partners are engaged in lake and lake watershed restorations and are not limited to the lake owners. Watershed partners include county Conservation Districts, which implement many DEP program initiatives and serve as grant and project managers. Program goals to restore and/or protect lake water quality are based on studies that identify impairments, pollution sources, and the course of remediation. Public use and benefit of the lake, and watershed priority based on impairment, are important criteria in prioritizing lakes to be funded.

Restoration techniques implemented through Phase II or restoration grants include various watershed and in-lake best management practices (BMPs) such as agricultural BMPs, riparian corridor protection and restoration (buffers and in-stream structures), lake shoreline protection, dredging, stormwater management and control techniques, point source controls, aquatic macrophyte controls, lake and watershed liming, alum treatments, biomanipulation to benefit fisheries, lake drawdowns, septic management, wildlife control, and institutional BMPs including public education efforts and enacting protective municipal ordinances. Sewage treatment plant upgrades are also an important technique to improve lake water quality. Additionally, controlling invasive species is an important restoration theme, with increasing numbers of lakes impacted by Eurasian watermilfoil, water chestnut, and zebra/quagga mussels. Some limited Growing Greener and Sea Grant funds are available for control of these organisms. Table 1 provides information on current Phase I (assessments), Phase II (restoration/implementation), and Phase III (monitoring for efficacy, post-TMDL) lake work conducted in the Commonwealth. Expenditures on active lake projects or lake watershed projects in Pennsylvania currently amount to approximately \$3.88 million for projects ongoing between 10/1/15-9/30/17.

Table 1. Active Lake Projects in Pennsylvania Public Lakes during the 10/1/15-9/30/17 reporting period. Does not include water quality assessments done by DEP. Growing Greener and 319 final reports available from DEP, Bureau of Conservation and Restoration.

Lake or Study Name	County	Study Type	Study Period	Federal Funds	Fund Source	State Funds	Match	Sponsor /Project
Antietam Lake	Berks	Phase II	2010-2016	\$100,000	319		\$28,885	Berks Co Commissioners ; stream BMPs
Beaver Run Reservoir	Westmoreland	Phase II	2014-2017		GG	\$129,945	\$29,838	Westmoreland CCD; ag BMPs in watershed
Beaver Run Reservoir	Westmoreland	Phase II	2014-2017		GG	\$70,000	\$152,540	Westmoreland CCD; dirt & gravel roads in watershed
Blue Marsh Lake	Berks	Phase II	2014-2017		GG	\$292,961	\$54,068	Berks CCD; ag BMPs
Conneaut Lake	Crawford	Phase II	2010-2015		GG	\$43,050	\$6,458	Crawford CCD; ag BMPs, partial in lake's watershed
Conneaut Lake	Crawford	Phase I and Phase II	2015-2018		GG	\$104,167	\$28,384	Crawford CCD/ ag BMPs
C-SAW - Various Small Lake Projects	multi	Phase I and Phase II	2012-2016		GG	\$2,800		C-SAW - Consortium of Scientific Assistance to Watersheds
Frances Slocum Lake	Luzerne	Phase II	2013-2015	\$269,964	319		\$24,580	Luzerne CCD, in-lake and watershed BMPs
Glendale Lake	Cambria	Phase II	2012-2016		GG	\$16,580	\$12,544	Cambria CCD, shoreline rehab.
Harvey's Lake	Luzerne	Phase II and III	2012-2016	\$366,100	319			Harvey's Lake Borough; stormwater BMPs and monitoring
Harvey's Lake	Luzerne	Phase II and III	2014-2018	\$196,810	319			Harvey's Lake Borough; stormwater BMPs and monitoring
Lake Carey	Wyoming	Phase II and III	2013-2016		GG	\$111,610	\$22,240	Lake Carey Welfare Assn; stormwater BMPs
Lake Erie	Erie	Phase II	2008-2014		GG	\$91,785	\$13,785	Erie PSU; stream projects & monitoring Bear Run
Lake Erie	Erie	Phase II	2012-2016		GG	\$371,843	\$71,282	Penn State University
Lake Luxembourg	Bucks	Phase II	2012-2016	\$293,900	319		\$52,680	Bucks CCD; watershed BMPs

Lake or Study Name	County	Study Type	Study Period	Federal Funds	Fund Source	State Funds	Match	Sponsor /Project
Lake Luxembourg	Bucks	Phase II	2014-2018	\$153,145	319		\$26,820	Bucks CCD; forebay rehab.
Lakes Redman & Williams	York	Phase II	2014-2015	\$59,925	319			Izaak Walton League; stream BMP design
Lake Ontelaunee	Berks	Phase II	2015-2018		GG	\$292,961		Berks CCD; ag BMPs
Lake Wallenpaupack	Pike	Phase II	2012-2016		GG	\$76,050		Lake Wallenpaupack Watershed Mgmt Dist.
Octoraro Lake	Lancaster, Chester	Phase II	2014-2017		GG	\$28,300	\$19,256	Octoraro Watershed Assoc; ag BMPs
PA Lake Management Society (PALMS)	statewide	Phase II	2011-2016		GG	\$283,000	\$105,074	PALMS – small lake BMPs statewide
Pinchot Lake	York	Phase II	2014-2016		GG	\$41,200	\$17,622	Warrington Twp; wetland islands
Speedwell Forge Lake	Lancaster	Phase II	2012-2014		GG	\$43,509	\$7,603,858	Save Speedwell - dam repair and restoration
Stephen Foster Lake	Bradford	Phase II	2014-2017	\$214,967	319			Bradford CCD; forebay rehabilitation
Stephen Foster Lake	Bradford	Phase III	2013-2015	\$6,000	319			Bradford CCD for efficacy monitoring - 2 yrs.
Tioga Lake	Tioga	Phase II	2008-2014		GG	\$227,107	\$34,066	Tioga CCD; Dirt & Gravel Roads
Total Funds				\$1,660,811		\$2,226,868	\$8,303,980	
Total Federal and State Funds								\$3,887,679

319 = Nonpoint Source Program

DCNR = PA Dept. of Conservation & Natural Resources

GG = Growing Greener Program, PA Environmental Stewardship Funds

CCD = County Conservation District