REGULATORY FLEXIBILITY ANALYSIS FOR SMALL BUSINESSES AND LOCAL GOVERNMENTS (RFA)
SALINE WATER QUALITY STANDARDS RULE
6 NYCRR Parts 701 & 703

The New York State Department of Environmental Conservation (the Department) is proposing revisions to New York's water quality standard (WQS) regulations in Title 6 New York Codes, Rules and Regulations (NYCRR) Parts 701 and 703. The proposed regulatory updates include amended WQS to protect the shellfishing best use in Class SA waters; protect the primary contact recreation best use in Class SA and SB waters; maintain water quality suitable for primary contact recreation in Class SC[1] waters; protect the secondary contact recreation best use in Class I waters; and add a wet weather (WW) limited use designation for waters impacted by combined sewer overflow (CSO) discharges and/or municipal separate stormwater sewer systems (MS4) effluents.

1. Effect of Rule

The Department reviewed the proposed WQS amendments and identified facilities that may be impacted by the proposed regulatory updates. The Department identified twelve municipal wastewater treatment facilities, ranging from 0.24 million gallons per day (MGD) to 120 MGD treatment capacity. Additionally, ten Private, Commercial, and Institutional (PCI) facilities were identified as surface water sanitary dischargers to the subject saline waters. Two industrial facilities were also identified with sanitary discharges to saline waters impacted by the proposed WQS. Of the ten PCIs and two industrial facilities identified, four may meet the qualifications of being a Small Business as defined in Section 131 of New York State (NYS)

[1] Class SC waters do not have a best use of primary contact recreation assigned to them in 6 NYCRR Part 701, but 701.12 does specify "The water quality shall be suitable for primary and secondary contact recreation…" in Class SC waters. Absent a primary contact recreation best use, Class SC waters are still protected by standards aligning with the swimmable goal of the Clean Water Act.

Economic Development Law. An additional nine facilities, owned and operated by the New York City Department of Environmental Protection (NYCDEP), were identified but not included in the regulatory impact analysis, because they already have an Enterococci water quality based effluent limitation (WQBEL) included in their State Pollution Discharge Elimination System (SPDES) permit.

The proposed updates to WQS are protective of shellfishing for Class SA waters and all discharges to SA waters. Per regulations at 6 NYCRR 47.3, samples collected from waters overlying certified shellfish lands shall have a total coliform (TC) geometric mean of 70 MPN/100ml or less or a fecal coliform (FC) geometric mean of 14 MPN/100ml or less, as these two criteria are equally protective. Since the TC geometric mean of 70 MPN/100ml is the current WQS and basis for current SPDES effluent limits, it is not anticipated that SPDES permits for discharges to Class SA waters would need to be amended to include an additional WQBEL for FC since this is equivalent to the WQBEL for TC that is already in place.

Under the proposed Enterococci WQS, twelve municipal wastewater treatment facilities, ten PCI facilities, and two industrial facilities discharging to saline waters will likely need to upgrade their existing disinfection systems or incur increased operation and maintenance (O&M) costs. The Department analyzed the costs associated with disinfection using both chlorination and ultraviolet radiation (UV).

2. Compliance Requirements

There are numerous municipal wastewater treatment facilities and several other regulated entities that discharge into waters affected by the proposed Enterococci WQS. All currently

permitted sanitary wastewater dischargers disinfect their effluent to meet WQS. It is anticipated that some of these dischargers will need to upgrade those existing disinfection systems, and in some cases add de-chlorination, to meet the proposed Enterococci WQS. The need for compliance schedules for small businesses and local governments will be evaluated on a case-by-case basis.

New York City (NYC) owns and operates numerous combined sewer overflows (CSOs) that discharge to waters affected by the proposed Enterococci WQS. NYC is already obligated, through an administrative consent order, to implement its Long Term Control Plans (LTCPs) to meet current WQS. It is anticipated that some CSO impacted waters may not meet the proposed WQS post-LTCP implementation. Waters subject to CSO discharges from permitted CSO outfalls will be assessed for compliance with the new WQS after completion of the LTCP and validation of LTCP controls through post-construction compliance monitoring (PCCM). After PCCM is completed and compliance with the WQS are assessed, new CSO control goals may be applied to discharges to waters that fail to meet WQS.

