

## Pennsylvania 2014 Water Conservation and Efficiency Program Review

The following information summarizes Pennsylvania's efforts regarding its Water Conservation and Efficiency Program, and is being submitted by the Commonwealth to the Regional Body and Compact Council pursuant to the requirements in the Agreement Article 304 and the Compact Section 4.2.2.

### **1. Lead Agency and Contacts**

Lead Agency: Pennsylvania Department of Environmental Protection (DEP)

Lead Contacts:

- Timothy Bruno, Chief, Office of the Great Lakes (814) 547-2170
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### **2. Status of the State or Province's Water conservation and efficiency goals and objectives consistent with the Basin-wide goals and objectives.**

Pennsylvania continues to achieve its Water Conservation and Efficiency Goals/Objectives through a mix of voluntary efforts combined with state-wide regulatory requirements.

Pennsylvania's Act 43 of 2008 (32 P.S. Section 817.25) authorized the Commonwealth to join the Compact and established that the Water Conservation and Efficiency Program, required under Section 4.2 of the Compact, shall be a voluntary program. As part of its State Water Planning Program, Pennsylvania has eight key goals that support the Basin-wide and regional objectives of the Compact. Pennsylvania's water conservation and efficiency goals are articulated in our State Water Planning Program, (27 Pa.C.S 3120(a).)

As reported in prior updates, the eight goals are:

1. Establish guidelines for developing voluntary water use reduction in Critical Water Planning Areas.
2. Identify and compile principles, practices, and technologies to assist all water users in conserving water.
3. Identify and compile principles, practices, and technologies to encourage groundwater recharge.
4. Develop a statewide program to promote voluntary reduction of water loss.
5. Establish a voluntary statewide conservation program for all users.
6. Develop educational programs for households, industry, and other water users.

7. Facilitate Governor's Water Conservation and Efficiency Award Program.
8. Establish voluntary water use reduction goals for all users.

Regarding goals one through three, Pennsylvania continues to develop plans in Critical Water Planning Areas (outside the Great Lakes Basin). As these plans are developed, the information will be used to help implement the first three goals. No CWPAs have been identified in the Great Lakes Basin at this time; however, the planning efforts currently underway in other basins are pilot projects that will help solidify the process, should the need to designate a CWPA in the Great Lakes basin arise in the future.

To help achieve all eight goals, Pennsylvania is working in conjunction with Pennsylvania Sea Grant and Pennsylvania State University toward the creation of a Lake Erie Water and Land Technical Resources website (Lake Erie WALTER). This website will provide a porthole to DEP partner agencies and organizations that focus on land and water issues in the Pennsylvania Lake Erie basin. An intended component of WALTER will be water conservation and efficiency information, materials, and outreach programs. DEP anticipates funding for this joint venture to begin in the first quarter of 2015 and web development will extend throughout 2015 and 2016.

To implement goal six during 2014, PA DEP convened a Lake Erie water conservation planning team to explore ideas that promote water conservation in the Erie area. Currently, the planning team consists of representatives from PA DEP, Erie County Planning Department, Penn State Extension, Environment Erie, Erie County Conservation District, PA DCNR, PA Rural Water Association and the Regional Science Consortium. It is anticipated that members of the team will coordinate various annual water conservation events and activities. In addition, PA DEP is a partner with EPA's WaterSense program, which encourages water conservation and promotes water efficient products. The WaterSense program promotes and supports events throughout the year, and the planning team expects to coordinate some events in the Erie area next year in conjunction with WaterSense events. The planning team has developed a tentative timeline for activities in 2015:

