



Brandon M. Scott
Mayor

Wet Weather Modified Consent Decree Program

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS



2022 MCD Annual Session Q&A

The City of Baltimore's Modified Consent Decree Public Information Session was held on Thursday, January 20, 2022, as a virtual public meeting using the Zoom platform. The general session was opened by the Director of the Department of Public Works, Mr. Jason Mitchell. Following his remarks, the Director of the Bureau of Water and Wastewater, Mr. Yosef Kebede gave a presentation on the Modified Consent Decree for the Sanitary Sewer System and the City's progress under the Decree over the past 12 months.

Following the presentation, attendees were encouraged to visit learning stations hosted in a series of breakout rooms where they were provided a brief presentation and then permitted to engage directly with subject matter experts from different divisions of DPW. The learning stations highlighted the primary activities of the Modified Consent Decree and the City's progress in each of those areas. Community members were encouraged to ask questions of the team or to provide written comments via chat throughout the session.

A summary of each learning station and the questions/comments received is provided below.

Learning Station 1: Collection Systems and Hydraulic Model

Presented by Jemil Yesuf, Engineer II, Office of Engineering and Construction, Baltimore City Department of Public Works

1. What are the street addresses for Sanitary Sewer Overflow (SSO) Structures #67 and #72 mentioned in the first session? Is one of them 3900 Belair Road?

- Addresses of SSOs #67 and #72: #67 - Falls Road, approx. 1,100' northwest of US 1 bridge intersection, #72 - Rear of 428 East Preston St.
- 3900 Belair Road is not an SSO structure, it is a manhole that frequently overflows. Due to that, the City has installed an Emergency Notification Response (ENS) flow monitor at this location to (a) alert the City when there is an SSO at this location, and (b) accurately determine the volume of SSO.
- The City has monitors at locations which chronically experience sanitary sewer overflows during large wet weather events due to capacity deficiencies in our collection system per our sewer model.

2. In the future, you may want to split some of these slides into 2 slides, so we can view the charts better. As it is, they are virtually unintelligible.

- The comment was acknowledged verbally by the facilitator.

3. You mentioned the main lines in from the County; how is the flow from them measured?

- Flow Monitor sensors were installed to capture the flow from neighboring counties. All major county flows are captured in the hydraulic model and analyzed to help with Phase II planning.

4. **Is the County flow increasing or decreasing? They have a CD (Consent Decree) too.**
 - Based on flow monitoring performed by the City, the Inflow and Infiltration (I&I) from some county basins are increasing, and in some other areas are decreasing. Based on our findings, the results are therefore mixed.
5. **Is exfiltration accounted for?**
 - Exfiltration is not accounted for directly, but rather by measuring flows from sensors at multiple locations; we capture the net volume loss from the system due to exfiltration.
6. **Recently, contractors ran cameras down the street and alley sewer lines in Lauraville and then re-lined some of them. Was that part of this consent agreement?**
 - Yes, the City is rehabbing sewers in this area under project SC965 (Herring's Run Sanitary Sewer rehabilitation project). This includes some of the sewers in the Lauraville neighborhood.

Learning Station 2: Maintenance and Preventive Maintenance

Presented by Jamison Smith, Scott DeWeese, and Michael Oshea, Office of Asset Management (OAM), Baltimore City Department of Public Works

