

# Strawberry Creek Ecological Stabilization Project

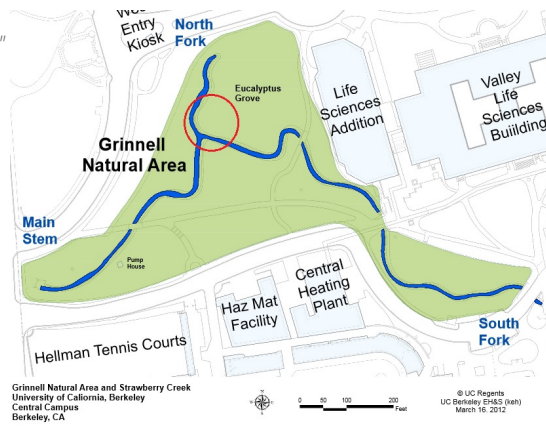
Formally known as "Slow It, Spread It, Sink It"

**Project Leads:** Aysha Massell, Associate  
Professor Kara Nelson

**Sponsor:** Department of Civil and  
Environmental Engineering

**TGIF Grant:** \$47,840

**Project Theme:** Habitat Restoration



## Project Location

### 2013 Application Submission

**Status:** In Progress

**Project Description:** This Ecological Stabilization Project will help Strawberry Creek regain ecological stability by applying basic Low Impact Development (LID) strategies and habitat restoration measures. Grant funding will finance the design phase of the project.

**Goals:** The primary goal of this project is to demonstrate how LID can benefit natural ecosystems and human systems alike.

This goal will be achieved through 2 Phases:

1. The installation and development of Rainwater Tanks and an Overflow Garden in Dwinelle Plaza.
  - a. This phase of the project will benefit the campus by diverting a portion of storm water from Strawberry Creek, thereby reducing erosion and infrastructure damage on campus. The water harvesting system also serves to beautify the landscape with an added native plant habitat. Outreach and education will provide inspiration for the effectiveness of LID techniques.
  - b. Success will be measured on total amount of water slowed or diverted by the rainwater tanks and overflow gardens.
2. The initial development of a comprehensive restoration design for the confluence of the north and south forks of Strawberry Creek.
  - a. This project will address the loss of biodiversity in urban and urban/wildland interface habitats that are becoming overwhelmed by non-native invasive plant and tree species.
  - b. Success will be measured based on assessment of biological and physical parameters surrounding Strawberry Creek and amount of visitations/interest to the project sites.

## Project Website

### TGIF Blog Posts about Strawberry Creek

## Project Photos

## Project Implementation Plan

Task	Description	Project Leads	Time Frame
Project Scoping & Data Review	Review available and pertinent studies for the project watershed	Primary: Aysha  Support: Jackie, Junice, Pete, ESA PWA	July 10, 2013
Topographic Survey	Conduct a topographic survey to develop detailed base map of existing site conditions.	Primary: Pete, ESA PWA  Support: Aysha, Jackie, Junice	June 13, 2013 (field topographic survey/workshop)  July 10, 2013 (AutoCAD 3D document)
Geomorphic Assessment and Basis of Design	Conduct a geomorphic assessment of the site to develop a basis of design for potential habitat enhancement and bank stabilization measures.	Primary: Pete, ESA PWA  Support: Aysha, Jackie, Junice	June 13, 2013 (geomorphic assessment workshop)  July 10, 2013 (final document outlining basis of design)
Engineering Design & Construction Documents	The student team and design consultant will review and utilize existing available hydrologic data in order to establish design flow rates and conditions.	Primary: Aysha, Jackie, ESA PWA  Support: Junice, Pete	July 30, 2013 (30% design draft)  October 31, 2013 (60% design draft)  December 31, 2013 (100% design)
Permitting Support	EH&S will lead the permitting effort Review of project descriptions, implementation impacts, design graphics, and construction methods necessary for inclusion in the permit applications.	Primary persons responsible: Aysha, Tim Pine (EH&S), ESA PWA  Support from: Junice, Pete, Jackie	December 31, 2013
Implementation Funding	Pursue several funding sources, primarily grants for specific implementation elements such as trails, revegetation, or channel grade control construction.	Primary: Junice, Aysha  Support: Pete, Jackie, ESA PWA	Ongoing dependent on grant deadlines
Project Coordination	Working sessions with EH&S and the design consultant; stakeholder meetings as needed with additional UC staff.	Primary: Aysha, ESA PWA, Tim Pine (EH&S)  Support: Jackie, Junice, Pete	Ongoing throughout project
Outreach	Build awareness about the project and the creek in the campus and larger community of Berkeley. Set up a blog and facebook pages, and conduct outreach to various media. Develop	Primary: Jackie, Aysha  Support: Junice, Pete	Ongoing throughout project

## 2013-2014 Accomplishments

- Held a Topographic survey and geomorphic assessment workshop

### **Free Workshop: Topographic Survey and Geomorphic Assessment of Strawberry Creek**

**Time:** Thursday June 13 from 10 am – 12 pm

**Location:** Strawberry Creek - Confluence of north and south forks

Get hands-on experience in topographic surveying and geomorphic assessment in this workshop at the confluence of the north and south forks of Strawberry Creek. Guided by engineers and scientists from ESA PWA, we will be using state of the art technology to survey longitudinal profiles and cross sections of Strawberry Creek at the confluence of the north and south forks. We will also be assessing the sediment transport, erosion, and migration of these reaches of the creek in response to surrounding environmental and urban changes. Data gathered from this workshop will be used for the conceptual design, engineering design and analysis, and permitting for a larger restoration project at this site. This workshop is hosted by the Strawberry Creek Ecological Stabilization Project, which is composed of UC Berkeley students, staff and faculty partnered with ESA PWA, a leading consultant in river restoration. This project is funded by The Green Initiative Fund (TGIF).

This event is free and open to the public. Please RSVP at [ecostabilization@gmail.com](mailto:ecostabilization@gmail.com).

You can stay up-to-date with project progress and future events at [ecostabilization.wordpress.com](http://ecostabilization.wordpress.com)

- Input field data into AutoCAD in order to develop a 3D model of the site.
- Conducted historical research, analysis, and modeling of the watershed to determine peak flows.
- Held design sessions to solidify the best design scenario.
- Created and regularly update the project blog at <http://ecostabilization.wordpress.com/>
- **Outreach brochure** was completed.
- Outreach to professors and grad students is ongoing (would like more classes to use creek site as outdoor lab).
- **30% of design documents** were completed in mid-September.
- Produced drafts of three permits required by state regulatory agencies .
- Applied for a number of different grants, including from TGIF and the Chancellor's Community Partnership Fund.
- Expanded objectives to include more community outreach, particularly to students in Berkeley High School.