Waller Creek Flood Prevention and Restoration

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March 20, 2014

Our proposal aims to limit potential flooding along Waller Creek and prevent erosion along its bank. The location is still to be determined depending on the advice of Karl McArthur and Dr. Maidment. Similar projects along Waller Creek include the restoration of Eastwoods Park.

In order to complete this project, our group will need to acquire maps of the floodplains of Waller Creek in the studied area, as well as detailed designs for our proposed implementations.

In addition to the data, we will be using HEC-RAS and StormCAD to simulate the effects of our new design on Waller Creek. We will obtain data to understand how well the area functioned prior to those changes and after the implementation of the proposed designs. We need to evaluate the quality of our proposed solutions by using these simulation models. We will also use ArcGIS to plot a base map for the studied area.

Our key project element is multi-layered rain garden terraces along each side of Waller Creek. These terraces will prevent soil erosion, filter stormwaters, create multiple fauna habitats, and are esthetically pleasing.

Within our team, Marie will be responsible for contacting Mr. McArthur about Waller Creek's floodplains, Christian will be in charge of obtaining dimensions and information on the key project element, Antonio and Fitsum will focus on drafting the possible designs for our project and using the simulation models to determine our impact. We will all collaborate on our respective positions.

References:

Jones, K., (2013). *Students' design for water district facility emphasizes conservation.* Available online: https://one.arch.tamu.edu/news/2013/6/24/waterconservation-design/ (accessed 19 March 2014).

Waller Creek Conservacy. *Earthwork terraces.* Available online: http://wallercreek.org/finalfour/ (accessed 19 March 2014).