1. **I track the SSO alerts and the monthly reports on DPW's website. Clearly, some sewer stacks have monitors, but not all do so. How do we know if there are stack eruptions at the stacks that do not have monitors on them?**
 - In the wastewater collection system, if there are unmonitored overflows, they come through as SSO's which get reported and put into 311. Sometimes these are either found by the public or OCR (Office of Compliance and Research, formerly OCAL), who monitors streams. If sewage traces are present in the stream, they backtrack to locate which asset is overflowing, and then a work order is created to have the pipe repaired.
2. **Part of Herring Run forms a nice swimming hole south of Bowley's Lane and north of Armistead Gardens. It is good to see more permanent signs in English and Spanish near this swimming area, but the signs have not cut down on the young people who swim in the Run, especially after heavy summer rainstorms that usually produce SSOs. Is there any thought given to having outreach people visit this site and outreach the two neighborhoods where the youngsters live?**
 - We will take note of this information and work with the communications team to see if there is more that can be done.
3. **Why do some of the SSO's on the map only report 1 or 2 gallons?**
 - Most overflows are either active or evidence overflows. When we get to the site, and it is not actively overflowing and there is no evidence of a major overflow that will be the gallon estimation for that particular SSO location.
4. **Of the 1,045 miles of sewer pipes, what are the materials that make up the sewer pipe, steel, PVC, etc.?**
 - The sewer system is comprised of mostly vitrified clay along with PVC, terra cotta, ductile iron, reinforced concrete pipe, and others. Brick is another material type commonly found in larger older sewer pipes.
5. **When can I learn about the pipe material? Can I follow up with someone?**
 - Michael Oshea provided his contact information to the participants if they wanted to follow up with him on a specific question: Michael.Oshea@baltimorecity.gov

- Jamison also offered his information if the participant wanted to follow up with him
Jamison.Smith@baltimorecity.gov

Learning Station 3: Expedited Reimbursement Program

Presented by Mohammed Rahman, Chief Technical Officer, Bureau of Water and Wastewater, Baltimore City Department of Public Works

- 1. Why are there so few applications to the Expedited Reimbursement Program as well as the SOS Program?**
 - The eligibility criteria for both programs is limited to wet weather capacity-related events. Many residents know about the criteria and the application process from community meetings and online sessions. We have adopted a more robust marketing program during the last few years. Our outreach team attends 2-15 community meetings each week to discuss these programs with the residents. We have done a recent survey, and 73% of the applications are from residents that attended a community meeting or read the DPW website. We have also mailed brochures with the residents' water bills to educate them about what to do in the case of a backup.
- 2. How is DPW currently approaching backups where both wet-weather capacity backups and maintenance or other issues were contributing factors regarding ERP and SOS eligibility?**
 - The criteria for both programs is similar. They must be residential dwellings and the backup caused by a wet-weather capacity-related event. Since the beginning of the SOS pilot program, when a resident calls 311, the program team will investigate and qualify the resident under the SOS program. The response rate for this program is 24 hours. A contractor will be dispatched to the residency during regular business hours, 2-8 hours. If you call 311, the program team will check the eligibility proactively and assist the resident.
- 3. How long has this program existed, and do people know about this program?**
 - The SOS program was launched by the mayor of Baltimore City on March 23, 2021, as a pilot program for one year. The program has now been implemented for almost nine months. We will be assessing the feasibility of the program to understand its long-term viability. When the program was first launched, we sent brochures through residents' water bills. We also issued press releases and announced the pilot program on social media. We have also targeted marketing in the neighborhoods where a backup has occurred. The City notified the entire neighborhood so that everyone in the area could contribute productively to reduce backups.
- 4. When there are multiple causes to a backup (a storm and a clog in the city-owned portion of the pipes), would this still qualify for the ERP and SOS programs?**
 - When a resident calls 311, an investigator is dispatched to the location to investigate the actual cause of the backup. Usually, the investigator gets to the backup location while the backup is still happening. This is the first step into the qualification for the SOS program. In the second step, the Program Team uses a hydraulic model to further identify the cause of a basement backup by conducting a simulation of what would happen to the sewer line during a rainfall event. Whenever there is doubt, we always give the benefit to the resident.
- 5. What kind of financial assistance is available to homeowners who need to replace their lateral sewer line to prevent sewage backups into their homes?**
 - Besides the ERP and SOS programs, the City also has a Homeserve program where residents can get repairs covered on their water and sewer service lines for a monthly charge. For those that

cannot afford the repair, there is a provision within the Homeserve program called the Hardship program, where they help people qualify for financial help for repairing their service lines. Residents may also qualify for a backflow preventer installation through the hardship program.