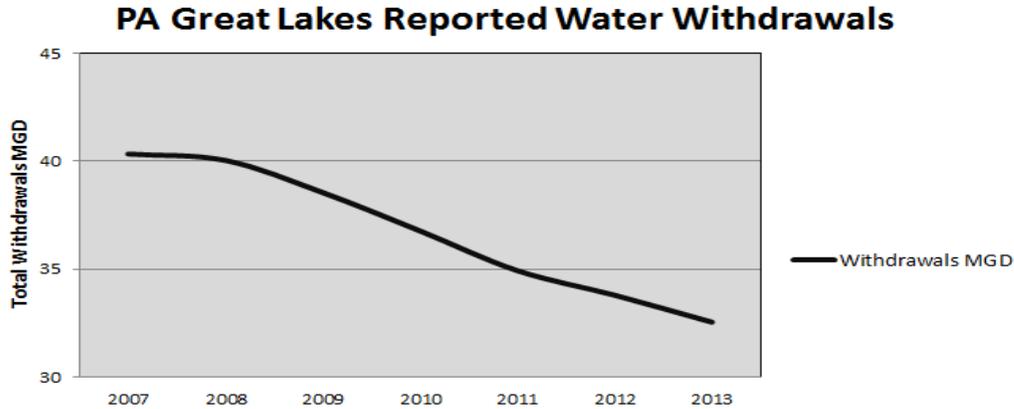
1. March: Partnering with home improvement stores like Home Depot or Lowe's to hold demonstration workshops for residents to learn about DIY leak fixes and installations and at-home water conservation tips. This could be held in conjunction with EPA's WaterSense Fix-A-Leak Week.
2. April-September: Coordinating a series of BMP workshops for homeowners. Workshop ideas include, rain barrels and cisterns, rain gardens, lawn and garden BMPs, roof gardens and green roofs, riparian buffers, etc.
3. May 14: Volunteering at the Children's Water Festival, coordinated by the Water Systems Council, at Penn State Behrend

PA DEP is exploring funding opportunities to support these events and to develop educational displays and handouts. In addition to planning its own events, the team is compiling a list of other water conservation activities that are already occurring in the Erie area. The planning team is also looking into partnering with other regional groups, such as the Presque Isle Bay Advisory Committee, to share ideas and plan future events.

One successful water conservation partnership developed during 2014 was between DEP and the Water Systems Council to conduct the Great Lakes Children's Water Festival in Erie, Pennsylvania. Slated to be held in May 2015 on the Pennsylvania State University Behrend Campus, the Festival will educate over 1000 students from schools within the Lake Erie basin on water quality, conservation, and efficiency. DEP is represented on the steering committee and has been integral during planning and funding of this venture.

Pennsylvania has several regulatory programs, administered by the Department and the Public Utility Commission, that support the objectives of water use reduction, water loss reduction, and overall water conservation. These regulatory programs are established on a state-wide basis, independent of the Great Lakes Compact, and are implemented on an on-going basis. The programs, which primarily involve Public Water Supply Agencies and water users who withdraw 10,000 gallons of water per day or more on a 30 day average, are discussed in further detail in Section 4 of this paper. A chart showing withdrawals, diversions, and consumptive use in Pennsylvania's portion of the Great Lakes watershed is attached at the end of this report (Source: Great Lakes Commission based on data supplied by PA DEP).

DEP implemented an electronic web-based Drought Emergency Application for use by golf courses, public water suppliers and athletic field operators who must submit plans for water use to the Department in meeting regulations under the Pennsylvania Emergency Management Agency towards conserving water and ending non-essential water uses during drought emergency declarations. This system allows submission of electronic plans via the Department's website, and it generates notifications to known entities to provide information, guidance, and requirements during a drought emergency. This new system was implemented during 2014.



### 3. Water Conservation and Efficiency Program Overview.

Pennsylvania’s Water Conservation and Efficiency Program is implemented through a mix of voluntary efforts combined with state-wide regulatory requirements. Pennsylvania’s Act 43 authorizes the use of a voluntary water conservation and efficiency program. As part of its State Water Planning Program, Pennsylvania has eight key goals that support the Basin-wide and regional objectives of the Compact. In addition, regulatory programs that support and complement water conservation and efficiency goals and objectives are already in place through other statewide laws and policies of the Commonwealth. The majority of water use in Pennsylvania’s Great Lakes basin is attributable to Public Water Supplies. Public water supply agencies throughout the Commonwealth are required to obtain a water allocation permit for surface water sources, with approvals of systems metering, use justification, drought management, and water conservation and efficient use elements included in the permitting process that implements the Water Rights Act, (P.L. 842 No. 365), 32 P.S. SS 63, et seq..

*Pennsylvania regulatory programs with citations and summaries include the following:*

*The Great Lakes-St. Lawrence River Basin Water Resources Compact—32 P.S. Section 817.21 et seq. Section 5 (Powers and Duties of department) of that PA statute, 32 P.S. Section 817.25, states, inter alia, that, “The department shall have the power and duty to”: (2) Administer and implement within the basin a water conservation and efficiency program required under section 4.2 of the Compact. Such a program shall be a voluntary program, utilizing the provisions of 27 Pa.C.S. Section 3120 (relating to water conservation).”*

*Water Resources Planning Act of 2002 (P.L. 1776, No. 220), 27 Pa.C.S. 3101 et. sq. Act 220 authorizes DEP to build capacity to the water use reporting system to develop a program for water users to record their voluntary water*

conservation and efficiency efforts.

