Grassroots BluePrints:

Linking Students and Communities

A USDA CSREES National Integrated Water Quality Program Project

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Fast Changes

In AL – the Urban-Rural interface:

- Gulf Coast, Baldwin Co. (42.9%)
- Birmingham, Shelby Co. (44.2%)
- Auburn-Opelika (32.1%)

Rich in Biodiversity

- Alabama has more species of fish, animals, birds and plants combined than any state east of the Mississippi.
- 4th in the nation in biodiversity
- 2nd in the nation in extinctions (lost 90 of its 4,533 species)

What are the needs?

- Many of watershed groups and local governments have participated in watershed planning
- After all the meeting and talking … What's next?

Common Theme

- Desire to implement watershed plan, but budgets are tight.
- Seeking Low Cost Technical Assistance for projects that offer water quality improvement AND education.

Simultaneously …

- Auburn University Landscape Architecture Dept. has interest in ‘watershed scale’ projects
- Some professors interested in presenting real-world challenges to students
  - Improve their educational experience
  - Fulfill AU mission to work with Alabama communities

The steps

1) Identify communities
2) Identify stakeholders
3) Identify priorities and concerns of the community
4) Students prepare draft designs
5) Present designs to the communities
6) Follow up to help with project implementation

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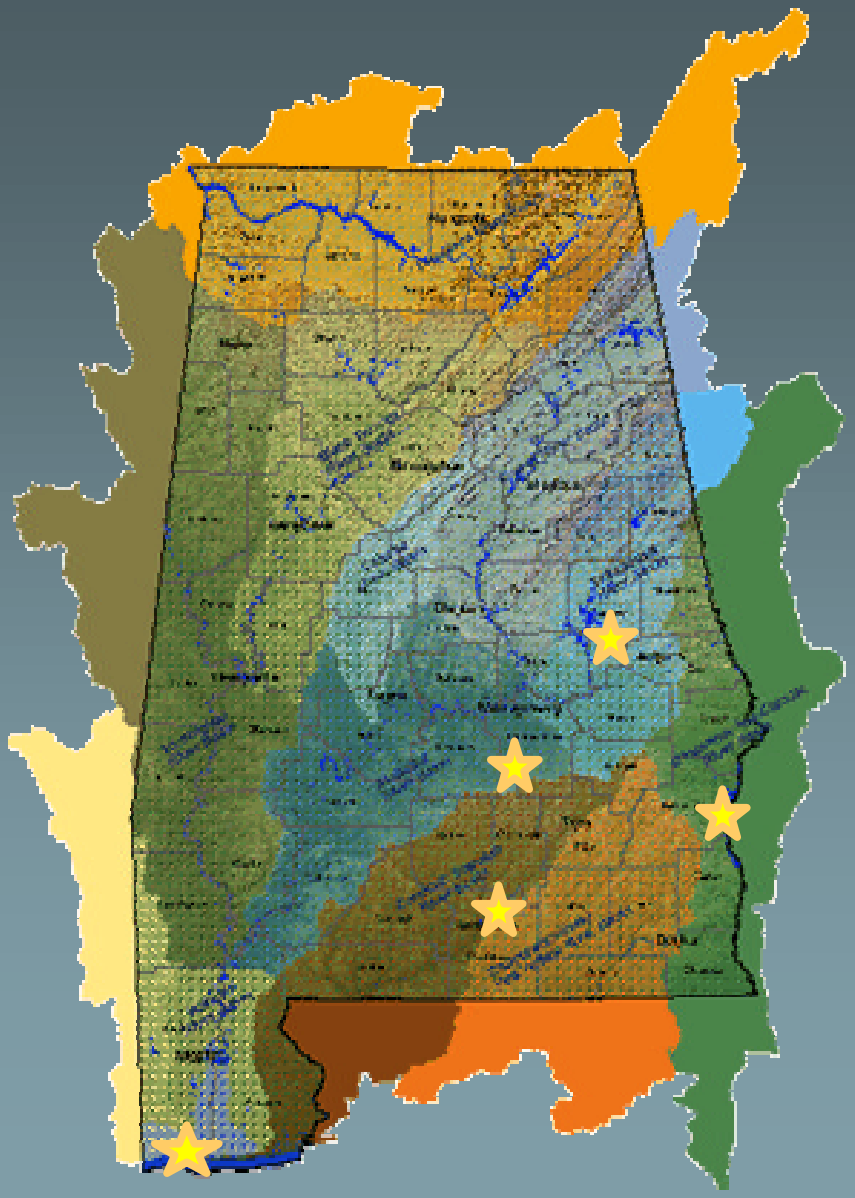
Urban-Rural Interface

