

# A Multi-Faceted Approach to the Using Community Science Applications for REEU Summer Environmental Research

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## BACKGROUND

Using free community science smartphone applications and wearable technology can be a meaningful way to conduct environmental research that can inform environmental policy. The REEU summer research program serves as a model program that can enable students and mentors to successfully conduct impactful community science environmental projects. Here, we highlight some of our study findings for research that took place during the 2024 Cal State LA Research and Extension Experiences for Undergraduates (REEU) summer program.

## METHODS

Two different community science studies took place: one was related to waste characterization and the other to identifying sources of potential vector-borne disease.

- (1) In an effort to directly tackle waste pollution on the Cal State LA campus, we decided to track waste by using the citizen science mobile application, Marine Debris Tracker by National Geographic.

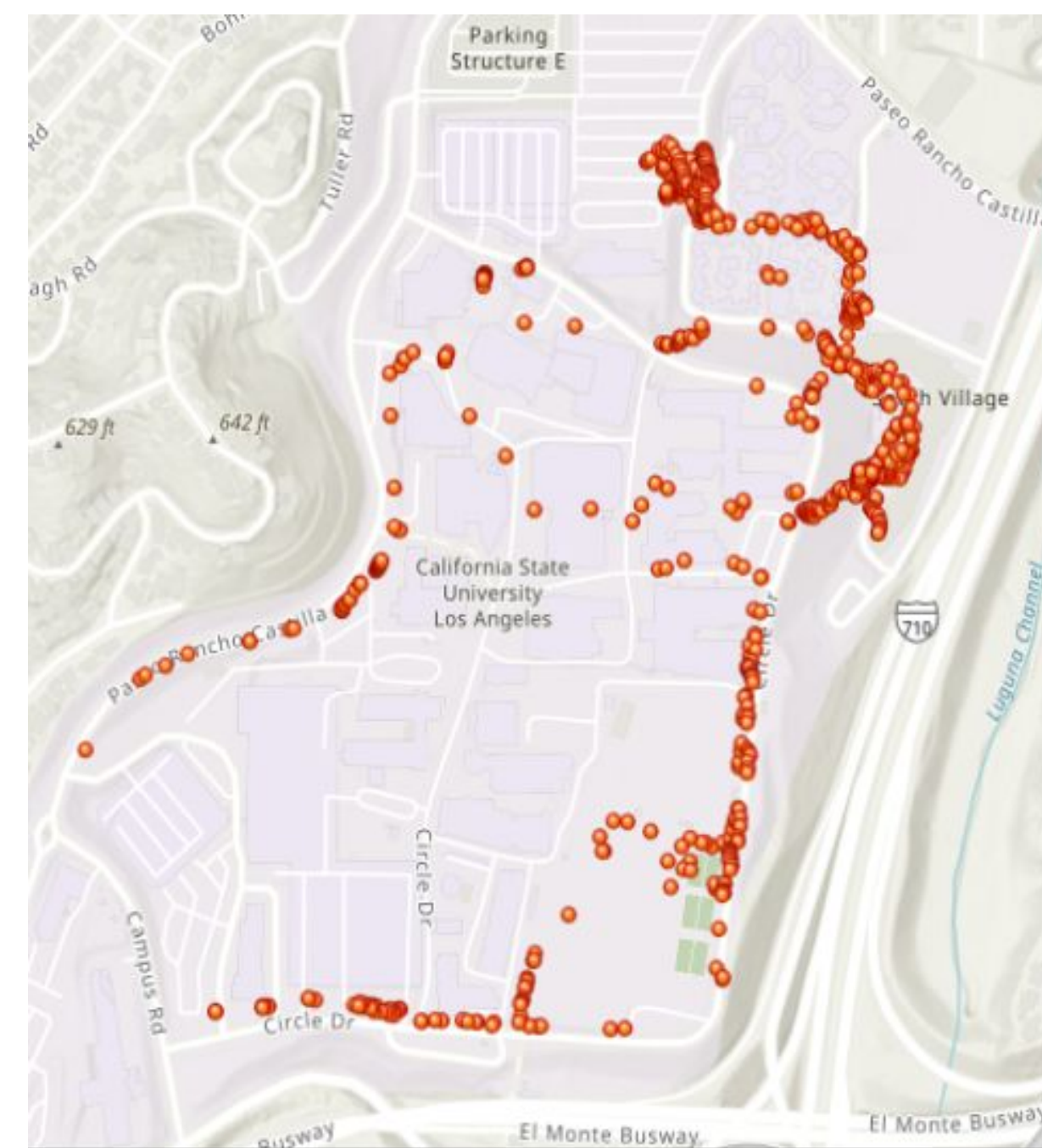
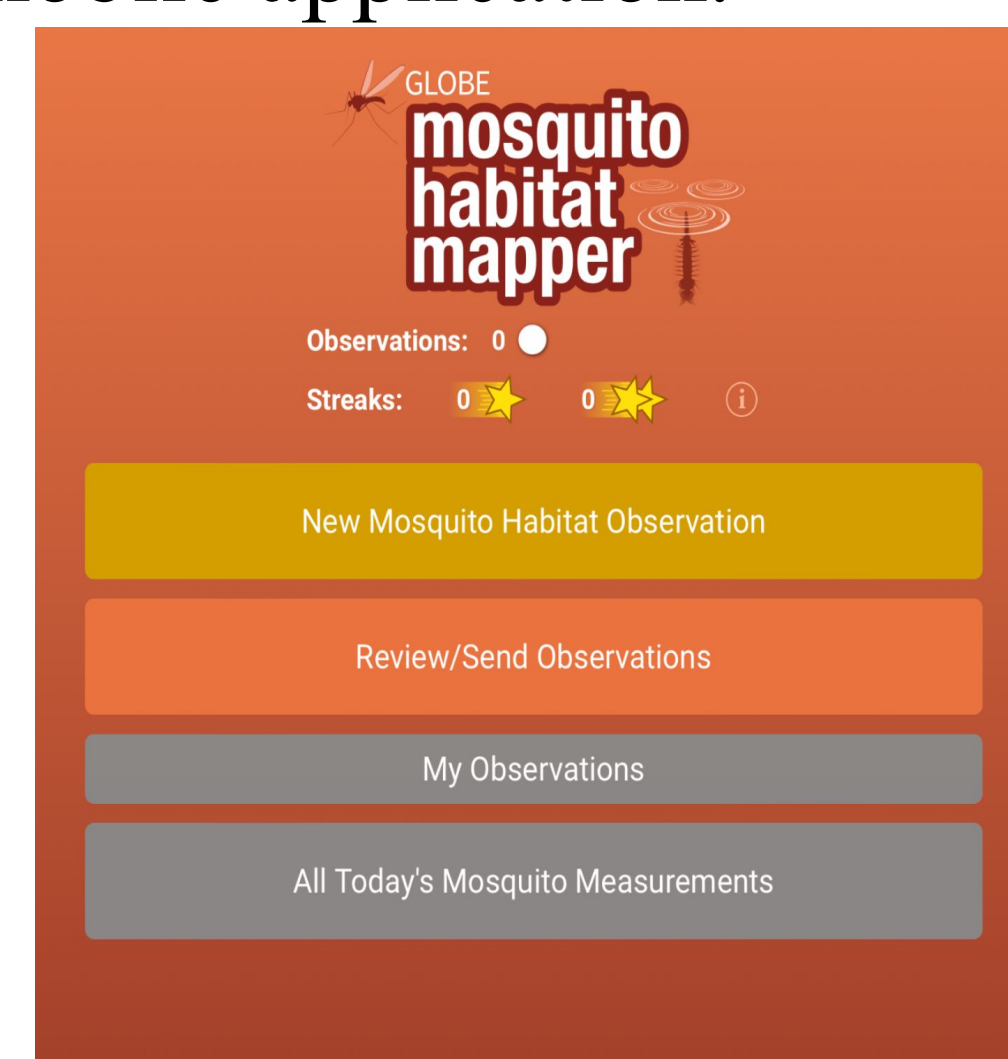


