

April 30, 2014

Christopher Doroski
Center for Environmental Health
Bureau of Environmental Exposure Investigation
NYS Department of Health
Empire State Plaza-Corning Tower, Room 1717
Albany, New York 12237

Re: NYS Department of Health's Draft Public Health Assessment of the Gowanus Canal

Mr. Doroski,

On Tuesday, March 25, 2014, you gave a presentation on behalf of the NYS Department of Health ("State DOH") to the Gowanus Canal Community Advisory Group ("CAG") on the Draft Public Health Assessment for the Gowanus Canal. The CAG would like to thank you for your time, and for the opportunity to submit comments for State DOH review prior to issuance of the Final Public Health Assessment ("draft PHA") for the Gowanus.

The mission of the Gowanus CAG is to be a forum for dialogue between representatives of all segments of the community about the federal Superfund clean-up of the Gowanus Canal and other related issues of concern to the community. In carrying out that role, the CAG's Water Quality Committee tries to identify the community's goals for improving the water quality in the canal and to develop and implement strategies, such as education, advocacy, research, reclassification, and other measures, to achieve those goals. Gathering information, voicing concerns, and communicating risks to the public are central tenets of this work.

As such, on behalf of the community, the public at large, and the Canal, please consider the comments, questions, and suggestions below regarding the State DOH draft Public Health Assessment of the Gowanus Canal.

Summary of State DOH PHA Conclusions

According to materials provided in person and online, the State DOH used existing data for chemicals in surface water, sediment, outdoor air and fish and biological contaminants in surface water for the Gowanus Canal assessment.¹ Additional samples collected in 2012 were also included in the assessment. The DOH then examined this data through the lens of human use – based on "reports that some city residents use the Gowanus Canal for canoeing, scuba diving, and swimming, and some catch and eat fish and crabs from the canal." Overall, the health assessment, on the community fact sheet released with the draft PHA, concludes that:

- Eating fish and crabs taken from the Gowanus Canal could harm people's health, due to chemical contaminants in the fish. *Women under 50 years old and children under 15 years old should not eat any fish or crabs from these waters.* [Men over 15 and Women

¹ <https://www.health.ny.gov/environmental/investigations/gowanus/>

over 50 should follow the general guidelines for consumption of fish caught throughout the City's upper bay, rivers and kills].

- Swimming and scuba diving (full body immersion activities) could harm people's health due to chemical, biological and physical hazards (underwater debris and commercial boat traffic).
- Canoeing, kayaking, boat touring and "catch and release" fishing are not expected to harm people's health, although there may be some physical hazards, such as large commercial boat traffic.
- Contact with chemicals in accessible sediments is a potential health concern for swimmers, as well as others, who might contact the sediments during fishing, boating or wading.

In the presentation given to the Gowanus CAG, the State DOH announced that these conclusions had led to 4 official recommendations. First, that "all activities such as swimming or scuba diving should be avoided due to the overwhelming presence of biological organisms present in the canal." Second, that boaters should observe "best safety and navigational practices." Third, anglers should follow recommendations from the standard "Fish Advisory Information" pamphlet. Fourth, when people use public access points, they "should attempt to avoid" contacting sediment.

Overall, the State DOH recommended to the CAG that the best course of action for the public would be to use personal judgment with regard to recreational use of the canal. Despite the fact that bacterial contamination and chemical contamination were literally found throughout the Canal at levels higher than nearby City waterways, the DOH is only advising that the Canal be subject to the same generic fish advisories as the rest of the upper bay, rivers, and kills.

Reviewing PHA Conclusions & Unanswered Questions from the Gowanus CAG

Analysis of draft PHA Conclusions

In the draft PHA, the State DOH makes a series of conclusions – each of which raises significant questions. Below, please find point-by-point comments for each.