3. Professional Services

There may be professional engineering services needed for the facilities potentially affected by the proposed regulatory updates, as mentioned above, to upgrade existing disinfection systems.

4. Compliance Costs

The Department reviewed the proposed regulatory updates and identified the likely anticipated costs that are set forth in this section. The estimated total financial impact for the municipal wastewater treatment, PCI, and industrial facilities to meet the proposed Enterococci WQS is a capital cost of approximately $2.4 million and a net increase in O&M costs of approximately $4.5 million per year, to cover increased chlorine dosing or increased UV intensity, as applicable to their current disinfection practices. The proposed WQS also prompt additional estimated costs of $9.7 billion for increased CSO control, but these costs are deferred until currently approved CSO control projects are completed.

The Department estimated the unit cost for building a UV disinfection system to be $634,008/MGD[2] design flow in capital costs with an estimated O&M cost of $12,367/MGD per year. Given that the total capital cost for conversion to UV disinfection is significantly higher than other alternatives, the estimated financial impact assumes that the impacted facilities will not choose the UV option. For facilities that already have an existing UV disinfection system, the most cost-effective alternative is to double the UV light intensity or dosing; thus, the financial impact of $12,367/MGD per year will result solely from increased O&M expenditures. As many of the facilities considered in this analysis are currently using chlorination for disinfection, these proposed regulatory updates will likely require additional chlorination which may result in a need to add de-chlorination to the treatment system. Because of the likelihood that additional de-chlorination will be needed, the Department determined the capital costs for constructing a de-chlorination facility. The Department estimated construction of a de-chlorination facility to cost

[2] All '$/MGD' and '$/MGD per year' rates were adjusted for inflation from 2016 to 2022 values (https://www.usinflationcalculator.com/).

$272,066/MGD. The Department used its own estimated rates of $23,002/MGD per year average O&M cost to determine the potential financial impact associated with O&M for facilities utilizing chlorination and de-chlorination, and $34,503/MGD per year for facilities that currently chlorinate but will need to add de-chlorination facilities. The Department estimates that two municipal facilities and seven PCI facilities will incur a collective capital cost of approximately $2.4 million to construct chlorination/de-chlorination. Additionally, all twenty-four impacted facilities will incur increased O&M costs, collectively totaling approximately $4.5 million per year, to cover increased chlorine dosing or increased UV intensity, as applicable to their current disinfection practices.

Additional costs for laboratory analysis of up to $68,100 per year across all facilities may occur, depending on how the Department implements the proposed Enterococci WQS for dischargers to saline waters. Should the Department supplant TC or FC effluent limitations in SPDES permits with Enterococci, there will be no additional impact because the analytical cost for all three fecal indicator bacteria (FIB) is roughly the same.

The Department does not plan on repealing the existing TC and FC WQS, and SPDES permits subject to issuance and renewal will be evaluated individually to determine the most appropriate discharge effluent limitations. Because the Enterococci WQS are only applicable seasonally, to minimize complexity and confusion, permitting approaches that apply a single FIB year-round may be given preference. In all cases, the discharge monitoring approach for FIB (TC, FC, and/or Enterococci) will be protective of the best uses and comply with all applicable laws and regulations, while avoiding unnecessary duplication and complexity.

Certain waters subject to the proposed WQS are impacted by CSOs. Most of the CSO impacts occur in Class SB and Class I waters in and around NYC. NYC's CSO control program is implemented through the development of LTCPs. The LTCPs must meet the regulatory requirements of the United States Environmental Protection Agency's (USEPA's) CSO Control Policy as per the Clean Water Act section 402(q) and must adhere to the terms of the 2005 Consent Order between the Department and NYC (Case No. CO2-20000107-8), as modified in 2008, 2009, 2012, 2015, 2016, and 2017 (collectively the "Consent Order"), and NYC's SPDES permits. LTCPs evaluate the cost-effectiveness of a range of control options/strategies, including up to 100% CSO capture. The LTCPs are reviewed and approved by the Department, based on currently applicable WQS. The cost of yet to be completed projects detailed in the approved LTCPs is $2.3 billion. The LTCPs will not be immediately opened or renegotiated to attain compliance with the proposed WQS but will be assessed for compliance with the new WQS after completion of the LTCP and validation of LTCP controls through PCCM.

