

As part of the proposed action, the Hunts Point Water Pollution Control Plant (WPCP) would introduce a carbon addition facility to enhance nitrogen removal, thereby improving the quality of the plant's effluent. Nitrogen is removed in a two step biological process called nitrification-denitrification. In the first stage (nitrification), ammonia in the wastewater is converted to nitrates in the aerobic zones of the aeration tanks. In the second stage (denitrification), nitrates are converted to nitrogen gas which is discharged to the atmosphere in the anoxic zones of the aeration tanks, which are zones that contain no dissolved oxygen. The rate of denitrification is limited by the amount of carbon in the wastewater. Under the proposed action, a source of carbon (such as methanol, a water soluble wood alcohol, or ethanol, alcohol found in liquor and beer) would be added to the wastewater to increase the denitrification rate. The carbon sources are readily biodegradable will be removed in the downstream aerobic zones. The nitrification-denitrification process on occasion can produce a heavy biological froth on the surface of the aeration tanks. The froth is a nuisance that can adversely impact the settling of sludge and cause foaming in the sludge digesters. Polymer is a coagulant which improves the removal of the froth in the settling tanks. In order to control the froth, polymer addition facilities would be installed.

In April 2007, the New York City Mayor's Office issued a report—*PlaNYC, A Greener, Greater New York*, The City of New York, Mayor Michael R. Bloomberg, April 22, 2007. This report identified the following as one of New York City's primary water challenges: "to ensure that the waterways surrounding the city are clean and available for use by New Yorkers." To ensure that this goal is met, the plan states that the city's wastewater treatment infrastructure will continue to be upgraded. The plan also identifies nitrogen as a particular water quality concern. The proposed action is an upgrade to one of the city's 14 WPCPs and thus addresses this goal. In addition to improving the plant's solids handling facilities, the proposed action includes measures that will enhance the plant's nitrogen removing capabilities (the carbon and polymer addition facilities, described above). The proposed action is being undertaken to improve existing conditions and to accommodate long-term growth in the area that the plant serves. As discussed above, the carbon and polymer addition facilities would enhance nitrogen removal. Therefore, the proposed action would improve the quality of the WPCP's effluent, and no potential significant adverse impacts on water quality are expected. *