**Plaster Creek Stewards – Urban Habitat Restoration with Green Team**

**Jia Luchs, Clare Doss, Rachel Warners, Dr. Dave Warners, Deanna Geelhoed - Calvin University, Grand Rapids, Michigan**

**Introduction**

Plaster Creek, though its watershed is home to many potential stewards in Grand Rapids, is the most polluted creek in West Michigan. The Green Team, a branch of Plaster Creek Stewards, is a group of students that work during the summer with a focus on research, education, and working directly to restore the Plaster Creek Watershed. The Green Team works toward this goal through urban green infrastructure, utilizing native plants to manage stormwater. Two Calvin students, Jia Luchs and Clare Doss, and twenty high school students living in the Plaster Creek watershed were hired by Plaster Creek Stewards this summer to work, learn, and grow together. The group was mentored by Rachel Warners, a Calvin University graduate.

**Projects**

**Seed Collections and Native Plant Identification**

Seed collecting is the first step to plant propagation. The students learn how to identify native plants and how to harvest their seeds. The collected seeds will then go through stratification over the winter, germination in the spring and then grown at Calvin the next year for future restoration projects within the watershed.

**Rain Gardens and Bioswales**

Rain gardens and bioswales are methods of green infrastructure which are designed to collect stormwater within a bowl-shaped basin planted with Michigan native plants. With the collection of the water, the native plants can filter the water and slowly return through the ground. Together with the community, we work on planting and maintaining these gardens.

**Research Shadow Day**

For one day each session, the students are matched with Calvin researchers to learn the process of research in college and to participate with the other research projects.

**Catalyst Partners**

Catalyst Partners is an environmental consulting business located in downtown Grand Rapids. Catalyst Partners works with local business as well as business around the world to integrate a healthier and greener building space. During our visit, we participate in a tour of the most highly LEED-certified building from president, Keith Winn. In return, the students help perform maintenance on the native landscaping around Catalyst.

**Leisure Creek**

Leisure Creek is an upstream floodplain restoration project that PCS (and project funding from Michigan EGLE and the EPA) to recreate a floodplain bench. This quarter-mile long flood bench helps stormwater by protecting the channel and our downstream neighbors. There will be 200 trees and roughly over 60,000 native plants in this restoration site.

**Green Team Student Reflections**

“Something that really stuck out to me was a new meaning to community and what community means. Also, how there are many different backgrounds, but we all have a common interest and share a common passion.”

- Natalie 2022 GT Student

“I usually was more of an animal person, so I haven’t really built my knowledge around plants even though they go hand in hand. So, it is really, really cool to learn about the plants and now I can point out plants.”

- Ryn 2022 GT Student

“It was good to reconnect back with our watershed and to see all the place again. It’s been a while since I drove around these parts of town.”

- YenTran 2022 GT Student

**Concluding Thoughts**

“We believe that through this work we were able to lead by example and to learn alongside the students. We hope that the students leave this amazing experience with a better understanding of ecological restoration and reconciliation, self-pride in their positive environmental impact, and the confidence to pursue college and possibly an environmentally conscious career in the future.”

**Acknowledgements**

Many thanks to:

Rachel Warners and Jamie Vaughan, the team leaders for the Plaster Creek and Rogue River Green Teams.

Dave Warners, Deanna Geelhoed, and Andrea Lubberts for mentoring students living in the Plaster Creek watershed were hired by Plaster Creek Stewards this summer to work, learn, and grow together. The group was mentored by Rachel Warners, a Calvin University graduate.

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