

PARTNERING WITH SCHOOLS AND UNIVERSITIES



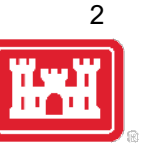
Partnerships in NRM
PROSPECT Course



US Army Corps
of Engineers®



Why Partner with Educational Institutes?



- Involvement with local universities and schools is a natural fit with the Corps' increasing emphasis on environmental stewardship and STEM.
- A good program can foster ownership of the project, which is beneficial when seeking community support.
- The easiest way to reach an adult is through the experiences of their children. Don't forget these programs have the ability to drive visitation from these contacts.
- Think outside the box: graphic design, environmental studies, event planning, recreation, biological sciences, engineering, architecture
- Give them the opportunity to say yes.



Job/Intern Fairs

These are an easy way to begin interaction with your local university.



- Recruit volunteers
- Educate
- Establish an agency presence
- Establish relationships



Where Preparation Meets Opportunity!



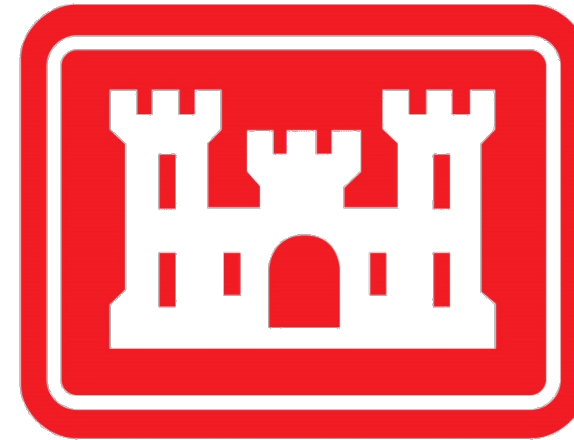


Guest Speaker for Intro to Rec Classes



The Athletic Department is a great way to promote water safety but the Recreation Department is your best way to get direct student interaction at your lake project.

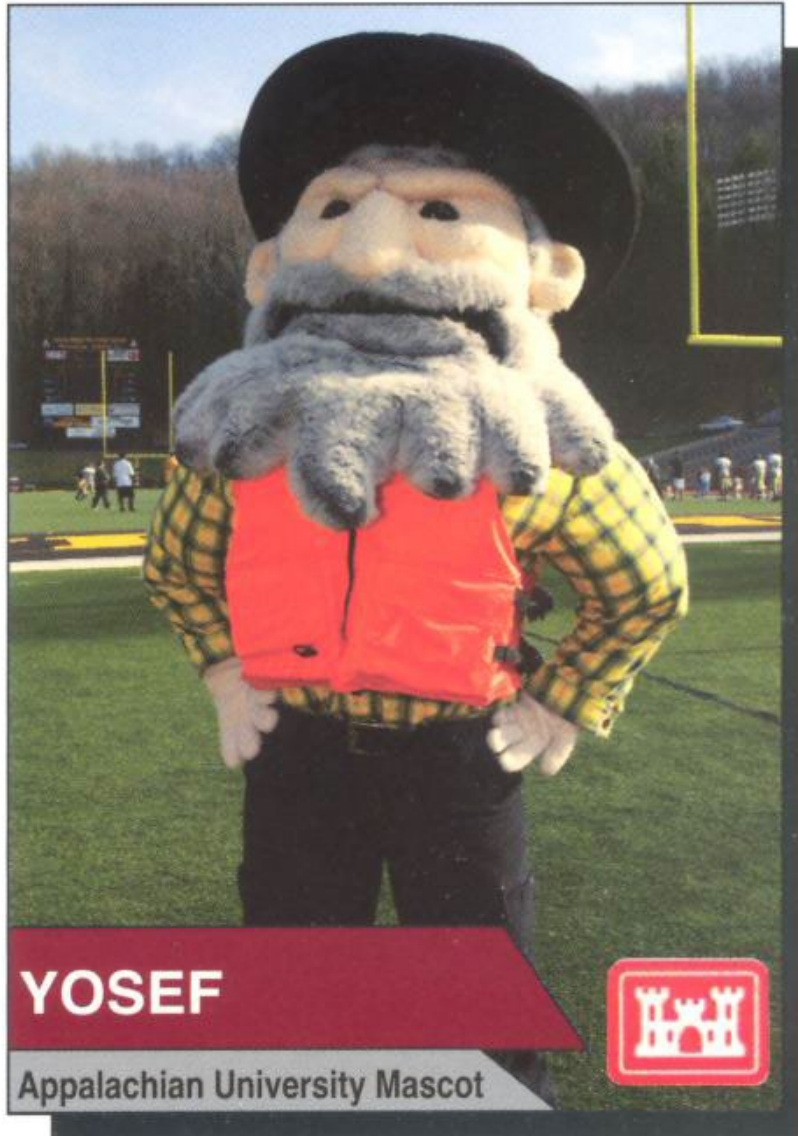
- Educate
- Establish an agency presence
- Recruit
- Develop relationships



