

**Comments on the CSO Long Term Control Plan for the city of Elizabeth, NJ
Submitted by the Urban Systems Lab**

The [Urban Systems Lab](#) (USL) is an interdisciplinary research, design and practice space at The New School that provides new insight into developing more equitable, resilient, and sustainable cities. As part of our work focused on [the environmental justice of flood risk and green infrastructure](#), the USL has been collaborating with diverse organizations involved in promoting environmental justice in the city of Elizabeth, NJ, such as Jersey Water Works, New Jersey Future, Future City Inc, and Ironbound Community Corp. Through this collaboration, the USL has developed an understanding of some the most important issues faced by Elizabeth's overburdened communities regarding pluvial flood risk. To support these organizations, our work has focused on mapping social vulnerability across the City of Elizabeth, modeling flood risk using a hydrodynamic tool, and providing advice in environmental justice mapping.

Given our knowledge of Elizabeth through our engagement and our research, as well as our deeper understanding of climate change, risk mitigation, and environmental justice, we deem it necessary to raise our concern over specific aspects of Elizabeth's Long Term Control Plan (LTCP). In the following document we outline our comments regarding the plan's environmental justice considerations including our recommendations for making them more consistent, transparent, and transformative. As a final note, at the USL we are interested in offering our support in future permits by providing our analytical and technical expertise that would improve the implementation of the plan.

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Comment #1: The lack of a comprehensive environmental justice assessment of the current configuration of the stormwater management systems in Elizabeth invalidates the argument that no environmental justice issues arise through the plan's implementation.

Description: Section 9.4 - Environmental Justice Considerations claims that no environmental justice issues are anticipated for the selected interventions. However, neither this plan nor previous reports have a section dedicated to assessing the environmental justice of the current configuration of Elizabeth's sewer system. Without knowledge on how the sewer system may currently be affecting communities disproportionately, the foundations of this statement are unclear.

A preliminary spatial analysis carried out by the USL has made the following observations:

- According to the Census 2010 data, those census blocks located within a 300 feet buffer of Elizabeth's CSO outfalls have a population that is 28.2% Black / African American. This number is much higher than the percentage of African American residents in the city of Elizabeth, NJ, which is 18.5%.

- According to ACS 2014-2018 data, those census block groups located within a 300 feet buffer of Elizabeth's CSO outfalls have 23.1% of its population living below the poverty line, while this number at the city level is 18.2%.
- According to ACS 2014-2018 data, 22.7% of the population living in census block groups located within a 300 feet buffer of Elizabeth's CSO outfalls have no health insurance. This means that one in five residents lack health insurance.

We believe that these observations justify the need for an in-depth, systematic analysis that addresses the injustices of the current situation, which should then be taken into account in the prioritization of interventions in the early stage of the LTCP implementation. This assessment should analyze 1) whether the communities that are disproportionately affected by CSO discharges and flooding are also significantly more vulnerable than those less exposed, 2) within those communities exposed, whether there are specific sub-communities or neighborhoods that are characterized by one or more socio-demographic attribute that may influence their coping and adaptive capacities against flooding and CSO discharges.

We recommend that NJDEP require permit holders to use the Environmental Protection Agency's Environmental Justice Screening Mapping Tool to map the neighborhoods who are overburdened and use this to assess the environmental considerations of the current configuration of Elizabeth's sewer system, as well as the LTCP's proposed interventions and in future reports.

We recommend that NJDEP require permit holders to use fine-scale demographic data to develop a deep understanding of the different factors that drive social vulnerability across the city, allowing for a broad characterization of the different communities present in different parts of the city, to then take their different circumstances and attributes into account when planning, designing and implementing the plan's interventions. Permit holders may be required to rely on [CDC's Social Vulnerability Index](#) as a starting point to characterize communities at a fine spatial scale.

We recommend that NJDEP require that CSO permit holders engage community members and specifically, environmental justice organizations, representatives, groups, in the designs of these projects to develop a community feedback loop (e.g. citing initial sites, 30% design sketch with community, implementing feedback to final design).

We recommend that CSO permittees prioritize environmental justice communities for CSO mitigations and ensure that the siting of gray infrastructure will not have a negative impact on these communities.

We recommend that CSO permittees prioritize environmental justice communities for green infrastructure implementation and other CSO controls that address localized flooding.

We recommend that CSO permittees prioritize environmental justice communities for workforce development programs related to the projects that will be implemented as part of the CSO LTCP.

