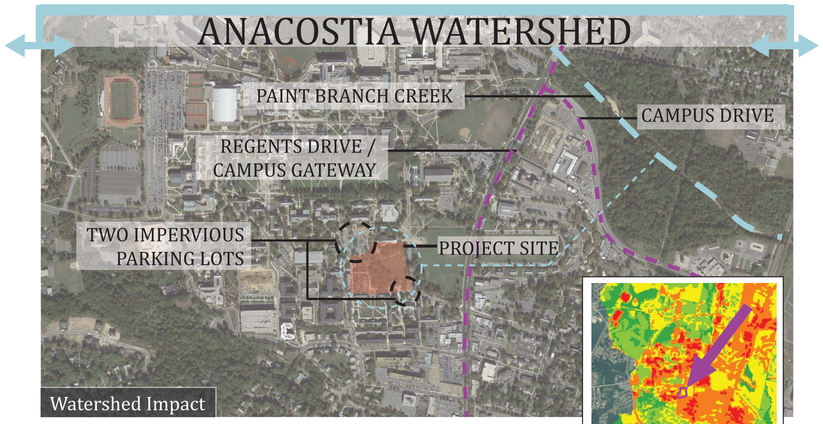
MEADOWS • MEANDERS • MEDITATIONS

HISTORIC CHAPEL
SITE RENOVATIONS

D9 EPA CAMPUS RAINWORKS CHALLENGE

PROBLEM

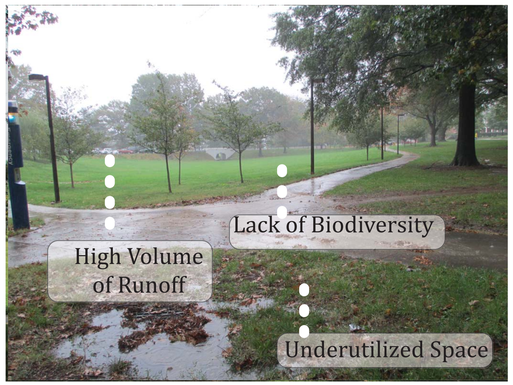


Impervious lots and urban campus surrounding the site lead to erosion and runoff issues before connecting to Paint Branch Creekbefore it flows into the larger Anacostia River.

MAP OF NONPOINT POLLUTANTS

SOURCE: Hot spots for campus (SWAT model)

EXISTING SITE CONDITIONS

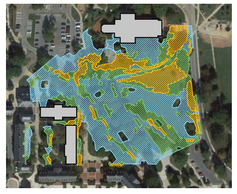


GOALS/OBJECTIVES

- Promote **biodiversity** through **native plantings** that target **wildlife** groups
- Create **ecologically** rich **habitats** as **aesthetically** appropriate choices for a **university campus**
- Provide **educational**, **social** and **reflective spaces** for students in a natural setting
- **Capture**, **detain, infiltrate,** and **filter** stormwater runoff

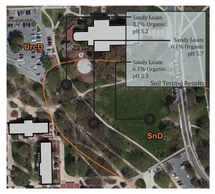
PROCESS

Existing Overland Flow
Overland Flow
Existing Stormwater Pipes
Pipe Flow
Stormwater Drain



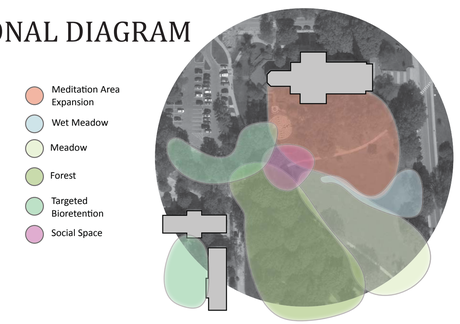
5%-10% Slopes
10%-15% Slopes
>15% Slopes

