



REACH

RESEARCH & EDUCATION TO ADVANCE CONSERVATION & HABITAT

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Research Program Manager,
REACH Coordinator & PhD Candidate

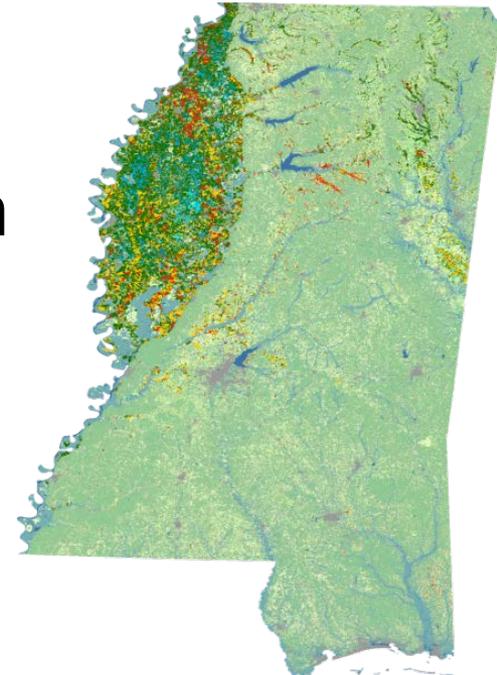
MISSISSIPPI STATE
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EXTENSION SERVICE



 **College of
Forest Resources**
Forest and Wildlife Research Center

REACH Mission

The REACH program will integrate research and outreach on specific farms to demonstrate the benefits of conservation on agricultural lands. The products developed by this program will be used to further conservation delivery and adoption in agriculture.



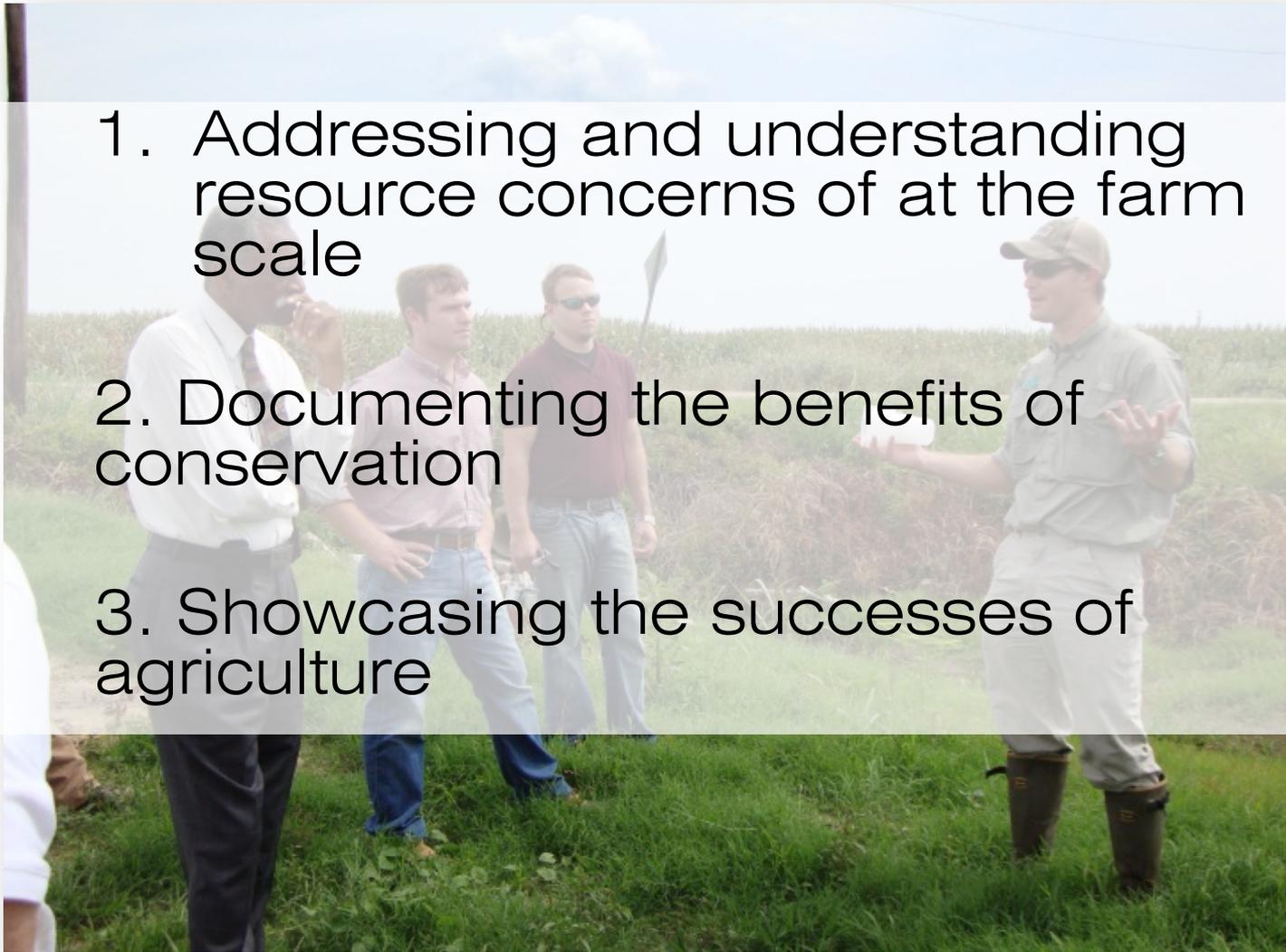
Why REACH, why now?

