



**I PRO 371**

**Sustainable Landscape Design &  
Implementation at the Rice Campus**

**29 April 2005**

# IIT Rice Campus





# Problems

- Negative environmental effects
- Landscaping is not sustainable
- Landscape has limited benefits



# Objective

- IPRO 371
  - Design & implement a landscape that reduces maintenance costs and improves the environment at IIT's Rice Campus.
- Spring 2005
  - Research and design sustainable landscape elements for the campus.

# Goals

- Improve environmental effects
- Introduce sustainability
- Invigorate campus & community

# Team Framework

**Stream  
Restoration**



**Stormwater  
Management**

**Native  
Vegetation**



# Sustainable Landscape

Stormwater  
Management

Stream  
Restoration

Vegetation

- Ordinances
- Requirements
  - 89 parking spaces
  - 14 trees
- Current Parking Lot
  - 291 parking spaces
  - 0 trees
- Porous Pavers
  - Allow infiltration of rain water



# Sustainable Landscape

Stormwater  
Management

Stream  
Restoration

Vegetation

- Rain Garden
  - a garden, designed to retain and absorb stormwater
- Filter Strips
  - Overgrowth designed to filter runoff

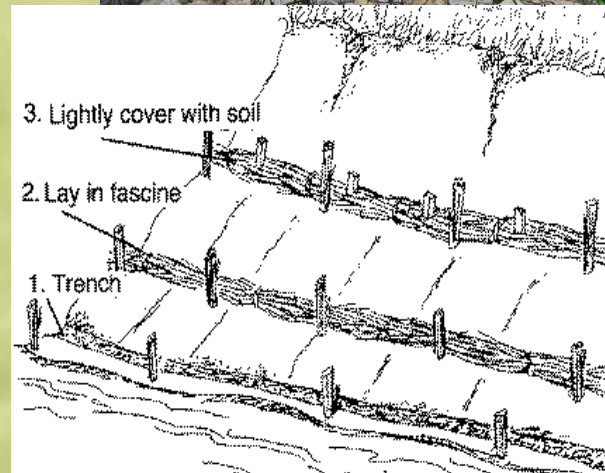




- Willoway Brook
  - Pollution source to Rice Lake
  - Flashy stream
  - Downstream effects
    - Rice Lake
    - Morton Arboretum
    - DuPage River



- Stream Bank
  - Grading
  - Bioengineering
    - Fascines
    - Brush Mattressing
  - Riparian buffer