[http://www.portal.state.pa.us/portal/server.pt/community/state\\_water\\_plan/18721](http://www.portal.state.pa.us/portal/server.pt/community/state_water_plan/18721)

*Water Rights Act, P.L. 842 (Act No. 365) Pennsylvania Surface Water Allocation Program*—under this act, public water supply agencies must obtain Water Allocation Permits from the DEP to acquire rights to use surface water sources in Pennsylvania. Included in the review of permit applications, the DEP considers the conservation, development, and use to the best advantage of existing sources of water supply. Permits generally contain requirements to implement water conservation programs, adopt drought contingency plans and submit annual permit compliance reports.

[http://www.depweb.state.pa.us/portal/server.pt/community/water\\_allocation/10632](http://www.depweb.state.pa.us/portal/server.pt/community/water_allocation/10632)

**4. A description of how Pennsylvania promotes Environmentally Sound and Economically Feasible Water Conservation Measures consistent with the regional objectives follows:**

OBJECTIVES	LEGISLATIVE OR PROGRAM CITATION
<p>Guide programs toward long term sustainable water use</p>	<ul style="list-style-type: none"> <li data-bbox="634 926 1466 1094">➤ Water Rights Act, 32 P.S. §§ 636-637.—Under this act, public water supply agencies must obtain Water Allocation permits from DEP to acquire rights to surface water in PA. In its review of the permit applications, DEP considers water conservation and use of existing water supplies.</li> <li data-bbox="634 1125 1466 1293">➤ Water Resources and Planning Act (Act 220), 27 Pa.C.S. §§ 3117; 3120, authorizes DEP to build capacity of the water use reporting system to develop a program for water users to record their voluntary water conservation and efficiency efforts.</li> <li data-bbox="634 1325 1466 1724">➤ PA Public Utilities Commission (PUC) has provisions in the PA Code for water conservation measures for public water suppliers (52 Pa. Code § 65.11) in the event of short term water supply deficiencies. In addition, public water suppliers are to encourage customers to implement cost-effective water conservation measures. Rates for water utilities are set with consideration for the following factors: customer education, efficient plumbing fixtures, leak detection, water audits for large non-residential customers, unaccounted for water, and metering (52 Pa. Code § 65.20). This section also requires public water suppliers to file mandatory conservation contingency plans.</li> </ul>
<p>Adopt and implement supply and demand management to</p>	<ul style="list-style-type: none"> <li data-bbox="634 1734 1466 1892">➤ A DEP regulation, which establishes water withdrawal and use registration, monitoring, record-keeping and reporting requirements at <a href="#">25 Pa. Code §§ 110.201; 110.301</a>, became effective upon its publication in the Pennsylvania Bulletin on November 15, 2008.</li> </ul>

<p>promote efficient use and conservation of water resources</p>	<p>➤ This regulation requires water users who withdraw 10,000 gallons or who purchase water through interconnection in excess of 100,000 gallons of water per day or more on a 30 day average to report their water use to DEP. <i>See also</i>, Water Resources and Planning Act (Act 220), 27 Pa.C.S. § 3118.</p>
<p>Improve monitoring and standardize data reporting among State water conservation and efficiency programs</p>	<p>➤ Pennsylvania participates in the Great Lakes Regional Water Use Database process. Currently this process is administered by the Great Lakes Commission in consultation with the Council of Great Lakes Governors, to meet the goal of standardizing data reporting among the Jurisdictions. A reporting requirement has been imposed in the Commonwealth on all water uses over 10,000 gallons per day; and any water use for oil and gas development requires submission of a water management plan. Oil and Gas Act, 58 Pa. C.S. § 3211(m). Water Resources and Planning Act (Act 220), 27 Pa.C.S. §§ 3117; 3118. <a href="#">25 Pa. Code §§ 110.201; 110.301.</a></p>
<p>Develop science, technology and research</p>	<p>➤ DEP plans to continue to seek the assistance of Pennsylvania Sea Grant and Penn State University to focus on developing science, technology, and research in the Great Lakes Basin.</p>
<p>Develop education programs and information sharing for all water users</p>	<p>➤ Water Resources Planning Act (Act 220), 27 Pa.C.S. §§ 3117; 3120, authorizes DEP to build capacity of the water use reporting system to develop a program for water users to record their voluntary water conservation and efficiency efforts.</p> <p>➤ Pennsylvania is considering new ways to increase water conservation and efficiency awareness and enhance commitments made in Resolution 5 of the Compact Council and Resolution 6 of the Regional Body. DEP plans to continue to seek the assistance of Pennsylvania Sea Grant and Penn State University to increase the level of water conservation and efficiency outreach and education in the Great Lakes basin and promote an existing Penn State Extension website for water conservation and continue to publish articles in the Erie Times News In Education series regarding Water Conservation, particularly as it applies to the Lake Erie watershed.</p>

