



# Water Infrastructure in Jackson, Mississippi



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**“Investment in infrastructure is a long term requirement for growth and a long term factor that will make growth sustainable”**

**- Chanda Kochhar**



Emergency pump installed at O.B. Curtis Treatment Plant in response to the flash flood

Image from: <https://onlinemadison.com/stories/politics-of-jackson-water-should-end.39587>

## Issues with Related Infrastructure

- The Pearl River has been observed to have eroded and unstable banks. Its draining pumps continuously malfunction.
- Pumps at the O.B. Curtis Treatment Plant used to transport treated water also malfunction.
- Flooding is encouraged by coastal storms and hurricanes when water is released by the Ross Barnett Reservoir.

## Final Project

After several weeks of presenting ideas and in-class brainstorming, I developed a personal project that presents an extensive knowledge of an infrastructural issue. When doing this I...

1. Conducted research to create a list of stakeholders that work with the related infrastructure or are affected by it.
2. Located the contact information of these stakeholders to later conduct interviews and addresses the issues.
3. “Visited” the targeted sites through virtual tours and videos while collecting long-term planning documents.
4. Interviewed the stakeholders and attended community/city meetings of the affected site.

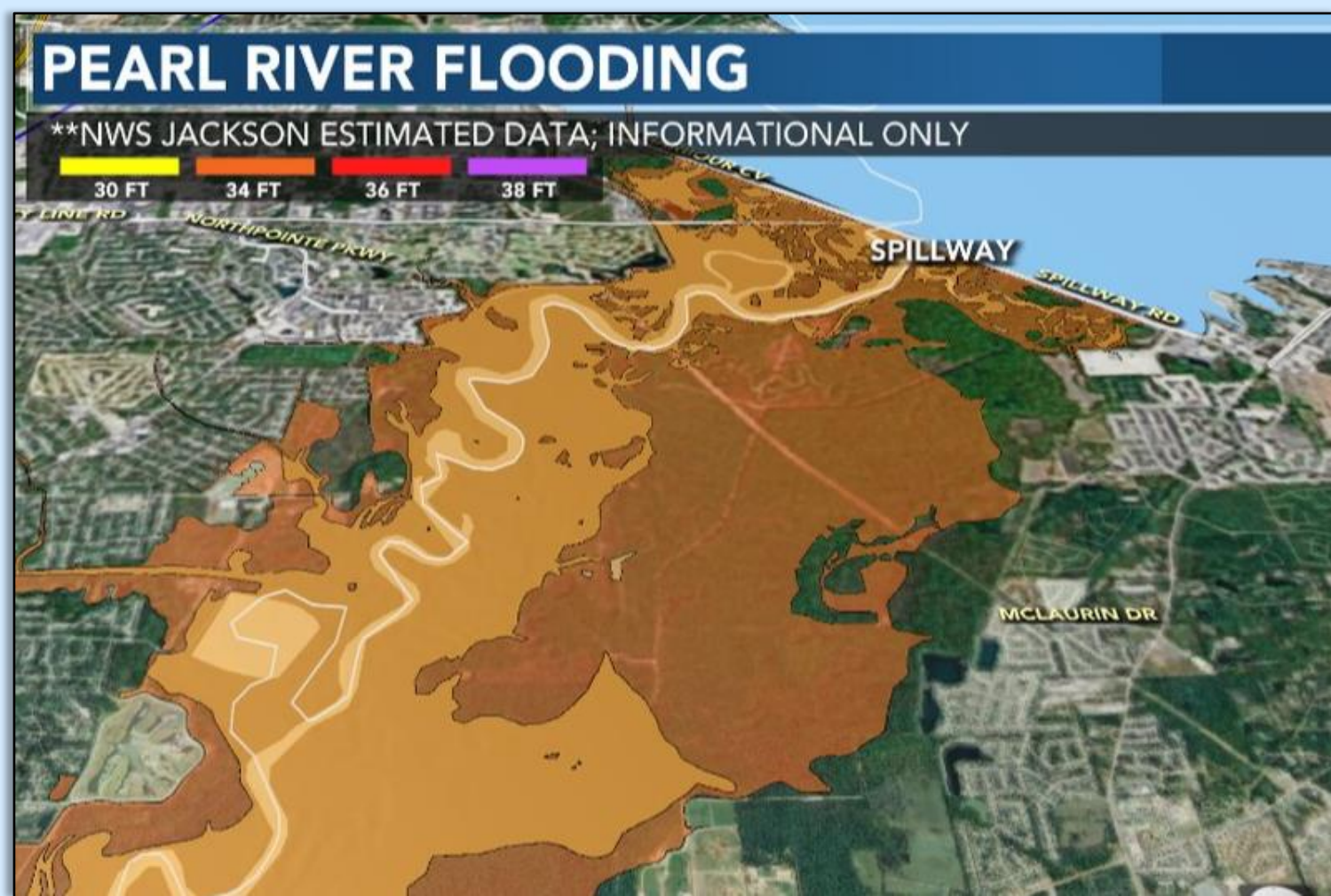


Diagram of the areas affected by Jackson flash flood of August 2022

Image from: <https://www.jacksonfreepress.com/news/2014/oct/08/waiting-one-lake/>



Zoom Meeting with UMD's Stormwater Management and Maintenance Inspector, Michael Carmichael.

## Site Information

Name of Site: CPSS340 - College Park Scholars: Infrastructure and Society

Address: ESJ 2101, 4131 Campus Drive, College Park, MD 20742

Instructor: Nicole Mogul

Class's Mission: “We will apply STS systems thinking skills and data collection techniques (Looking for Ethics in Artifacts, Seeking Stories about Science, Technology and Engineering, etc.) to assess and map infrastructure systems.”

Goals: While taking the class, I planned to make meaning of the societal significance of several infrastructure systems and analyze the sociopolitical relationships that influence their existence.



Before & After Pictures of RSC technique on campus creek.

Image from: <https://sustainingprogress.umd.edu/views-campus-creek>

## Observations & Outcomes

I chose my stakeholder to be the university's Stormwater Management and Maintenance manager, Michael Carmichael. After speaking to him and conducting further research, I discovered that there are multiple factors that contributed to the infrastructure's issues.