Pedestrian Circulation
Pedestrian Node
Vehicular Circulation

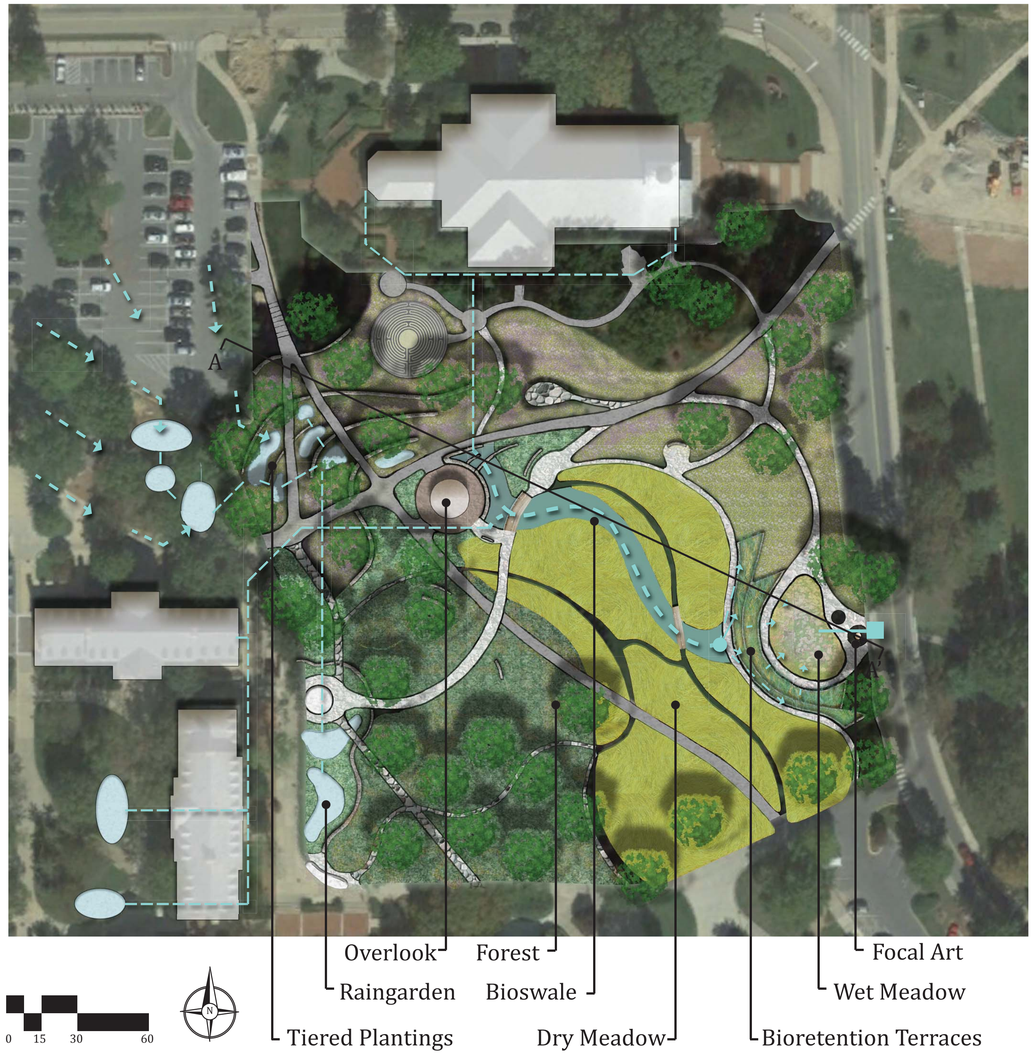


UrcD: Urban Land-Christiana-Downer Complex
Hydrologic Group D
SnD: Sassafrass Urban Land Complex
Hydrologic Group B

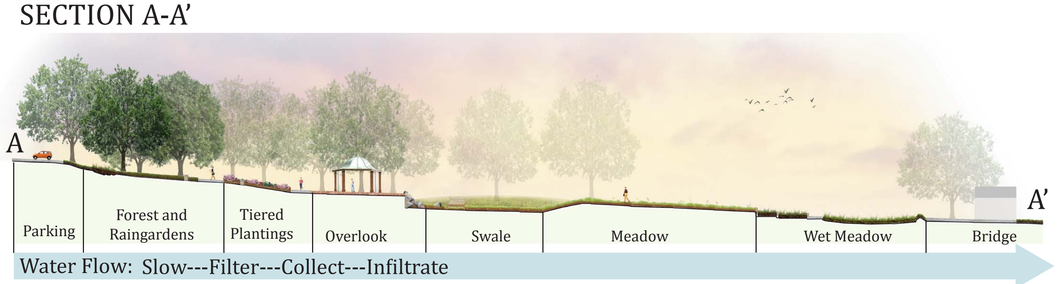
FUNCTIONAL DIAGRAM



SOLUTION



SECTION A-A'



2.5 ACRES 100% of existing **lawn replaced** with **native plants**

1 YEAR Storm : **100%** of **runoff treated** with **multiple LID** controls

5 YEAR Storm : **55%** of **runoff treated** with **multiple LID** controls

45 X Factor in which pollinator diversity are **increased by meadow** plant community over lawn. (Tallamy, 2014)