



## WHAT MATTERS WEBINAR SERIES – AUGUST 6, 2020

### STORMWATER MATTERS: INCREASING WATER SUPPLIES WHILE REDUCING POLLUTION

#### QUESTIONS AND ANSWERS

Q1: Is there an engineering path for private development to divert stormwater to the sanitary sewer?

A1: Yes, private companies can contact their wastewater agency to determine the requirements/conditions of a diversion. In addition, Los Angeles County Public Works is exploring partnerships with private/commercial property owners for on-site stormwater management and control measures. Regardless of how a private development's stormwater is delivered to the sewer, the downstream sewer agency will need to review the project on a case-by-case basis.

LASAN is looking at different innovative approaches to allow construction dewatering and permanent dewatering to its wastewater collection system as the preferred option and in the most economical manner. In addition, LASAN is also establishing a P3 model (Public-Private Partnership) for implementing a number of its projects. One example is its project at the Riviera Country Club Golf Course next to the Santa Monica Canyon Channel, where runoff is captured from the channel and cleansed through a BMP train. Part of the water is utilized at a reduced cost for golf course irrigation and excess water is diverted to the Hyperion Water Reclamation Plant.

Also, LVMWD is working with several commercial business owners on the possible diversion of dewatering discharges associated with underground parking structures to the sanitary sewer system.

Q2: In streams and stream segments that support plant and animal habitat, will diversion approaches be modulated to ensure in-stream flows are sufficient?

A2: Yes, the white paper will acknowledge that regulatory review may be required for some diversions and that there may be a need to maintain and/or protect necessary in-stream flows that support a beneficial use of the water body.

Q3: What about the decrease in WWTP capacity during storm events due to infiltration, and has the white paper considered the need for storage?

A3: The white paper includes an analysis of 10 years of rainfall data, and the impact on influent sewer flows at the Hyperion Water Reclamation Plant and Joint Water Pollution Control Plant (JWPCP). The purpose of the analysis is to demonstrate the correlation and identify the opportunities/limitations of diverting flows during wet weather. The need for storage will also be discussed.

- Q4: I know that this is not the focus of the White Paper, but you are an informed panel. Given the lack of percolation and groundwater basins in large areas of the County, what kinds of strategies can be pursued in these areas for wet weather stormwater? How can water be captured and stored in those areas.
- A4: These areas of the County present some unique challenges; however, there are a number of strategies that remain effective for both capturing and storing stormwater. [Public Works' website](#) provides photos and descriptions of model projects such as those for Dominguez Gap Wetlands and Oxford Basin. Alternatives to infiltration into groundwater basins include diversions to the sewer system, storage for irrigation and other non-potable uses, and treatment in nature-based systems such as wetlands. LASAN believes, and has done so, in nature-based projects that only clean the water and support habitat and ecosystems, such as the South Los Angeles Wetlands Park and the Echo Park Lake Restoration Project, where infiltration opportunities are limited.
- Q5: Enrique, can you talk more about the Peak Flow Attenuation Facility you mentioned? What is the timeline on that and where in Ballona Creek is it situated? Any background would be great!
- A5: The proposed project is a retrofit of the City's North Outfall Treatment Facility at 10201 Jefferson Boulevard in Culver City), which is adjacent to Ballona Creek. This facility was originally built as a sewer overflow facility, but has been abandoned for over 20 years. It is now being retrofitted for doing the opposite: diversion of up to 23 million gallons per day (mgd) of dry weather flow from Ballona Creek into the sewer system. In addition, the facility will clean and disinfect 6 mgd of dry weather flow and return to Ballona Creek to support the downstream beneficial uses of the creek and Ballona Wetlands. A construction contract could be awarded for the project in mid- to late-2021, depending on the timing of funding approval for the project through the Safe, Clean Water Program.
- Q6: Hi Enrique - Thanks for your presentation. I love the "zero waste, zero water wasted" vision. Can you talk more about the Ballona Creek low flow diversion project? How did you decide how much water to send to Hyperion vs. release back to the Creek? Would more water be available for the Ballona Wetlands after construction is complete? Thanks in advance.
- A6: As explained in the response to the previous question, the Ballona Creek project will clean and disinfect 6 mgd of dry weather flow and return it to the creek. This return of cleaned and disinfected water is important to dilute dry weather runoff discharges to Ballona Creek downstream of the Ballona Creek project. We estimate that 6 mgd of disinfected water is enough to keep the bacteria levels in Ballona Creek below the maximum standards for water contact recreation all the way down to Ballona Wetlands. Please note that the Ballona TMDL project will not divert stormwater, continuing the supply of fresh water to the Ballona Wetlands during the rainy season.

