

No Staff Time, No Money, No Problem: Leveraging Relationships with Schools and Colleges

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Our Needs: MCM #1 Public Education & Outreach



MARKETING



CURRICULUM

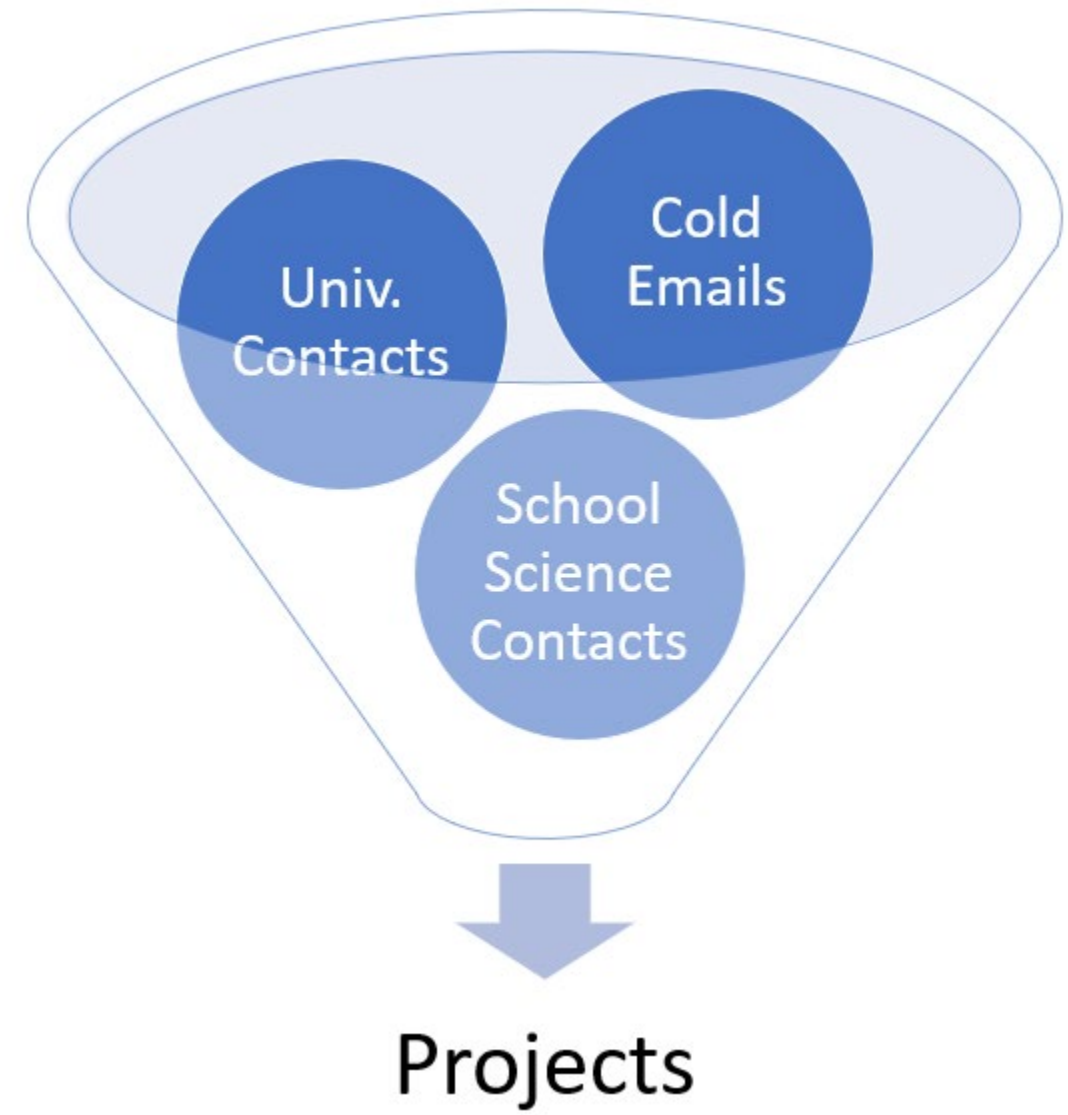


EVALUATION



RESEARCH

Process



Marketing Plans



Marketing Plan



Marketing Management Class

- Graduate level class
- Assignment: Marketing plan for Tennessee Smart Yards
- 4-Student Team Project
- Product: Marketing Plan