- No central program at the farm-level
- Brings cooperators together to enhance landscape stewardship
- Quantifying and documenting the many benefits accrued by conservation efforts



3 Central REACH Tenets

1. Addressing and understanding resource concerns of at the farm scale
2. Documenting the benefits of conservation
3. Showcasing the successes of agriculture



REACH Background



REACH Background

- 1) translate the benefits of conservation to our agricultural producers?
- 2) present results to policymakers in local, state, and national government to the benefit of conservation and agriculture?
- 3) start placing some critical effectiveness measures behind investments in the landscape?





The REACH program goal is to create a network of cooperative farms in Mississippi, with variable agricultural systems, conservation initiatives and ecosystem monitoring to illustrate the success of conservation practice implementation on landscape stewardship.



REACH Objectives

- Identify REACH farms to address resource concerns
 - Document benefits for agriculture, water resource conservation, and wildlife habitat within the respective watersheds
 - Create a database of agricultural and environmental outcomes
 - Use high impact and innovative educational vehicles to highlight REACH
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Delivery vehicles

- Local:
 - The REACH farms themselves
 - Farmers as our champions
- State: R&E Centers
 - Extension activities
 - Field demonstration days
 - Regional BMP demonstration sites
- National / Regional:
 - Interactive Website
 - Live web feed / data streaming
 - YouTube – Video Shorts
 - Visually appealing info sheets
 - Conference presentations



