

Stormwater Sampling and Monitoring Plan for the Fujian Agriculture and Forestry University

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Project Outline

This project details my sampling and monitoring plan for the stormwater runoff on the Fujian Agriculture and Forestry University campus in Fuzhou, China. This sampling plan can be used to monitor fecal coliform and other common pollutants such as heavy metals and organic compounds. Fecal coliform is the contaminant of concern due to the apparent need for a stormwater management upgrade. The campus has a form of a combined sewage and stormwater system that can allow contamination of stormwater. This plan will

sample areas of the campus to allow a investigation into possible health concerns for the students. Included are the areas of sampling, equipment needed, and procedure for random representative sampling. Continuous monitoring will give data for later analysis that could motivate changes to the campus infrastructure.



Equipment

Dipper	Protective clothing
Sampling containers	Ice/storage container
Protective gloves	Protective goggles
Chain-of-custody labels	

Sampling and Monitoring Plan



Shown left is an aerial photograph of the campus. The yellow markers detail where sampling will take place. They indicate stormwater outfalls and noted areas where stormwater overloads the system on campus. From daily observation on campus, I found that these areas have issues with stormwater collection and pose a risk to exposing students to pollution in the stormwater.

In accordance with recommendations by the EPA, you will be wearing needed PPE during the sampling process. You will take a grab sample with the dipper at each location using time as a random parameter. Each sample should have a random collection time within a 15 period.



One of these samples will be a replicate sample and tested twice for QA/QC purposes.

Once these samples have been collected, they should be put on ice in a sealed container for preservation before lab analysis.



The samples can then be sent to a lab and analyzed for contaminants such as indicator organisms for fecal coliform. This could include E. Coli.

If such organisms continue to be present, the stormwater and sewage system would need to be upgraded to handle the amount of input that is causing the flooding the campus is experiencing. This will also address ecological impacts if other contaminants are found.

My monitoring plan suggests sampling quarterly each year. This could give the concerned party updated conditions of the stormwater on campus.

Conclusion

This project enabled me research the stormwater flow on campus and design a sampling and monitoring plan to address issues with the stormwater runoff.

This plan can be used to address the health risks involved with stormwater runoff on campus. It can also be used to analyze other environmental impacts on nearby ecological systems.

This project allowed me to see the impact of stormwater. Stormwater is becoming more of a regulated entity, and I could see myself working in this growing field.

References

<http://www.epa.gov/npdes/pubs/owm0093.pdf>
http://www.swrcb.ca.gov/water_issues/programs/stormwater/docs/draft_cnst_sample_guidance.pdf
<http://www.fafu.edu.cn/english/aboutfafu.html>

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