# Urban Stream Restoration Case Study: Parkerson Mill Creek

Eve Brantley, PhD, Extension Specialist and Assoc. Professor
Department of Crop, Soil and Environmental Sciences
Auburn University

Acknowledgments:
Dan Ballard and Dusty Kimbrow, City of Auburn
Ben Burmester, Auburn University Facilities
Caleb Duke, Auburn University, Crop, Soil, & Env Sciences
Alabama Department of Environmental Management
Environmental Protection Agency, Region 4
Goodwyn, Mills, and Cawood, Inc
Jennings Environmental, LLC
North State Environmental
Erosion Pros, Inc

# Watershed Overview

Urban, 9.2 sq mi watershed

Lower Tallapoosa Basin


Photo Credit: Dan Ballard, Auburn Water Resource Management

1. Opportunity to improve local resource
   - Quality of life
   - Community amenity
   - Outdoor classroom
2. Regulatory requirement
   - *E. coli* Total Maximum Daily Load
   - Phase II stormwater rules


2003


2004


2006


AMERICAN
2003


2007


DRAINS TO
Parkerson Mill Creek

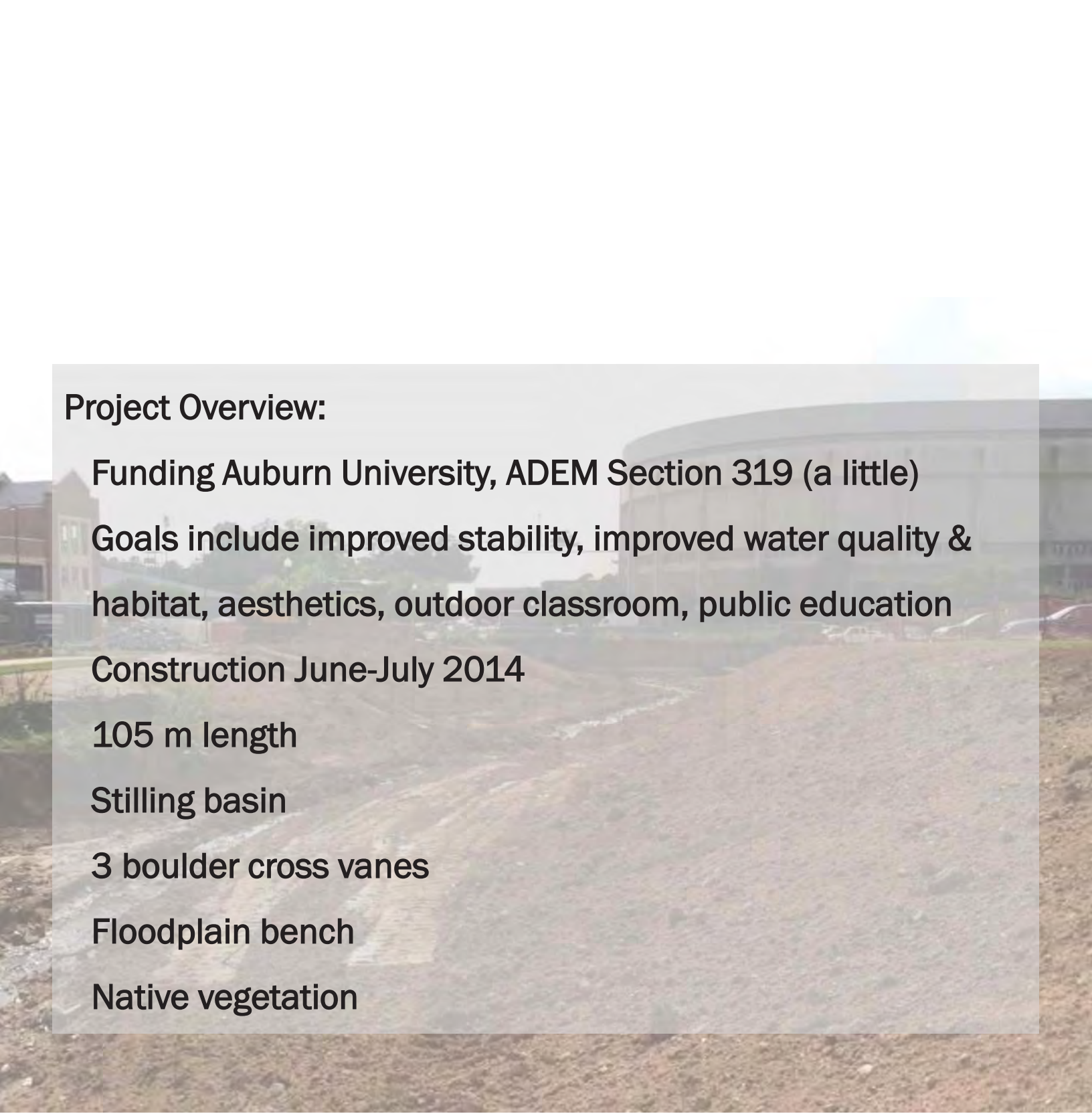

11/16/2012


AVONDALE
TOOMER'S DRUGS
TOOMER'S DRUGS


2014

2013

# PMC – Wellness Kitchen



Project Overview:

