



**Testimony submitted on behalf of  
The Stormwater Infrastructure Matters (S.W.I.M.) Coalition**

**NY State Senate Standing Committee on Environmental Conservation hearing, “to examine mechanisms for better notification procedures in instances where sewage and other pollutants have been released into our water”**

**October 14, 2011**

Thank you for the opportunity to offer the following comments on behalf of the Stormwater Infrastructure Matters Coalition (S.W.I.M.) Coalition, a coalition of more than 70 organizations, including community and environmental groups, architects, engineers, boaters and scientists, that are dedicated to ensuring swimmable waters around New York City through natural, sustainable stormwater management practices - Green Infrastructure - in our neighborhoods. We believe that this approach is fiscally responsible because it utilizes stormwater, currently viewed as waste, as a resource.

S.W.I.M. championed the New York City Council's efforts to pass Local Law 5 of 2008, which required development of the city's first Sustainable Stormwater Management Plan, completed that same year. Today, we are actively engaged with NYC DEP concerning the agency's refinement and implementation of the approaches outlined in its 2010 Green Infrastructure Plan.<sup>1</sup> We welcome this opportunity to engage with the State Senate on the issue of sewer overflows, both in terms of protecting public health in the near term as well as investing in the infrastructure needed to prevent overflows altogether in the long term.

**As the long-term solutions take shape, we see an urgent need for improved public notification of weather-dependent and emergency sewer bypasses that release untreated wastewater into NYC waterways and create a public health hazard for waterfront users citywide. While we are heartened by recent word from NYC DEP that an improved public notification system is in the works, we urge the DEP to consult early and often with the relevant communities who would actually use this system (notably the organized boating, swimming and fishing groups) to ensure that as the system is redesigned, the most relevant information is presented in the clearest way.** The S.W.I.M. Coalition has been active on this issue for many years, and a clearinghouse of our past comments, letters and presentations on the topic can be found on our website at [www.swimmablenyc.info](http://www.swimmablenyc.info).

In the days following the fire and major sewer bypass at the North River WPCP in July of 2011, S.W.I.M. Coalition members observed the existing public notification protocol employed by NYC DEP and DHMH to be inadequate, noting that alerts failed reach the well-organized boating community, who were holding programs in the Hudson River in the early days of the bypass. In addition, S.W.I.M. members observed swimming and fishing in close vicinity to ongoing sewer

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<sup>1</sup> S.W.I.M. comments on the Green Infrastructure Plan, dated 11/12/2010, are available online, [http://swimmablenyc.info/wp-content/uploads/2010/11/SWIMSC\\_GIplan\\_DEC.pdf](http://swimmablenyc.info/wp-content/uploads/2010/11/SWIMSC_GIplan_DEC.pdf)

bypasses on the Hudson and Harlem Rivers.<sup>2</sup>

**The North River WPCP fire and aftermath reveal the City's failure to develop and implement an effective system of public notification for sewer overflows despite requirements at the local, state and federal level to do so.**

Local Law 5 of 2008 requires the City to undertake “a program of public notification to inform the public of the location and occurrence of combined sewer overflow events, which . . . shall include a mechanism to alert potential users of the waterbodies affected by combined sewer overflow events . . . of the estimated nature and duration of conditions that are potentially harmful to users of such waterbodies.”

The same requirements appear in DEP's Clean Water Act permits issued by the State. In other words, the ultimate goal of a CSO public notification program in New York City must be to provide the public with general health information on the effects of CSO discharges and real-time information on when CSOs are impacting their waterbody of interest. **Public notification of routine CSO events will protect New Yorkers during routine wet weather as well as during emergency sewer bypasses such as the North River incident.**

The 2008 Sustainable Stormwater Management Plan sought to meet Local Law 5's requirements for public notification of CSOs through two strategies: improved signage at CSO outfalls, and the creation of an online notification system. In February of this year the goal of improved signage, no small task and certainly a step in the right direction, was ostensibly met, but the online notification system remains deeply flawed. The S.W.I.M. Coalition detailed our concerns with the online system in a letter to DEP in August 2009.<sup>3</sup> Briefly, our most fundamental concern with DEP's new advisory program is that it does not base advisories specifically on the “location and occurrence of CSO events.” Therefore, it will often give a misleading impression that waterways are safe for fishing, swimming, paddling, and other activities in many instances when CSO discharges do occur. These concerns remain, **and proposed improvements to the DEP's online content built upon this flawed foundation do not resolve the public notification system's failings.**

**The current public notification protocol is insufficient in terms of geographic coverage and scientific basis.** Waterfront uses on all 600 miles of NYC waterfront, not just the handful of bathing beaches, require public notification that represents a clear portrayal of what is happening in the water at the shoreline. Near shore monitoring - as most recently demonstrated by Riverkeeper's monitoring of the Hudson during the North River bypass<sup>4</sup> - most accurately captures the severe but localized water quality impairments related to CSO events and dry weather bypasses and should be used (in conjunction with modeling, in advance of receiving lab reports on water quality samples) as the basis for issuing use advisories, not the mid-channel samples DEP relies on.