NATIONAL GEOGRAPHIC

Ocean Conservancy

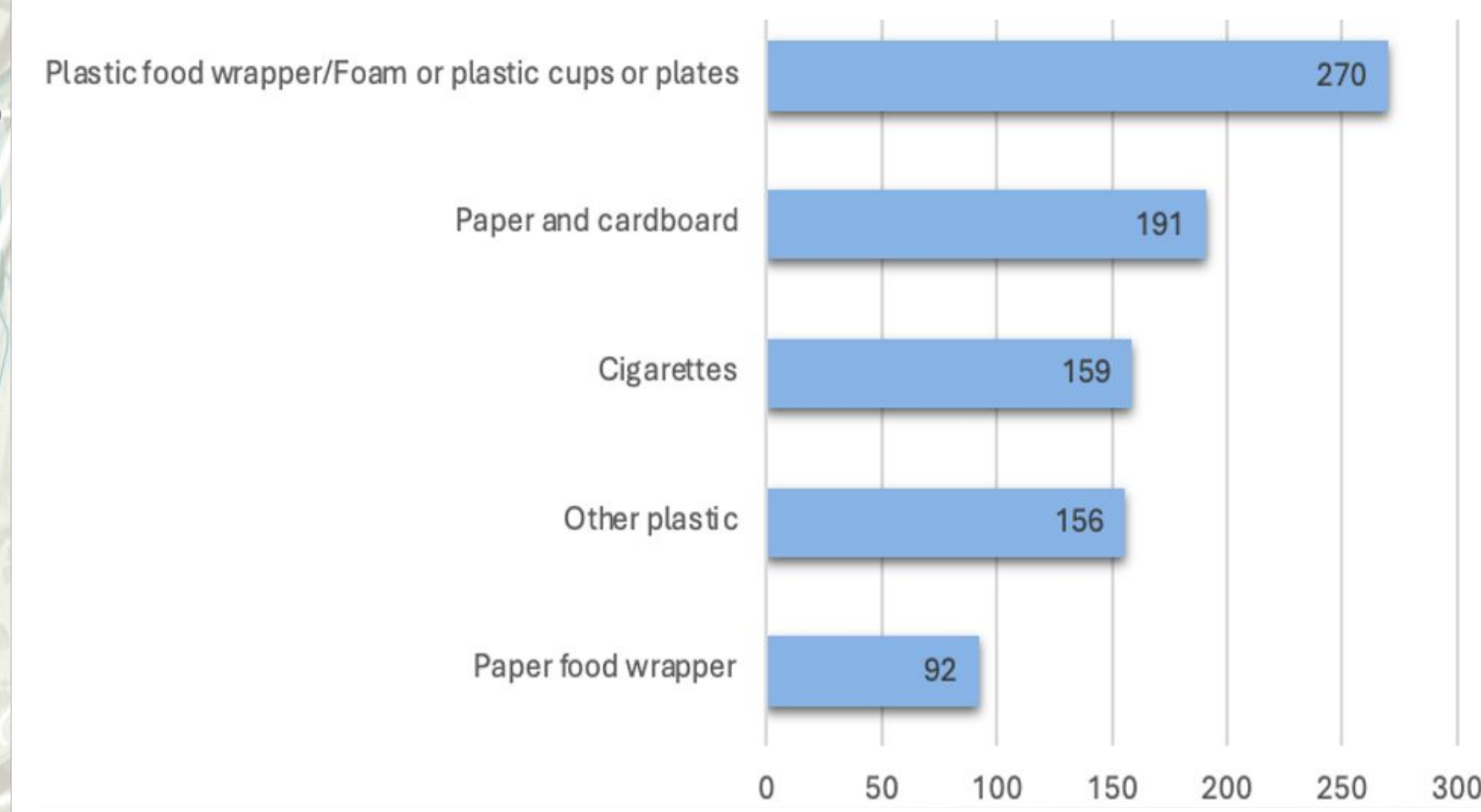


- (2) To identify stagnant water sources across Cal State LA, we used the mosquito Habitat Mapper mobile application.