Staff Involvement: Minimal

- Background interview with MWS and State Director/TN Smart Yards
- Virtual final presentations



Marketing Plan



Marketing Plan

Mailing Lists & Information Packets



- ✓ Use existing mailing lists from e-billing to send out information about TN Smart Yards throughout the state of Tennessee
- ✓ 2.495 Million people in these 4 counties or 36% of Tennesseans
- ✓ Leverage all mailing lists for water, power, sewage, garbage, etc...



Marketing Plan

Social Media Influence



"Today around seven-in-ten Americans use social media to connect with one another, engage with news content, share information and entertain themselves" - Pew Research Center

- Use social media platforms to gain brand awareness and penetrate previously untapped markets.
- Knowledge consumption has begun gravitating towards 60 second or less short-form media driven via Tik Tok, IG Reels, and YT Shorts
- Create a digital footprint using short-form media to drive consumers to your website or YT page for long-form content and awareness of environmental change

Marketing Plan

Partnerships throughout Tennessee

- ▶ Partner with local nurseries in every county to increase your sales force organically at no additional cost
- ▶ Use the nurseries to help drive awareness of TN Smart Yards Program and the purchase of native plants and flowers
- ▶ According to the 2017 USDA survey, Tennessee has 473 nurseries in TN
- ▶ An increase of 30.8% from the 2009 data which had 327 nurseries in the state of TN
- ▶ TN has some of the highest sales on horticulture in the US
- ▶ McMinnville, TN is the "Nursery Capital of the World" -Tennessee Home and Farm



Social Marketing Plan



Marketing Social Change Class

- Undergraduate class
- Assignment: Social Marketing Plan for Tennessee Smart Yards
- 2 Teams, 4 students/team
- Products – Social Marketing Plans
 - Promoting the use of a rain gauge to monitor rainfall and water accordingly
 - Encouraging residents to start sketching their yards

Staff Involvement : Minimal

- Background presentation
- Virtual final presentations





Social Marketing Plan
Metro Water Services

Derrick Allison, Daylet Angeles, Quinton Clark, Caroline Stanley

Social Marketing Plans

Develop a collection of educational content on the issue of non-point source pollution. Posters and infographics are relatively easy to create. A short video may also be beneficial

Include information on content that details the concern for individuals. Develop a need for attention to the problem

Promote the generated materials among the target audience. Utilize partnerships with local organizations to spread content

Develop a call to action for the target audience encouraging the use of a rain gauge

Conduct a review of the implementation via education materials. Assess the adoption rates of the intended behavior and make changes as needed

Social Marketing Plans



RELEVANT THEORIES OF INDIVIDUAL- AND COMMUNITY-LEVEL CHANGE

Community Engagement:

- Visible impact: Members see how sketching lawns contributes to fighting pollution.

Reasoned Behavior:

- Encouraging rain gauge use and lawn sketching aligns with the theory of using reason.

Individual Beliefs:

- Shift from chemical lawn care to sketching aligns with individual beliefs about harm reduction.

Social Norms:

- Highlighting the normality of lawn care by showcasing community participation.

Strategic Approach:

- Strategies focus on increasing knowledge and modifying attitudes, beliefs, and behaviors.

Key Objectives:

- Behavior alteration through attitude alignment.