- Approach communities that have written or are finalizing watershed management plans, revising or writing comprehensive land use plans
- These communities have gone down a path of collaborative problem identification and potential solutions

Spotlight Communities

Communities at the urban-rural interface

- City of Alexander City
- City of Eufaula
- Town of Pike Road
- City of Brewton
- Town of Dauphin Island



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Grassroots Groups and Beyond

- Alabama Clean Water Partnership
  - Basin facilitator in each river basin
  - Already working to bring together stakeholders to write management plans

Grassroots Groups and Beyond

- Alabama Cooperative Extension System
  - Important local contact with government, watershed groups, and *key* partners (the mulch guys)
  - Provide workshops, seminars, web sites and other educational programs requested by communities

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Community Charettes

- Meeting strategy – make it as convenient as possible
- Attend regularly scheduled meetings as a special program
- Make sure everyone is invited to participate

Community Concerns

- What are local concerns?
- What are the priority projects in their Watershed Management Plans?

Community Tours

- Follow up by spending the day in each community so that students can maximize their interactions with landscape and interested community members

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AU Landscape Architecture

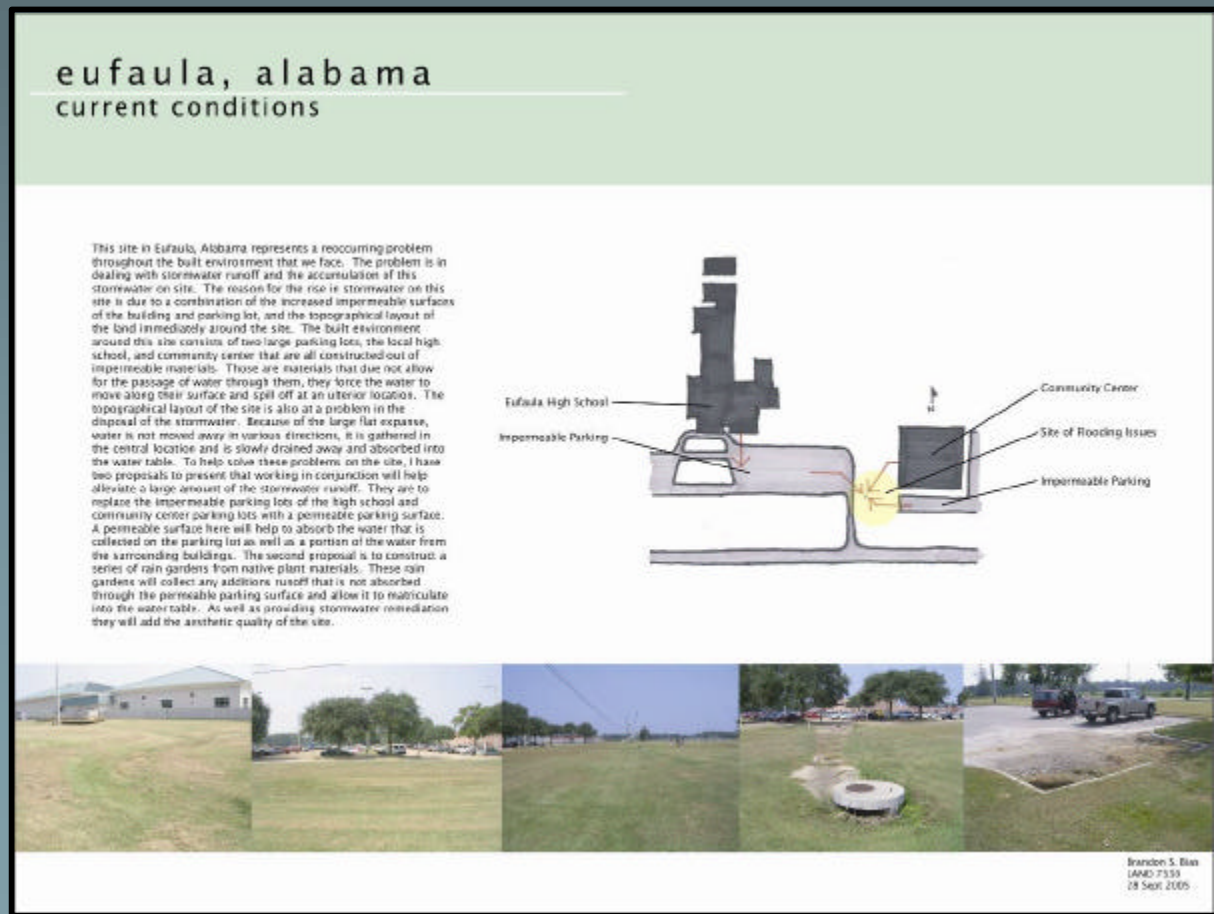
These projects are part of their course grade, so it's serious business