SM



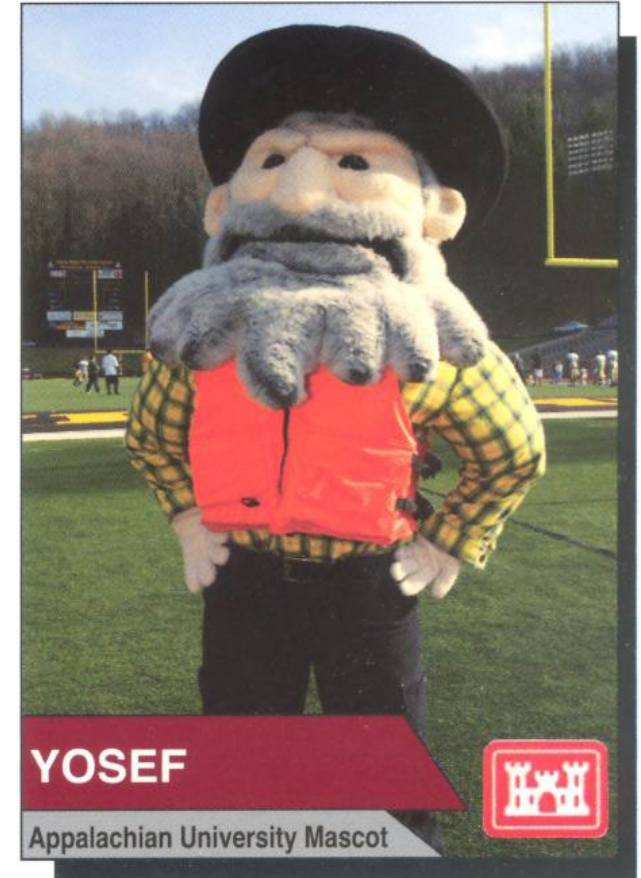
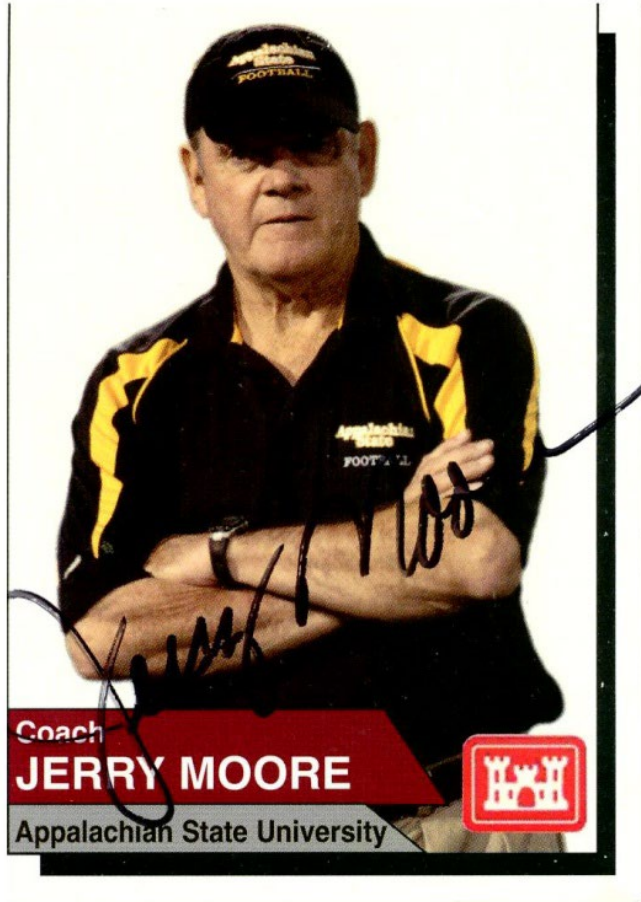
Case Study: W. Kerr Scott Lake & ASU



- **Make initial school commitment easy, i.e.**
“Could we have 10 minutes of your time to take a picture of the mascot in a life jacket? Anytime would work for us.”
- At W. Kerr Scott Reservoir in SAW, Appalachian State University allowed a ranger to come to a practice to get photos and video of players, coach and mascot wearing life jackets and promoting water safety.