NYCDEP provided water quality model runs to the Department to assess compliance with the proposed Enterococci WQS in the CSO-impacted waters. The model runs indicated that the proposed Enterococci WQS will not be attained in some waters; thus, additional water quality improvements may be needed after the LTCP projects are completed. The Hutchinson River is the only CSO-impacted water projected not to attain the proposed Enterococci WQS for Class SB. CSO-impacted waters projected not to attain the proposed Enterococci WQS for Class I include: Alley Creek, Bronx River, Coney Island Creek, Flushing Creek, tributaries of Jamaica Bay and Westchester Creek.

Estimating costs for these CSO-impacted waters to achieve the proposed WQS is difficult because pollutant concentrations at the overflows are unknown and variable, unlike a traditional SPDES outfall where the pollutant concentrations are monitored and the necessary controls to achieve compliance are easily calculated. Although such impacts are not immediate, as noted above, costs for CSO-impacted waters to comply with the proposed Enterococci WQS must still be estimated. Using 100% CSO capture, a highly conservative approach with respect to water quality, the Department estimated increased control costs for outfalls discharging to Alley Creek, Bronx River, Coney Island Creek, Flushing Creek, Hutchinson River, tributaries of Jamaica Bay and Westchester Creek to meet the proposed Enterococci WQS for Class SB and Class I waters. The total cost of 100% capture for these receiving waters is $9.7 billion.

There are additional CSO outfalls in, and around the City of Yonkers, discharging to the Class SB portion of the Hudson River. Based on information in the 2008 and 2014 Yonkers Post Construction Monitoring Reports, no additional CSO controls will be required to meet the proposed Enterococci WQS. No other CSO communities will incur financial impacts from the proposed WQS.

The (WW) designation being proposed with these regulatory updates will not be immediately applicable to any waters and, therefore, has no associated costs. Future rule makings that apply the (WW) designation will detail costs associated with its application.

5. Economic and Technological Feasibility

The Department concluded that compliance by parties regulated under SPDES permits is both economically and technologically feasible. Under the proposed Enterococci WQS twelve

municipal wastewater treatment facilities, ten PCI facilities, and two industrial facilities discharging to marine coastal recreation waters will likely need to upgrade their existing disinfection systems or incur increased O&M costs resulting from higher dosing.

Economic and technological feasibility for additional CSO controls is difficult to assess at this time, but such costs are deferred until currently approved LTCP projects are completed.

6. Minimizing Adverse Impact

In developing these regulatory updates, the Department considered approaches that would minimize adverse economic impacts on small businesses and local governments such as differing requirements, outcome standards, and potential exemptions from coverage. Given the nature of these proposed regulatory updates, and in order to adequately protect the waters of the State, in compliance with both State and federal law, differing regulatory requirements or potential exemptions for small businesses and local governments were not feasible. However, for the potentially impacted facilities subject to these proposed regulatory updates, the Department will allow necessary time to achieve compliance.

The proposed regulatory updates will take effect on the date specified in the Notice of Adoption. However, the Department recognizes that it may be unreasonable, both physically and fiscally, to expect regulated parties to comply with the regulations immediately. After the regulatory updates become effective, they will be implemented in SPDES permits when the permits are initially issued or renewed. Permit renewals and integration of the proposed WQS will follow the Department's Environmental Benefit Permit Strategy that prioritizes renewals to permits having the greatest potential for environmental impact. If additional new or modified

treatment is required to meet the proposed WQS, a compliance schedule may be included in the permit on a case-by-case basis and may require the permittee to submit a report describing their alternative treatment strategy to meet the WQS and include a schedule for construction. Under such a scenario, the Department would review and, if appropriate, approve the report before construction could commence.

Waters subject to CSO discharges from permitted CSO outfalls will be assessed for compliance with the new WQS after completion of the LTCP and validation of LTCP controls through PCCM. After PCCM is completed and compliance with the WQS are assessed, new CSO control goals may be applied to discharges to waters that fail to meet WQS.

7. Small Business and Local Government Participation

The Department will inform the public about the proposed regulatory updates through the Department website, letters to dischargers and municipalities, and notices in the Environmental Notice Bulletin and the State Register. During the public comment period, the Department will hold a public hearing on the proposed rule making. The public will have the opportunity to comment on the proposed regulatory updates by attending a public hearing or by submitting written comments to the Department.