

LAXSON SOUTH BIOSWALE (SWRP PROJECT 65)

General Project Information

- **Project Description:** The proposed project will collect surface runoff from City streets and neighboring parking lots into a bioswales where it can be filtered and infiltrated. Currently, the area receives large amounts of runoff during moderate and heavy rainstorms, which floods the area between Laxson Auditorium and the humanities building. The flooded areas are safety concerns and the rainwater has nowhere to go but into campus. The intent of the project is to alleviate flooding on sidewalks, direct runoff to a bioswale where it can partially infiltrate, plant the bioswale with native vegetation, and provide a demonstration of low impact development (LID) project to promote education and outreach for stormwater runoff. Bioswales will be integrated along West 1st Street, so as to capture stormwater as it runs through campus. A new drain inlet will be installed in the lawn area at the south side of the Laxson Auditorium and tied into the existing drainage to the west. The new drain inlet will be located within the proposed bioswale feature. Minor shaping and grading of the lawn area at the south side of the Laxson Auditorium is needed to create a collection area for runoff not collected by storm drains. Catch basins will be installed in the bioswale, upstream of the storm drain inlet to allow more water to infiltrate into the ground. For academic purposes, two sampling areas would be incorporated. The first would be up stream of the swale at the outlet of the church parking lot to collect “before” samples, and the second would be at the end of the bioswale, nearest to the storm drain inlet to allow for comparison samples which can show the effectiveness of the system. Boulders, cobble, and appropriate plant material will be incorporated to slow down the flow of water and to further filter the runoff water prior to entering the storm drain system. Signage will be included that explains the need to manage stormwater in a responsible manner, and how bioswales and similar features can be incorporated in commercial and residential sites to help clean runoff.



Imagery: Google © 2018, Map Data: Google © 2018

- **Watershed:** This project is located in the Big Chico Creek Watershed.
- **Location:** The project site is the lawn area to the south of Laxson Auditorium and northeast corner of the Arts and Humanities building, adjacent to the roundabout at West 1st Street and Salem Street.
- **Tributary Watershed Area and Impervious Percentage:** The area that drains to this project includes the Presbyterian church. The total tributary areas is 2.53 acres. Impervious percent is not changing.

Benefits Resulting from this Project

- **Water Quality:** This project will capture approximately 5.5 acre-feet of stormwater and dry weather runoff per year from urban parking lots, sidewalks, and streets. Parking lot and street runoff is typically high in oils, grease, metals, and trash.
- **Water Supply:** Water supply is expected to be slightly improved because implementing infiltration areas will allow some flows to recharge groundwater.

- **Flood Management:** Flood management is expected to be highly improved. This project will reduce potential Street flooding along West 1st Street, and Salem Street or sidewalk which will improve the walkability of campus.
- **Environmental:** The environment is expected to be improved because implementing this plan will help manage sediment and erosion and will improve receiving waters.
- **Community:** The community is expected to be improved. In order to reach-out and engage the campus community and campus visitors, signage would be included that explains the need to manage stormwater in a responsible manner, and how bioswales and similar features can be incorporated in commercial and residential sites to help clean runoff before entering waterways.

Project Costs

- **Estimated Plan Preparation Cost:** The estimated cost of this bioswale is to be determined.

Project Photographs:



Photograph 1. Flowing water from the church parking lot



Photograph 2. Oriented down West 1st Street towards proposed project area. Facing west.



Photograph 3. Facing south west, overlooking proposed project area



Photograph 4. Oriented towards project area facing south west

Initial Projects Included:

No other initial projects were included in this plan.