Water Safety Trading Cards



These are popular with kids and are cost effective way to promote water safety (4 cents per card)

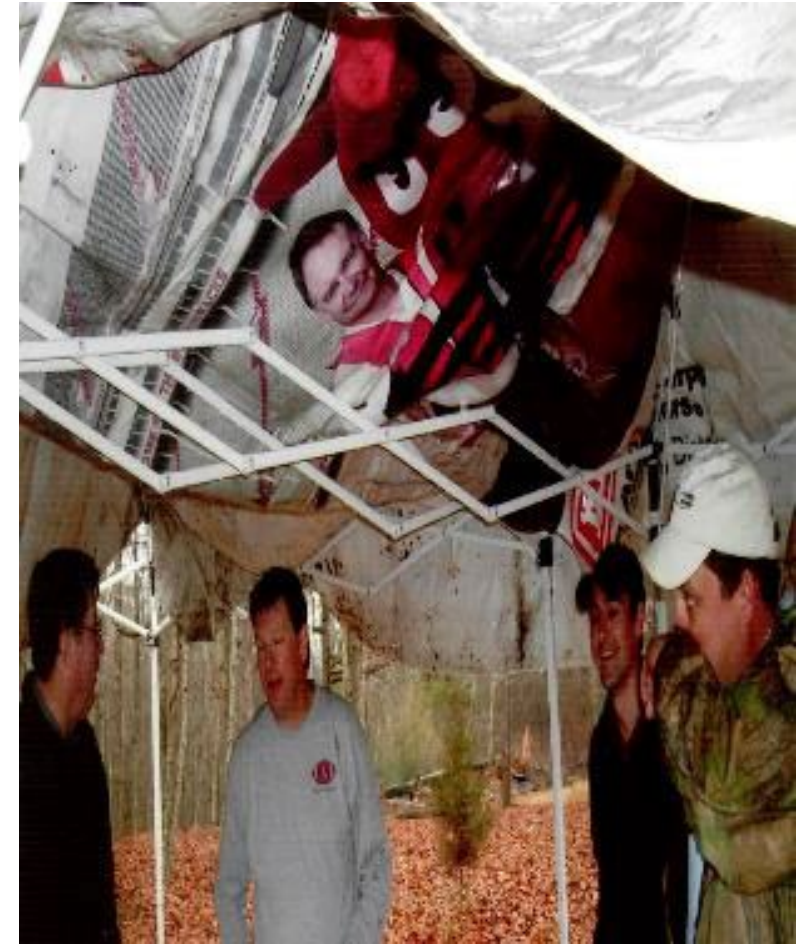
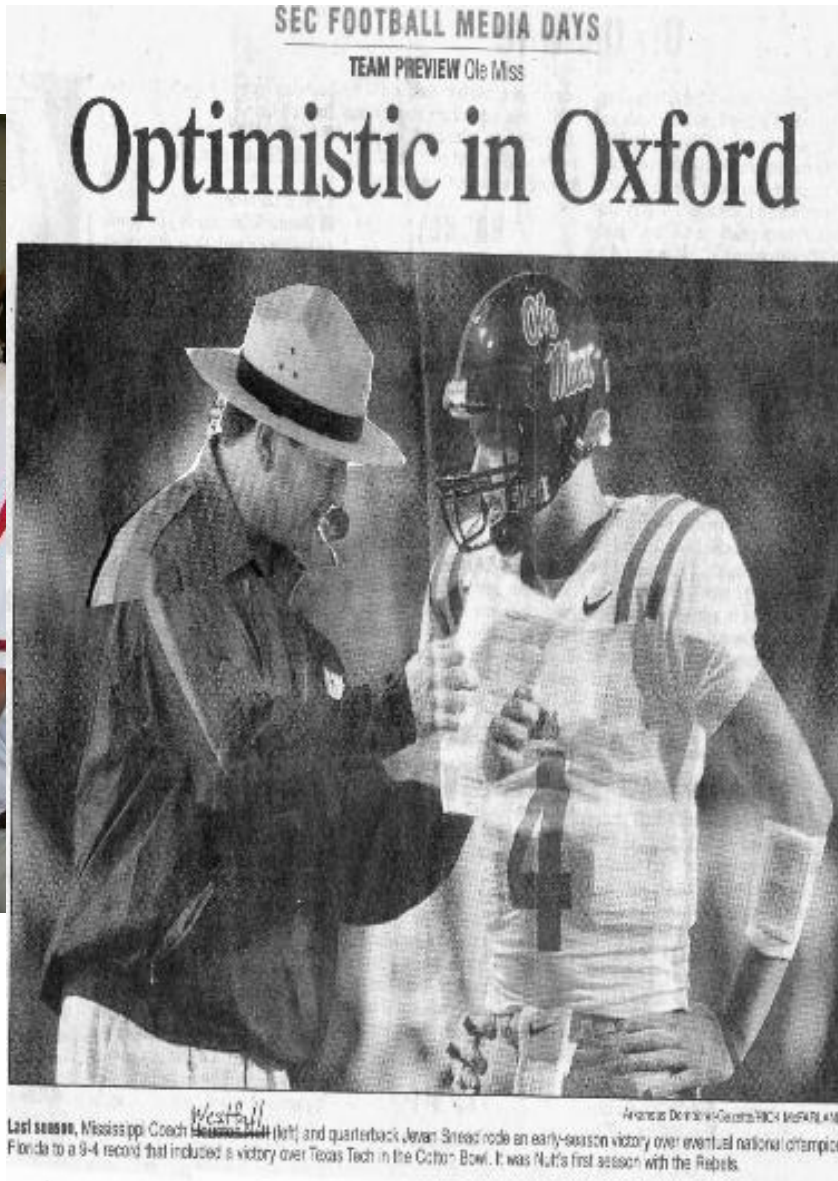