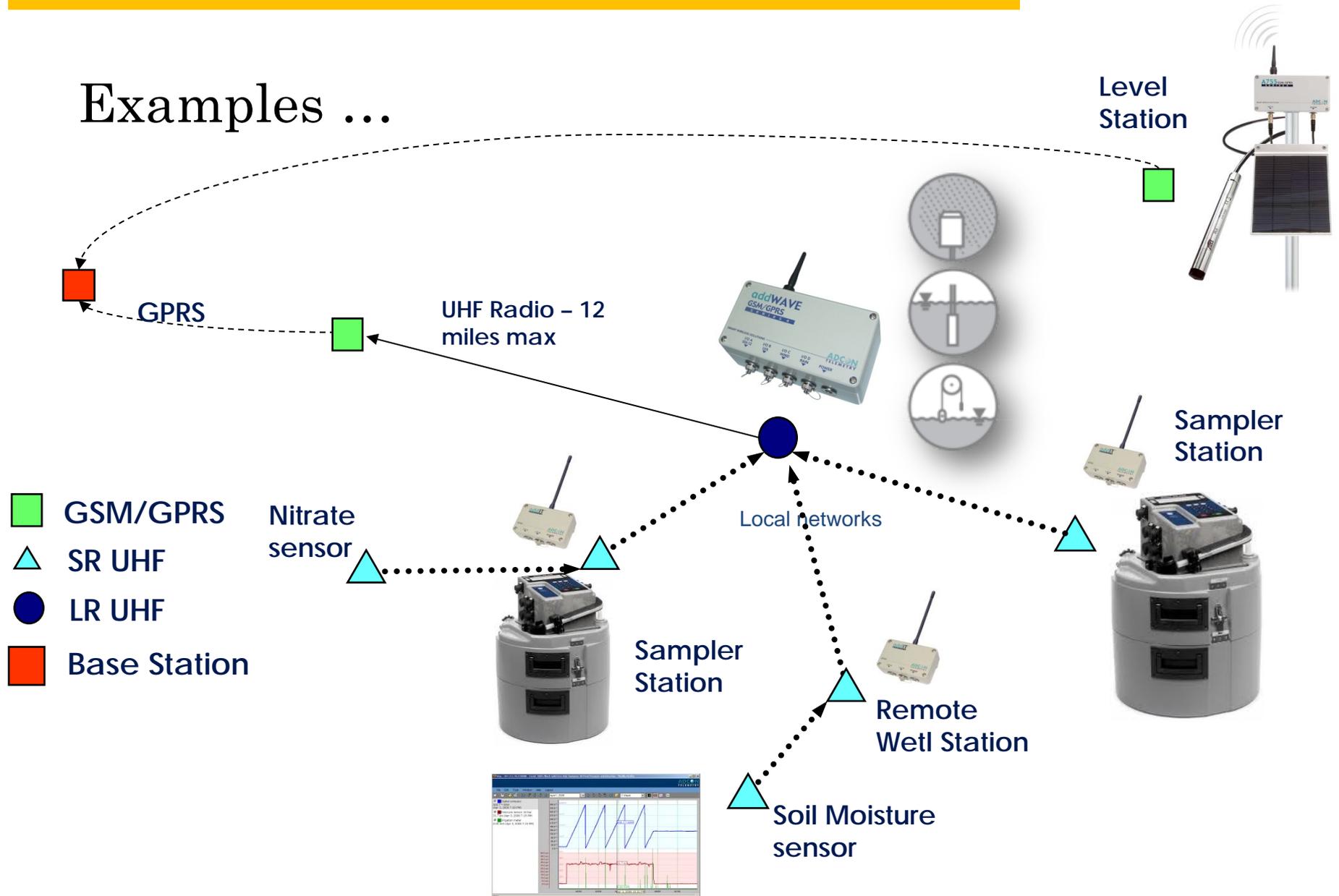
REACH Sites

- Three grades of REACH Farms
 - Cadillac
 - Substantial commitment to data gathering
 - Automated samplers
 - Demonstration days
 - Real-time data logging
 - Routine
 - Data on water resource management is collected (i.e., water quality and quantity)
 - Other data collected based on farm specific objectives
 - Service
 - Provided info and service to help deliver and assess conservation practices
 - “Success Stories”



REACH Cadillac Instrumentation

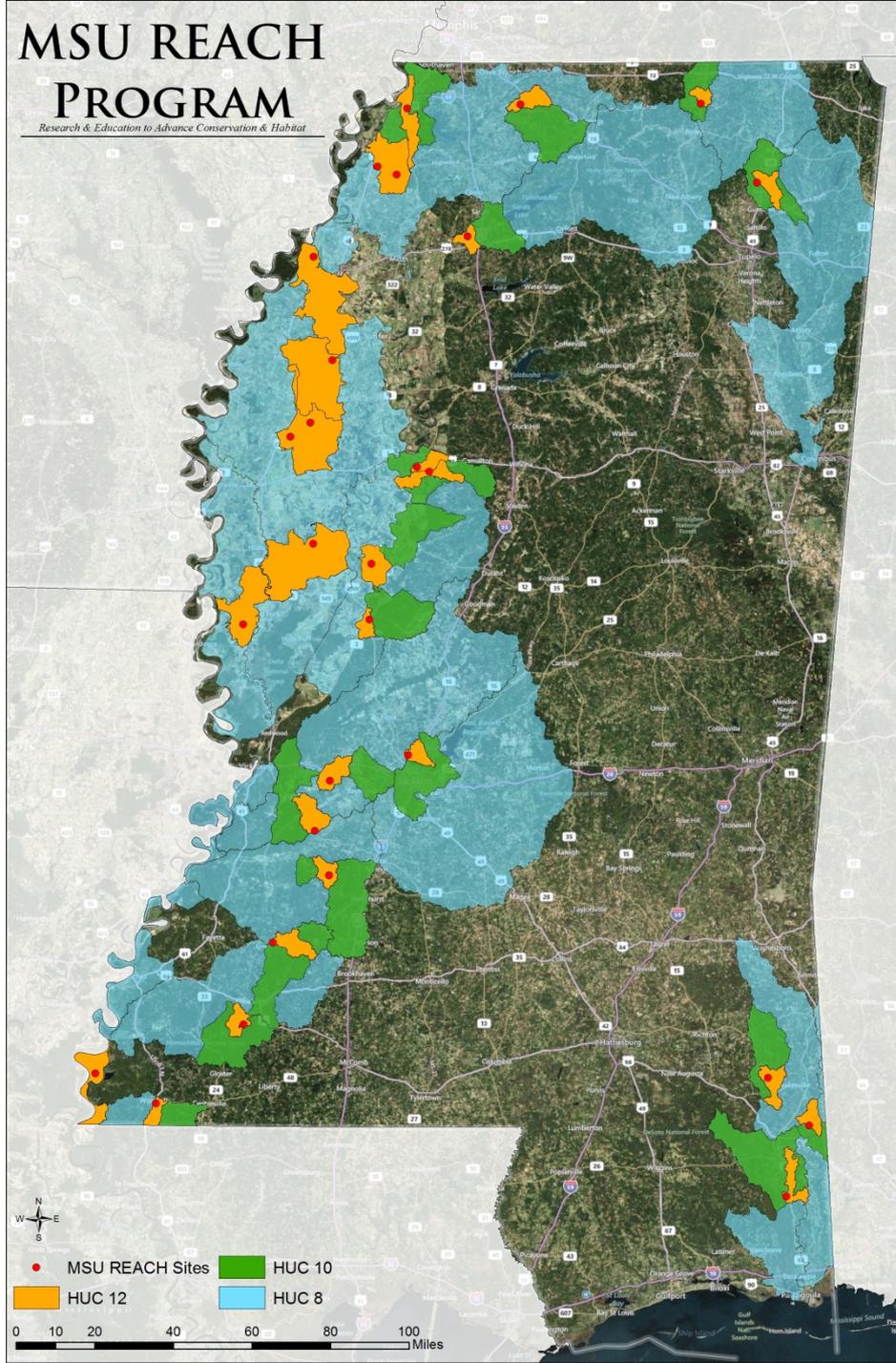
Examples ...