Curriculum Development



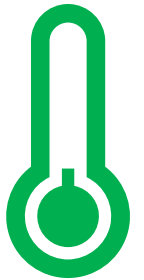
Tour Curriculum

Secondary Education: Planning and Assessment Course

- Undergraduate level class
- Assignment: Develop tour curriculum
- 2-Student Team Project
- Product: Curriculum for Stormwater Demonstration Campus tours

Staff Involvement: Minimal

- Background tour of the Demonstration Stormwater Campus
- Email questions



Stormwater Demonstration Campus Tour Curriculum



Pre

Model stormwater flow and pollutants
Brainstorm solutions



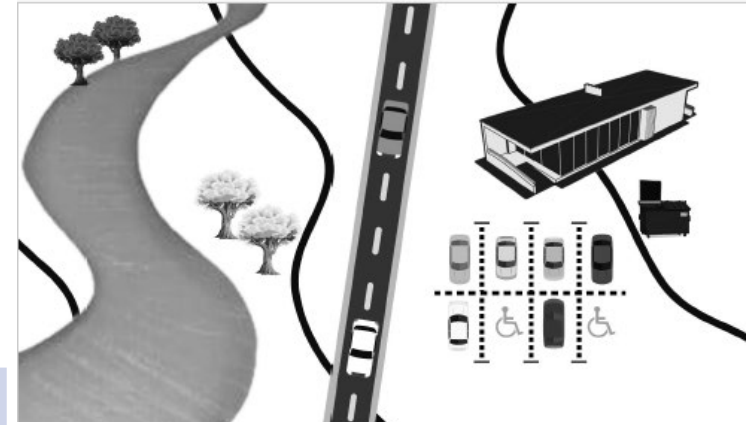
Tour

Stormwater Control Measures
Strengths, weaknesses of SCMs worksheet



Post

Revise model to include 2 SCMs
Proposal for SCMs to meet N.O.V.
requirements



Name: _____

Fill out each section of the table as you explore the Stormwater Facility. Think about the implementation of each conservation mechanism and what each offers.

	Parking Lot	Cistern	Green Roof
What conservation strategies is the facility employing?			
What are the strengths and weaknesses of this strategy?			
Would this be effective for <i>We Dye Stuff?</i> Why or why not?			

Project Based Learning Units

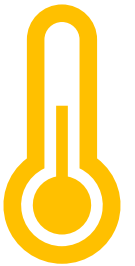


Teacher Externship

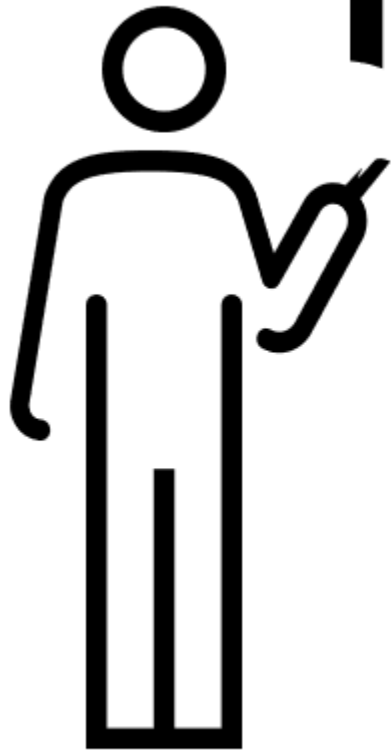
- 6th grade teachers
- 4 Schools
- Interdisciplinary
- Products:
 - Water.... We like to move it, move it!!!!
 - smART Yard Designs, LLC.

Staff Involvement: Medium

- Attend PBL session
- Host teachers for 2 days
- Background presentations and tour of Stormwater Campus
- Available for questions in the 2 afternoons
- Attend feedback session



Project Based Learning Units



Water... We like to move it,
move it!!

Driving Question:

*How can we as civil engineers
**design and create a
modern aqueduct system
to reduce the negative
impacts of stormwater
resources** and improve the
community?*

smART Yard
Designs, LLC.