- Flow Alteration
  - Meander
  - Flood plain
  - Riffles

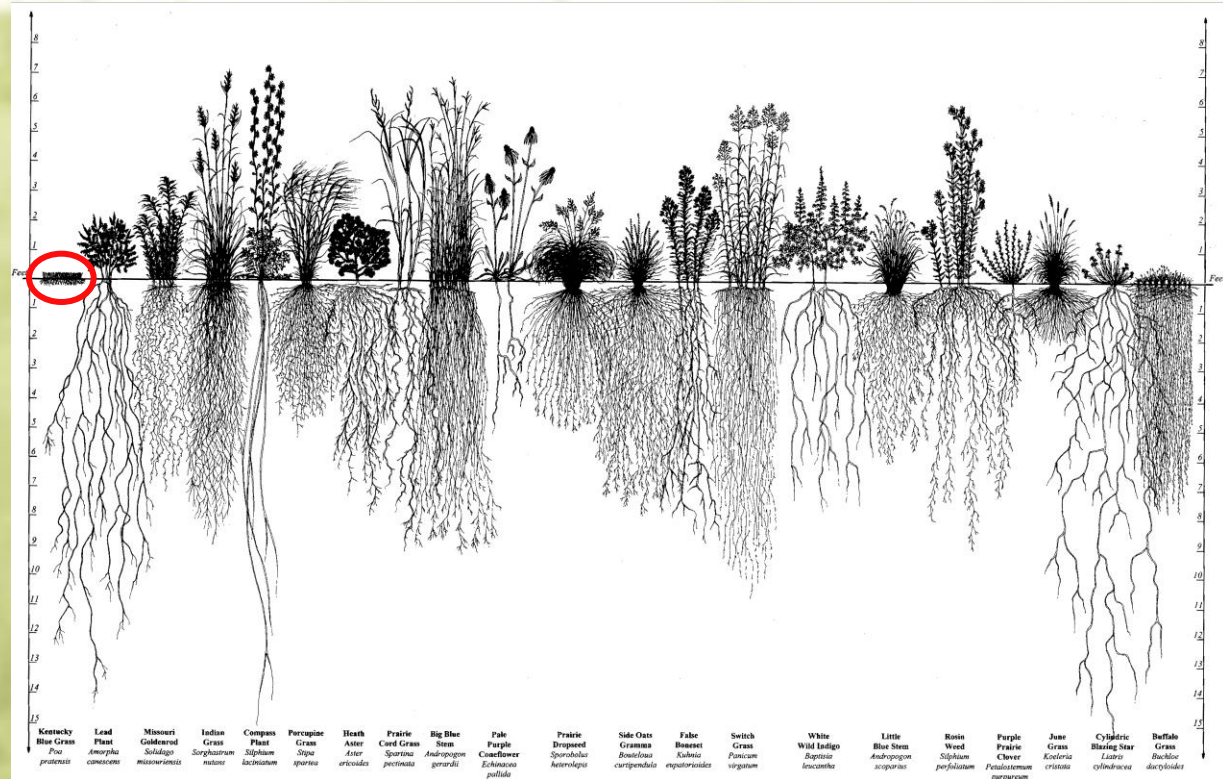




- Plant habitats
  - Native Prairie
  - Aquatic Plants
  - Riparian
- Appropriate vegetation
  - Sustainable
  - Attractive



- Sustainable plants
  - Reduce costs
  - Retain stormwater
  - Minimize runoff
    - Fertilizers
    - Pesticides
    - Herbicides



# Benefits

- Improve environmental effects
  - Reduce runoff
  - Increase filtration
  - Reduce sedimentation
- Invigorate campus & community
  - Improve aesthetics
  - Connect with community
  - Encourage education
- Introduce sustainability
  - Reduce costs
  - Increase functionality

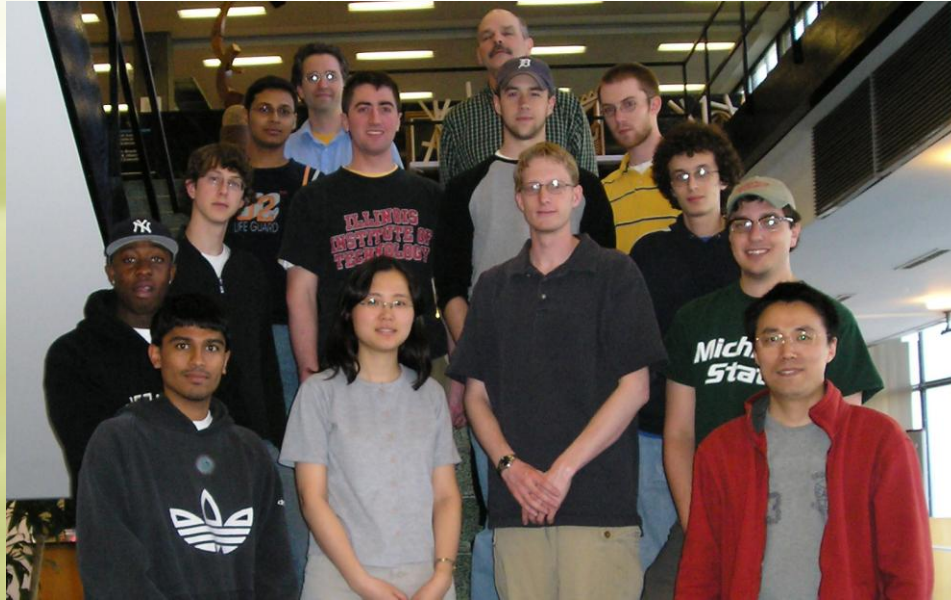


# Looking Forward

## Recommendations

1. Engage stakeholders
2. Identify funding sources
3. Develop schedule
4. Develop outreach plans

# Reflection



- Researched sustainability & the environment
- Utilized several academic disciplines
- Experienced real world problem solving
- Contributed to campus's development

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# Acknowledgments

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  - Joseph Buri, IIT
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# Questions?

