



June 30, 2017

Cynthia Finley  
Director, Regulatory Affairs  
National Association of Clean Water Agencies  
1816 Jefferson Place N.W.  
Washington D.C. 20036

**Vincent Sapienza, P.E.**  
*Acting Commissioner*

59-17 Junction Blvd.  
Flushing, NY 11373

Tel. (718) 595-6565  
Fax (718) 595-3525  
vsapienza@dep.nyc.gov

RE: NACWA Request re Wipes Study

Dear Ms. Finley:

I am writing in response to your inquiry regarding New York City's interpretation of the results of the August 15, 2016 study titled "NYC Forensic Evaluation of Nondispersables," which was prepared for the New York City Law Department by Fuss & O'Neill. The study has several limitations, summarized below. Its findings diverge from those of other studies conducted at other municipal wastewater management systems, and additional research is required to accurately assess the concentration of wipes and their associated physical and financial impact on the City's wastewater treatment infrastructure, which is managed by the New York City Department of Environmental Protection (DEP). Here in New York City, wipes present many operations and maintenance challenges at its wastewater treatment plants (WWTPs) throughout the entire treatment process. To protect and preserve our aging system, DEP is planning a public outreach campaign to educate residents about keeping anything other than toilet paper out of the wastewater system, including all types of wipes, pharmaceuticals and trash.

The Fuss & O'Neill study assessed the contents of two five-gallon containers of debris collected on February 17, 2016 at screens located at two influent channels conveying wastewater from Manhattan and the Bronx, respectively, to the Wards Island WWTP. The debris was separated by type of material, including multiple types of wipes, some of which were identified as "flushable", paper towels, trash, and other materials. The study thus provided valuable information about the materials that are accumulating in, clogging, and otherwise interfering with equipment in the wastewater collection and treatment system. Any type of wipe or other material entering the collection system, regardless of label representations about flushability, that becomes caught in WWTP bar screens is an indication of its potential to cause or exacerbate flooding and/or harm downstream equipment.

Although the Fuss & O'Neill study yielded a valuable snapshot of the nature of flow through the City's wastewater treatment system, its results have significant limitations in the overall context of the City's vast wastewater treatment infrastructure. The City owns and operates 14 WWTPs, 96 wastewater pumping stations, and over 7,000 miles of sewer pipes that

transport and treat an average of 1.3 billion gallons of wastewater every day, serving over 8.5 million people. The small sample size for this study (ten volumetric gallons of debris), and the weather conditions under which the samples were taken, cannot be interpreted as an accurate or complete representation of the content of flows in a system of its size.

The study's findings also contradict DEP's observations at its 14 WWTPs and the numerous significant adverse operations, maintenance, and performance impacts to the entire treatment plant. Flushed non-woven fabric products, including those labeled and marketed as "flushable" that do not disperse in water when flushed as advertised, regularly damage the City's wastewater infrastructure. DEP has observed a significant increase in the volume and variety of wipes collected in its wastewater infrastructure since approximately 2007, when so-called "flushable" wipes were introduced into the consumer marketplace. Sales of these wipes continue to grow. Wipes and other debris often congeal with grease, fat and other solid waste material into masses that clog screens and become stuck in equipment, including pumps, pipes, and mixers, causing wear, jams, damage and reductions in the flow of wastewater. As a result, risks of flooding and equipment damage increase, as does the frequency and extent of cleaning and maintenance. These issues impose significant costs and divert financial and staffing resources from critical system upgrades and water quality improvement projects.

The Fuss & O'Neill study has other important limitations as well. Over the course of two days preceding the study, almost 1.5 inches of rain fell. Because the City's sewers are a combined system, meaning that stormwater and wastewater enter the same pipes and are both conveyed to the WWTPs, vastly more wastewater entered the WWTPs immediately prior to the study's sampling event than is typical during dry weather or light precipitation conditions. These conditions likely had the following effects:

- The higher volume of flow from stormwater diluted wastewater flows to yield a significantly lower concentration of debris. Dry weather flow or light precipitation conditions likely would have yielded a much higher concentration of debris;
- The increased pressure of the higher volume of water pushed more debris through the initial screens at the WWTP (where the samples were collected), than would have been caught under average dry weather or light precipitation conditions. It is likely that any debris that bypassed the screens impacted the downstream infrastructure. "Flushable" wipes may have been pushed through the screens in greater numbers than non-flushable wipes because they are smaller in size and thickness;
- Stormwater washed more litter from the streets into the collection system during the rain event, disproportionately increasing the ratio of trash to other material.

The City acknowledges the steps the wipes industry has taken to test and label its products. Like wastewater utilities across the country, the City also advocates defining the features that make a product truly flushable. It is critical that this definition give due consideration to impacts to wastewater treatment infrastructure.

The City would be happy to further discuss the Fuss & O'Neill study with you or anyone else interested in its findings. Please do not hesitate to contact us if you have any additional questions or concerns.

Sincerely,

A handwritten signature in black ink, appearing to read "Vincent Sapienza". The signature is fluid and cursive, with the first name "Vincent" written in a larger, more prominent script than the last name "Sapienza".

Vincent Sapienza