Driving Question:

*How can we use media
arts to show how
human activities affect
the environment?
**Design an interactive
model of a smart
yard or rain garden.***

Adopt-a-Tree Activity

Interdisciplinary Science Research (ISR)

- Instructor developed Adopt-A-Tree activity
- ISR students worked with middle school students on contest
- Products:
 - Activity in tree curriculum guide
 - Co-presentation for teacher in-service

Staff Involvement: Minimal

- Background presentation to middle school students



Adopt-A-Tree Activity

Adopt-A-Tree

NAME IT, LOVE IT, HELP IT GROW

- EACH CLASS WILL receive a **tree care KIT**, INCLUDING
 - A SIGN + PAINT (FOR THE TREE'S NAME)
 - A WATERING CAN
 - CLIPBOARD W/CARE DATA SHEETS
 - DECORATIONS



Adopt-A-Tree



Evaluation



Evaluation Methods and Theory

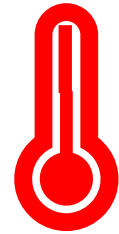


Consultant: Emily Jones, Ph.D.

- Evaluation consultant
- Data collection methods
- Use of data

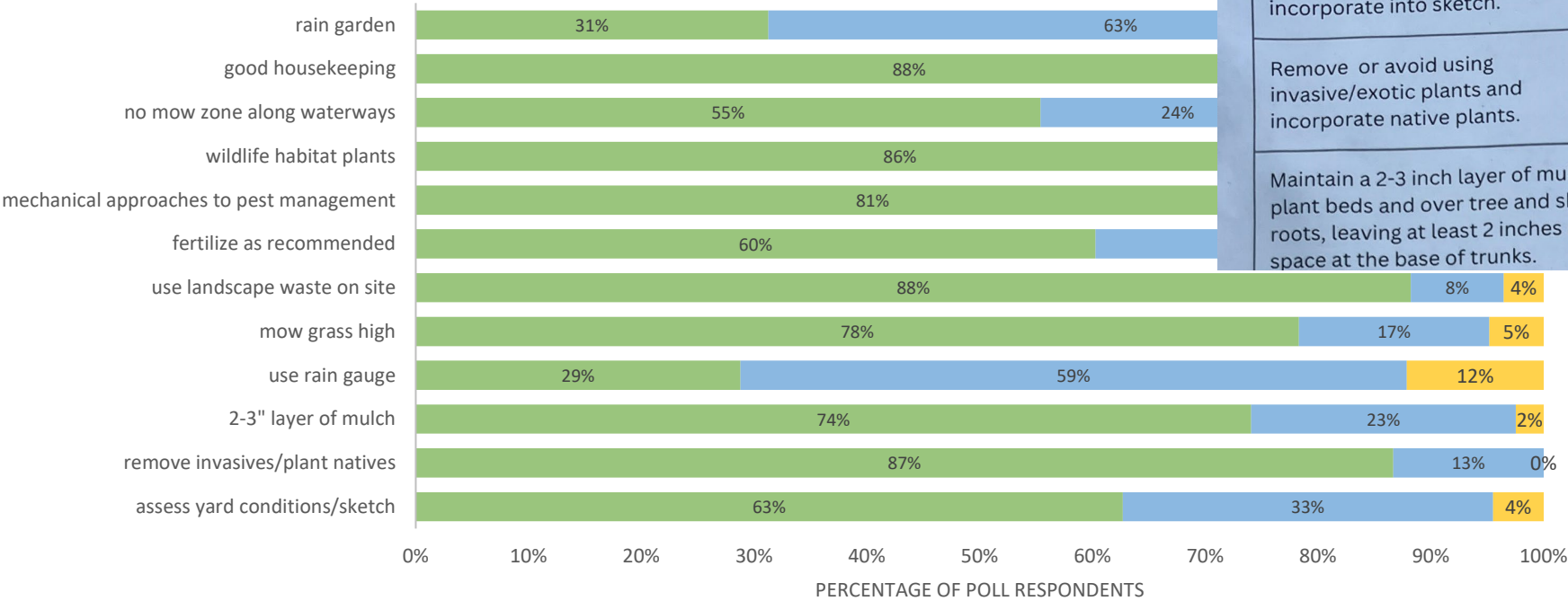
Staff Involvement: High

- Email questions
- Virtual meetings
- Data collection and analysis



Evaluations Methods

SMART YARD ACTIONS POLL



Smart Yard Actions	I do this	Need More Information, I might do this	Not Applicable or Not Interested
Assess yard site conditions and incorporate into sketch.			
Remove or avoid using invasive/exotic plants and incorporate native plants.			
Maintain a 2-3 inch layer of mulch in plant beds and over tree and shrub roots, leaving at least 2 inches of space at the base of trunks.			

