



Brandon M. Scott
Mayor

Wet Weather Modified Consent Decree Program

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS



2021 MCD Annual Session Q&A

Learning Station 1: Collection Systems and Hydraulic Model

Presented by Jamil Yesuf and Sharon Tsay

1. How is the model linked to the surrounding county systems?

- Jamil Yesuf: Baltimore City Department of Public Works (DPW) has put in place a significant number of flow meters to monitor flows from surrounding County Systems. DPW also utilizes flow monitoring flumes to gauge how much flow comes in at the boundary connection points. We use the data from these flow monitoring networks to develop the City's hydraulic model and to make assessment of the flows from neighboring jurisdictions.

2. So, is that County data fed into your model, as a boundary condition?

- Jamil Yesuf: That is correct, that is exactly what we did. We input that data into our hydraulic model as a boundary condition. [DPW has] sub-catchments that reproduce the flow from the County, and therefore our boundary conditions are predictive. Sometimes people take the word boundary condition to mean an inflow boundary condition, which is less desirable because it is not predictive.

Learning Station 2: Maintenance and Preventive Maintenance

Presented by Jamison Smith and Bilal Sarayra

3. Have the maintenance programs reduced dry weather overflows annually?

- Bilal Sarayra: Yes, our [SSOs] have dropped significantly over the years. Thanks to the programs we have good control, targeted cleaning, and all other programs that we have which is more capable of handling everything without any (SSOs) issues.
- Harpreet Singh: Additionally, since 2012 we have seen a 29% reduction overall in SSOs, that is both dry and wet weather. For dry weather SSOs, we see a reduction due to all the proactive programs we are doing.

Learning Station 3: Regulatory Requirements

Presented by Bethel Henry

4. What process can residents initiate for an appeal if a DPW investigator diagnoses the cause incorrectly?

- Bethel Henry: DPW is currently developing the appeals process for residents seeking reimbursement.

5. Any discussion as to paying for the cleaning of qualified applicants as some residents cannot afford the cleaning and seek reimbursement?

- Bethel Henry: DPW has a Home Serve program that residents can use to submit an application.

- 6. Is DPW considering streamlining the process to apply for the Expedited Reimbursement Program and the General Claims program so that residents don't need to navigate two application processes?**
- Bethel Henry: The Expedited Reimbursement Program falls under DPW while the claims process falls under the Law Department. There is communication between DPW and the Law Department about claims being submitted and monitored. DPW will help any residents with the claims process should they need assistance.
- 7. A while ago you mentioned this [program] started in April 2018, this is the first time I am hearing about this program. I had a backup in April 2019 and no one from DPW told me about this program. Am I still eligible? I currently have a claim with the city about this and have not heard anything. We used our insurance and had to pay a large deductible. This issue is from trees that I requested be removed along with the overflow events. Forestry department said the trees are fine and will not remove them. We have an overflow and a back flow valve. This has happened many times over the last 20 years. Is there an email from someone that we can email with directly?**
- Bethel Henry can be emailed at bethel.henry@baltimorecity.gov. No specific claims questions can be answered during the forum. There was outreach performed regarding this issue with information being provided on water bills distributed in the city.
- 8. Given climate change, we can expect to see an increase in wet weather over time and thus the need for payouts through this program. Are there plans to increase this fund over time?**
- Bethel Henry: There is a hydraulic model that currently takes future climate change into account. Per the MCD, pipes that are under-capacity must be upgraded to increase capacity. The goal is to decrease the occurrence of backups, not to increase the payouts made by DPW.
- 9. DPW announced last summer that it was considering a direct, no-cost cleanup assistance program for backups. What is the status of this program?**
- Bethel Henry: DPW is currently working on this project but no launch date is available at this time.
- 10. Will there be active replacement of residential sewer lines?**
- DPW is currently performing lining, point repairs, pipe replacement, and pipe-upsizing. This includes work on residential laterals, although it is limited to the public side of the system, no work is performed on the private side.
- 11. It was also discussed at the hearing last July that the program would include non-wet-weather backups. Has that changed?**
- No, it has not changed. This would be dependent on funding. Maintenance and prevention practices can be implemented by residents to deter non-wet-weather backups.