Conclusion 1: "DOH and ATSDR conclude that full body immersion recreation (e.g., swimming, scuba diving) in the Gowanus Canal could harm people's health." (page 1)

According to the draft PHA, the basis for this conclusion is threefold. First, there are physical hazards (e.g., commercial boat traffic and high bulkheads) which "may make it difficult to get out of the canal when necessary for safety." Second, the waters of the Canal "periodically contains" levels of bacteria, microorganisms, viruses and parasites, that can make a person sick if swallowed or if there is skin exposure. Third, 8% of water samples taken in two studies, and many sediment samples, had chemical and lead levels high enough to pose serious risks to people after long-term exposure.

From the community's perspective, it is hard to imagine that the State DOH can catalog such concerning dangers (parasites, lead, viruses, a plethora of hidden physical hazards) and yet

still only conclude that “full body immersion...could harm people’s health.” As discussed below, the CAG requests that the final PHA be much more specific as to where, when, and to what extent these “periodic” pathways to increased risks happen. The draft PHA notes that most of the evidence points to the middle reach, but the entire basis for this assessment rests on one set of data from one day of sampling in 2007, and another from two days of sampling in 2010, and, as far as we can tell, at most three site visits by actual DOH personnel.

This section reads as if the DOH is warning people that there are dangers everywhere – some things which can be seen, others which cannot – so be careful. In one case, the draft PHA actually notes that “Lead in some of the sediment locations could increase a child's blood lead level if a child frequently contacts sediments in these high lead locations.” To conclude that the data points to there being lead poisoning risks to children – without specifying **where along the canal that risk is, when the DOH first learned of this risk, how much exposure to sediments is too much exposure, or how to avoid exposure**, is, in short, unacceptable.

For the dozens of other pathogens, metals, chemicals and navigational hazards, the draft PHA is similarly silent, nonspecific, and vague. The CAG recommends that the State DOH make the warnings in the PHA conclusions much more clear, and that geographically these physical, biological, and chemical risks be more precisely mapped out.

Conclusion 2: *“DOH and ATSDR conclude that recreational boating (for example, canoeing or kayaking) or “catch and release” fishing from a boat in the Gowanus Canal is not expected to harm people's health, although there may be some physical hazards, such as large commercial boat traffic. However, certain precautions are recommended because accidental swallowing and skin contact with the water when boating or fishing in some areas of the canal would lead to increased exposure to chemical and biological contaminants, and these are discussed under general recommendations below.”* (page 2).

The basis for this conclusion, noted in the draft PHA, was the same as conclusion #1: the physical, biological, and chemical hazards generally found throughout the canal. The CAG continues to be concerned that these risks are not communicated geographically or temporally – and again suggests that this be remedied in the final PHA.

Additionally, the CAG suggests that the State DOH develop an actual standard (if it doesn’t have one already) for how much less of a risk there is for boaters compared to swimmers. Unacceptably, the draft PHA simply states that *“Because people do not usually submerge their heads during these activities, the presumed volume of incidental water consumption is lower than when swimming. Consequently, the risk of illness can also be assumed to be lower.”* These assumptions, relied upon without explanation, could be putting people at risk. The CAG urges the State DOH to be more specific than it is in this draft. Answers to questions like “to what extent is boating less of a risk than swimming?”; “is boating less risky than swimming throughout the canal?”; “what volume of water ‘incidentally swallowed’ is too much water to incidentally swallow?”; or “what amount of long-term exposure for boaters or other less-than-immersion users of the canal equates to the risks associated with swimming?” should be included in the final PHA. Anything short of such specificity endangers the public.

Conclusion 3: *“The DOH and ATSDR conclude that if people don’t follow DOH’s fish consumption advisories, and eat more fish and crabs from the Gowanus Canal than recommended, their risk for adverse health effects will increase and their health could be harmed.”* (page 2).

According to the State DOH, the basis for this conclusion was that, *“[b]ased on the close association of the Upper Bay of New York Harbor and the Gowanus Canal, contaminant levels in fish and crabs from the waters probably are similar.”* Thus, according to the draft PHA, the advisories in place for the rest of the inner waters of New York City apply to the Canal.

