

Water Withdrawal and Use

The 2009 State Water Plan Update included a comprehensive treatise on Water Withdrawal and Use Management in Pennsylvania that described the common law and statutory basis for water allocations, and the roles of the federal, state, and local governments and compact commissions on water withdrawals and use. From this, the 2009 State Water Plan Update provided three primary recommendations centered on the:

- Advancement of water use registration and reporting
- Development of water use projections and water use trends
- Development of recommendations as to whether and how Pennsylvania's water rights system might be improved

For the 2022 Update, the Water Supply Workgroup of the statewide committee looked at the 2009 State Water Plan Update to ascertain which of the recommendations may be appropriately updated, to consider how water supply needs and priorities have evolved since 2009, and to offer new recommendations.

Of the three 2009 recommendations, DEP accomplished the development and implementation of water use registration regulations and an implementation program. From these registrations and subsequent periodic reporting, DEP created [a comprehensive database and statistical information on water use in Pennsylvania](#) that is accessible to the public and other agencies for water planning purposes. This data is important in serving to inform the development of trends in water use over time.

The Water Supply Workgroup recognized that, going forward into the next planning phase of the State Water Plan, the legacy issues from the previous update should be completed. The workgroup also identified potential future activities such as evaluating potential changes to the current common law system for a more consistent and secure statutory arrangement. The workgroup envisioned that such changes in law would consider DEP's water data system to achieve a better understanding of future water demands. Additionally, the workgroup envisioned that supporting legislation would be designed to protect existing and future uses of private wells and other groundwater resources. Finally, the workgroup believed it will be important to consider the effects of climate change and to plan for more resilient water supplies and improved drought and flood monitoring.

These considerations are the basis for the following Update recommendations.

Water Withdrawal and Use Recommendations

1. Encourage the General Assembly to protect existing and future uses of private wells and the groundwater resources upon which they rely, by enacting legislation to require proficiency-based licensing and certification of water well drillers, and to establish statewide private water well construction standards. Considering past significant adverse reactions to similar proposals, any proposed legislation should be preceded by a strategic campaign of educational outreach.
2. DEP should work with the river basin commissions, United States Geological Survey and other partners to improve the utilization of reported water use data in projecting future demand trends

and to aid in managing and assessing water supply and water availability on a watershed scale. Such efforts should include the following actions:

- Maintain efforts to register and report withdrawals under the provisions of ~~the Pennsylvania's~~ Water Resources Planning Act (Act 220 of 2002) and counterpart basin commission programs, and to encourage compliance with withdrawal and consumptive use reporting programs
 - ~~Evaluate the need for additional metering and/or other forms of monitoring to obtain information on unreported/unregulated uses. Chapter 110 regulations provide a mechanism to assess water availability.~~
 - Expand the current data analytic tools (e.g., water use summaries, report viewers, ~~etc.~~) to focus on consumptive use/depletions on a watershed scale
 - Prior to and during the next iteration of the State Water Plan, develop projections and trends in water withdrawal and consumptive uses by watershed
 - Prior to and during the next iteration of the State Water Plan, develop projections of the impacts of climate change on water availability by watershed
 - ~~Revisit and update the Water Use Trends section of the 2009 plan to ensure DEP's planning and management efforts are appropriately focused on the current and future locations and activities that pose the greatest challenges.~~
 - Explore opportunities for outreach to water supply purveyors and other self-supplied water users to focus on improved water supply planning ~~in order~~ to assure long-term, reliable supplies, including considerations of water resiliency
 - Reevaluate the processes for using reported data and projections to identify critical and potentially stressed or challenged watersheds and assign appropriate priority for focus on watersheds based on the degree of stress or challenge
3. The Statewide Water Resources Committee should work with DEP, the broad spectrum of stakeholders, and the General Assembly to evaluate the current effectiveness and shortcomings of Pennsylvania's existing water rights and water withdrawal arrangements, and to develop recommendations for evolving those arrangements to a more consistent, secure and holistic approach. Once shortcomings have been identified, an evaluation of programs used in other states and compact commissions should be conducted to determine if those practices may serve as recommendations for a statewide, secure and sustainable water supply statewide. Focus should be placed on considering and evaluating the options and issues, evaluating programs that are used in other states and by river basin commissions, utilizing a process which includes DEP, the Statewide Committee, and other major stakeholders. Based on that process, a report developed by DEP in consultation with the Statewide-statewide Committee-committee on the relative merits of the identified options should be developed, and appropriate recommendations should be made to the General Assembly as to whether and how Pennsylvania's water rights system might be improved and made more efficient, effective, predicable, and secure.
4. DEP should evaluate and continue to improve its drought monitoring practices and encourage proactive monitoring among public water suppliers.
- Add targeted groundwater wells with 20-year records to the monitoring network to increase county representation
 - Seek an alternative to the Palmer Drought Severity Index, which proved unreliable for Pennsylvania in recent droughts

- Encourage the monitoring of groundwater well water level monitoring by public water suppliers and industrial facilities that are not already required to do so and consider incorporating data into statewide drought monitoring
- ~~Evaluate an alternative to the county-based approach for assessing the onset of drought conditions on a watershed basis, recognizing that administration of drought response is likely most effective and relatable to the public when conducted on a county level.~~
- ~~Elevate awareness of short-term but high-intensity draws of water in small watersheds as a result of events that involve a much larger number of people than typically present (e.g. festivals, vacationers).~~

5. Considering the anticipated effects of climate change, all ~~publiccommunity~~ water ~~supply agencies~~systems (as well as self-supplied users) should evaluate the vulnerabilities of their respective sources to the impacts from expected increases in both the frequency and intensity of flooding and the frequency and intensity of droughts. ~~These Systems~~systems and users should follow their Uninterrupted System Service Plan to promote resiliency and redundancy and, where needed, seek: (i) diversification of sources (i.e., avoiding reliance on a single surface source or well field tapping the same resource); (ii) interconnection with neighboring systems; (iii) raw or finished water storage; (iv) development and implementation of conjunctive management plans for coordinated use of surface and groundwater sources; and (v) focused monitoring of source conditions, with contingency plans for implementing conservation measures and adjustment of water withdrawals in order to preserve the ability to meet essential needs through drought conditions.