

# One Year After the Storm Bon Secour NWR: A Refuge Reborn



*In the early morning hours of September 16, 2004, a massive hurricane slammed into the white sand dunes and beaches of Bon Secour National Wildlife Refuge, Alabama. Hurricane Ivan hit the Alabama Gulf Coast with sustained winds of 130 miles per hour and the center of its eye, estimated to be 50 miles wide, passed directly over the Perdue Unit of the refuge.*

Just hours after the hurricane made landfall, U.S. Fish and Wildlife Service personnel were on the ground at Bon Secour assessing damage, restoring critical infrastructure, and clearing roads. Many homes in nearby Gulf Shores were destroyed by the 15-foot storm surge which pushed a wall of debris onto the refuge. Boats, propane tanks, gas cans, and lumber stretched as far as the eye could see around Little Lagoon, Gator Lake and remote marshes on the refuge. Refuge staff began planning a major recovery effort to remove the unprecedented amount of hurricane debris from a national wildlife refuge with a focus on preventing further damage to its fragile coastal habitats.

Emergency supplemental funding was provided in the *Military Construction Appropriations and Emergency Hurricane Supplemental Appropriations Act, 2005*, to restore and repair national wildlife refuges impacted by Hurricane Ivan. A total of \$3.9 million was used to issue a contract to remove debris from the Perdue Unit of the refuge. To minimize disturbance to endangered species habitat, which overlaid some of the hardest hit areas of the refuge, the use of hand labor and low impact equipment was emphasized in the contract design.

On August 29, 2005, one month after cleanup work began, the worst natural disaster in U.S. history, Hurricane Katrina, struck the Gulf Coast. The new debris generated by Katrina's storm surge covered all of the recently cleaned areas of the refuge.

Work resumed within several weeks of Hurricane Katrina and debris removal was completed in February 2006. A total of 14,400 cubic yards, or 576 dump truck loads, of debris from Hurricanes Ivan and Katrina were removed from the refuge and more than 30% of this material was recycled.

Emergency funds were also used to construct miles of sand fencing that will allow dune stabilization and restoration that is critical to the recovery of the endangered Alabama beach mouse. Additional funds are currently being used to reconstruct administrative and public-use facilities throughout the refuge.



*Top: debris from Hurricanes Ivan and Katrina at Bon Secour National Wildlife Refuge; below: after the clean up.*

The clean-up at Bon Secour National Wildlife Refuge has been a tremendous success. The refuge is now officially re-opened to the public and critical habitats are recovering quickly. An official reopening event is scheduled for March 2006.