*Lessons Learned





Just Two Years Later!



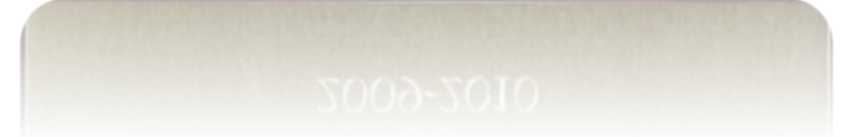


Volunteer Interns



If you have a good working RELATIONSHIP with a university in proximity to your project, you can recruit volunteer interns.

Students are often required to do internships to fulfill their graduation requirements.

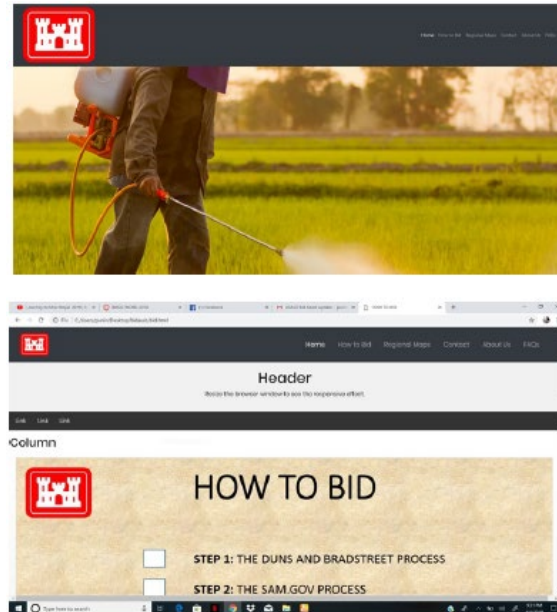




Capstone Projects: Tulsa District Innovations Team and SW Oklahoma State University



- MOU established in 2017
- IT students work with Innovations team to develop Jr Ranger App, USACE Bid Assist (contracting tool), Shoreline Web Form, Hunting Mobile App, and ARPA App.
- Each team shows their final presentations and demonstrates the apps to the class and USACE
- 36 students through the program so far, producing 7 innovations tools and contributing over 6,000 hours



USACE Bid Assist Team



Innovations Team and SW Oklahoma State University



- The partnership continues to grow with SWOSU adding a Fall Capstone Class in 2019 to continue USACE software and mobile app development.
- The University hosted the Innovations Team Workshop in 2019 at no cost to the Corps, where students and the Innovations Team could interface. The workshop was attended by leadership from both SWOSU and the Tulsa District.