First and foremost, the CAG is concerned that the DOH is saying that fish, crabs, and critters captured in the Gowanus Canal are no more dangerous to eat than if they were captured out in the upper bay, or Hudson River, for example. This conclusion literally comes on the heels of conclusions and statements about the numerous biological and chemical dangers that the Canal presents to people who may simply get water on their skin. For animals that could conceivably spend most of their lives in the Canal, one can assume that there is a much greater risk for contamination.

Second, the CAG is concerned that these conclusions are based on two weeks of sampling from the middle of summer in 2010. Fish and shellfish migrate, stocks ebb and flow, fishing pressure can be higher in winter, spring and fall, or none of this could be true. Basically, there is nothing in this PHA that shows whether or not one two-week sample of fish and shellfish (from an undisclosed number of places) is sufficient to determine risk. It appears to the CAG that the State DOH chose the path of least complexity, when it is clear from all evidence presented that pollution in the Gowanus Canal Superfund site is of an entirely different caliber than the pollution in the rest of the Upper Bay, rivers, and kills around the City.

Third, and most importantly, the CAG is deeply concerned with the lackluster review of this narrow sampling of fish and shellfish. In the draft PHA, the DOH issued a four-part conclusion based on its review of data on contaminants in fish and crabs collected in 2010 from the Gowanus Canal and adjacent waters of the Upper Bay of New York Harbor. The conclusion reads as follows:

- *“PCBs are the predominant contaminant of concern in Gowanus Canal fish and crabs;*
- *due to the limited number of species and samples analyzed, the available data are inadequate to establish whether fish and crabs caught in the Gowanus Canal have higher PCB levels than those caught in adjacent waters of the Upper Bay of New York Harbor;*
- *the relative differences in PCB levels between fish and crabs from the Gowanus Canal and Upper Bay of New York Harbor reference locations are small, so that the differences may not be meaningful for risk assessment/fish advisory purposes; and,*
- *the current DOH advisories for the Gowanus Canal are still appropriate.”*

To paraphrase, the State DOH is saying that, even though there wasn’t a broad enough sample size to make any meaningful distinctions in risk associated with eating Gowanus Canal fish and crabs versus Upper Bay fish and crabs, the agency concludes that there is no difference, and that the generic warnings applicable to all interior City waterways are fine. This is unacceptable. If

there were insufficient samples taken, the DOH should have demanded more; if there were too few species analyzed, the DOH should have asked researchers to broaden their scope; if this was done without DOH involvement and the DOH cannot do more research, then the **DOH should not issue baseless findings and hazardous recommendations**. The CAG requests that the DOH conduct a meaningful, scientific assessment of the risks associated with fish and crab consumption from the Canal.

In sum, for the final PHA, the CAG recommends that the DOH reassess fish consumption issues, even if this requires new sampling beyond the two weeks of data from June, 2010. DOH should develop and distribute Gowanus-specific advisories, even if this requires more sampling.

Conclusion 4: *“DOH and ATSDR conclude that breathing contaminants from the Gowanus Canal in outdoor air near the canal is not expected to harm people's health.”* (page 4).

Please see comments below on airshed impacts.

Outstanding CAG Questions

In March, at the Gowanus CAG meeting where the State DOH presented the draft PHA, members of the CAG and the greater community raised numerous questions about the assessment. The State DOH representative in attendance gave cursory and seemingly off-the-cuff answers to many of these questions. In an effort to obtain clearer and more complete answers, the CAG hereby submits the following questions for official DOH response (questions adapted from official CAG meeting notes).