- Funding Auburn University, ADEM Section 319 (a little)
- Goals include improved stability, improved water quality & habitat, aesthetics, outdoor classroom, public education
- Construction June-July 2014
- 105 m length
- Stilling basin
- 3 boulder cross vanes
- Floodplain bench
- Native vegetation

June 2014

June 2014


SCIENCE
MATTERS

2016 April

# All good?  Are we finished?

July 2016

# AU Policy for Natural Resources Management Areas – Approved May 2016

II. POLICY PRINCIPLES

A. The University campus includes Natural Resource Management Areas designated for preservation, rather than development.

1. Restore, improve, and protect water quality by:

a. Conducting Stream and Wetland Determinations as part of project and construction processes to identify all existing Intermittent Streams, Perennial Streams, and Wetlands;

b. Maintaining Open Channel conditions;

c. Removing Invasive Vegetation and establishing Native Vegetation;

d. Maintaining Stream & Wetland Buffers per Table 1 on each side of all Perennial Streams, Intermittent Streams, and Wetlands;

1. Restore, improve, and protect water quality by:

a. Conducting Stream and Wetland Determinations as part of project and construction processes to identify all existing Intermittent Streams, Perennial Streams, and Wetlands;

b. Maintaining Open Channel conditions;

c. Removing Invasive Vegetation and establishing Native Vegetation;

Downstream – Parkerson Mill Creek, Turf Unit

Project Overview:

