**The Rhode Island Nutrient Removal Program**

The Rhode Island Department of Environmental Management manages the nutrient removal program for Narragansett Bay through Rhode Island Pollution Discharge Elimination System Permits (RIPDES). The RIPDES permits were modified with seasonal nitrogen and phosphorus limits for discharges into Narragansett Bay or the tributaries discharging into the bay.

The RIPDES permits require seasonal limits for nitrogen and phosphorous from May through October. For nitrogen the permits are concentration based with generally limits of either 8 mg/l or 5 mg/l total nitrogen based on a monthly average. The lowest limit was most recently issued to the City of Woonsocket where the 2016 total nitrogen season limit will be 3 mg/l total nitrogen.

Of the 19 publically owned treatment works (POTWs) in Rhode Island seven facilities are presently are or will be using supplemental carbon to achieve the season nitrogen permit limits. Two facilities are using methanol exclusively and three are using glycerin for a supplemental carbon source. Of the above referenced seven facilities five are capable or will be capable of using methanol or a flammable carbon source when construction is completed in 2015-16. The largest facilities are owned and operated by the Narragansett Bay Commission, the Fields Point WWTF and the Bucklin Point WWTF. Both facilities serve the metro City of Providence area. Bucklin Point is only capable of using a non-flammable carbon source and the larger Fields Point facility was design to use methanol along with glycerin.

In addition to the POTWs the Rhode Island Resource Recovery Johnstown landfill leachate pretreatment facility will become operational in early 2015. This pretreatment facility will be required to reduce a very concentrated leachate nitrogen discharge down to 10 mg/l nitrate with the effluent discharging to the Narragansett Bay Commission’s Field Point WWTF. The Johnston landfill facility is designed to use methanol in the sequencing batch treatment process on a year round basis estimated to use approximately 800 gallons per day of methanol.