



NOAA Research in Delaware



DE-1 (Based in Newark - serves entire state)

National Sea Grant College Program Delaware Sea Grant College Program

The Delaware Sea Grant College Program, part of the National Sea Grant College Program, is a statewide network of research, education, and extension services that works to promote the wise use, conservation, and development of marine and coastal resources. Current priority research areas include coastal ocean studies, environmental technology, marine biotechnology, coastal engineering, and fisheries. In FY 2001, 21 research projects were funded, ranging from the implementation of a real-time environmental monitoring network in Delaware Bay using existing lighthouses to the development of an artificial bait to relieve fishing pressure on the horseshoe crab. Since it was formally established in 1976 at the University of Delaware, the program has educated more than 300 graduate students in marine science and policy. In addition to graduate student education, the program offers courses and workshops in K-12 teacher education and develops online expeditions involving thousands of students nationwide. The program also hosts the award-winning Coast Day open house at the University of Delaware's seaside Lewes campus, educating more than 10,000 visitors annually about coastal issues through research demonstrations and exhibits, lectures, children's activities, seafood, and ship tours. The program's outreach mission is advanced by the Marine Advisory Service and Marine Public Education Office. The Marine Advisory Service has special expertise in the areas of marine education, marine resource management, coastal processes, seafood technology, marine recreation and tourism, aquaculture and water quality, and marine transportation. The Marine Public Education Office translates complex scientific information and shares it through publications, the SeaTalk radio series, videos, interactive Web sites, and media relations activities. Delaware Sea Grant's administrative base is in the University of Delaware Graduate College of Marine Studies. In FY 2001, Delaware Sea Grant was funded at approximately \$3 million, with \$1.3 million provided by the National Sea Grant College Program. For more information please visit <http://www.ocean.udel.edu/seagrant/>

DE-1 (Statewide)

Climate and Global Change Program

NOAA is responsible for providing climate information to the nation in order to prepare and protect climate sensitive sectors of society and the economy. To carry out this mission, NOAA's Climate and Global Change Program conducts focused scientific research to understand and predict variations of climate. The Program is comprised of a number of research elements, each focusing on a specific aspect of climate variability. Taken together, this research contributes to improved predictions and assessments of the effects of climate variability and change on different environments over a continuum of time scales from season to season, year to year, and over the course of a decade and beyond. This research is accomplished through the strong support of the academic and private

sectors, as well as NOAA and other federal laboratories. In FY 2001, NOAA's Climate and Global Change Program provided approximately \$126,600 in support of climate research in the State of Delaware. For more information please visit <http://www.ogp.noaa.gov>

DE-1 (Statewide)

Air Resources Laboratory Atmospheric Deposition Research

The rapid expansion of chicken farming on the Delmarva Peninsula has elevated concerns about the environmental impact of ammonia released from waste. A major conference on the issue was recently held in Delaware, organized by a consortium lead by scientists of the Air Resources Laboratory. The results of this gathering will be used to help construct a coherent program to assess the role of atmospheric nitrogen (especially in the form of ammonia) on ecosystem viability in the area. For more information please visit <http://www.arl.noaa.gov/research/programs/coast1.html>

DE-1 (coastal waters)

National Undersea Research Program Mid-Atlantic Bight National Undersea Research Center

The Mid-Atlantic Bight (MAB) National Undersea Research Center supports undersea research in the Mid-Atlantic Bight, a region which extends from Montauk, NY, to the Virginia/North Carolina border. MAB is administered by the Institute of Marine and Coastal Sciences at Rutgers University in New Brunswick, NJ. It is one of six regional centers supported by the National Undersea Research Program (NURP). The Center provides access to undersea research platforms (such as submersibles, remotely operated vehicles, undersea sensors and sampling equipment, and SCUBA), including Long-term Environmental Observatories (LEOs). Key research includes processes governing change and stability in ecosystems of the seabed and coastal and oceanic waters; distinguishing between natural and anthropogenic changes in the marine environment; characteristics of essential fish habitat; recruitment of marine organisms; and the effects of physical and environmental processes on water disposal, fisheries, nuisance algal blooms, biodiversity/habitat, hypoxia, toxic contaminants and pathogens. The FY 2001 funding for the MAB center totaled \$1.34 million. For more information please visit <http://marine.rutgers.edu/nurp/mabnurc.html>

DE-1 (Lewes and Trap Pond State Park)

Air Resources Laboratory Atmospheric Integrated Research Monitoring Network

The AIRMoN, or Atmospheric Integrated Research Monitoring Network, is an array of sampling stations designed to quantify the extent to which changes in emissions affect air quality and deposition. NOAA's Air Resources Laboratory Headquarters in Silver Spring, Maryland, operates one of the two elements of the network, AIRMoN-Wet. AIRMoN-Wet collects data on the deposition of atmospheric pollutants that occurs with precipitation. Daily samples of precipitation are collected at ten stations throughout the country and then sent to a single central laboratory for

chemical analysis. Prime users of these data include ecologists, agriculturists, foresters, and power companies affected by Clean Air Act legislation. In Delaware, AIRMoN data are being used to address atmospheric nitrogen loadings and subsequent eutrophication of estuaries. AIRMoN-Wet stations are located in Lewes and at Trap Pond State Park near Laurel. For more information please visit <http://www.arl.noaa.gov/research/programs/airmon.html>

DE-1 (Reedy Point)

Forecast Systems Laboratory GPS Meteorological Observing System

NOAA's Forecast Systems Laboratory (FSL) operates a rapidly expanding network of GPS Meteorological (GPS-Met) Observing Systems to monitor the total quantity of precipitable water vapor in the atmosphere. Currently, there are 93 systems over the contiguous 48 states and Alaska, and plans are being made to extend these observations to Hawaii, Puerto Rico, the Caribbean Islands, and Central America. Water vapor is an important but under-observed component of the atmosphere that plays a major role in severe weather events and the global climate system. GPS-Met systems provide accurate water vapor measurements under all weather conditions, including thick cloud cover and precipitation, and do so at very low cost. The major reason why this system is so economical is that the network is being developed by FSL in cooperation with federal, state and local government agencies, universities, and the private sector. The GPS stations provide high-accuracy surveying and navigation services for National defense, automated agriculture, safe land and marine transportation, government infrastructure management, and 911 emergency response services. Fortuitously, these systems can also be used for meteorology with the addition of surface weather sensors. A GPS-Met system operated by the U.S. Coast Guard is located near Reedy Point. For more information please visit <http://www.gpsmet.noaa.gov/jsp/index.jsp>

For further information about these and other NOAA programs, please contact NOAA's Office of Legislative Affairs at (202) 482-4981.

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