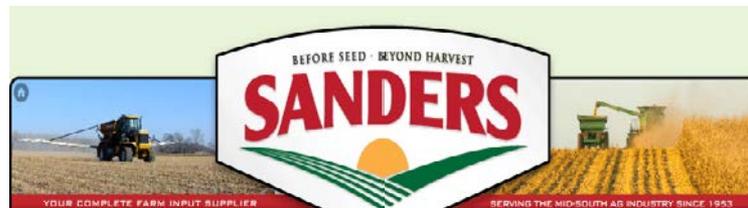
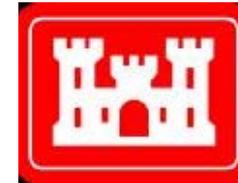
REACH “Influence”

41 REACH Farmers
>126,470 acres

50ac truck-cropper
to
10,000+ac Delta farmer



REACH COLLABORATORS AND SUPPORTERS



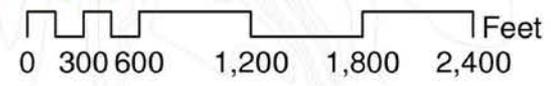
DEPARTMENT OF AGRICULTURE AND COMMERCE
CINDY HYDE-SMITH
COMMISSIONER



LEGEND

- DRAINAGE STRUCTURE
- FLOW DIRECTION
- BRIDGE
- DITCH
- 1 TAILWATER RECOVERY

DOCKERY 2004

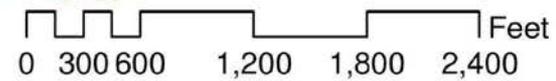




LEGEND

- DRAINAGE STRUCTURE
- FLOW DIRECTION
- BRIDGE
- DITCH
- ① TAILWATER RECOVERY

DOCKERY 2012



Major lessons learned



Major lessons learned



Robert Kröger

Robert is an assistant professor at the University of Mississippi, where he works in the Department of Aquaculture, where he is the director. His research aims to improve and intensify aquaculture.



Jared Harris

Jared is the coastal program manager at the University of Mississippi, where he works in the Department of Aquaculture, where he is the director. He is also the director of the Gulf of Mexico Aquaculture Program, which showcases how best management practices can be used to improve ecosystem services and resources.



Alex Littlejohn

Alex is the freshwater program manager at the University of Mississippi, where he works in the Department of Aquaculture, where he is the director. He is also the director of the REACH program, which focuses on the effectiveness of sustainable agriculture.



Beth Poganski

Beth is a project coordinator at the University of Mississippi, where she works in the Department of Aquaculture, where she is the director. She is also the director of the Quality Laboratory, which helps producers make their products more sustainable and is based in Mississippi.



Dan Prevost

Dan is the watershed program manager at the University of Mississippi, where he works in the Department of Aquaculture, where he is the director. He is also the director of the F.A.R.M. program, which is a broad audience program.

