

# Shenandoah River Monitoring Plan

## Algal Field Methods Development

### June 2016

#### *Problem and Objective*

Virginia has received information from volunteer monitoring groups suggesting water quality problems relating to algae may exist in the Shenandoah River. Because this information was not deemed sufficient to make a determination of impairment, Virginia has classified seven stream segments as Category 3C on the [2014 Integrated Report \(IR\)](#). The Category 3C listing requires that waters be prioritized for monitoring so that their attainment status can be resolved with additional data.

The preliminary monitoring plan outlines the agency's strategy for collecting data for the development of algal field methods. The agency will evaluate the need for ambient data above and beyond what is currently being collected as part of the [2016 monitoring plan](#) following the first year of the algal field methods development and depending on available resources.

#### *Monitoring Plan*

##### *Characterizing the state of algal presence*

- Assess the longitudinal areal coverage of algae at 5 targeted locations in the Shenandoah River (category 3C segments in the 2016 IR).
- Algal coverage to be quantified using transect characterization.
- Describe
  - Diversity of algae presence (i.e., forms of algae)
  - Areal coverage of Algae
  - Seasonal patterns in Algae growth
  - Filamentous algal /periphyton growth related to existing nutrient data
- *Proposed: Transect monitoring to be conducted bi-weekly from March through October for two years.*