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

Presented by Kim Grove

12. How do you identify illegal connections? How do you locate the offender?

- The storm drain system is investigated in conjunction with permitted system connections. Backtracking takes place to identify hotspots and then dye tests are performed. DPW works with residents to perform the dye tests should they need to access private property. An illegal connection is one that has not been permitted (DPW is the only body designated to approve connections under Article 25).

13. Why have none of the stations met the criteria?

- There is still work to be done in reducing the SSO's and identifying the sources of sewage from the public and private side. Additionally, our microbial source tracking has shown other sources of fecal bacteria indicators, such as domestic animals and wildlife. Ultimately, our long-term monitoring data is showing a downward trend of bacteria in our waterways.

14. Can you explain how does DPW solve the problem of the sewage overflows? Where does it go?

- There are structured overflows in cases where pipes are not sufficiently sized. These structured overflows discharge into a stream and there are currently two located along the Jones Falls. DPW is currently designing solutions to eliminate the hydraulic restriction and increase capacity to the system over the next 10 years. The discharge is treated at a wastewater treatment facility. The Clean Water Act allows the discharge of a certain amount of treated effluent.

15. How much of a role do pet waste and rodents waste play on bacteria values?

- It depends on the area. Places like Patterson Park can show high levels of bacteria and with microbial source tracking, dogs and unknown sources were found to contribute. This is a reminder of the importance of properly taking care of dog waste.

16. Can we determine how much Baltimore County contributes to the problem?

- Baltimore City works hand in hand with Baltimore County to monitor bacteria levels and plan for actions to take, especially in regard to non-wet-weather events.

17. How can a citizen help to identify illicit discharges?

- If you see discharges along streams or the harbor that look like grey water or have heavy odor, you can call 311 to report the polluted water. Photos can also be submitted to document the discharge. Please do not attempt to deal with the issue yourself and allow the appropriate individuals to handle the situation. Some issues can arise with sump pumps when improperly connected to the sanitary sewer system and environmental issues can occur. The 311 phone app is a useful tool to report any issues and provide photographic evidence.

18. After a problem has been identified how long does it usually take to fix?

- It depends on the problem and who is responsible for it. Some problems are easy to deal with. If the problem is on the public side, there are contract mechanisms in place to fix issues. If it is on the private side, DPW will work with the private resident to guide them in the process to appropriately fix the issue. Sometimes it only takes 1-2 months, other times it can take up to 2

years. Most times residents are more than willing to help in solving the issue. Sub-surface sanitary sewer overflows can usually be resolved in an hour or two.

19. Does this have anything to do with the recent high water bills? Is it normal to go from \$77 to 110.00, with no leaks in my home?

- There have been increases to water/sewer rates in the city which has helped fund work being performed. If there is a high bill not based on the increased rates, then it is unrelated. This can be brought up with the Customer Support division within DPW.

20. I would like to know the progress with all drinking water being placed underground at all fresh water locations.

- Under the Safe Drinking Water Act, the EPA requires additional treatment for “finished”/treated water sitting in a surface reservoir before it enters the distribution system. A solution for this is to put the “finished” water into tanks underground. There are on-going projects currently underway at Druid Lake and Ashburton Lake. This improves the safety of the water supply.

21. Could anyone tell what the abbreviation means when receiving an email back from DPW-repairs concerning leaks of a water meter? The letters are as follows: CM.

- It could not be determined what the acronym stood for.

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

Presented by Mohammed Dohdar

22. The City has stated that up to 80% of sewage backups will be eliminated once Headworks is fully operational. Is this the 80% of sewage backups along the 10-mile portion of the sewer shed, 80% of all backups in portions of the system that flow to the Back River plant, or 80% of all backups citywide?