- LAND 7330 Landscape Ecology
- LAND 6240 Landscape Construction II – Stormwater Design
- LAND 6200 Landscape Architecture Community Fabric Studio

- Students know this is an opportunity to bulk up their portfolios - they tackle projects with gusto

Student Designs

- Students take note of existing conditions and concerns
- We encourage them to ask community members what the solutions may be



eufaula, alabama

current conditions

This site in Eufaula, Alabama represents a reoccurring problem throughout the built environment that we face. The problem is in dealing with stormwater runoff and the accumulation of this stormwater on site. The reason for the rise in stormwater on this site is due to a combination of the increased impermeable surfaces of the building and parking lot, and the topographical layout of the land immediately around the site. The built environment around this site consists of two large parking lots, the local high school, and community center that are all constructed out of impermeable materials. Those are materials that due not allow for the passage of water through them, they force the water to move along their surface and spill off at an ulterior location. The topographical layout of the site is also at a problem in the disposal of the stormwater. Because of the large flat expanse, water is not moved away in various directions, it is gathered in the central location and is slowly drained away and absorbed into the water table. To help solve these problems on the site, I have two proposals to present that working in conjunction will help alleviate a large amount of the stormwater runoff. They are to replace the impermeable parking lots of the high school and community center parking lots with a permeable parking surface. A permeable surface here will help to absorb the water that is collected on the parking lot as well as a portion of the water from the surrounding buildings. The second proposal is to construct a series of rain gardens from native plant materials. These rain gardens will collect any additions runoff that is not absorbed through the permeable parking surface and allow it to matriculate into the water table. As well as providing stormwater remediation they will add the aesthetic quality of the site.

Brandon S. Blan
LAND 7559
28 Sept 2005

Student Designs

- Students research the current state of science in stormwater management … what are options for practices, structural and non-structural, that improve water quality?
- More experienced classes match up water quality impairments with BMPs that may help (ex: small watershed, organic enrichment – are bioretention areas feasible?)

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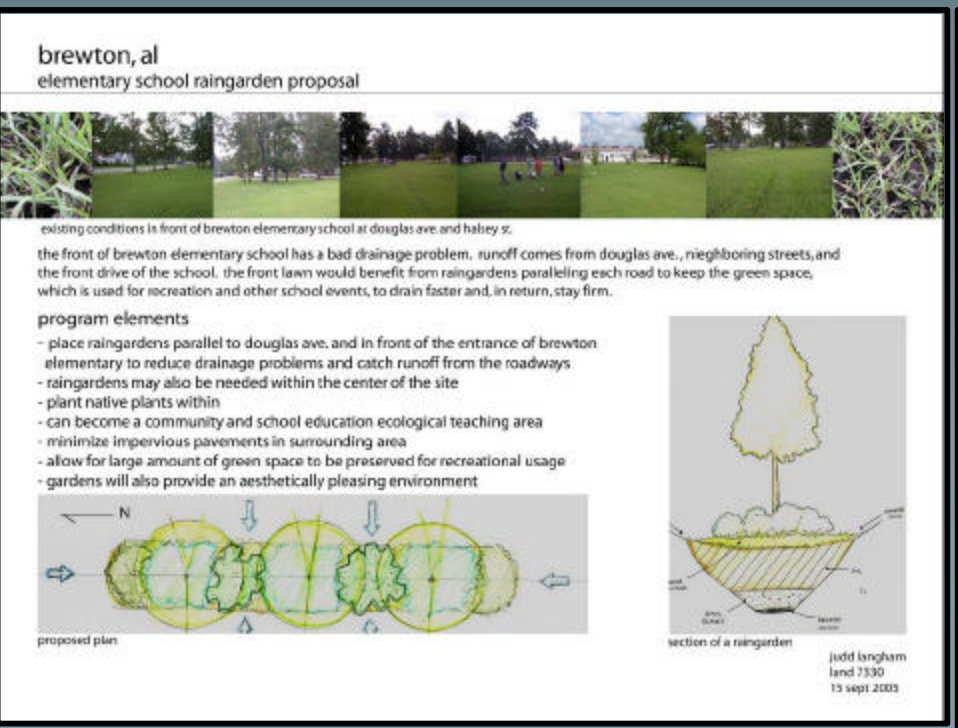
Community Reaction

- Overwhelmingly, communities have been pleased with the student design ideas (even the off the wall ideas)
- There is great interest in supporting the students and offering constructive criticism
- One city councilman asked, “This didn’t cost us anything? When can they come back?”