Major lessons learned

Load Nutrient Reductions			
	Minimum (%)	Maximum (%)	Median nutrient reduction (%)
NO_3^-	-850.17	89.17	25.11
NO_2^-	-105.34	100.00	66.94
NH_3^+	-223.26	89.44	66.80
DIP	-137.65	91.10	14.18
TIP	2.28	97.19	45.93

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REACH

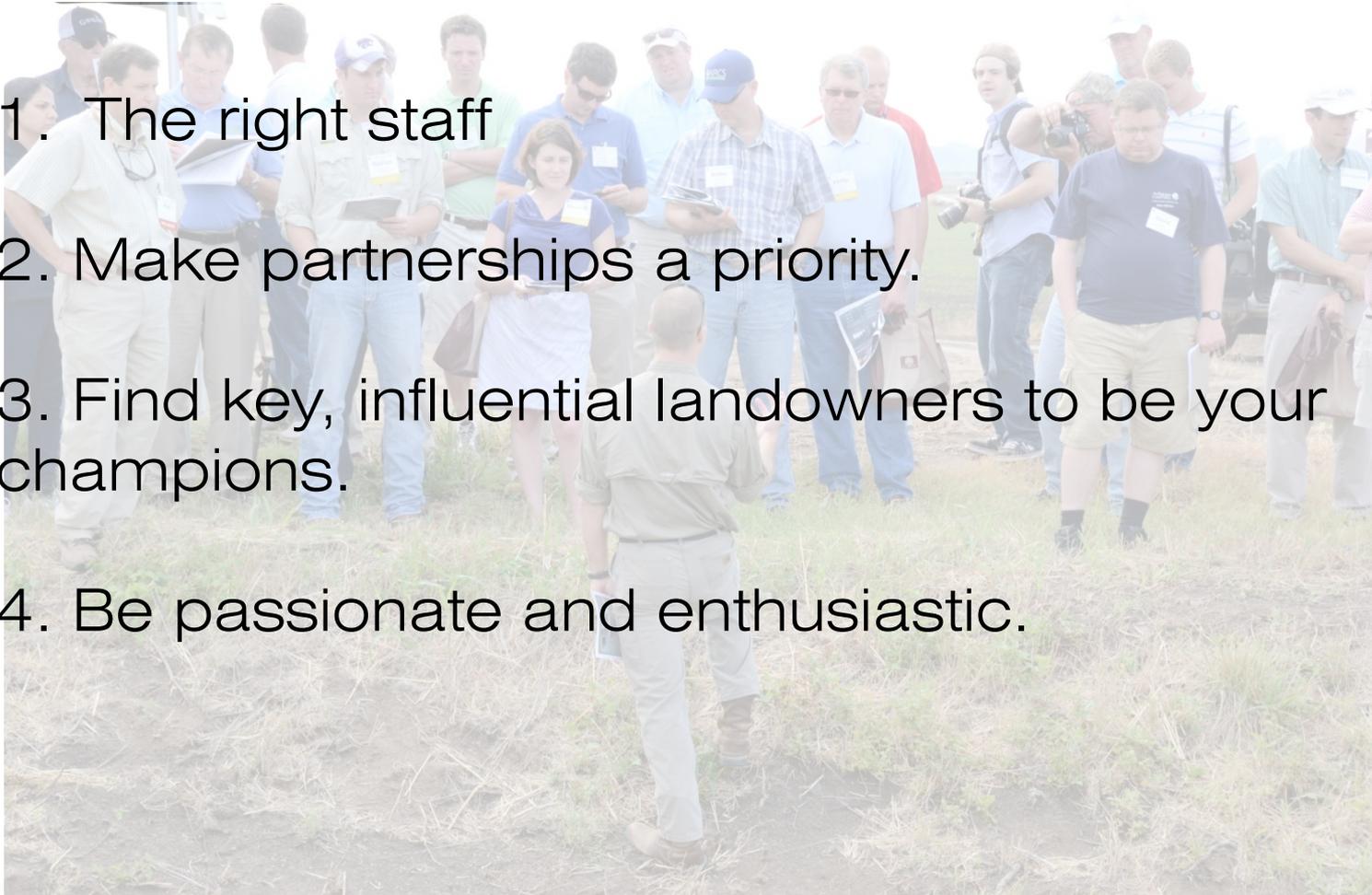
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The potential of the program is
limitless ...

Essential components to replicate REACH...

1. The right staff
2. Make partnerships a priority.
3. Find key, influential landowners to be your champions.
4. Be passionate and enthusiastic.





REACH

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REACH Program <http://www.reach.msstate.edu/>

Water Quality Laboratory www.fwrc.msstate.edu/water