

FROM	NAME & TITLE	Rudolph S. Chow, P.E. Director	CITY of BALTIMORE <i>MEMO</i>	
	AGENCY NAME & ADDRESS	Department of Public Works 600 Abel Wolman Municipal Building		
	SUBJECT	City Council Resolution 19-0159R		

November 8, 2019

TO:

Land Use Committee

INTRODUCTION

I am herein reporting on City Council Resolution 19-0159R introduced by Council Member Burnett, President Scott, Council Members Cohen, McCray, Dorsey, Henry, Middleton, Pinkett, Bullock, Costello, Clarke, Reisinger, Sneed, and Stokes.

PURPOSE

The purpose of the Resolution is to invite representatives from the Departments of Public Works, Law, Health, Office of Information and Technology, and the Mayor's Office of Emergency Management to discuss the effectiveness and sufficiency of measures being taken to address basement backups of raw sewage in the City.

BRIEF HISTORY

Baltimore was one of the first cities to enter into a consent decree with State and federal regulators in 2002, which was to be completed within a 14-year span (by 2016). The City had just completed a study of its aging sewage collection system, consisting of 1,400 miles of pipes, approximately 71% of which is over 50 years old. Many of the recommendations included in that study were incorporated into the consent decree. Although the City's sewer system is separate from the stormwater system, wet weather can increase amounts of rainwater and groundwater that enter the sewer system through cracks or loose junctions, in addition to inflow from illegal connections into the sewer system. This extra flow can exceed the capacity of the sewers, causing overflows and backups. The intent of the consent decree is to reduce the frequency and volume of sanitary sewer overflows (SSOs) reaching waterways, a violation of the federal Clean Water Act. Subsequent consent decree communities were given 25 years or more to complete their mandates.

In addition to having to close old structured overflows¹, the consent decree required the City to evaluate each of its sewersheds² and develop a hydraulic model to examine flows and test capacities of pipes and sewershed systems, including using actual rainfall data as part of the model. A list of projects to be completed by 2016 to reduce SSOs included cleaning and lining sewer pipes, repairing

¹ A structured overflow is an antiquated method engineered to provide relief to a sewer pipe overcome by heavy flows of sewage and extraneous water during rain storms by releasing the flow to an adjacent waterbody. These structures were designed and installed long before the passage of the Clean Water Act.

² A sewershed is composed of sanitary sewer pipes which act much like a watershed, with smaller collection pipes draining to larger interceptor pipes. While connected to and part of the entire system, sewersheds can be analyzed independently of the larger system.

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leaks and cracks in pipes and manhole structures, repairing and replacing pipes, and closing 60 of the 62 overflow structures listed in the consent decree. One of the inhibitors to meeting the 2016 consent decree deadline was the discovery of a hydraulic restriction at the Back River Wastewater Treatment Plant. This almost 10-mile hydraulic restriction prevented the closure of the last two structured overflows and required construction of a more than \$400 million project at the Back River plant. The project will be completed by the end of 2020.

MODIFIED CONSENT DECREE AND EXPEDITED REIMBURSEMENT PROGRAM

Under the modified consent decree, a three-year pilot program was included, called the Expedited Reimbursement Program. The program was designed to provide rapid reimbursement to homeowners or tenants for verified disinfection or cleanup costs from basement backups caused by wet weather events that surcharge the public portion of the sewer system, thus backing up flow into a private line. A maximum of \$2,500/dwelling is available, and an annual ceiling of \$2 million is to be set aside for the program. Affected residents are asked to call 311 within 24 hours of the event so that inspectors can verify the surcharging of the public system. An application is required to be filled out to enumerate the costs requested for reimbursement. This program is separate from the City's existing General Liability Claims Process administered by the Department of Law.