Iowa State Capstone Project at Saylorville



- Partnership with Department of Natural Resource and Ecology Management at ISU
- Seniors/Juniors enrolled in Animal Ecology/Forestry capstone course
- USACE provides large sites with unique land features or vegetation to students to manage and provides objectives such as forest inventory, timber management, habitat improvement, etc.
- Students spend semester doing site visits, collecting/analyzing data, and give final presentation to students, professors and USACE rangers
- Final product provided to USACE = booklet with site history, current conditions, site recommendations that can be implemented by USACE



NC State Eagle Cam

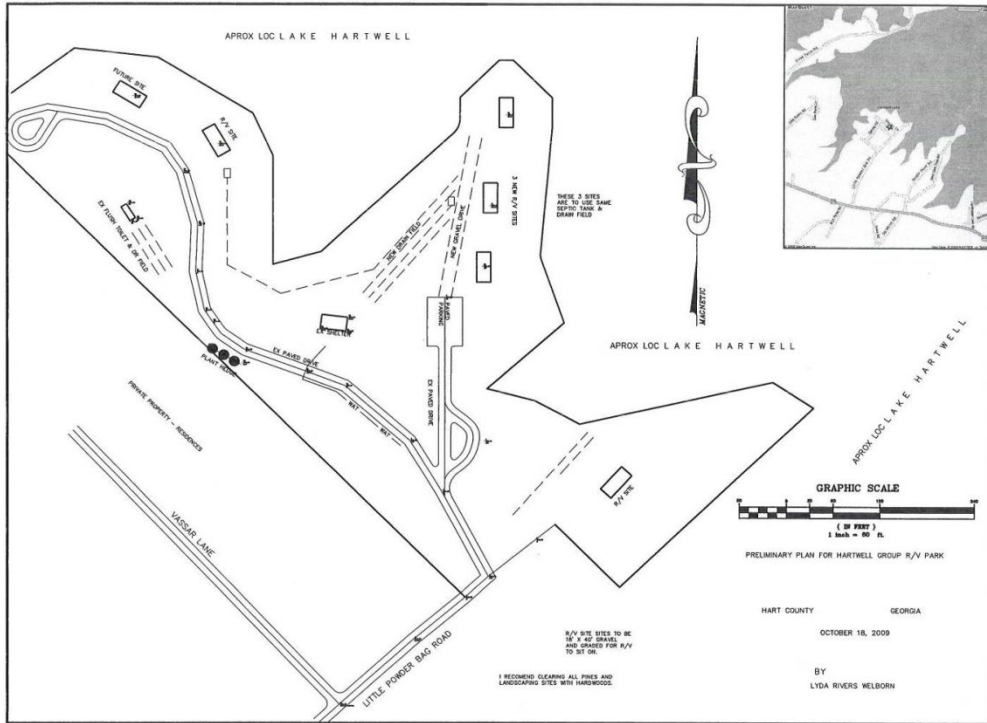
- This project originated when Army Corps of Engineers ranger, Francis Ferrell, led a class of NCSU ornithology students on a visit to an active Jordan Lake Bald Eagle nest
- A team of volunteer engineers, NCSU graduate students, faculty, and staff formed over the next six months.
- Video cameras installed at an active nest in October and began monitoring the breeding pair just before female laid two eggs in early December.