1. Lack of comprehensive flood protection strategies – The Pearl River suffers from erosion and sedimentation due to weak levees and a history of ineffective protection strategies. While speaking to Carmichael, we discussed how the campus creek was able to flourish after applying the Regenerative Stream Conveyance (RSC) technique during the Creek Restoration Project. By strategically incorporating step pools, plunge pools, and floodplains, contamination and erosion significantly reduced. Such natural solutions have the potential to restore the Pearl.
2. Lack of state funding & tax revenue – The Mississippi state government has constantly vetoed legislation that would help needy residents pay their water bills. Such legislation would generate funds for the city to spend on repairs.

In the late 20<sup>th</sup> century, Jackson was affected by white flight where a large number wealthier white residents fled the city. Today, Jackson's population is 80% black however, 25% of the total population is in poverty.

## Class Activities

The class would meet bi-weekly from 11:00 AM to 12:15 PM every Tuesday and Thursday. During that time, I...

- Read articles and watched videos on the successes and failures of systems on campus, the state of Maryland, and throughout the world
- Engaged in discussions and activities that challenged previous notions of past, modern, and future infrastructure
- Listened to guest speakers on their expertise in food processing, storm water management, and other fields of infrastructure

## Impact & Future Work

Prior to taking this class, I thought of infrastructure of simply being roads, buildings, and similar structures. Although partially true, the world of infrastructure is much more. I now know that they serve as the backbone of communities. It directly influences the livelihood and the overall sense of belonging to those who reside there. Due to this, I have gained a greater appreciation for a plethora of infrastructure systems.

Recently, the U.S. Army Corps of Engineers and Jackson officials discussed plans of revitalizing the 2007 *Lake One* project, which plans to build a 1,500 acre lake on the Pearl River. The lake would be accompanied by newly-constructed waterfront property. Experts claim that this project would move water downstream the Pearl which would significantly reduce future heavy flooding. Arguments from local environmentalists however suggest that it would have an inverse effect and destroy local ecosystems and aquatic habitats. If the plan goes into effect, I would like to conduct research on its development.



Diagram Outlining Proposed *Lake One* Project

Image from: <https://www.jacksonfreepress.com/news/2016/oct/19/one-lake-plan-moving-forward/>



## Acknowledgements

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