

Comprehensive Assessment Plan

After completing the first-ever statewide aquatic life use assessment of Pennsylvania's wadeable surface waters in 2007, DEP replaced the original method with a more intensive set of assessment methods for the second statewide aquatic life assessment. From 2006 through 2012, the survey design included both probability-based and targeted sampling within one major sub-basin in each of six DEP regions. Beginning in 2013, the survey design was changed to be based solely on targeted sampling. This design allows DEP staff to focus efforts on areas where the previous design identified potential use impairments for further assessment. DEP staff in the six regional offices and central office each conduct aquatic life use assessments on a minimum of 75 sampling points in selected watersheds. Through this effort staff also identify priority monitoring areas for future years.

In 2006, DEP began monitoring targeted source waters for community water supplies in Pennsylvania to assess attainment of the potable water supply use. The potable water supply monitoring protocol consists of the collection of multiple grab samples upstream of the point of withdrawal during the critical period to determine chronic criteria violations. Water chemistry analysis is completed for nine parameters of concern for drinking water. Analysis of collected samples identifies waters with obvious potable water use impairments and those with no obvious impairment. The first round of potable water supply monitoring and assessment was completed in 2013, so DEP is currently focusing on reassessment of previously assessed waters.

DEP employs bacteriological sampling to assess surface waters for water contact recreational use during the swimming season. The recreational use assessment is focused on water contact recreation because DEP believes water contact is the most critical recreational use and is important to reduce the risk of waterborne illness to individuals recreating in the surface waters of Pennsylvania. DEP staff and citizen volunteers collect samples to determine compliance with Pennsylvania's water quality standards. DEP is currently on the first cycle of statewide water contact recreational use assessments, using a combination of targeted and probabilistic survey designs to make assessment determinations as efficiently as possible.

To assess other recreational uses, such as fishing, DEP implements the fish tissue consumption assessment method. This survey design targets surface waters that are frequented by anglers or surface waters used for subsistence consumption. In surface waters that do not contain commonly fishable organisms, it may not be possible to assess fish consumption. The Fish Consumption Advisory Technical Workgroup (FCATW) includes representatives of DEP, Department of Health, Pennsylvania Fish and Boat Commission, and Pennsylvania Department of Agriculture. The technical workgroup coordinates routine program activities, such as sampling site identification, and provides recommendations for advisory issuance or lifting to the policy workgroup.

Pennsylvania's narrative water quality criterion at 25 Pa. Code § 93.6(a) states, "Water may not contain substances attributable to point or nonpoint source discharges in concentration or amounts sufficient to be inimical or harmful to the water uses to be protected or to human, animal, plant or aquatic life." To assess this criterion, DEP must detect a "substance" (i.e., pollutant or pollution) that is causing harm and is linked to point or non-point source discharges. The presence of compounds alone does not constitute a violation of this criterion as there must be some harm demonstrated to uses, such as aquatic life or human health. To assess this criterion, DEP has conducted extensive studies on emerging contaminants in surface waters, such as endocrine disrupting compounds, personal care products, pharmaceuticals, and hormones.

As a part of the overall comprehensive assessment plan, DEP continues to refine and add more assessment methods for each of the protected uses. All assessment methods are made available to the public for comment before they are finalized and used to make assessment determinations in the Integrated Report.