

SPORTS, CITIZEN SCIENCE, & ENVIRONMENTAL STEWARDSHIP

Tapping Into Recreation to Organize A Beach Cleanup

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ABSTRACT / INTRODUCTION

Millions of people annually visit Coney Island in Brooklyn, NY, a peninsula renowned for its amusements and ocean beaches. Yet environmental issues related to its northern edge along Coney Island Creek (namely washed-ashore trash), are less well-known.

Outdoor recreation has been said to be one way that people develop eco-concern. Stewardship activities like beach cleanups are one way to get involved. Additionally, there is growing interest in “citizen science,” i.e., scientific data collection by non-professionals.

Given the above associations, I developed a project with the goals of engaging a community of local beach sports enthusiasts (specifically Ultimate Frisbee players) to participate in a Coney Island Creek beach cleanup, advancing my AIP master plans goals of promoting environmental stewardship around the Coney Island Creek.

PROJECT DESCRIPTION



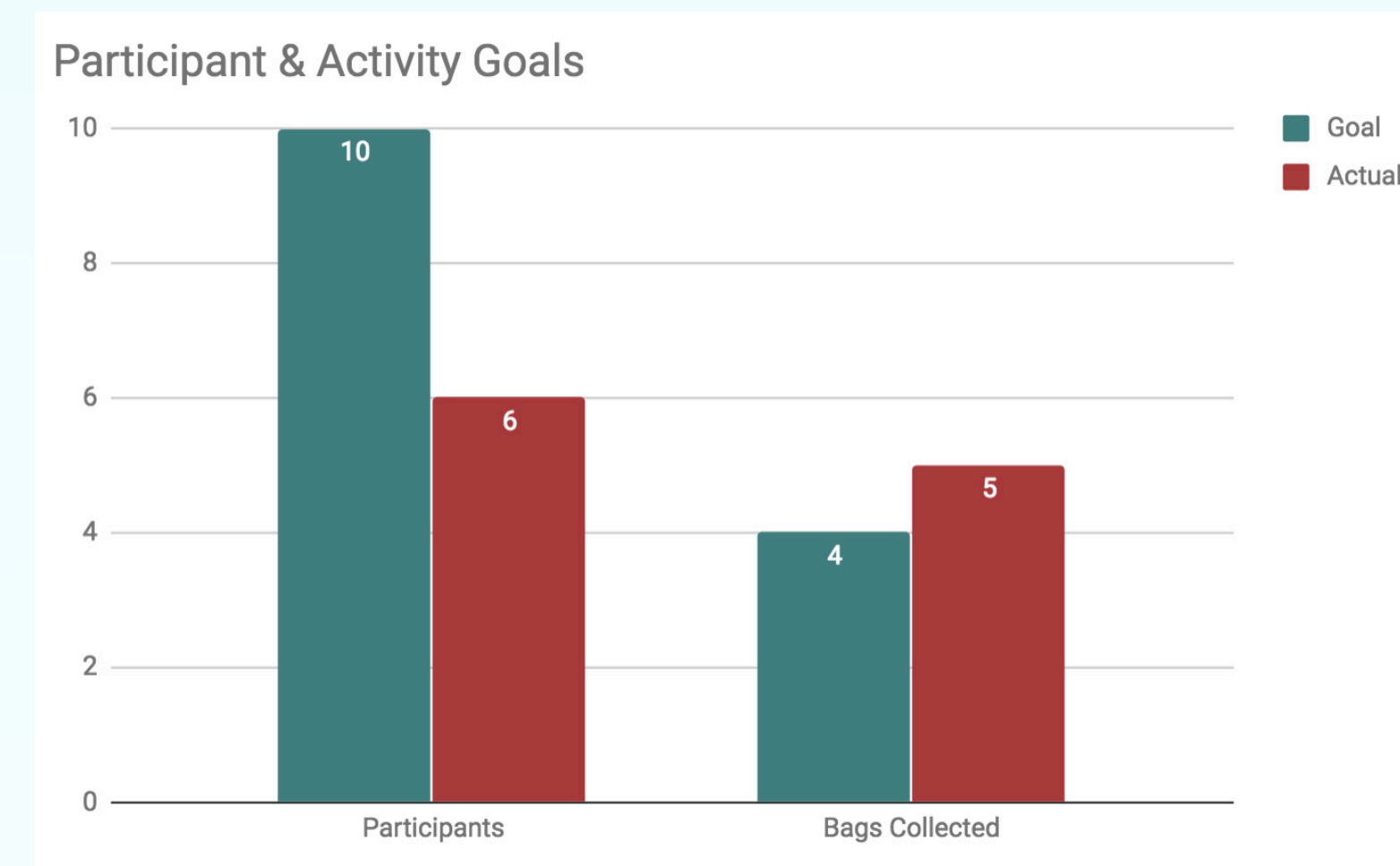
Project goals included getting at least ten (10) participants, collecting four (4) large bags of total trash, and logging the types of trash collected with a mobile app (CleanSwell).