6. Can you clarify that if you call 311, your organization will file a claim on behalf of the resident so that we don't have to file a claim on our own?

- Yes, the City has DPW investigators who work from 7:00 AM to midnight to qualify the residents after their site investigation. No application is needed for the SOS program. On-call contractors will be dispatched to the residence once the resident is qualified and accepts the service under the SOS program. The program team also verifies the eligibility by reviewing the investigation data and hydraulic model to qualify residents if the investigator on site misses anything.

7. Is there a time limit after the basement back up to call 311?

- No, there is not. The sooner a resident calls 311, the better to maximize the ability for our team to investigate and understand what is actively causing the backup.

Learning Station 4: Compliance – Water Quality Monitoring and Investigation (WQMI)

Presented by Kim Grove, Chief, Office of Compliance & Research, Baltimore City Department of Public Works

1. Why aren't there any samples in the heart of the City?

- They sample within the streams (open channel) or the pipe systems that convey historical streams. There are no open channels in the central, downtown areas of the City. Most of the area flows to the Inner Harbor; we have sampling locations at the outfalls in the Harbor.

2. Are you seeing any long-term trends in bacteria levels at any stations (even if they're not yet meeting standards?)

- We are starting to see some. We are now taking a deeper dive to connect rainfall data and SSOs to determine if they are related to dry or wet weather. We are seeing encouraging trends along Jones Falls, where bacteria levels are going down. By and large, we see a downward trend.

3. Does this affect our drinking water for homes & schools?

- The drinking water system is pressurized, which means water is more likely to leak out of the pipe than anything to get into the pipes. These pipes are above your sanitary pipes, so this does not affect your drinking water.

4. The process of tracking bacteria and sanitary flows, by nature, has to be reactive. Is there any research or any thoughts on any proactive means to control the bacteria?

- The current process is reactive, and we have realized that it is hard to catch mistakes when they are not actively happening. We are looking into continuous monitoring to see what is happening. We will also install real-time temperature gauges to capture things as they happen. These methods will help us understand routine blockages to monitor them.

Learning Station 5: Headworks and Wet Weather Flow Equalization at the Back River WWTP

Presented by Mohammed Dohdar, PMP, CCM, Project Manager, Office of Engineering and Construction, Baltimore City Department of Public Works

1. When will the Headworks system be fully operational?

- It is now fully operational. It has been in service for more than a year now. The last facilities were completed on time on October 1, 2021.
2. **Is there a gravity bypass around the IPS (Influent Pumping Station) directly to the plant?**
 - Yes, there is an overflow bypass that actually bypasses all the facilities. That is a safe failure in case of catastrophic energy loss or any catastrophic failure. Wastewater will flow by gravity via a channel that bypasses Headworks and sends the flow to the downstream processes as the old system would.
 3. **How often have the EQ (Equalization) tanks been used?**
 - I do not have the exact counts of the events that used the Equalization Storage Tanks, however, generally, anytime the received flow exceeded 340 MGD (million gallons per day), the EQ tanks were activated and received the flow during that event; at least he remembers five events when the tanks were activated.
 4. **Is it possible to arrange a group tour of the Headworks project, perhaps when the COVID situation has improved?**
 - This can be coordinated through his office at DPW. The team is happy to receive requests, but they would have to process them through different partners to ensure the safety of everyone visiting, and it depends on which facilities and areas you want to see.
 5. **Could someone please explain to me how these projects help to avoid major sewer treatment issues that we have read about in which the plants have been found to not be in compliance with pollution regulations? Have those issues been remediated?**
 - As mentioned in the main presentation, this project helps prevent or reduce backup or sewer overflow events. Back in 2002, when the City did the initial study to meet the original consent decree, one of the model's findings was at the hydraulic restriction at Back River. At the time, the flow was not coming into the treatment plant without having enough backup pressure in the system to push the flow through, mainly because the elevation of the weirs at that plant was at a higher level than the water contained in that conduit. When Headworks was designed and built, the main effort was to cut through those conduits and drop the elevation of the received flow to almost 50 feet deeper than what it was, which allows a continuous flow of that wastewater to be stored and processed at the Headworks without it being backed up in the system which causes overflows in different areas of the City.
 6. **If the Headworks project is fully operational, why are we still seeing huge sewage discharges during rain events at usual locations such as outfall 67, outfall 72, 3900 Belair Road, etc.?**
 - As part of Phase 2 we have a post-construction monitoring project that is actually monitoring the changes that the Headworks created. I think some of the reasons for the SSOs you mention are related to sedimentation in the interceptors. Over many years of constrained flow, much sediment was deposited in the critical sewers bringing flow to the plant. After removing the hydraulic restriction and dropping the elevation in the sewer system, many local clogging and issues were discovered and are being resolved. I believe some of that has been mentioned in the Compliance presentation or in some of the other presentations that the team has answered in detail, but that is a brief answer to the question here.
 7. **When will there be a noticeable impact on the frequency of overflows and bacteria counts in streams?**
 - For sure there should be a change as of now because in 2021 we measured at least 69% less overflows than previous years. That is measured as of now with the local issues that I mentioned