Community Mobilization

- Catalysts…
- Once a project is suggested, the speed at which it is adopted is astounding
- Groups want to act – sometimes they just need a little help



brewton, al

elementary school raingarden proposal

existing conditions in front of brewton elementary school at douglas ave. and halsey st.

the front of brewton elementary school has a bad drainage problem. runoff comes from douglas ave., nieghboring streets, and the front drive of the school. the front lawn would benefit from raingardens paralleling each road to keep the green space, which is used for recreation and other school events, to drain faster and, in return, stay firm.

program elements

- place raingardens parallel to douglas ave. and in front of the entrance of brewton elementary to reduce drainage problems and catch runoff from the roadways
- raingardens may also be needed within the center of the site
- plant native plants within
- can become a community and school education ecological teaching area
- minimize impervious pavements in surrounding area
- allow for large amount of green space to be preserved for recreational usage
- gardens will also provide an aesthetically pleasing environment

N

proposed plan

section of a raingarden

judd langham
land 7330
15 sept 2005

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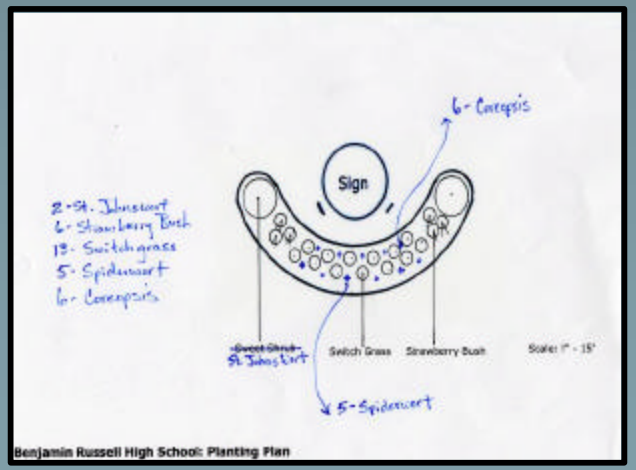
Implementation

- The exciting part!

Implementation

- If a community chooses to implement a project, students may be tapped with providing specifics
  - Costs
  - Maintenance
  - Equipment and supplies required

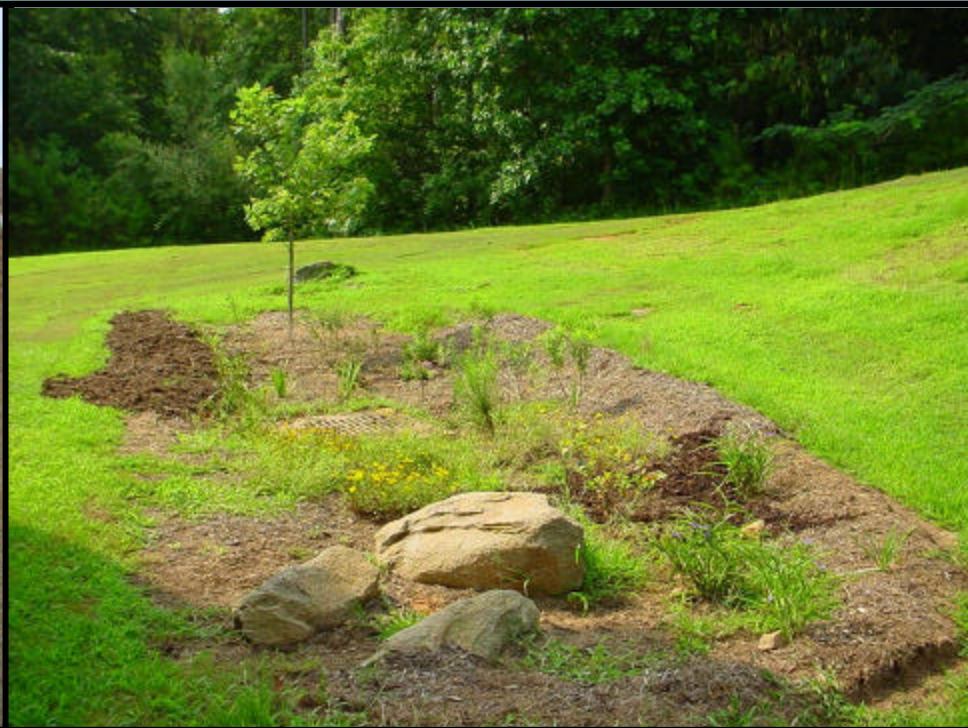


Implementation

- Actual project designs to be implemented are reviewed by LA professor
- It's still a feather in the students' cap to have a design selected

