**The Massachusetts Nitrogen Removal Program November 19, 2014**

The Massachusetts nitrogen removal programs are divided into several areas of the state. The Connecticut River basin in central Massachusetts is part of the Long Island Sound TMDL. The upper Connecticut River basin facilities in Massachusetts at present are only required to monitor nitrogen discharged with no limits in place. It is anticipated that some form of nitrogen limits will be required in the future, however it will most likely to in the 10 mg/l total nitrogen range and not require the use of supplemental carbon.

The treatment facilities that discharge into the 10 Mile River and Black Rivers in the south central portion of the state discharge into the Narragansett Bay Estuary and are presently required to reduce nitrogen discharged to 8 mg/l total nitrogen seasonally from April – October. The next phase NPDES permits for the three facilities Attleboro, North Attleboro and the Upper Blackstone Regional Treatment Plant will require a total nitrogen limit of 5 mg/l. Attleboro and North Attleboro presently have the ability to add supplemental carbon (glycerin) or a nonflammable carbon source. The Upper Blackstone is evaluating alternatives to achieve the new lower limit and will be required to by 2019.

There are two other small municipal treatment facilities located in southeastern Massachusetts that have low level nitrogen limits of 3 and 4 mg/l total nitrogen in Scituate and Chatham. Both facilities utilize down flow denitrification filters with methanol as the supplemental carbon source

With the exception of the large 56 million gallon per day Upper Blackstone treatment plant and potentially the Brocton WWTF it is not anticipated that any other major dischargers will be required to utilize a supplemental carbon source in the next 5 years.