still to be addressed with phase 1 and phase 2 projects. To answer your specific question, I think there is a session for our Compliance office in another station where they have a presentation and share more details. They do take regular samples. I'm not sure about the frequency, but they do measure and track it. The difference would be noticeable in those reports. I believe the quarterly report that our department publishes on our website provides more information. I believe there is contact information for the people in charge of that office or operation.

8. When will the accumulated sewage sludge cause the SSOs to be removed from the pipes, and is there a date this will happen?

- As for Headworks, they are still seeing large deposits of grit and large objects being discharged into the system. In almost every high flow event, they see that if carries flow into the Headworks facility which means that the system is being cleaned by carrying that grit settlement into the system. As far as the engineering and design project, he thinks part of it is due to what Carlos mentioned for the Phase 2 project, which includes CCTV followed by construction projects to clean and address those issues.

Learning Station 6: Design Projects

Presented by Carlos Stephenson, Office of Engineering and Construction, Baltimore City Department of Public Works

1. Can you define accelerated vs. design-build?

- This breaks down the approach, going back to slide number 4. With design-bid-build, we're going to retain a design consultant to do a physical design, bid that work out, advertise that for construction, and obtain a contractor to do that work. Projects delivered through Accelerated Design will be those that are not complex, and the City will put together a work package that will be assigned to our on-call contractor, who will perform the construction work.

2. When will the awarding of those four CCTV (Closed Circuit Television) projects be announced?

- They are still being evaluated. We received bids on those. I believe it was November/December 2021, and we are still evaluating those bids' results. My hope and anticipation will be for at least two of those contracts to be awarded to a contractor in the next two to three months. For the other two, we're still evaluating.

3. Are the 76 high I&I (inflow and infiltration) basins related to actual sewage backups in homes?

- Yes, high I&I basins are identified and designated as such because of a higher than other basins preponderance for SSOs and building backups; that's why we're addressing them. Observed root issues and defects in pipes that enable water to infiltrate are other factors in assigning the designation. We're hoping to address these basins with the projects we are putting out under the Phase II program.

4. Are there plans to install trash interceptors at discharge points into the streams?

- Some have been installed, but I know we're covering it in another session. I believe there was stream monitoring, but there are some trash interceptors that are installed; I don't know about plans at this point. I believe that's being covered more by our environmental group, which is doing a lot of stream restoration projects. That is a part of their evaluation of the stream restoration and things of that nature. Those kinds of trash collectors are being evaluated along with stream restoration.