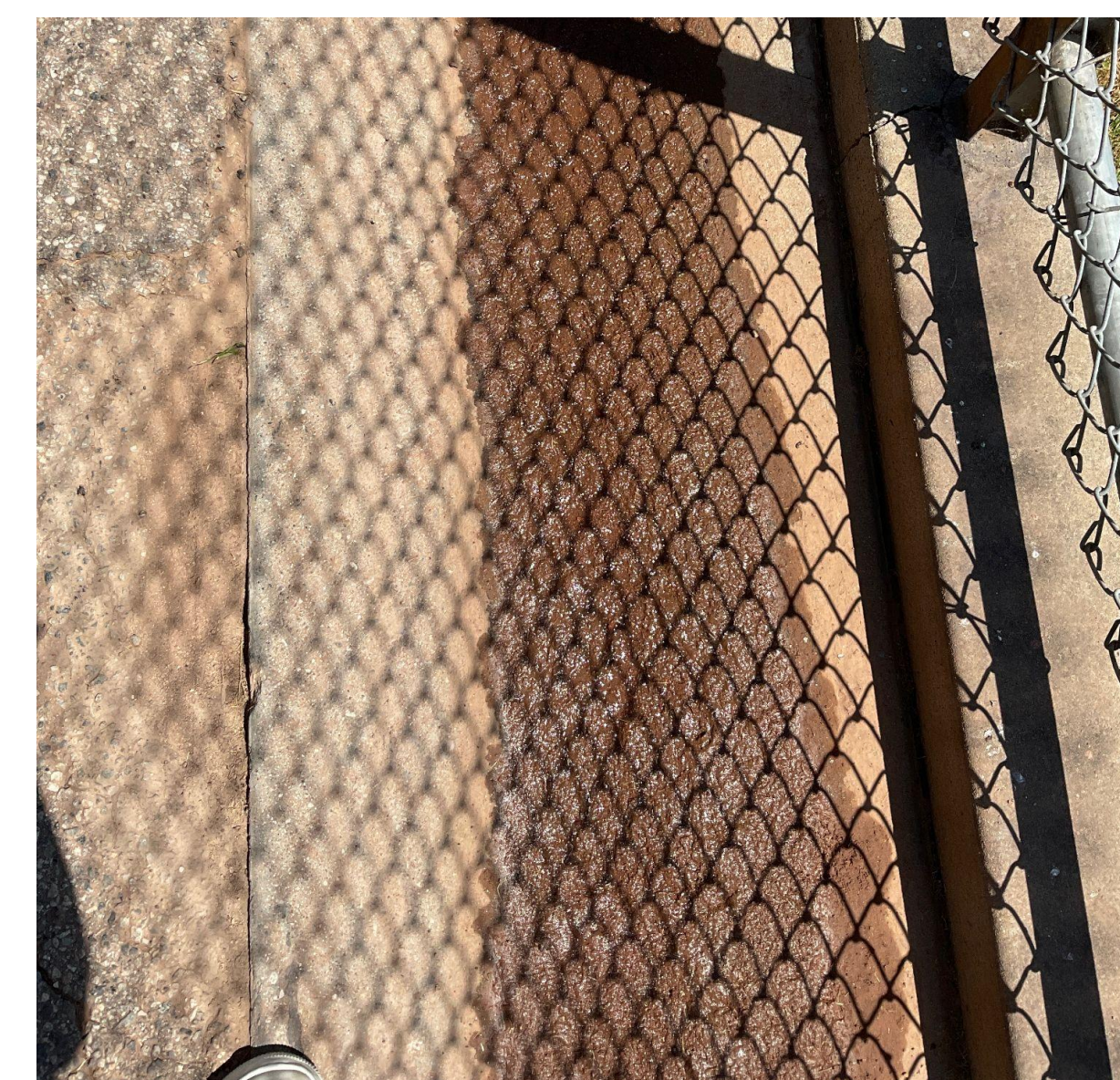


## RESULTS

- (1) By identifying, pinning and tracking the waste, we highlighted litter hotspots and accessed strategies to manage the issue.