Rain Gardens & Stream Revegetation

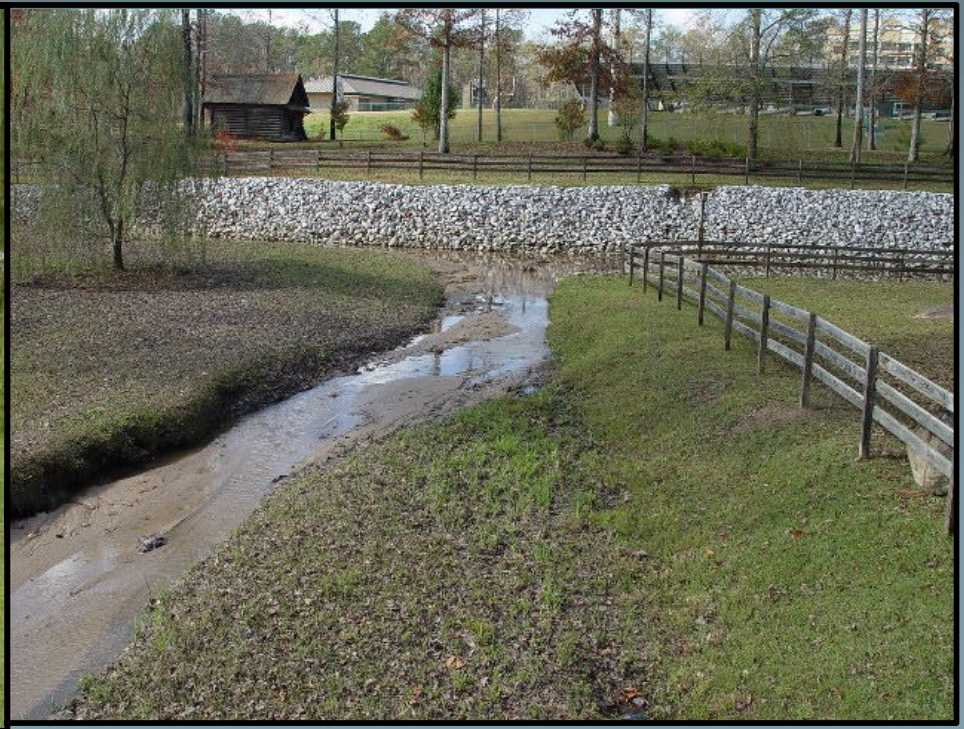
- Alexander City – 4 highly visible sites
  - Radney Middle School
  - Benjamin Russell High School
  - Sport Plex
  - Camp ASCCA



- Benjamin Russell High School

Stream and Floodplain Planting

- Round II …
  - Stream improvement project identified at the Charles E. Bailey SportPlex



Native plants

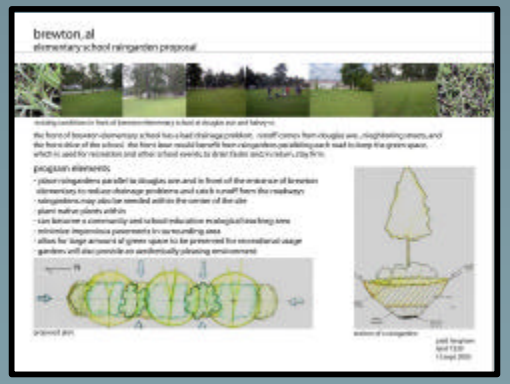
- Tulip poplar
- Red Maple
- River Birch
- Sweetbay Magnolia
- Hazel Alder*
- Native azalea
- Iris
- Sedge/Juncus
- Cardinal Flower*
- Obedient Plant

Follow Up

- Projects are followed for success and lessons learned
- These lessons are shared with other Alabama communities
- Lessons are also shared with other landscape architecture students

Extending the Project

- BMP tours (3)
- Presentations to City Councils, Alabama NPS Conference, University classes, Local media
- Workshops (2)

Results

- People are crazy about this project!
- We get approached regularly to ‘adopt’ new communities as class projects
- Students attended the 2006 Alabama NPS conference and were lauded with praise – a real ego boost for them