

Draft - Scope of Work

Overall Objective: Develop a statewide methodology that can be applied to individual basins for setting site-specific phosphorus goals that support aquatic life uses considering other contributing stressors for any given stream in the State and use the Quinnipiac River basin as a test case for this methodology.

Tasks

1.) Provide a consistent background of understanding for all members and qualitatively describe goals

- Identify and state relevant CT water quality standards, such the narrative phosphorus standard, narrative aquatic life standard and biological condition gradient
- Explain the aquatic life assessment methodology process in CT CALM and how it relates to the narrative aquatic life standard. Identify elements of methodology which may be related/influenced by phosphorus.
- Provide an explanation of stressors that may be present and describe the relative importance of excessive phosphorus to those other stressors.
- Identify what available data may be relevant
- Qualitatively define an endpoint goal that relates the phosphorus narrative standards to the biological community and aquatic life designated uses

2.) Develop a methodology for assessing the significant relationships that exist between phosphorus, biological response variables and aquatic life designated uses that accounts for site-specific conditions including other contributing stressors

- Develop a conceptual model diagram that graphically depicts the relationship between sources of phosphorus and effects on aquatic life considering other contributing stressors.
- Discuss the landscape of potential approaches and identify any existing examples of site-specific applications in other states
- Identify the approach or approaches best suitable for CT
- Identify data and tools needed to implement the approach and any data gaps in the Quinnipiac River Basin
- Evaluate uncertainties associated with available data and tools.

3.) Quantitatively define measures of success that meet endpoint goals

- Determine what the acceptable level of phosphorus should be in a stream given the site-specific conditions of a river, including other contributing stressors and assess whether phosphorus reduction alone is sufficient to attain aquatic life standards.

4.) Identify specific phosphorus sources and their contributions in a given basin, as well as what reductions are needed to achieve endpoint goals

- Identify methods to determine the levels of phosphorus contributed from various nonpoint and point sources in a basin
- Identify options to allocate reductions in phosphorus contributions among various sources

5.) Implement methodology in the Quinnipiac Basin as an example for CT

- Identify and collect any additional data needed to support application of methodology/tools.