

Panel: Strengthening our Roots



Pete Campbell Mattamuskeet National Wildlife Refuge

Pete Campbell is a Project Leader with the U.S. Fish and Wildlife Service's National Wildlife Refuge System. During his tenure, Pete concentrated on working with conservation NGOs and local, federal and state partners to restore the ecological integrity of Lake Mattamuskeet, the centerpiece of Mattamuskeet National Wildlife Refuge, a premier wintering waterfowl refuge in the Atlantic Flyway. Pete holds a Bachelor of Science in Fisheries and Wildlife Science from North Carolina State University. He held various wildlife and fisheries research positions at both NC State and Penn State University prior to entering federal service in 1991. Over his 28 year career with the Department of Interior, Pete has worked for the Service's Refuge and Ecological Services Divisions as well as the U.S. Geological Survey's Biological Resources Division. Since 2000, his work has focused on collaborating with partners to develop and implement landscape conservation initiatives at national, state, and local scales.





Climate Change Adaptation on the Albemarle-Pamlico Peninsula – Preparing National Wildlife Refuges for the Future

BRIAN BOUTIN AND AARON MCCALL THE NATURE CONSERVANCY ALBEMARLE-PAMLICO SOUNDS PROGRAM





Climate Change on the Coast







Wildfire



2008-2011

- 4 wildfires
- 97,000 acres
- 20 million metric tons of carbon
- \$57 million in suppression costs
- 567 days from ignition to out

	Acres	Cost	Days
Evans Road	41,060	\$19,000,000	215
Pains Bay	45,294	\$14,000,000	120
South One	4,884	\$11,000,000	121
Lateral West	6,377	\$12,500,000	111
	97,615	\$56,500,000	567

Climate Adaptation Strategies

- Improve water management capability
- Set the stage for change through vegetative restoration
- Reduce shoreline erosion using oyster reefs



Starting on the Frontline



•Alligator River NWR

- Point Peter Rd
- •Visible impacts
 - Ditching
 - Vegetation die-off
 - Shoreline erosion
- •Good Accessibility
 - Monitoring
 - Education







Point Peter Road: Water Management



Point Peter Road: Water Management



Point Peter Road: Water Management



Flap gates prevent saltwater intrusion into the lake from the 4 canals that connect Lake Mattamuskeet to the Pamlico Sound



Potential Sheet Flow Sites



378 acres within watershed

2,477 acres outside watershed

Currently seeking additional sites for evaluation.

Refining Our Approach: Vegetative Restoration

FLOOD-TOLERANT TREES



SALT AND FLOOD-TOLERANT GRASSES



Oyster Restoration



Oyster Restoration

Swanquarter NWR

- •Bell Island Fishing Pier publicly visible
- •Failing breakwater/bulkhead
- Restore 600 ft of oyster reef to address erosion









Monitoring SLR on Coastal Refuges