1. For community cleanup days, how should we advise the community as to their risk – given the lack of specificity as to how much exposure may be too much exposure? The DOH responded that, to paraphrase, “best judgment should be used.” The CAG requests more specificity from the DOH for community event safety advisories.
2. Why is the language of the PHA so mild, given the dire warnings of the risks – from lead poisoning to cancer – that could result just from wading through canal water, let alone eating fish or swimming in the Canal?
3. What led to other DOH advisories where blanket “do not eat” advisories for fish were issued, especially compared to the specific data obtained in Gowanus fish tests?
4. What is the process for the community giving data, input, or evidence to the DOH for its ongoing review of the PHA?
5. What, specifically, restricts the DOH’s ability to study air, water, or soil health risks beyond the “bulkhead to bulkhead” limitations of this draft PHA?
6. The CAG raised concerns that too few signs (if any at all) were advising the community of the known health risks of the Canal. The DOH noted that “signs that are put up tend to go missing.” This, to the CAG, is an unacceptable answer. What programs, plans, and/or policies is DOH considering to ensure that signs do not go missing or to ensure that the public is made aware of the risks? There are many signs put up in New York City, surely there is a way to make sure they stay posted.

7. How will the public be notified of the findings in the final PHA? We have heard that media, websites, and pamphlets will be used; the CAG is asking where, specifically, this information will be disseminated (e.g., what are the websites, which newspapers will have ads (and when), and where – or at what events – will DOH staff be out, in person, relaying health risks to the public).
8. Do remediation activities risk worsening the health risks associated with any of the uses of the Canal (e.g., will future dredging impact air quality?), and how does the DOH plan on updating the PHA accordingly?

Improvements Requested for Final PHA

On behalf of the members of the Gowanus Canal CAG and the greater Gowanus Canal community, in addition to the suggestions above, we urge DOH to improve upon its draft public health assessment as follows:

More Narrowly Tailor Use Advisories

More specificity is requested for advisories, risks, and use – either using existing data or with the development of more comprehensive datasets. The DOH had split the Canal into three zones for the purposes of its PHA analysis, but none of those differences were communicated in the conclusions or recommendations. For example, in Table 1 of the PHA, the DOH notes that Toluene was detected in over 100 samples – around two dozen in each of the lower reach and the upper reach, and in over 80 samples in the middle reach. Similarly, Benzene was found in 9 samples in the lower reach, 79 in the middle reach, and 23 samples of the upper reach. Given the dangers posed by these chemicals, clear geographic variation in the levels detected, and considering that the goal of PHA is to “ensure that community around the Gowanus Canal has the best information possible about how contaminants in the canal might affect their health,” the final PHA should make every effort to map out health risks as specifically as possible.

Furthermore, advisories throughout the draft PHA use broad, non-specific warnings. In one case, the DOH notes that chemicals in the surface water at about 8% of the sample sites present health concerns to swimmers if they are “exposed repeatedly over a long period of time (for example, 30 years) at those specific locations.” Beyond the point raised immediately above (that there are no specifics as to where those “specific” locations are – beyond their being mainly in the middle reach), the characterization of risk is so unclear that it is almost useless to the general public, and is far from the “best information possible.” If someone is swimming once over 31 years, would they be safe? Conversely, what if they repeat that one swim, such that they have swam repeatedly in those 31 years – are they now at risk? If someone swims every day for two months, are they not at risk, as they would have to – in the words of the DOH presenter – “spend literally their entire life in the water”? Do these warnings and advisories hold true for all of the chemicals, pathogens, and other substances of concern found in the canal during the two sampling series that this PHA is based on?

All of the recommendations and conclusions are similarly nonspecific. Boating, *generally*, is not expected to harm people’s health; air quality is *generally* the same as one other

EPA study; if fishing with release, contact with fish *could* increase exposure to contaminants; swimming in the canal *could* harm people's health. These are all entirely too nonspecific.

If the canal is broadly toxic so that the State DOH cannot tell whether any discrete sections are more (or less) dangerous for swimming, or for lead poisoning, or for catch-and-release fishing, then the DOH should either (1) conduct more studies to pinpoint where the more risky places are (to ensure that the community has that best information possible) and to determine precisely how much exposure results in potential risk (avoiding phrases like “repeated over 30 years), or (2) be much more explicitly clear that the entire canal presents a level of background risk for all activities and, as such, use of the canal is (not could be) a public health risk. Anything short of this is unacceptably vague.