NC STATE UNIVERSITY

Live Video - Bald Eagle Nest at Jordan Lake, NC

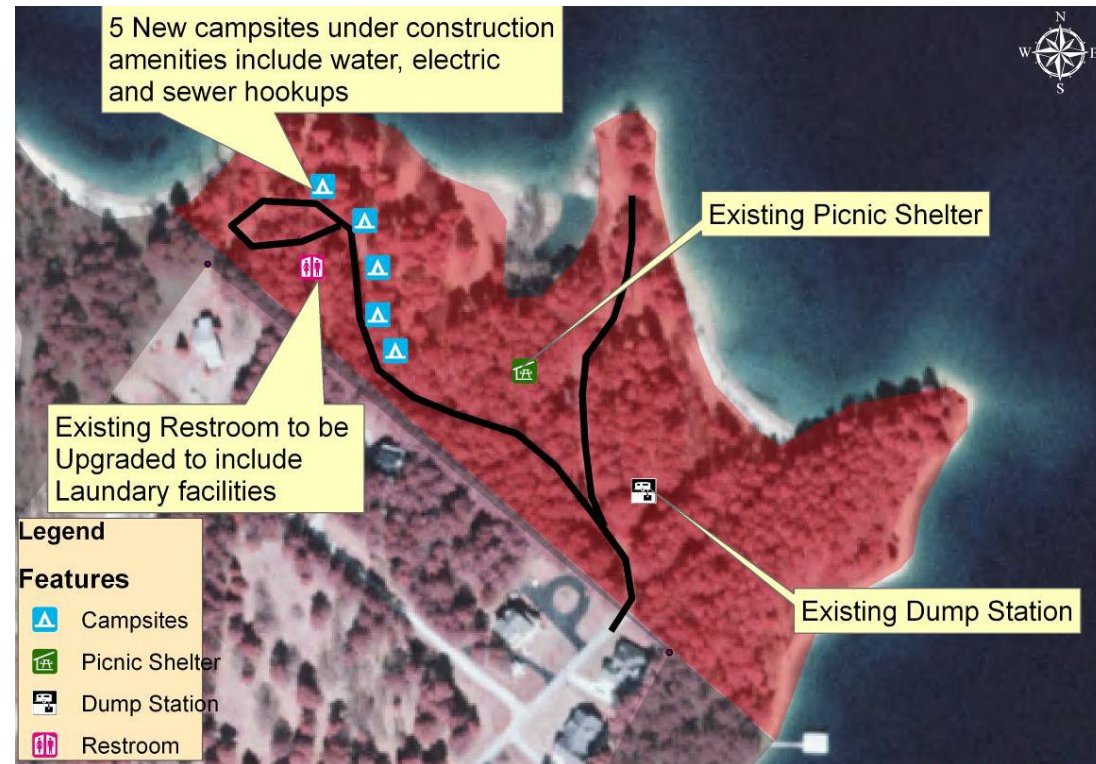


Nest is visible dawn to dusk Eastern Standard Time.



- 2009 MOU with Clemson for facility planning, outreach, data collection, program development

- Student assignment to design a volunteer village
- Winning design implemented at Hartwell



0.00501 0.02 Miles
1 inch = 0.03 miles





Finished product!



Walla Walla District MOU With WSU



- Issue: Lower Granite- Illia Dunes Recreation area overuse. Popular party area for WSU students resulted in habitat degradation, littering, parking problems, safety concerns
- MOU signed with WSU in 2015 to involve students in addressing the problem and providing volunteer clean-up and restoration of the area





Juniata College Raystown Field Station



- Lease since 1974 to Juniata to provide opportunities for environmental research and education at Raystown.
- Developed Raystown Conservation Education Partnership
- Led to 2007 Handshake funded challenge partnership agreement for environmental education programming.



Simonson Biological Field Station Henderson State University



- 7,200 square-foot log structure on 104 acres
- Classrooms and laboratory
- Student dormitory rooms
- Supports HSU faculty research, field based courses, educational outreach, biology club and biology department retreats and events
- Support use consistent with its mission





https://www.youtube.com/watch?v=OQch_VQw6XQ





DeGray Lake Visitor Center Renovation

Estimate-\$350,000



- Partnership with Henderson State
- Serves as research and resource center
- Maintains archeological records, collections
- Teach anthropology courses and outreach
- Artifacts on loan from the University (free)
- Caddo Village mural- cost of materials only
- Identification labels and labor for display (free)
- Loan historical photographs





Restoring Native Species at Allatoona



- Lake Allatoona has a 10-year plus relationship with Berry College.
- Ranger Terrell Stoves approached a professor at the college about a possible partnership to reintroduce the Mountain Longleaf Pine to Pine Mountain at the project.
- This success led to the expansion of the program 7 years later to include the project as a test site for the introduction of potentially blight resistant American Chestnuts.



- The Professor on the Longleaf Pine project also happened to be the state coordinator for the American Chestnut Foundation with whom the Corps has a National MOU.