**5. Description of the State or Provincial Water conservation and efficiency program implementation timeline and status.**

- a. With the completion of a pilot training session on AWWA Water Audit procedures to a number of public water suppliers in PA's Great Lakes area, DEP will be extending similar training to other

regions of the state in 2015 and eventually statewide. This training will help Pennsylvania meet its conservation and efficiency goals through reductions in leakage and increased efficiencies by public water suppliers.

- b. Penn State University has Federal designation and support from USGS as the state’s official water resources research center. A possible initiative under consideration is working with Penn State University through Penn State Agricultural Extension offices, Pennsylvania Sea Grant, and the Water Resources Research Center to develop an outreach and educational program for the Great Lakes basin.
- c. DEP created and convened the Lake Erie Water Conservation Planning Team to build local capacity in the planning and implementation of water conservation events and initiatives. The Team consists of members from state, county, and local governments as well as local non-profit, non-governmental organizations.

### Pennsylvania 2013 Water Use Data Summary

Sector	Withdrawals				Diversions		Consumptive Use
	GLWS	OSW	GW	TOTAL	Intrabasin	Interbasin	
Public Water Supply	24.85	0.09	1.67	26.62	0	0	2.66
Self-Supply Commercial & Institutional	0	0	0	0	0	0	0
Self-Supply Irrigation	0	0.07	0	0.08	0	0	0.07
Self-Supply Livestock	0	1.43	1.34	2.77	0	0	2.21
Self-Supply Industrial	2.74	0	0	2.74	0	0	0.27
Self-Supply Thermoelectric Power Production (Once-through cooling)	0	0	0	0	0	0	0
Self-Supply Thermoelectric Power Production (Recirculated cooling)	0	0	0	0	0	0	0
Off-Stream Hydroelectric Power Production	0	0	0	0	0	0	0
In-Stream Hydroelectric Water Use	0	0	0	0	0	0	0
Other Self Supply	0	0	0	0	0	0	0
<b>Total</b>	27.59	1.59	3.01	32.21	0	0	5.21

*In millions of gallons per day*

*Water Sources: Great Lakes surface water (GLSW), other surface water (OSW) and groundwater (GW)*

Note: Values as shown submitted to Great Lakes Commission and should be considered preliminary until publication.

**Consumptive use:** that portion of water withdrawn or withheld from the Great Lakes basin and assumed to be lost or otherwise not returned to the Great Lakes basin due to evapotranspiration, incorporation into products or other processes

**Diversion:** a transfer of Water from the basin into another watershed, or from the watershed of one of the Great Lakes into that of another by any means of transfer, including but not limited to a pipeline, canal, tunnel, aqueduct, channel, modification of the direction of a watercourse, a tanker ship, tanker truck or rail tanker but does not apply to water that is used in the basin or Great Lakes watershed to manufacture or produce a product that is then transferred out of the basin or watershed (Agreement Article 103; Compact Section 1.2)

**Intrabasin transfer:** a transfer of water from the watershed of one of the Great Lakes into the watershed of another Great Lake (Agreement Article 103; Compact Section 1.2)

**Mgd:** million gallons per day

**Principal facility:** facilities withdrawing in excess of the Great Lakes Charter uniform trigger level of 100,000 U.S. gallons/day (380,000 liters/day) average over a 30-day period. A principal facility is determined by its total withdrawal (or consumption) from all sources combined (Great Lakes surface water, other surface water, and groundwater). The combined withdrawals (or consumption) of separate wells or operations undertaken by the same facility or company will be evaluated separately for the purpose of determining principal facility status unless those operations are covered under the same registration (or permit) or are physically contiguous. Principal facilities are a subset of all facilities in the database.

**Withdrawal amount:** water removed or taken from surface or groundwater (including hydroelectric use)