High-resolution rainfall data correlated with real-time CSO monitoring would ideally be the basis for a predictive notification system. The NYC DEP is in possession of telemetric data from thirty

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<sup>2</sup> Member comments from our July public meeting: <http://swimmablenyc.info/?p=939>

<sup>3</sup> 08.19.09 letter to Anne Canty, NYCDEP re: serious concerns with NYC Waterbody Advisory Program on the website of the Department of Environmental Protection: [http://swimmablenyc.info/wp-content/uploads/2010/12/NYC\\_Waterbody\\_Advisory\\_Program\\_SWIMcomments.pdf](http://swimmablenyc.info/wp-content/uploads/2010/12/NYC_Waterbody_Advisory_Program_SWIMcomments.pdf)

<sup>4</sup> Riverkeepers comparative near-shore and mid channel monitoring is summarized here: <http://swimmablenyc.info/?p=954>

or so of the top-discharging CSO outfalls in the city, as well as WPCP throttling events (when intake at a sewage treatment plant is shut down, and overflows potentially follow in that drainage area). **This existing data could be used today to craft a more direct message of “location and occurrence” of CSO events, an improvement on the “diluted message” of overly interpreted sampling and modeling.**

**Local Law 5 suggests the use of radio, print media, internet, 311, e-mail alerts or similar modes of communication to reach the public.** The S.W.I.M. Coalition has long advocated that in addition to employing a diverse array of communication modes, that the City should communicate directly with boating, fishing and open water swimming communities, who are most in need of this information.<sup>5</sup>

**NYC public notification system should be improved in the following ways:**

- 1. Advisories must apply to all waterfronts citywide, not just to those that affect bathing beaches.**
- 2. Advisories should directly indicate the “location and occurrence” of CSO events, not the effect mid-channel and/or on a 30-day average.**
- 3. Advisories should effectively reach the public using multiple channels such as radio, TV (broadcast meteorologists) and internet.**
- 4. DEP and DOHMH must work with the boating, fishing and open water swimming communities to ensure effective notification for these waterbody users.**

**Multiple examples exist of effective, cost-efficient public notification systems.**

The S.W.I.M. Coalition has identified the following examples of effective public notification programs, with elements that could be applied to the NYC context:

### **1. Metropolitan Water Reclamation District of Greater Chicago**

A color-coded graphic representation of the waterways appears on the web page depicting the occurrence of CSOs and waterway diversions to Lake Michigan. This map is updated on a daily basis seven days per week. Upon occurrence of a CSO in a given waterway segment, the color of the segment shown on the map changes from blue to red. The color of the waterway segment downstream of the segment on which a confirmed CSO has occurred will, by default, also change to red, indicating that the water quality of that segment may be affected as well. The on-line maps of CSOs are updated as the information becomes available and are typically certified the following day. In conjunction with the above maps, a CSO Synopsis Report that provides “start and stop” times for individual CSO discharge points is also available on the website.

<http://www.mwrp.org/irj/portal/anonymous?NavigationTarget=navurl://eec9b2f677d42e0dea742ba5e2b45713>

### **2. Pittsburgh – Allegheny County Sanitary Authority (ALCOSAN) and Allegheny County Dept of Health (ACDH) maintain 44 “Flag Sites”**

This program flies a CSO flag at marinas and river access locations when river contact recreation is illadvised. If the flag is up, river use is constrained. CSO events and awareness on the flag system is reported through local TV, radio and print media. In addition, ALCOSAN maintains a color-coded Sewer Overflow Advisory Key (SOAK), that “grades” current water quality by a visual color key, indicating conditions in terms of appropriate recreational uses and stores a history of water quality alerts online.

<http://www.alcosan.org/WetWeatherIssues/CSOFlagLocations/tabid/101/Default.aspx>

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<sup>5</sup> 06.20.11 letter to NYC DEP and DHMH Commissioners: <http://swimmablenyc.info/?p=870>

### **3. Three Rivers Wet Weather Demonstration Project (3RWW) Calibrated Radar Rainfall Data**

Beginning in 2001, 3RWW operates and maintains 33 rain gauges throughout Allegheny County, which collect actual rainfall during wet weather events. The primary radar source used for the County is the National Weather Service (KPBZ) NEXRAD radar, located in Moon Township. NEXRAD is the rainfall radar usually seen on TV. The radar data gathered during a wet weather event is calibrated with the rain gauge data collected during the same time period for every one square kilometer in Allegheny County. Communities in the ALCOSAN service area need accurate rainfall data to analyze and design cost-effective sewer rehabilitation projects and long-term sewer maintenance plans. Through this calibrated system, high-quality rainfall data is available online about two weeks after the end of each month. In 2002, 3RWW expanded the system to cover all 130 Allegheny County municipalities and to provide realtime rainfall data, which is critical for optimizing the operation of wet weather treatment and storage facilities. [http://web.3riverswetweather.org/trp:Main.overview\\_jump\\_html;trp;](http://web.3riverswetweather.org/trp:Main.overview_jump_html;trp;)

### **4. Philadelphia RiverCast**

This web-based system offers a forecast of water quality that predicts potential levels of pathogens in the Schuylkill River between Flat Rock Dam and Fairmount Dam in Philadelphia. RiverCast Water Quality Designations are based upon historical relationships between water quality, stream flow, and rainfall data, and on the United States Environmental Protection Agency's "Implementation Guidance for Ambient Water Quality Criteria for Bacteria" (USEPA, 2002). This document identifies the maximum level of bacteria measured in a single sample that would be within acceptable illness levels for recreational activities that may involve complete immersion in the water. The conditions and Water Quality Designations defined by the historical data were tested on a set of recent data (2004 to 2005) to assess the accuracy of the relationships and the RiverCast predictions. This testing showed that the RiverCast relationships are very conservative. 65% the time the RiverCast prediction was accurate. 35% of the time the prediction was conservative (higher bacteria levels were predicted than measured). There were no examples of predicted levels lower than the measured levels. [http://www.phillyrivercast.org/Nav\\_howcreated.aspx](http://www.phillyrivercast.org/Nav_howcreated.aspx)

Thank you for the opportunity to provide these comments.

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