I sought project advice with the Coney Island Beautification Project, a local advocacy group. I publicized the project to local Ultimate players through mailing lists, social media posts, a website sign-up form, and a more detailed flyer (shown above).

The Coney Island Creek beach cleanup project took place on Saturday, July 7, 2018 at 8am on a stretch of beach on the eastern end of Coney Island Creek Park. I supplied equipment including trash grabbers, garbage bags, and disposable nitrile gloves.

Mostly splitting into teams of two, the teams picked trash, logged trash data into the app, weighed bags, took photos, and packed up.

OUTCOMES / RESULTS



Not including this researcher, participants in the event tallied six (6) people out of a goal of ten (10).

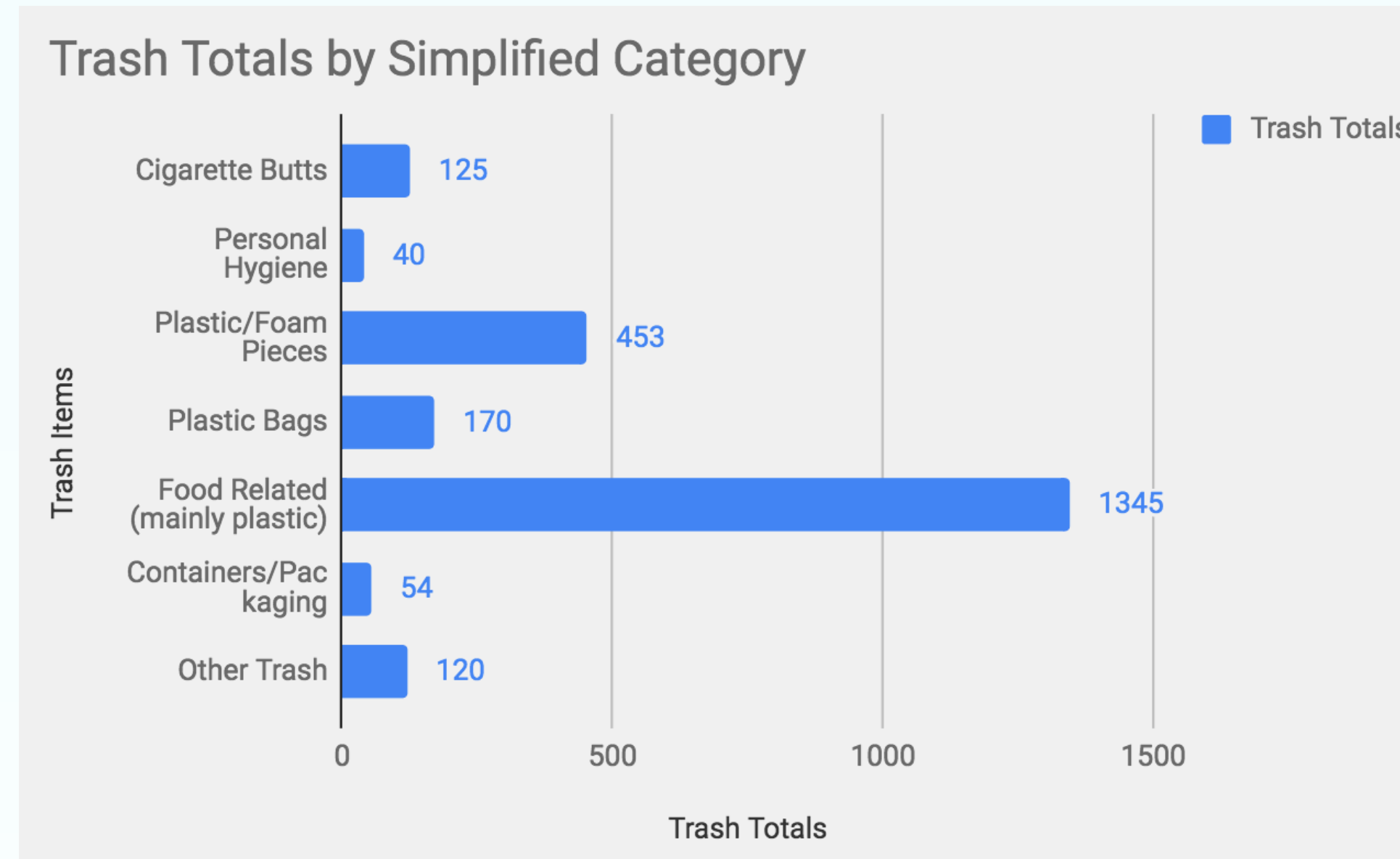
In just over two hours, we filled five (5) thirty-gallon-capacity trash bags out of a goal of four (4).