Comment #2: The CSO discharge considered in the plan has not been characterized to consider which and how communities will be most affected by it.

Description: The LTCP anticipates capturing 85.1% of CSO flow once the implementation is complete over a course of 40 years. This means that 14.9% of the combined sewer system's inflow will still be discharged, but it is not clear where this discharge will take place. If the majority of this remaining CSO discharge takes place in only a few localized sewersheds, some communities may be more impacted than others (e.g. those located downstream, or those exposed to sewer backups). In order to assess the LTCP's potential environmental justice issues, it is important to assess whether specific socio-demographic groups will remain subject to flooding and being exposed to untreated sewage. An assessment that details whether certain areas will remain more affected by CSOs than others after the implementation of the LTCP should be incorporated into the plan.

We recommend that NJDEP require that CSO permit holders to provide a detailed description of the areas that will remain discharging a fraction of untreated sewage through CSOs and that this consideration is incorporated in their environmental justice considerations.

Comment #3: Socially vulnerable communities are not being prioritized in the LTCP's timeline.

Description: Because the environmental justice of the current situation has not been assessed, it is unclear whether the current schedule of the LTCP is failing to prioritize interventions that mitigate CSO and flood risk in Elizabeth's overburdened and / or socially vulnerable communities.

A clear representation of what parts of the city are expected to be intervened earlier, and their relationship with Elizabeth's overburdened communities is needed to assess the LTCP's environmental justice considerations.

We recommend that NJDEP require permit holders to submit a map of Elizabeth visualizing the interventions planned, their timeline (which ones will be implemented first, and which ones later), and the distribution of social vulnerability across the city.

We recommend that NKDEP require permit holders to include the impact of the timeline on specific neighborhoods in their environmental justice considerations.

We recommend that CSO permittees ensure that specially vulnerable populations are prioritized in the LTCP's implementation timeline.

Comment #4: The environmental justice of Elizabeth's green infrastructure pilot program is not defined.

Description: Section 9.4 - Environmental Justice Considerations claims that "Proposed green infrastructure locations for the pilot program will be selected based on suitable site conditions, and care will be taken to ensure that these sites are distributed throughout the city equitably." However, the methods and criteria for ensuring an equitable distribution are not mentioned. In addition, since the environmental justice of the current situation has not been assessed, it is unclear how the distribution of

proposed green infrastructure will be carried out in a way that reduces current injustices, rather than ignoring or even perpetuating them.

We recommend that NJDEP require CSO permittees to indicate how the knowledge of the current environmental justice issues in the city of Elizabeth will be used to determine a fair distribution of GI interventions.

We recommend that NJDEP require CSO permit holders to rely on local environmental justice organizations to ensure that the green infrastructure interventions proposed benefit socially vulnerable populations.

We recommend that NJDEP require CSO permit holders to consider other than one single green infrastructure intervention (the current plan only considers rain gardens in their pilot program) in order to increase the chance of identifying suitable locations and / or potential partners.

Comment #5: The impact of construction on local residents is not explained in adequate detail.

Description: Section 9.4 - Environmental Justice Considerations claims that "Construction impacts will be temporary and no permanent adverse impacts to any specific community is expected." However, the estimated duration of some of the interventions considered in the plan is considerably long, reaching up to 10 years (e.g. in the installation of a new wet weather pumping station). It is unclear how much time for construction will be required by each intervention.

We recommend that NJDEP require CSO permit holders to map the duration of the disruptions that each intervention may cause during their construction phase in overlap with the distribution of overburdened and / or socially vulnerable communities.

Comment #6: The socio-demographic data used in the LTCP is outdated and does not reflect the socio-economic impact of the COVID-19 pandemic.

Description: The socioeconomic data used to evaluate the LTCP's Financial Capability was the American Community Survey (2017), as well as the City's approved municipal budget for the Sewer Utility for the fiscal years 2017 through 2019 and other datasets. These sources fail to represent the huge economic impact caused by the currently ongoing COVID-19 pandemic.

We recommend that NJDEP require CSO permit holders that the LTCP and upcoming permits rely on updated data to account for changes in the socioeconomic reality of Elizabeth's communities that may be economically impacted by the Covid-19 pandemic. As of today, new American Community Survey data is publicly available and should be used at the finest resolution possible (census block group, 5 year estimates) to spatially characterize the communities present in the city.