- The project should be able to reduce approximately 80% of all sanitary sewage overflow volumes across the Baltimore City system draining to the Back River WWTP.

23. The hydraulic model is very important as we implement Phase 2. Where has the model worked well, and where has the model worked not as well, as judged against actual water quality sampling? How does the project respond when the model predictions are less accurate?

- Our hydraulic model is very accurate. We have found that the model is helpful when issues are encountered on construction projects and require modifications. We run any modifications through the hydraulic model to see how the system would perform with the potential changes. The hydraulic model is also used during design projects to help make design decisions based on the model data. One challenge with the hydraulic model is that not all pipes have been mapped in the model. Only pipes above 10” have been mapped – so some smaller, older pipes are not yet a part of the hydraulic model. Missing pipes require estimates to be made within the model.

24. Can the public be confident that the money has been well spent on the Headworks Project?

- It is critical to be transparent to the public on this major project. At DPW, we use a standard procedure on all projects to perform a continuous review of all documents and expenditures. These are submitted for review with oversight by other departments within DPW, such as

Department of Finance. MDE also performs reviews each month on expenditures. There is also an annual review by the EPA, since the project is partially funded by federal loans.

Learning Station 6: Design Projects

Presented by Mohammed Rahman

25. How are Phase 2 projects being prioritized? Are they prioritized by cost, sewershed, or remaining SSOs? Will stakeholder be able to engage with this prioritization?

- Mohammad Rahman: The City has explored many options to make the best use of the limited funding granted to complete these projects. At this time, we do not know which projects will come first or be “highest priority”. During the finalization of plans for Phase 2, we will be exploring how to best prioritize the projects and optimize costs and implementation methods.

Learning Station 7: Construction 2020

Presented by Mohammed Rahman

26. Will there be an industry outreach session for design and contracting professionals?

- Mohammed Rahman: DPW’s Contract Administration typically holds an annual networking event called “Meet the Primes” in the Spring. The event geared toward design and contractor firms to learn about upcoming projects and contracts. There is also a Small Business Development Program to learn from other design/construction firms. Additionally, in July/August each year, DPW Contract Administration hosts a design/construction event to discuss upcoming projects. We recommend subscribing to the DPW email list to learn more about these events/programs.

Learning Station 8: Office of Communications & Strategic Alliances

Presented by Jennifer Combs

27. Paul De Santis mentioned that one of the SSOs impacting Herring Run has been eliminated. How can we learn the location of that sewer stack?

- Jennifer Combs: Responded that the information can be found on the DPW SSO map. She sent the link to the SSO map in the chat.
- Yolonda Winkler: You can also go to the website under connect decree and SOS and when you click on the information in the map it will provide information regarding that project.
- The public can review Quarterly Reports on DPW’s website. These reports provide helpful information regarding DPW’s progress to comply with MCD, including the status of structured overflows.

28. Are the community Liaisons listed on the DPW website?

Keita Wells: Responded in the chat requesting Ms. Johnson’s (attendee) City Council District and the attendee responded Council District 12. Ms. Wells informed the attendee that Mr. Terrance Brown is the Liaison for District 12. Attendees can find their City Council District on the website for Baltimore City. Liaisons are listed by Council District (page 6) in the Communications’ PowerPoint presentation.

29. How are citizens being informed of basement backup reimbursement program?

- Jennifer Combs: Shared with the customer that they can find [basement backup reimbursement program] information on the DPW website. Specific details are outlined on the brochure which includes contact information and other details. She also mentioned that [DPW] has a robust social media campaign and shares all this information.
- Yolanda Winkler: Shared the information with community leaders and community associations. She also shared that customers could call them at 410-545-6541 and they will be happy to share informational pamphlets.

Learning Station 9: Office of Boards and Commissions

Presented by Deena Joyce

No Questions

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

Presented by Kerwen Whatley

30. Can you talk more/describe the training program?

- *Question was answered after reviewing the presentation.*

31. Growing MBE/WBE seems like a great idea. Is there a report on your success to date?

- Kerwen Whatley directed the attendee to the slide in the presentation which quoted the success to date. You can look on the website under OBC and show the different classes and who has graduated from the program.

