Balancing Bathers and Bacteria: Managing recreation, wet-weather flows and the legacy of a combined sewer system in the Nation's Capitol.

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The District of Columbia, like many older U. S. cities, is serviced by a combined sewer system. Designed and built in the 1890's, the urban core of the system drains approximately one-third of the District's land area, and the federal, commercial and residential sewage generated in that area. In an average year, combined sewer overflow (CSO) events occur approximately seventy five (75) times, discharging over 3 billion gallons of untreated combined sewer effluent and stormwater during rain events into District waters from the sixty (60) NPDES permitted outfalls.

The Draft Long Term Control Plan (LTCP) for CSOs proposes to reduce by a very large percentage both the frequency and volume of overflows occurring in District waters. Yet, in striving to balance economic realities, engineering constraints, and climatological uncertainties, the proposed plan will not meet existing water quality standards all of the time. The plan instead proposes to modify water quality standards so that the standards can be met or relaxed during wet-weather events. Proponents of the plan claim that changing the water quality standards is essential to both EPA approval of the LTCP, and necessary to garner public support for a plan that will, at some level, depend on rate payer contributions and rate increases to fund an approximately $1 billion implementation cost.

The environmental community has not surprisingly, balked at this, and responded with a resounding cry of "Rollback!" The Nation's Capitol should be a roll model for urban watershed restoration and recreation, including fishing, boating, and swimming should be enjoyed by all, particularly those residing and recreating in the Anacostia River and surrounding neighborhoods. At the turn of the century, there were several known swimming "holes" and public beaches, in both the Potomac and Rock Creek, as well as in the tidal basin and channel near the confluence of the Anacostia. Now, and in contrast to other urban areas such as Baltimore and Annapolis, which do there is no natural water body in Washington, DC where it is a) safe enough, and b) legal to swim. Indeed, swimming has been banned from all of the District waters since the 1970's.

There are several sections of the District's water quality standards that are relevant to the central issue of sewage, bacteria and recreation. All of the waters of the District of Columbia are classified for *designated uses* of Class A waters, fit for primary contact recreation. However, currently none of those waters are classified for *current uses* for Class A standards. The CSO dilemma centers around two key provisions: a narrative standard and a numeric criteria. The narrative standard (1104.3) states that "Class A waters shall be free of *discharges of untreated sewage*,(emphasis added) litter and unmarked, submerged or partially submerged, man-made structures which would constitute a hazard to the users." The related numeric criteria (section 1104.6 Table 1) sets a maximum bacteriological standard for Fecal Coliform of 200/100 mL (as a 30 day geometric mean for five samples).

Without the narrative standard, the numeric criteria alone as written provides inadequate protection of public health. Without a single-sample maximum, recreational users are not protected from acute exposure, which is the only kind of exposure one would have, were an individual splashed, submerged or overturned. Bacteria levels are currently typically several orders of magnitude above the standard, especially during wet-weather flows when bacteria levels reach thousands of times above the limit.

The LTCP proponents favor amending the narrative standard to allow some provision in which to discharge untreated sewage during and after wet weather. Indeed, some including officials in EPA believe this narrative standard is unrealistic, and claim it is oddly unique to the District. A CSO system, by design, is engineered to overflow during rain events. But despite the swimming ban, and the current uses recognized by the regulatory

body, the DC Department of Health, the reality is that primary contact recreation, and other activities that pose high risk of exposure to bacteria contamination, including fishing, wading, rowing, kayaking, and swimming, do occur in or on the major water bodies in DC, regardless of the weather. (Primary contact recreation is defined as "those water sports or activities which result in frequent whole body immersion and/or involve significant risks of ingestion of the water.") Kayaking is primary contact recreation which occurs on the Anacostia and the Potomac Rivers in the District. Boat houses, yacht clubs and subsistence fishing occur in close proximity to major CSO outfalls, and recreation is not wet-weather dependent.

What is most troubling perhaps, is the timeline, process and timeframe by which the DC Department of Health (DOH) sought to achieve the attempted "rollback". Piggy-backing off of, and in contrast to, a summer of weekly and monthly public meetings for the LTPC information process, the standards changes promulgated by DOH were done quietly, fast-tracked, with minimal pubic notice or participation. No outreach was done to the affected stakeholders, recreational rowers, boat houses, marinas, or nearby communities, particularly not to the residents of the Anacostia River whose youngsters often play on the banks and along the tidal flats of the river, downstream of outfall #019, the single-largest point source for CSO discharges.

As part of the current development proposal and planning process for the Anacostia Waterfront Initiative, there is much focus on trails, waterfront property, and access, but the charettes are devoid of any talk of swimming. This is in part because no one can fathom swimming in the Anacostia, given its contamination, especially the psychological toxins of garbage and cloudy suspended sediments that allude to the more dangerous and less visible toxins of untreated sewage, bacteria, toxics and metals.

But any change in standards where the "Director may remove a designated use, establish a partial use, or establish sub-categories of a use … if a use attainability analysis can demonstrate the designated use is not feasible because: (f) Controls more stringent than those required… would result in substantial and widespread economic and social impact" ***must*** consider a broad and balanced stakeholder assessment of social and economic impacts. This, were it to be done, could in all likelihood show that cleaning up the District's water bodies to fulfill the Class A standard and the vision for fishable, swimmable waters, would bring net social and economic gains to the affected communities. The "substantial and widespread social and economic impact" was the only argument advanced by the LTCP proponents, however, no attempt has been done to date to analyze these impacts.

A well-intentioned and balanced use attainability analysis should engage and address the recreational needs, desires and visions of the local community. It should consider the limits of technology with the realities of recreation, which, in the context of wet-weather high flows and elevated bacteria levels, do not necessarily consider the weather report.

Rowers and fishermen regularly face the rain for their routine morning practice and their precious days off. Moreover, who gives a second thought to *yesterday's* weather, when its sunny out today? And if the Anacostia River takes two to four months to cleanse itself of a single CSO event?

Water quality standards revision must ensure protection of the public health and protection of any use "actually attained in the surface water segment or body on or after November 28, 1975." Water quality standards should be reevaluated only ***after*** a comprehensive long term control plan has been designed, approved and ***implemented***. Provisions should be made to monitor progress and upgrade the plan as necessary. Any remaining discharge of combined sewer overflow should received a minimum level of treatment. Short-term measures should include the institution of a single-sample maximum numeric standard, real-time water quality monitoring and public notification analogous to the now common-place hazardous air quality ozone alerts.