- Q7: First, thanks for the program and a lot of really exciting efforts. My question/concern with LFD - How do we avoid using LFD as a rationale to not address runoff at/closer to the source through nature-based, multi-benefit, community-benefit projects? LA Waterkeeper strongly supports water recycling, and while we appreciate lower wastewater flows presents unique challenges (more concentrated flows, etc.), I also wonder how we balance trying to reduce the 100MGD of dry water runoff while ensuring facilities get needed flows, and how do you think we should decide where to invest limited resources - distributed stormwater projects vs. LFD?
- A7: We agree that the best alternative is to eliminate dry weather runoff at the source through water conservation, low-impact development, nature-based solutions and other multi- and community-benefit projects. Diversions of urban runoff and first flush stormwater to the region's wastewater treatment facilities may be part of the solution when other strategies don't resolve the issue completely.
- Q8: Can the speaker share how cross contamination will be controlled? What mechanisms, double and triple checks, will we use to make sure sewage never enters our flood control channels. On the east coast, combined storm/sewer systems are a liability, not an asset.
- A8: The diversion facilities are designed to prevent the possibility of a backflow or backsiphonage of sewage to the flood control system. This is generally accomplished by pumping the diverted stormwater flows to the sewer, maintaining an air gap and installing backflow prevention devices.
- Q9: How are these various LFD projects financed? Does the interconnection with collections/wastewater infrastructure enable you to use revenue bonds and rates to cover costs?
- A9: There are a variety of mechanisms to fund diversion-type projects. The specifics would vary by project and the agencies involved. However, these types of projects generally qualify for funding under the Safe, Clean Water Program.
- Q10: Question for Robert: (1) What does first flush mean? (2) Does LA County Sanitation also have two separate conveyance system to separate sewage from stormwater similar to City of LA? Thank you!
- A10: With regard to first flush, we are generally referring to the first rainfall event following a period of dry weather. On the second question, yes, the Los Angeles County Sanitation District's trunk sewer collection system is entirely separate from the stormwater system.
- Q11: What is the total new water being created that ultimately decreasing demand on the MWDSC system?