Air Pollution

First, more sampling should be required before the DOH concludes that ambient air quality is not being affected by the canal (as noted in the DOH presentation to the CAG), or that there is nothing to worry about when breathing air around the canal. According to the PHA, the air quality samples used to form the basis of these conclusions were taken on two days, at an undefined “several” locations, at least 3 years ago. There is no way for the public to tell where these were taken, whether other areas of the canal might have higher levels of airborne contamination, or even if there was sampling bias in the methods used. In short, more work must be done.

Second, the PHA itself notes that breathing on or near the canal is one of the potential pathways for exposure by contaminants in the canal – chemical or biological. Yet, in the assessment, only airborne contamination from chemicals was studied. More attention should be paid in the final PHA to airborne contamination from pathogens.

Third, in the draft PHA section on “Public Health Implications” the DOH notes that the “levels of benzene, chloroform, ethyl benzene and methylene chloride detected in air at the canal or street level are within the range of values for outdoor air from EPA’s RIOPA study.” This other study (RIOPA) tested air quality in three U.S. cities. For other contaminants, the DOH also found they were within the range of other studies. The DOH continues, noting that, based on this data, “the health risks from long-term exposure to these chemicals in air near the canal (at street or canal level) are expected to be similar to those associated with their concentrations in typical urban air.”

To the CAG, these conclusions do nothing but show that the air around Gowanus has chemicals in the air that, unfortunately, other cities have as well. There is nothing in this assessment that examines whether that is a dangerous *status quo*, or what people should do to avoid exposure (like was attempted for swimmers, boaters, and waders). Additionally, it is erroneous to say that the risks are similar to risks in “typical urban air” – the studies cited only examined air in three other cities, none of which were New York City. On top of this, in materials from the DOH presentation to the CAG in March, 2014, the State noted that “ambient air quality is not being effected [sic] by chemicals volatizing from the canal.” Phrases like “not

being effected [sic]” and “typical urban air” gloss over the actual, concrete, local, and location-specific risks people face, whether those are on par with other cities or not.

Essentially, this assessment of the public health risks in the air does not (1) address pathogens in the air, (2) analyze the increased risk New Yorkers face when breathing in the Gowanus versus breathing in other parts of the City, or (3) rest on data collected over a wide variety of conditions, days, or locations. Therefore, the CAG requests the DOH conduct more research and provide a more thorough analysis of the public health risks (as opposed to a cursory comparative look at other airsheds).

Next Steps

At the March 25, 2014, CAG meeting, the State DOH discussed its future plans for public health assessments and advisories. These plans were (1) to continue to evaluate health risks as new data becomes available, (2) to evaluate and revise fish advisories as new data becomes available, and (3) work with “all stakeholders to aid in the evaluation of all upland and nonpoint source pollution effecting [sic] the canal.” In the discussion about these plans, the DOH mentioned that citizen-collected data and samples would not be accepted as “new data” that is used in ongoing review of public health risks on the Gowanus. The State DOH added that it did not have a plan or a schedule for updating the PHA or the data it is based on. Respectfully, the Gowanus CAG requests that:

1. The State DOH develop a timeframe for future data collection, assessments, and updates to advisories that coincide with the remediation of the Canal; the CAG, stakeholders, PRPs, and the public have been working hard to generate long-term sustainable improvements to the Canal, and the State DOH should have a plan for being there alongside the community as the Canal improves;
2. The State DOH publicly announced its willingness to accept environmental, biological, or toxicological data from the community and the CAG. If the State needs such data to be collected using certain methods, labs, or standards, we ask that the State DOH also work with the community and CAG to ensure that those standards are clearly articulated; and
3. The State DOH make recommendations to other agencies, such as New York City DEP, the EPA, and the PRPs as to sampling regimens, locations, and standards that are needed to ensure that the community has the best, most thorough information on public health risks possible.

Thank you for this opportunity to comment on the draft PHA. We look forward to receiving the State DOH response.

Sincerely,

Gowanus Canal CAG

cc: NYC DEP, NYS DEC, EPA Region 2