ECOS

Leveraging Prize Challenges

Mississippi's Beach Outfalls Challenge

Lessons Learned

ECOS 2019 Fall Meeting
September 25, 2019

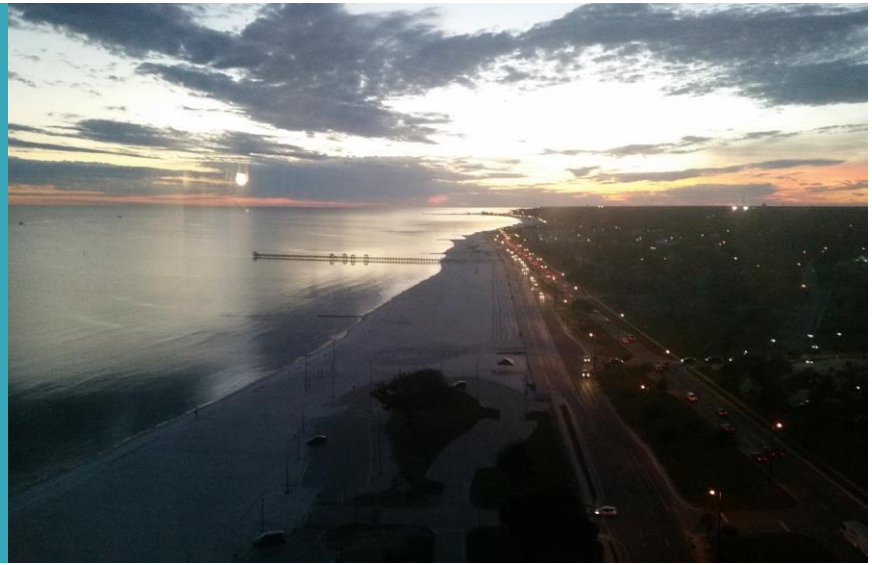
MDEQ

www.beachoutfallschallenge.org

BEACH OUTFALLS CHALLENGE

NATIONAL FISH AND WILDLIFE FOUNDATION
NFWF

GOAL



The Beach Outfalls Challenge was a public prize challenge sponsored by MDEQ. The Challenge was funded through a grant from the National Fish and Wildlife Foundation Gulf Environmental Benefit Fund (NFWF GEBF).

The goal of the Challenge was to enhance Mississippi's ability to restore and maintain ecological integrity of priority bays and estuaries by providing measurable improvements to water quality and reducing significant sources of degradation.

Was the challenge a success?

- MDEQ officially announced the Beach Outfalls Challenge at the 2016 Restoration Summit in November
- Registration opened January 9 and closed March 31, 2018.
- We had **28 teams** to register:
  - **5 states** were represented (AZ, LA, NY, MS, VA)
  - Included **10 high school** teams (Hancock & Madison Counties) and **2 college** teams (VA Tech) with other universities participating as team members (MSU; USM)
- Engineers, Scientists, Landscape Architects, Professors, Students, Other members of the Public
- From those teams, we received **21 design submissions.**

FINALISTS & SEMIFINALISTS

Design Submission

- All designs were reviewed by a judging panel of five randomly selected judges from our pool.

12 Semifinalists

- We narrowed 21 submissions to 12 Semifinalists.
- These 12 teams made a five minute video that described their technology and that were voted on by the public.

Logistics/Feasibility Evaluation

- The 12 Semifinalists underwent a more rigorous logistics/feasibility review by a subset of the judges pool.

6 Finalists

- Finalists were determined by adding the judges' original score, public voting score, and feasibility score.
- Finalists presented at the Beach Outfalls Challenge Showcase on June 28, 2017.
- Three judges were planted in the audience anonymously and selected the three winners.