- A11: At this time, we do not have an accurate estimate of the amount of new water that could be created as a result of diversion strategies; however, this is an area of focus as the white paper effort moves forward.
- Q12: Lower flows create more costly treatment challenges. Can members of the panel address how that is remedied?
- A12: The impacts vary by agency, but lower flows generally increase the cost of operating and maintaining the wastewater collection and treatment system. In the collection system, more frequent sewer line cleaning is required, along with increased investment in odor control. At the treatment plant, adjustments may be required to chemical usage to ensure the quality of the final effluent. Also, the corrosion of infrastructure and equipment can require more frequent rehabilitation and/or replacement.
- Q13: Question for Robert: Do I understand that the Carson reclamation plant will build advanced treatment to release into the flood channel leading to Machado Lake?
- A13: There are no plans to discharge to Machado Lake. At full-scale, the proposed Regional Recycled Water Program will take water from the JWPCP, treat it through advanced treatment, and potentially deliver it to the region's groundwater basins, industrial facilities and two of Metropolitan's treatment plants. More information can be found on Metropolitan Water District's website at [www.mwdh2o.com](http://www.mwdh2o.com).
- Q14: For Mr. Ferrante - Is there some way to lower the cost of diverting storm water into the sewer system. In my community, we can use diverted storm water for irrigation, infiltration, and treat to release back to the storm drain. We are concerned about the price per gallon to send to the sewer system.
- A14: The Sanitation Districts have made diversions as cost effective as possible by relieving connection fees for local governmental diversions that can utilize unused capacity in the sewer system. Unfortunately, the Sanitation Districts are prohibited from using wastewater service charges to offset the operation and maintenance expenses related to conveying and treating stormwater. As a cost saving measure, we suggest that entities plan projects to deliver no more than the annual average flow during the daytime and/or operate during off-peak hours to access the lowest sewer service rates possible.
- Q15: Green Infrastructure requires nuanced maintenance. How will we fund and create a workforce qualified to maintain these projects, especially those with very specific inspection and o&m requirements?
- A15: Maintenance of green stormwater infrastructure (GSI) and nature based stormwater solutions, through both O&M manuals and effective training of personnel, is something that Public Works and others have been exploring for some time. Certain local initiatives like the County's Safe, Clean Water Program are also serving as platforms to not only ensure funding of the necessary O&M but also to establish workforce training programs.

The Safe Clean Water Program effort is expected to be publicly initiated this fall and is intended to align with other initiatives, including collaboration across Measures H, A, and M as well.

Q16: As water conservation increases and wastewater flows decline and wastewater integrated to water supply augmentation, LA River flows are declining. Will the LA county sanitation and LA city projects include dedicated instream contributions, or will that be left to others?

A16: LASAN is a leading supporter of the revitalization of the LA River including maintaining minimum flows from its water reclamation plants for habitat and non-contact recreation like kayaking and fishing.

Q17: Some communities are more averse to beneficial local stormwater capture projects. How can opposition to good projects be mitigated?

A17: Early public engagement is critical to ensure community support for projects. Additionally, collaborative and sustained regional education efforts (e.g., Safe Clean Water Program will be initiating some such efforts this fall) are anticipated to lay a stronger foundation for communities to understand the importance of these types of projects as a whole.

Q18: Aside from the funding issues, is any cost/payback criteria applied to determine project feasibility?

A18: At this time, we have not developed general cost or payback criteria to determine project feasibility as part of the white paper effort. However, initial data indicates that the diversion strategy offers a very cost-effective approach to achieve water quality and water supply benefits. A future phase of work for the white paper effort will include a more detailed analysis of cost and payback period.

Q19: Where can I access the Phase 1 White Paper?

A19: <https://socalwater.org/wp-content/uploads/Tapping-Into-Available-Capacity-in-Existing-Infrastructure-Phase-1.pdf>

Q20: Is there a strategy to inform local stakeholders to potential impacts both positive and negative regarding changes to infrastructure and will it include access to jobs for local communities?

A20: Yes, development of major projects typically includes community outreach and engagement as well as a study of potential environmental impacts. Job creation is an important part of each project's community engagement program, and is also included in typical contracting provisions. The various regional efforts related to workforce training

will continue to establish and implement strategies for new jobs and corresponding training.

Q21: UCLA researchers have modeled the effects of climate change on weather patterns. There is a high probability that in the coming decades hundred year floods are projected for every thirty years. Are these future high severity rain events being used to engineer combined storm/sewer operations and other water quality and water supply infrastructure?

A21: Public Works is currently engaged with UCLA on an extreme events climate study that will predict rainfall intensities resulting from climate change. Public Works intends to use these predicted storm intensities to assess current stormwater management facilities as well as design future water infrastructure. Public works does not use combined storm/sewer operations for a variety of reasons. Also, these diversions are not intended for large storms and sanitation treatment facilities could not handle such large flows.

Q22: Can we get the contact information of the panelists if they are willing to share?

A22: Yes, please see below.

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