Learning Station 7: Projects in Construction

Presented by Angela Cornish, Construction Supervisor, Baltimore City Department of Public Works

- 1. How many total miles of sanitary sewer pipes make up our system?**
 - There are approximately 1,460 miles of sewer in the City system.
- 2. How long does the CIPP (Cured in Place Pipe) liner last? Does it decrease the capacity of a pipe?**
 - The decrease in capacity is minimum. Well installed CIPP lining typically lasts 50 years. The City's system is approximately 100 years old, CIPP will extend the life. While CIPP slightly decreases the diameter of pipe, it also decreases the roughness such that the flow capacity is approximately the same.

Learning Station 8: Office of Communications & Strategic Alliances

Presented by Jennifer Combs, Public Relations Officer, Office of Communications and Strategic Alliances, Baltimore City Department of Public Works

- 1. Why does the District 6 Liaison have one district vs. others with 3 to 4 districts assigned to them?**
 - Yolanda Winkler, Chief of Office of Communication and Strategic Alliances, responded that District #6 Liaison, Anthony Greene's primary function is youth services, and the office is currently hiring additional liaisons.
- 2. If Mr. Greene is working primarily with youth, is that only in District 6?**
 - Mr. Greene works citywide. There are two youth programs run by DPW. One is called YH₂O Mentoring Program, and the other is Youthworks. There are 80 young people ages 14 to 24 with the two programs combined. In addition to running those programs, Mr. Greene also trains the youth in the YH₂O Program for jobs in the Public Works industry. In the capacity of liaison, he is serving as backup for the Community Engagement Team.

Learning Station 9: Office of Boards and Commissions

Presented by Deena Joyce, Chief, Office of Boards and Commissions, Baltimore City Department of Public Works

- 1. No questions from the public.**

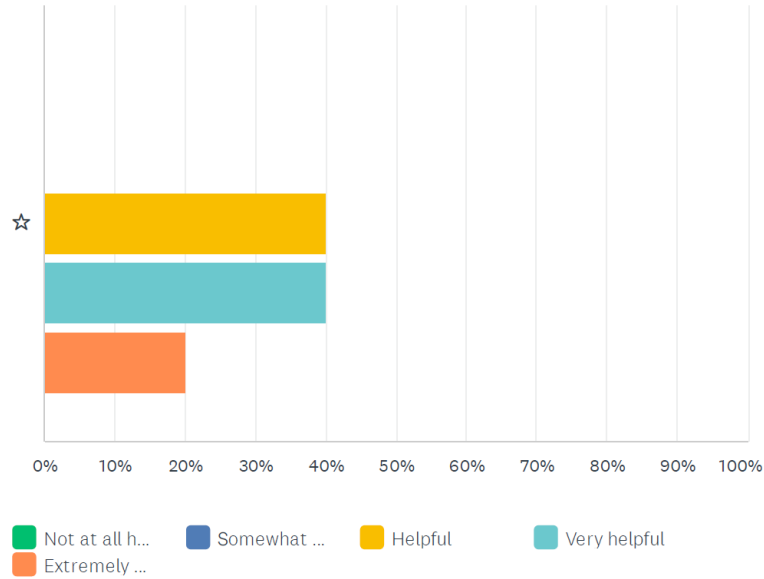
Learning Station 10: DPW Small Business Development Growth by Design Training Program

Presented by Kerwen Whatley, Small Business Development Program Director

- 1. Have you had any companies take the Training Program twice?**
 - Kerwen Whatley responded that he does not believe anyone has ever taken the program twice. However, there are occasions where previous participants send additional employees from their companies to participate in the program.

Q1 How would you rate the quality of the content presented?

Answered: 5 Skipped: 0



	NOT AT ALL HELPFUL	SOMEWHAT HELPFUL	HELPFUL	VERY HELPFUL	EXTREMELY HELPFUL	TOTAL	WEIGHTED AVERAGE
☆	0.00% 0	0.00% 0	40.00% 2	40.00% 2	20.00% 1	5	3.80

ADDITIONAL COMMENTS

- I work for a consultant on sewer monitoring projects. It is helpful to see the other pieces of the network and how the data we generate is used.