Cumulative Polls ■ I do this ■ Need more information, I might do this ■ n/a or not interested



Evaluation Plan



VANDERBILT UNIVERSITY

Program Evaluation Course

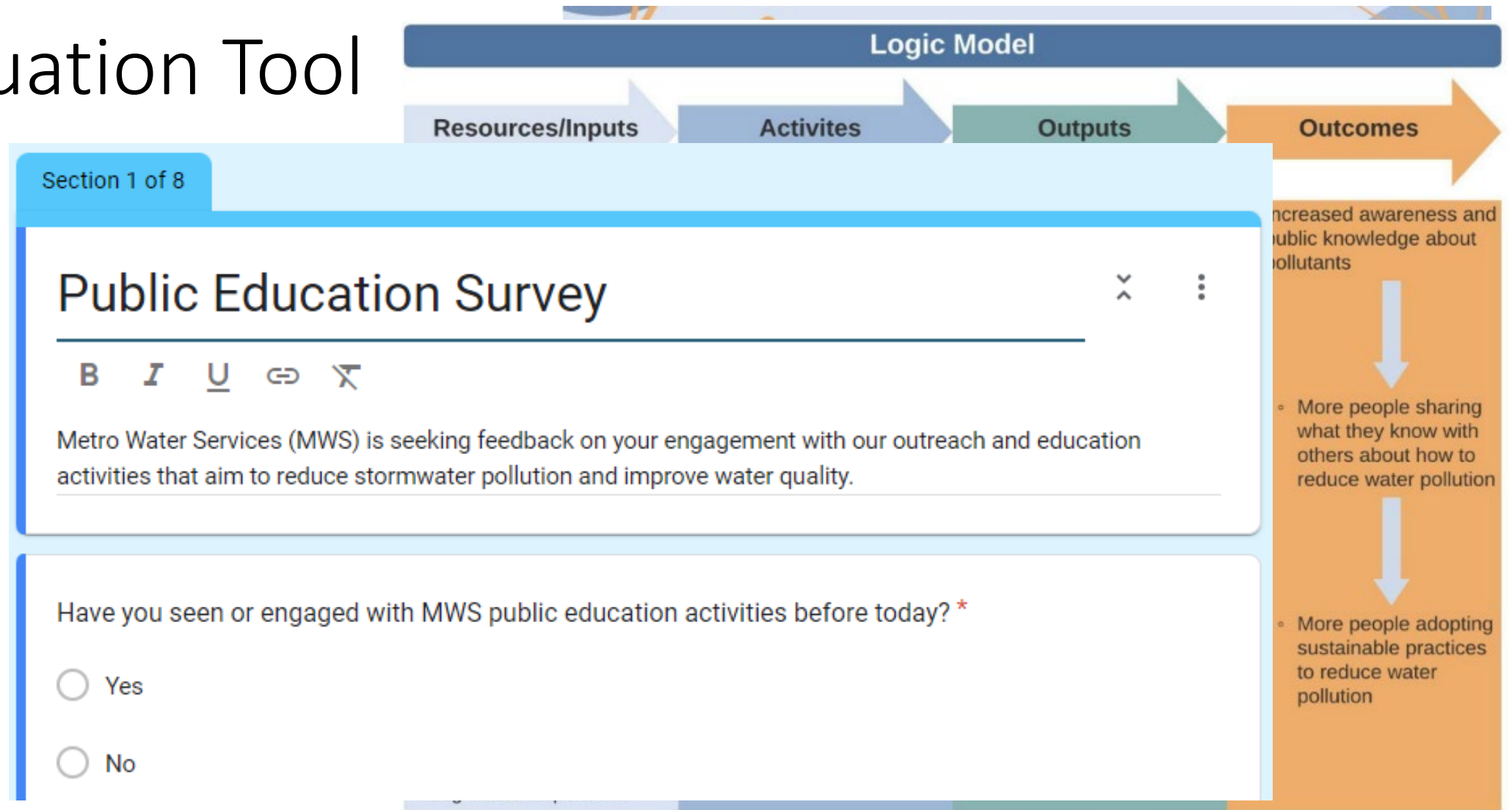
- Graduate level
- Community Partners working with students
- Product: Evaluation Plan with Survey