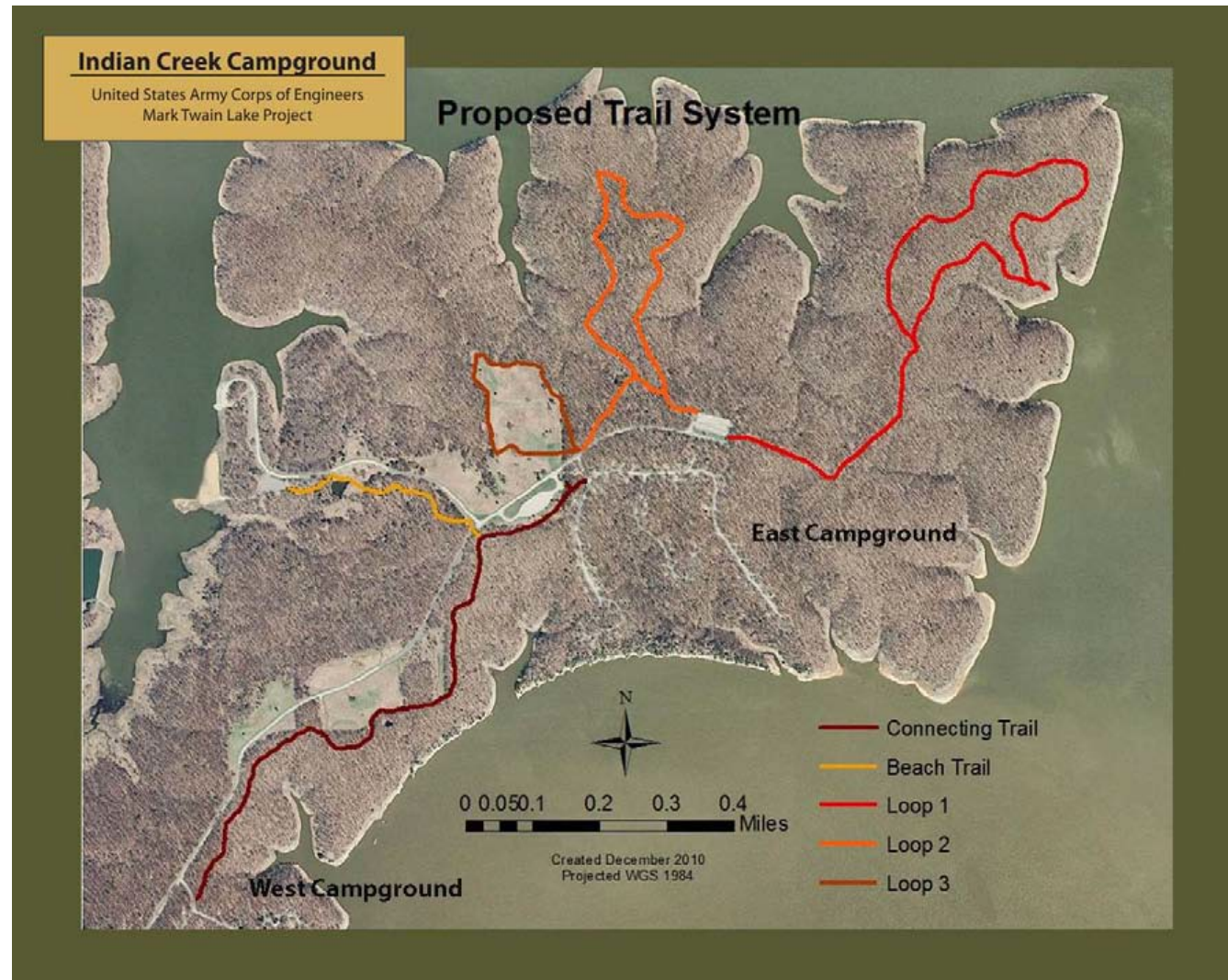




Trail Design at Mark Twain Lake



- MOU with Western Illinois University and the FOREST Council
- Worked with Open Space Park Planning/ Landscape Construction class on needs assessment and design of multi-use trail project
- FOREST Council applied for grant \$