Total trash weight came to seventy-nine (79) pounds.

We used the Ocean Conservancy's CleanSwell app to record trash data.

At right, the chart provides a seven-category breakdown of trash collected.

Overall, the total items collected came to 2,307.



58% of the trash at this site consisted of mainly plastic, food-related items.

Among individual items, plastic straws were the most collected item (n=489).

DISCUSSION

The modest goals of the project were achieved—members of the local Ultimate community participated, they were engaged and enthused about the beach cleanup, trash data was logged and uploaded to CleanSwell. Participants even stayed to play beach Ultimate Frisbee afterwards.

However, future such projects would benefit from a longer timeframe. Starting earlier would allow for better planning, organization, and time for more participants to sign up.

Additionally, participants themselves provided further constructive comments, notably that logging trash data slowed things down—they wanted to see more of the beach itself clean. Moving forward, future projects could offer activity choices (data collection vs. cleanup) or set only a short time aside to gather sample data.

IMPACTS

This project engaged a very small subset of a local audience in an environmental stewardship activity, connecting that activity with their recreation interests. Impacts in terms of actual trash/data collected seemed meaningful. Though participants desired an even larger sense of accomplishment, there was general satisfaction and an openness to future projects.



REFERENCES

Berns, G. N., & Simpson, S. (2009). Outdoor recreation participation and environmental concern: A research summary. *Journal of Experiential Education*, 32(1), 79-91.

Brymer, E., Downey, G., & Gray, T. (2009). Extreme sports as a precursor to environmental sustainability. *Journal of Sport & Tourism*, 14(2-3), 193-204. <https://doi.org/10.1080/14775080902965223>

NYC Parks. (n.d.). Coney Island Beach & Boardwalk. Retrieved August 5, 2018, from <https://www.nycgovparks.org/parks/coney-island-beach-and-boardwalk/>

NYC Parks. (2014, September 22). The Daily Plant: Citywide beach attendance grows by more than 22%. Retrieved August 5, 2018, from <https://www.nycgovparks.org/parks/coney-island-beach-and-boardwalk/dailyplant/23220>

Shandas, V., & Messer, W. B. (2008). Fostering green communities through civic engagement: Community-based environmental stewardship in the Portland area. *Journal of the American Planning Association*, 74(4), 408-418. <https://doi.org/10.1080/01944360802291265>

Silvertown, J. (2009). A new dawn for citizen science. *Trends in Ecology & Evolution*, 24(9), 467-471.

van Vugt, M., Griskevicius, V., & Schultz, P. (2014). Naturally Green: Harnessing Stone Age Psychological Biases to Foster Environmental Behavior. *Social Issues and Policy Review*, 8(1), 1-32.

Wyles, K. J., Pahl, S., Holland, M., & Thompson, R. C. (2017). Can beach cleans do more than clean-up litter? Comparing beach cleans to other coastal activities. *Environment & Behavior*, 49(5), 509-535. <https://doi.org/10.1177/0013916516649412>