32. Do graduates of the program OR city-based firms receive any scoring benefits when competing for contacts?

- Kerwen Whatley: No. When the time comes to compete for contracts the procurement requirements are very clear price-based selections.

33. How is [the Small Business Development Growth by Design] opportunity advertised, and are graduates recognized publicly in anyway?

- Kerwen Whatley/ Deena Joyce: This past year, [the program] was held virtually due to the pandemic. We advertised the program using social media, email blasts and with virtual events. Pre COVID-19 we would often attend in-person outreach events to recruit participants. We also mailed notices and hosted an event titled "Facetime with Primes" to introduce small businesses to larger firms.

COMMENT FORM QUESTIONS

1. In session 1 of the Blue Breakout the modeling chart showed that there would still be 40MGD overflow after 5 years and 3MGD after 10 years. Where will those overflows go, if all, of the structured overflows are closed, as discussed by Paul DeSantis in the overview presentation?

- The City is utilizing its hydraulic model to predict overflows for a representative 20-year continuous simulation period. The MCD's Level of Protection (LOP) mandate requires that the City reduce SSOs citywide to a frequency of no more than 4 times during the 20-year simulation period (5-year LOP) and no more than 2 times during the 20-year simulation period (10-year LOP) in sensitive areas. The criteria does not require the City to eliminate all overflows. The only way all overflows would be eliminated over the 20-year period would be to design for a 20-year or larger LOP. Achieving this would be an overwhelming financial burden for the City's ratepayers.
- Under the 5-year LOP, the total volume of all individual SSOs activating no more than 4 times over the 20-year simulation period is approximately 40 MGD. The 10-year LOP will result in a total of 3 MGD of overflow across all individual SSOs activating no more than 2 times over the 20-year simulation period.
- The MCD also requires that all structured overflows be eliminated. The City is very conscious of the fact that closing outfalls has the potential to cause or worsen SSOs from manholes and/or increase the frequency and worsen building backups. For that reason, the City has determined what capital improvement projects are needed to eliminate activation of overflows through SSO structures without consequence. However, even with the outfalls closed, there will still be overflows out of manhole covers for storm events that are larger than the LOP criteria state above. During these rare events, these overflows will mostly enter the stormwater system and/or nearby waterways.

2. Do the model projected flows assume perfect maintenance?

- In some cases where significant sedimentation has been observed and simulated, the model has been adjusted to remove debris, reduce pipe roughness factors, and assume an improved maintenance program in future conditions. In most places, though, it is assumed the system will perform the same as existing conditions unless a specific structural or rehabilitation project has been recommended.

3. How are those factored into estimating the volume of overflows after the CD work is completed?

- The model representation described in Question No. 2 above will be used to estimate the volume of overflows after the CD work is completed.

4. Given that there will be problems, are there any structured overflows that will remain to prevent backups into homes in low-lying trouble spots?

- Structures will be closed and the LOP criteria described in Question No. 1 will be achieved. However, building backups and SSOs beyond the criteria will still occur. They are part of the analysis and the City will try to reduce and minimize them. The City expects that each of the Phase I and II projects will have some incremental impact on reducing overflows and building backups. The removal of the hydraulic restriction at the Back River Wastewater Treatment Plant (BRWWTP) will have the most significant impact, but all of the rehabilitation and maintenance related projects will improve either the hydraulic capacity and/or performance of the collection system, which will result in a reduced number of overflows and building backups.

5. The format did not allow for much interaction. Q&A was limited.

- This year's MCD Public Info Session was held under extenuating circumstances due to Covid-19. The City believes the format used for the session is warranted was conducted in a very informative, responsible, and safe manner. Nonetheless, we have taken note of the comment and will attempt to mitigate this issue in future MCD public information sessions.