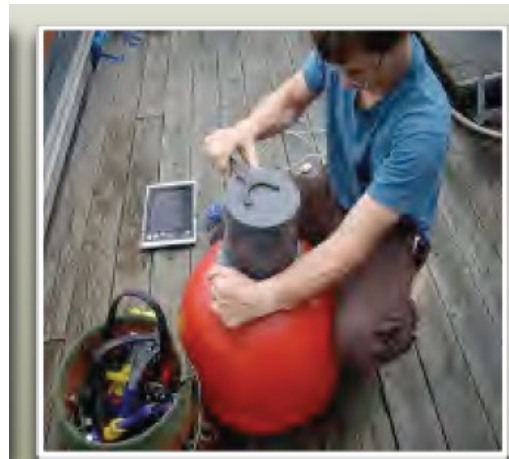
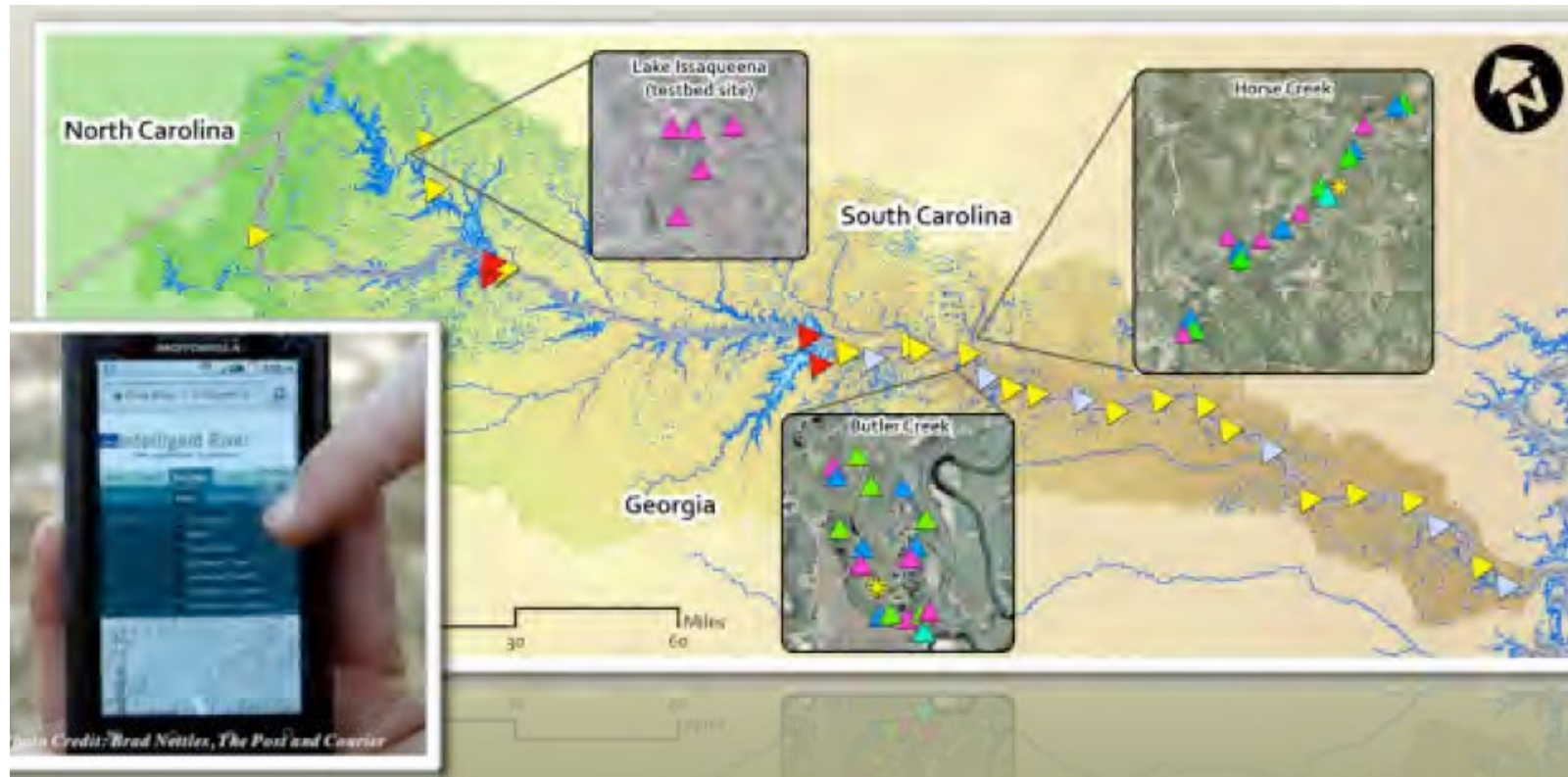




Clemson Water Quality Monitoring



- Clemson University awarded \$3M by the National Science Foundation to design, develop and deploy a basin-wide network of computerized sensors that provide real-time remote data acquisition to monitor water quality along the entire length of the Savannah River.
- Partnered with the Corps to place sensors and share data.





Boise State Kestrel Box Program

- Students at BSU build and install kestrel nest boxes, develop management plan, monitor populations, band birds





Franklin Pierce Bat Studies at Edward MacDowell



- Students conduct studies to determine bat species presence to establish a baseline data set
- Mist netting surveys in 2019
- Acoustic surveys in 2020-2021
- Seven of eight known bat species in NH documented
- Three of four state endangered bat species present
- Future studies hope to incorporate telemetry to document forest-ed areas used as roosting habitat by target species such as the northern long-eared bat.