And then…

Beach Outfalls Challenge Winners

ALLEN
ENGINEERING
AND SCIENCE

MSU
USM-GCRL
Moffatt & Nichol
Audubon Mississippi

SALT
Sustainable Active Landscapes Team

MDEQ

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BEACH OUTFALLS CHALLENGE

NFWF

Lessons Learned: Work Load

- Developing the Rules, Specifications, and Scoresheets
- Social Media Management
- Website Content
- Team Management
- Management of the Judges
- Logistics of the Showcase

Lessons Learned: Timeline

- Duration of Development
- Duration of Execution
- Communications and Outreach

CHALLENGE TIMELINE

January 9
Registration Opens

March 31
Design Submissions Due

April 21
Announce Semifinalists

May 8
Public Voting for Videos Begins

June 8
Finalists Announced

March 15
Registration Closes

April 18
Judges Score Sheets Due

May 5
Design Videos Due

June 2
Public Voting for Videos Ends

Late June
Beach Outfalls Challenge Showcase

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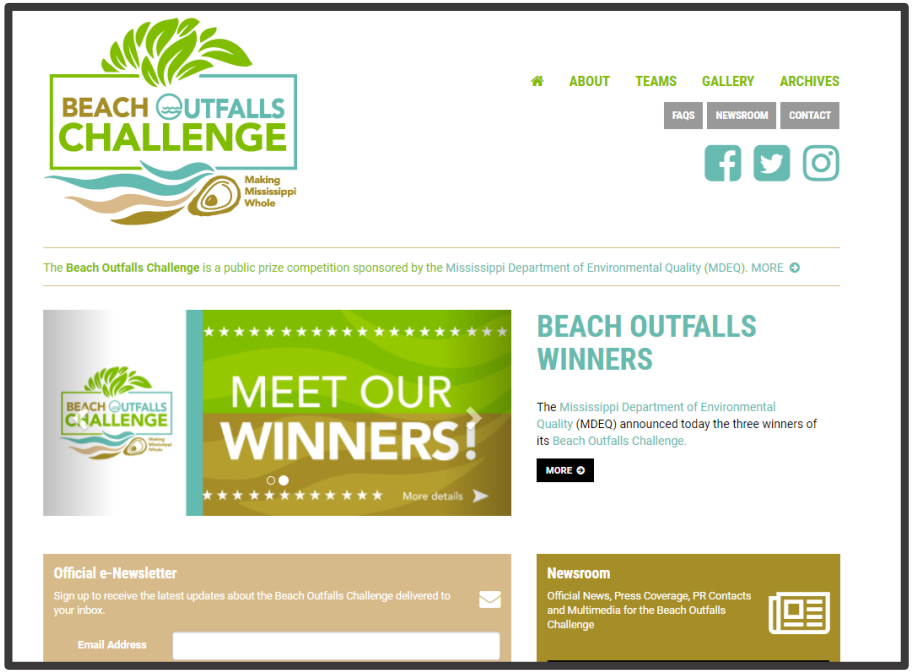
Lessons Learned: Monetary Commitment

- Running the Challenge
- Incentives to Participate
- Showcase
- Outreach

Lessons Learned: Technical Considerations

- Updating and Clarifying the Rules
- Submission Issues
- Website Operation



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Next Steps

- Each team will be responsible for the engineering and design of their own pilot scale project
- MDEQ will monitor for the water quality improvement. This monitoring will inform the possible implementation of the solution at other locations along the Mississippi Coast.
- MDEQ will be working with the teams, the coastal counties and their sand beach authorities or equivalents, and the US Army Corps of Engineers to ensure that all potential negative impacts to the beach, the seawall, and Highway 90/Beach Boulevard are avoided.

QUESTIONS?

Takeaways

- Agency goal: pose problem, seek solutions
- Importance, connectivity
- Collaborations
- Communication

Exercise 1: Developing a Problem Statement

- Contents: current state of issue, desired end state, existing gap between the two
- Steps: identify theme, give it context, write statement

Example: As our planet warms, we need it more than ever to keep our people cool. Worldwide, by 2030, extreme heat could lead to a $2 trillion loss in labor productivity. Despite a 100-year runway, the most advanced residential air conditioners have only achieved 14 percent of their maximum theoretical efficiency. Commercial LED lighting has achieved nearly 70 percent of maximum theoretical efficiency. Solar panels have reached 40 percent. I'm no AC expert, but 14 percent seems pathetic.

Exercise 1: Developing a Problem Statement

- In groups, address a nutrient issue through a challenge
- Use Mad Libs to write a problem statement

Exercise 2: Advertising your Challenge

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- Use your problem statement to develop a 2-minute pitch
- Think interesting & exciting - what will make people want to be a part of your challenge
- Team with best pitch wins prizes