Data regarding the Expedited Reimbursement Program has been published in the 7th Quarterly Report. The subject report can be found here: <https://publicworks.baltimorecity.gov/reports> At the time the Quarterly Report was published, the Department had received 74 applications and reached 72 final determinations. 31 of the 72 (43%) applications were denied for procedural issues. Of the 41 applications that received a determination on the merits, 10 (24%) were approved. The 31 denials (43%) were made because the documentation indicated that the basement backups were the result of maintenance issues, and not capacity issues.

AGENCY/DEPARTMENT POSITION

The Department of Public Works will attend the hearing on this resolution to provide more detailed information and to answer any questions the Council Committee may have on City Council Resolution 19-0159R. Specific questions provided to the Department by the lead sponsor prior to the hearing have been answered in brief and are attached to this bill response. Should the Committee have any additional questions prior to the hearing, please do not hesitate to contact Ms. Marcia Collins at 410-396-1960, or via email at Marcia.Collins@baltimorecity.gov.



Rudolph S. Chow, P.E.
Director

RSC:MMC

Attachment

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**DEPARTMENT OF PUBLIC WORKS
ATTACHMENT
CITY COUNCIL RESOLUTION 19-0159R**

What do you, Director Chow, view as the role of the Baltimore City government with respect to Baltimore residents who have experienced sewage backups in their homes?

Basement backups can be caused by a number of different issues on both the public and private side. These causes include tree roots which enter pipes through cracks and other damaged areas along the pipe; the improper disposal of “flushable” wipes and fats, oils, and grease that accumulate in the system and cause chokes; as well as pipe capacity issues. The City’s primary responsibility is to maintain, remediate, or upgrade the City’s system to limit the occurrence of basement backups, as well as educate the public on proper disposal methods for certain substances and products that should not be flushed. To the extent that basement backups occur in the interim, where the City is found to be negligent in the operation of its sanitary sewer system, it should be obligated to pay for any damages caused to a home as a result of the backup. That would include payments under the expedited reimbursement program where we can verify that it was caused by a capacity-related issue, and payments of compensable damages under the general liability claims process administered by the Baltimore City Department of Law.

How is DPW advertising the expedited reimbursement program currently?

DPW has provided notice of the program in water bills, on its website, through community meetings, and maintenance workers are providing a Basement Backup Guide to residents that call 311 to notify the City of a basement backup. The Basement Backup Guide provides information regarding the Expedited Reimbursement Program as well as the general liability claims process administered by the Baltimore City Law Department.

The Modified Consent Decree states that “the Pilot Program shall have annual funding for reimbursement of costs of at least \$2 million.” Quarterly Report No. 7 documents that less than \$15,000 has been paid out to residents since the reimbursement program started. What happened to the other \$1,985,000 set aside each year for the reimbursement program?

DPW keeps the money in a separate account and will deposit more money annually to ensure that it has \$2 million at the beginning of the year.

As you know, the Consent Decree prohibits the City from counting the costs of administering the reimbursement program against the \$2 million funding requirement. Is \$2 million being allocated to the program every year and accumulating in the fund, or are these funds being repurposed?

Please refer to the answer to the prior question.

Is the burden of proof on a resident to prove that a backup was caused by surcharging, or is the burden on the City to prove that a backup was *not* caused by surcharging?

The Modified Consent Decree provides:

The Pilot Program shall only provide reimbursement for the reasonable costs of clean up and disinfection of interior spaces that is necessary as a result of *verified* Capacity-Related Building Backups.

In verifying that backups are the result of capacity-related issues, staff reviews service requests, work orders, rain data, and other relevant data including past issues in the area and where possible, the City's hydraulic model, to determine if the backup was more likely than not the result of a capacity related issue. Staff spends a significant amount of time to try to prove a backup was the result of capacity-related surcharging. When possible, we have disregarded an applicant's failure to provide notice, if we have found that a neighbor did experience an event was the result of surcharging. In addition, we have also reviewed older cases if we are able to secure more accurate rainfall data.