Funding City of Auburn

Construction November-December 2015

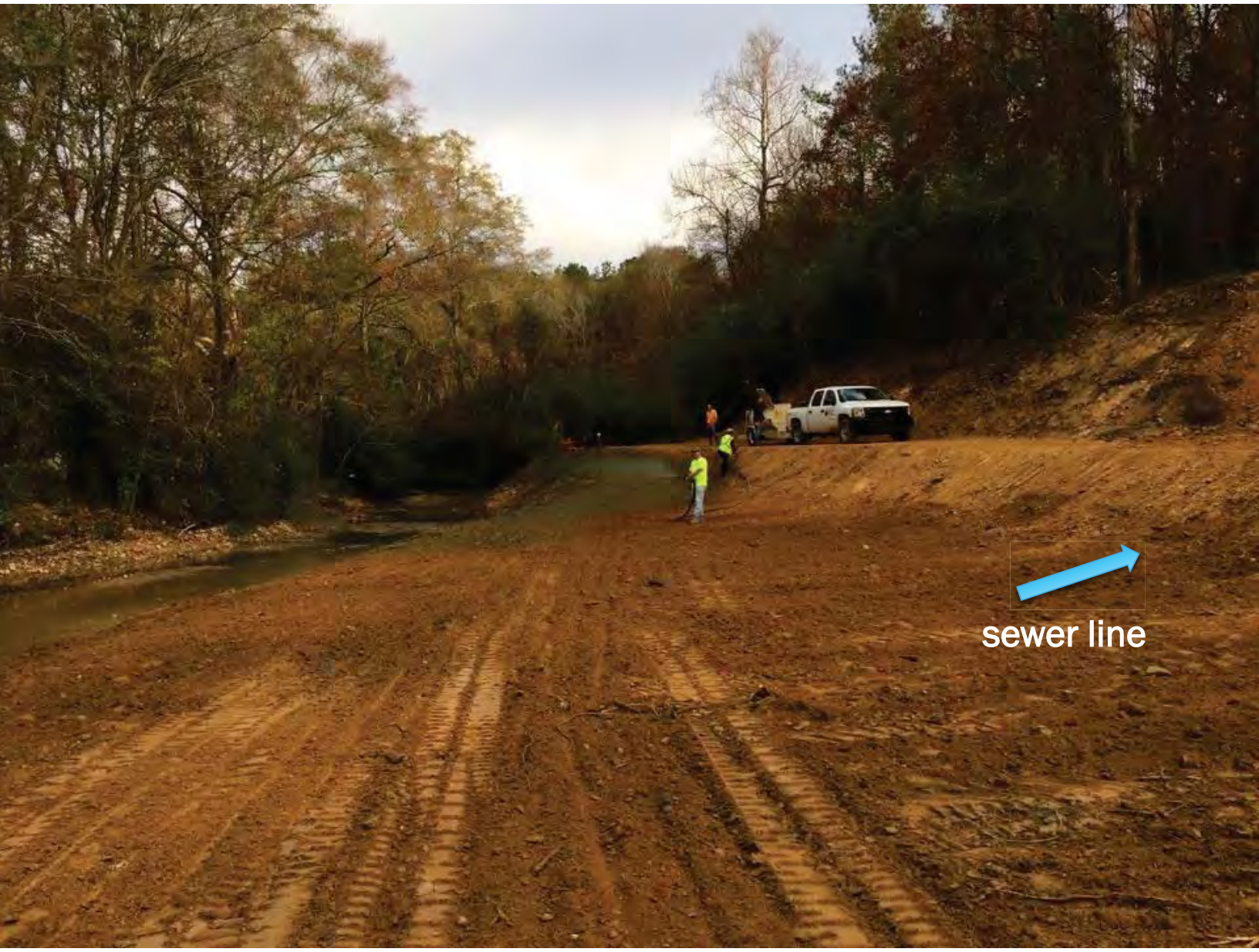
60 m length

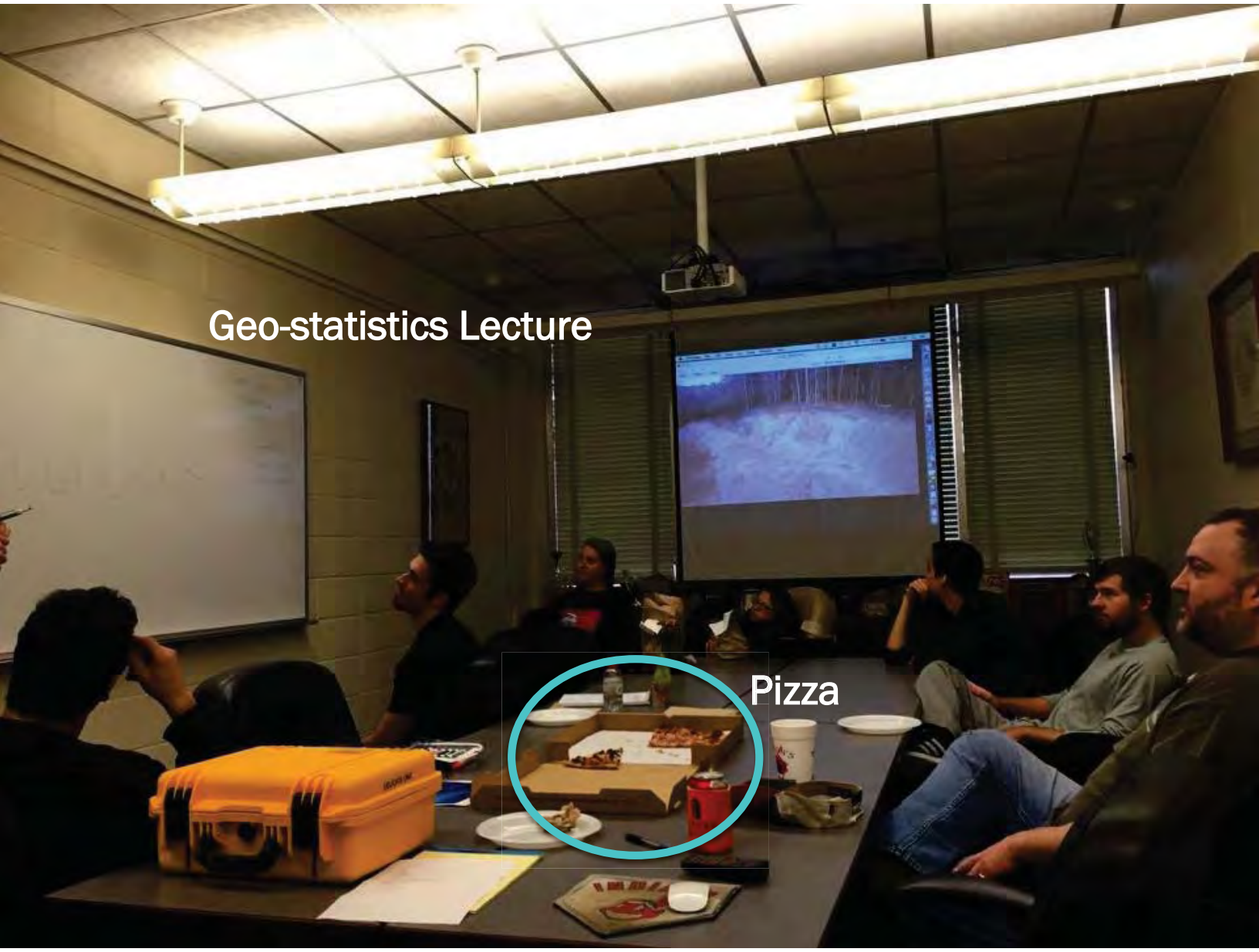
1 boulder vane

1 log j-hook

Floodplain bench

Native vegetation


sewer line


Geo-statistics Lecture
Pizza


12/24/2015 6:38 AM
Cuddeback

June 2016

October 2016

October 2016

October 2016

# What does success look like?

Thank you and Questions?

brantley@auburn.edu
Twitter @brantef
Instagram AcesWater
Facebook Alabama Extension Water


Don't Dump!!!
Dumper
Protester
And you'll get Durched!
Drains to Sugahatchee Creek

Video Link

https://youtu.be/IraH-HxrQCI