Staff Involvement: High

- Attend semester-long course



Evaluation Tool



Research



Pet Waste Research



Stratford High

Interdisciplinary Science Research

- Sophomores – seniors
- Multi-year project
- Assignments:
 - Quantify dog waste in dog park
 - Water quality testing
 - Education initiatives

Staff Involvement: Minimal

- Planning
- Water quality test demonstration



Pet Waste Research

Reducing Pet Waste to Improve Water Quality in Shelby Park

Jesi Seifert, M.S.¹; Dr. Kiara T. Vann Ph.D.²; Julie Berbiglia, M.S.³; Students of the Interdisciplinary Science Research



Program¹

¹Stratford STEM Magnet High School; ²Vanderbilt University; ³Metro Water Service



Introduction: Recent studies have shown that waterways are greatly impaired by pollution, especially from pet waste. The presence of dog feces poses a potential hygienic and public health concern. Dog feces contain significant amounts of bacteria; every gram of canine fecal matter can contain 23 million harmful bacteria. The failure of dog owners to pick up after their dogs can have detrimental effects on the environment. Stormwater runoff washes these bacteria into streams, rivers, and lakes increasing the bacterial load in the waterways. The microorganisms found in dog feces can be pathogenic to humans. In addition, dog feces contain nitrogen and phosphorous, elevated levels can deplete the oxygen needed for fish and water-based life to survive.

This study has two specific aims: to determine which water supply in Shelby Park has the highest amount of contaminants through water surface tests and to determine the presence of coliform bacteria in water Shelby Park. **We hypothesize the reduction of canine fecal contamination will improve water quality in Shelby Park.**

This research will be used to encourage our community to pick up after their pets and help keep our water clean.



Project Outline:



Test Water in
Shelby Park
Oct'23-Oct'24

+



Survey Dog Feces in
Dog Park Oct'23-
Oct'24

→



Educational Outreach
to Community Sep'24-
Nov'24

• Signage in Park &
Community
• Mailings
• Social Media

→



Test Water in
Shelby Park
Oct'24-Oct'25

+



Survey Dog Feces in
Dog Park Oct'24-
Oct'25

Sponsors:



Program Impacts

School for Science and Math at VU

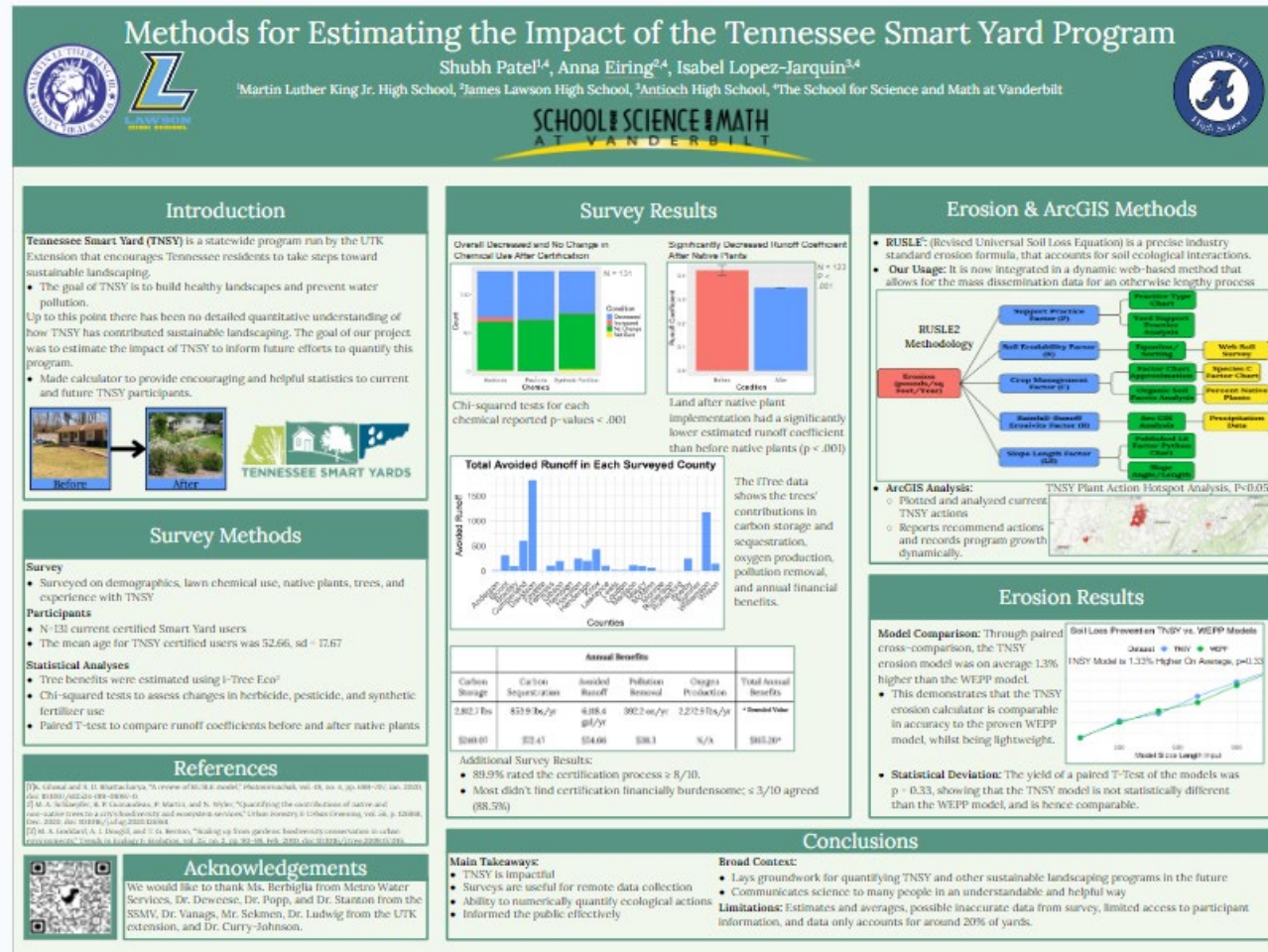
- High School Program
- Sophomore class research project
- Product: Methods of Estimating the Impact of the Tennessee Smart Yards Program

Staff Involvement: High

- Background Presentation
- Weekly meetings with group



Program Impacts



Erosion calculator

Zipcode

37235

Enter your Tennessee zipcode.

Area (sq ft)

2500

Enter the area of your land in square feet.

Slope percentage

40

Enter your slope percentage in a number (e.g., 40% = 40).

Slope length (ft)

300

Enter the length of your slope in feet.

Percentage of land covered in native plants

20

Enter the percentage of your land that has native plants growing on it.

Calculate

What's Next?



Messaging and signs

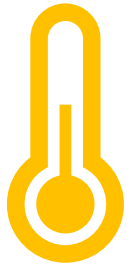


Practices of Sustainable Living Class

- Undergraduate level class
- Assignment: Develop scoop the poop signs for greenway trailheads

Staff Involvement: Medium

- Assignment development
- Background presentation
- Water Reclamation Plant tour
- Attend final presentations



Behavioral Research



Capstone Class

- Undergraduate, seniors
- Assignments:
 - Conduct observational research on poop scooping behavior in residential areas
 - Literature review

Staff Involvement

- Assignment development
- Background presentation
- Attend final presentations



Social Media



Public Relations Course

- Undergraduate
- Consultation:
 - Social Media tips and trends ideas
 - Focus group for readability
- Future involvement
 - Potential internships
 - Focus groups
 - Social Media

Staff Involvement

- Background presentation
- Q&A



Contacts

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