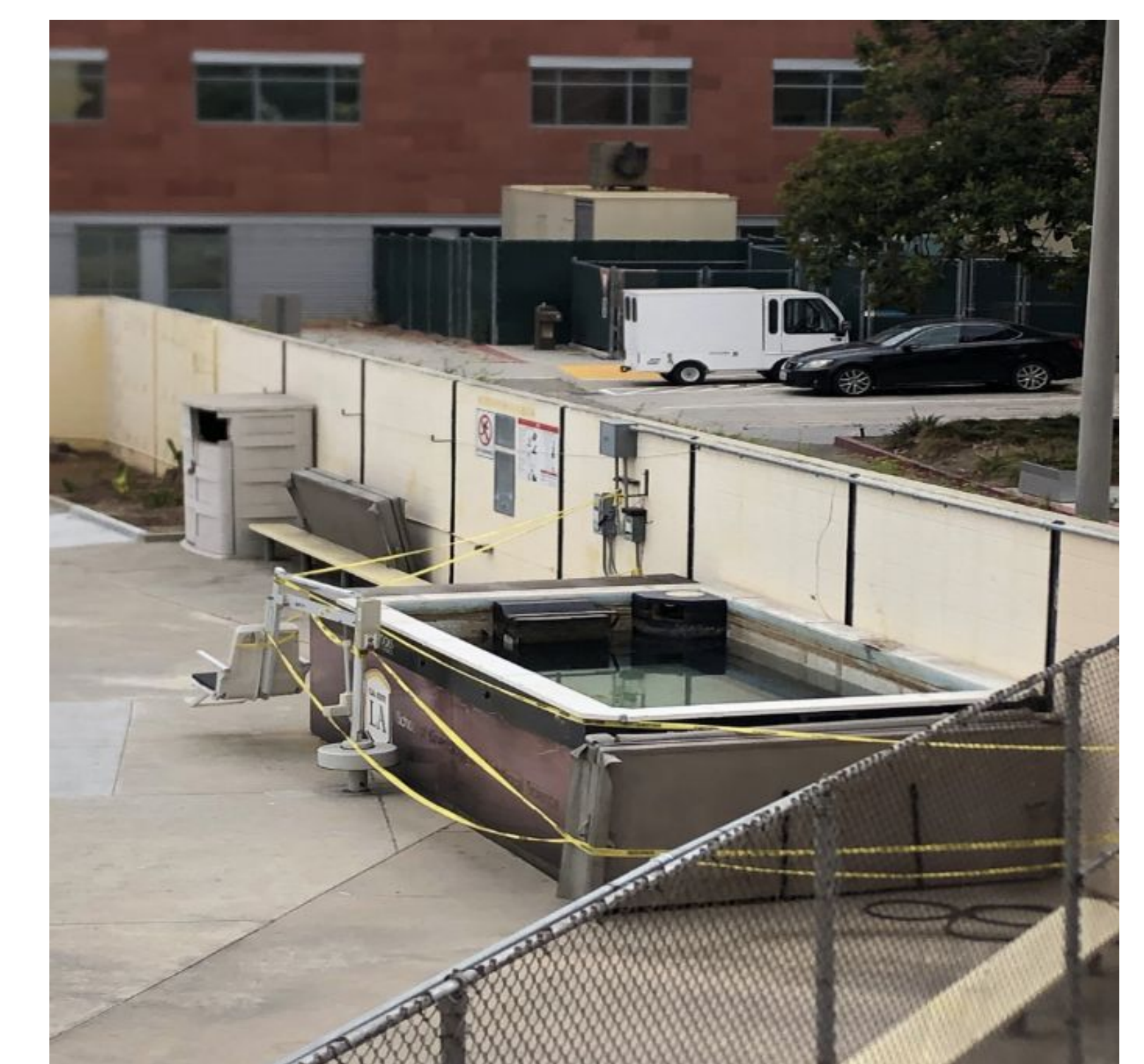


- (2) After searching the entirety of the campus, we also found 3 areas of concern with regards to potential sources of vector-borne disease.



## CONCLUSION

Leveraging the benefits of using community science smartphone applications, we successfully raised awareness of waste and vector-borne disease issues on campus as a function of environmental health. Our study provides actionable recommendations for our campus administration stakeholders to help improve environmental health on campus. Our study was also successful in having the administration drain a major stagnant source of water, thus reducing vector-borne disease risk on campus.



### Further questions?

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