Many applications to the Expedited Reimbursement Program were denied because DPW determined they were caused by blockages, even when they occurred during a rainstorm. Is there a threshold for the size of blockages and where they're found in order for you to define an event as "not caused by surcharging"?

As noted, the program is designed to reimburse residents when we can verify that the basement backup was caused by capacity-related surcharging. There seems to be a misunderstanding as to how investigators diagnose these problems. If a pipe segment is surcharging, the pipe will be filled in the downstream segments of the pipes and manholes will also show surcharging conditions. The water in these manholes will exhibit a spinning funnel as the water is flowing. A partial choke, however, would be indicated by water flowing more freely in a downstream manhole. This is how staff can identify the location of the choke and know where to clean. If the pipe is truly surcharging, there is no way to add a jetter hose to break a choke and allow the sewage to flow freely.

This is why it is so important to call 311 so we can make a contemporaneous inspection of the system. If we do not have that inspection, we do our best to rely on other data such as prior incidents of basement backups, our hydraulic model, or investigations performed by our Office of Asset Management to determine if the backup was more than likely caused by capacity-related surcharging.

Has DPW ever investigated the possibility of providing direct cleanup assistance to residents who experience backups via contractor paid by the City in the way that some other cities, including Cincinnati, Ohio, provide this service? What are your thoughts on the feasibility of providing such a service in Baltimore?

There are a number of issues with this approach. First, we would still need to analyze the cause of the backup so that the City is not expending ratepayer money to remediate conditions caused by a private-side or other non-capacity issue. That analysis may take time depending on the complexity of the case. It is unfair and unreasonable to ask a resident to wait for the cleanup to occur. Moreover, you are inviting liability issues by having City agents enter a home. In addition, the resident has more control of the process if they are the one contracting with the cleaning company, and we provide reimbursement.

Has the City analyzed the effects of increasing precipitation caused by climate change on the sanitary sewer system and the frequency of basement backups in the future?

Yes. Our hydraulic model takes into account actual storm events as opposed to design storms, and climate change will be further considered as part of the recalibration before we address our Phase II projects.

Do you have a plan for addressing basement backups in [the parts of the City that are served by Patapsco WWTP, as opposed to Back River WWTP]?

Yes. When the City and the regulators modified the Consent Decree, we did not merely extend the time frame for compliance but established a more robust strategy to rehabilitate the City's sanitary sewer

system. The work required under the Modified Consent Decree is broken down into two phases. The first phase is largely composed of projects designed to reduce inflow and infiltration of stormwater and groundwater into the sewer system and the Headworks project that will eliminate the hydraulic restriction leading to the Back River WWTP. These projects will be completed by January 1, 2021. As alluded to previously, once these projects are completed, DPW will analyze the effects of these projects on the system using our hydraulic model. DPW will then identify areas within the City that are capacity-limited, and we will design Phase II projects that will ensure that the system is constructed to meet a 5-year level of protection City-wide, and a 10-year level of protection for specified sensitive areas within the City. Thus, the Phase II projects will address any capacity issues in Patapsco WWTP service area that are leading to frequent basement backups.

If a claim is denied through the Expedited Reimbursement Program due to a blockage in the mainline of the sewer system, would the claim be eligible for reimbursement through the City's Office of Legal and Regulatory Affairs? Are residents advised that they can & should apply to reimbursement in this way when claims are denied due to blockages in the mainline of the system?

To clarify, the Expedited Reimbursement Program is being administered by DPW's Office of Legal and Regulatory Affairs. General Liability Claims are handled by the Baltimore City Law Department's Central Bureau of Investigation. Applicants under the Expedited Reimbursement Program are informed that they are entitled to file a general liability claim with the Law Department if an application is denied. Similarly, if an application is approved, the applicant is informed that the he/she may file a general liability claim requesting compensation for property damaged proximately caused by the subject event.

Information regarding the general liability claims process is also provided in the Basement Backup Guide that DPW distributes to residents impacted by basement backups and on the DPW website.