

# Educating and Teaching Youth about Water Quality, Stormwater Runoff, and Green infrastructure installations in Plaster Creek Watershed

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## Introduction

Plaster Creek Stewards (PCS) is a watershed restoration initiative of Calvin University, that focuses on education, research, and restoration to help improve the water quality of Plaster Creek. Plaster Creek drains a 58-square mile watershed in southern Kent County, emptying into the Grand River just south of downtown Grand Rapids. The Grand River then drains west, where it flows into Lake Michigan at Grand Haven. Plaster Creek is deemed the most polluted waterway in West Michigan. The Green Team is a program initiated by PCS involving a group of high-school students that live in the urban areas of the watershed, and are hired to work during the summer towards restoring Plaster Creek. The group was mentored by Gary Warners, a science teacher at Living Stones. Under the supervision of Deanna Geelhoed the Program coordinator of PCS. I also worked closely with Benjamin Steenwyk, a student at Calvin University.

## Our Work

As a college mentor, I worked with the Green Team students to help guide and lead them during different projects in the field and in the classroom setting. We were able to share our stories and perspectives about the environment. I learned a lot from their experiences living in Grand Rapids, and was also able to motivate and encourage them in their path to living sustainably.



Transplanting with Green Team



Beach Cleanup at Grand Haven

## Conclusion

Working with the Green Team and installing curb-cut rain gardens has been an amazing experience that has helped me set a trajectory in what I hope to direct my life towards: engaging with the local community, sharing lives with the youth, and implementing hands-on rain gardens while getting educated about the effects of native plants. Also, at the end of each monthly Green Team session, PCS hosts a celebration that allows the high schoolers to share their reflections and takeaways from this experience. I was encouraged by their articulate expressions in how much their short-span of work has impacted their perspective on their local watershed and thus their individual/communal actions.

## Objectives

- Educating and engaging a group of high schoolers from the urban area of the watershed .
- Showing the Green Team the outlet of where the Grand River flows into Lake Michigan and helping them understand the importance of the connections and the effects of their watershed.
- Installing and designing 5 new curb-cut rain gardens in the Grand Rapids urban neighborhood.



Beach Cleanup at P.J. Hoffmaster State Park

## Projects

### Rain Garden Installations

Designing, shaping, preparing, and planting curb-cut rain gardens to capture stormwater runoff from draining into Plaster Creek.

### Watershed Tour

Took the Green Team on a tour, showing them the head waters and the mouth of Plaster Creek.

### Seed Collecting

Went to Seidman Park and Lutton Park in Kent county Michigan to collect native plant seeds.

### Maintenance and Weeding

Performed maintenance on established rain gardens.

### Greenhouse Work

Led Michigan Native plant propagation efforts including; Transplanting seedlings, maintained plant success and oversaw greenhouse activities.

### Dutton Shadyside Park

Shadyside has been an ongoing floodplain restoration project in the headwaters of the Plaster Creek Watershed. In June 2019, we planted thousands of plants and seeded a shortgrass prairie.



Curb Cut Rain Garden Installation with Green Team



Planting at Dutton Shadyside Park

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