

## **A Brief Summary of the NOAA Office of Oceanic and Atmospheric Research Organizational History**

The NOAA Office of Oceanic and Atmospheric Research (OAR) serves as the primary research arm of the National Oceanic and Atmospheric Administration (NOAA), and maintains a strong history of pre-eminent and innovative research. The origins of OAR date back more than 200 years with the creation of the Survey of the Coast in 1807 by Thomas Jefferson. The Coast Survey, which became the U.S. Lake Survey office in 1841, was developed to undertake “a hydrographic survey of northwestern [Great] lakes.” Research executed by the scientists of this group was innovative and holistic: the first current meters were developed to understand water flow rates, and forecasting techniques were greatly enhanced to predict water levels and the relationship to lakefront property. The same traits of world class, long-term research continue to define OAR today.

In 1965, President Johnson transferred the Central Radio Propagation Laboratory from the National Bureau of Standards (the forerunner of the National Institute of Standards and Technology) to join the United States Weather Bureau and the Coast and Geodetic Survey in a new scientific agency of the Department of Commerce: the Environmental Science Services Administration (ESSA). The coupling of these divisions recognized the importance of dedicated research of both the world’s ocean and atmosphere. ESSA’s mission was to respond to the national need for adequate warnings of severe and natural hazards, for technological advances in capabilities to observe the physical environment and for investigations into the physical environment as a “scientific whole” rather than a “collection of separate and distinct fields of scientific interest.” After its creation, ESSA quickly began to expand. By 1970, the ESSA laboratories included the Atlantic Oceanographic and Meteorological Laboratories, Atmospheric Physics and Chemistry Laboratory, Geophysical Fluid Dynamics Laboratory, Space Disturbances Laboratory, Wave Propagation Laboratory, Earth Sciences Laboratories, Pacific Oceanographic Laboratory, Air Resources Laboratories, National Severe Storms Laboratory, Aeronomy Laboratory, and Institute for Telecommunication Sciences.

NOAA was formally established in 1970 under President Nixon from the combination of ESSA, some elements of the Department of Interior, much of the Bureau of Commercial Fisheries, the office of Sea Grant Programs (transferred from the National Science Foundation), the mapping charting and research functions of the Army’s U.S. Lake Survey (a forerunner of the Great Lakes Environmental Research Laboratory), and the Navy’s National Oceanographic Data Center. The research laboratories were pulled together under the umbrella of the Environmental Research Laboratories (ERL), with headquarters in Boulder, Colorado. The decision to create NOAA was largely based upon the recommendations from the Stratton Commission, established to develop an implementation plan for the Marine Resources and Engineering Development Act of 1966 (P.L. 89-454). The final report from this commission came in a document titled, “Our Nation and the Sea: A Plan for National Action.”

In 1971, the Manned Undersea Science and Technology Office, forerunner of the National Undersea Research Program, was established. In 1973 the Pacific Marine Environmental

Laboratory was created from the Pacific Oceanographic Laboratory under ERL. The Great Lakes Environmental Research Laboratory was established under ERL as well in 1974.

As a means to consolidate the various functions across NOAA that dealt with increasing administrative mandates, NOAA reorganized in 1977 to include five principal Line Offices: the Office of Fisheries, the Office of Coastal Zone Management, the Office of Oceanic and Atmospheric Services, the Office of Research and Development, and the Office of Satellites. The Office of Research and Development was responsible (in NOAA laboratories and in the academic community) for environmental research that supports NOAA program needs, for implementation of the Sea Grant program, and to provide Federal leadership for interagency, international research programs like the Global Atmospheric Research Program. In 1983, the Office of Research and Development evolved into the Office of Oceanic and Atmospheric Research (OAR) and began to manage major research efforts to support improvements to NOAA's service arms, as well as to fulfill the agency's responsibilities for leadership in science to improve our understanding of the oceanic and atmospheric components of the global earth system. One stated purpose of this reorganization was to "strengthen NOAA's position in fundamental research in those areas that are pertinent to NOAA's mission and to remove any programmatic myopia that might come from coupling development and application to the more fundamental areas of research." OAR included ERL, the Sea Grant Program (which included 14 Sea Grant institutions by 1980), Extramural Programs, and a Program Development and Cooperation office.

In 1998, in a move to consolidate NOAA's Boulder entities on the Department of Commerce campus site, the David Skaggs Research Center was completed. Named after the former Boulder Congressman, the David Skaggs Research Center would house over a thousand NOAA employees from the NOAA National Geophysical Data Center, NOAA Mountain Administrative Support Center, local NOAA National Weather Service and six of the 12 NOAA Environmental Research Laboratories: Aeronomy Laboratory, Climate Diagnostic Center, Climate Monitoring and Diagnostics Laboratory, Environmental Technology Laboratory, Forecast Systems Laboratory, and Space Environment Center. At about this same time, NOAA divided ERL into its individual laboratories, with each laboratory reporting separately to the OAR Assistant Administrator.

In 1999 the Office of Weather and Air Quality was established in OAR, and in 2001, the Ocean Exploration program was established in OAR.

The FY 2004 House and Senate Appropriations Committee Reports contained language specific to NOAA's research in OAR, and this language was included by reference in the Conference Report accompanying the Consolidated Appropriations Bill. The House Report accompanying the FY 2004 Commerce, Justice, State, and Judiciary, and related Agencies Appropriations Bill directed NOAA to develop a laboratory consolidation plan: "In recognition of current resource limitations the Committee is forced to operate within, the Committee directs NOAA to review the continued requirements for twelve separate laboratories, six of which are located in Boulder, Colorado. The Committee directs NOAA to submit a laboratory consolidation plan to the Committee by March 15, 2004." The Senate Report accompanying the FY 2004 Appropriations Commerce, Justice, State, and Judiciary, and related Agencies Appropriations Bill stated, in part:

“NOAA is directed to report to the Committee on Appropriations on the costs and benefits of breaking OAR up into its constituent parts and distributing those parts as desirable to the other line offices. The report should specifically address how the newly configured research sector will directly assist line offices in developing timely solutions to problems confronting NOAA now and in the next 5 years.”

In 2004 a Research Review Team made recommendations to improve NOAA’s research enterprise based on the congressional language. In response to the Research Review recommendations, OAR underwent a reorganization beginning in 2005. Six Boulder laboratories were consolidated into the Earth System Research Laboratory, or ESRL (i.e., Aeronomy Laboratory, Climate Diagnostic Center, Climate Monitoring and Diagnostics Laboratory, Environmental Technology Laboratory, Forecast Systems Laboratory, and part of the Air Resources Laboratory.) The position of OAR Deputy Assistant Administrator for Laboratories and Cooperative Institutes was created to serve as both the senior management official for research in OAR and the Director of ESRL. The Offices of Global Programs, Arctic Research, and Climate Observations and Services were combined to form the Climate Program Office. Lastly, the Undersea Research Program and Office of Ocean Exploration were combined to form the Office of Ocean Exploration and Research. NOAA developed and published both a Research Vision with a 20-year horizon and a Research Plan with a five-year horizon. Stemming from a separate decision to transfer research to operations, the Space Environment Center was transitioned to the National Weather Service. The most recent organizational diagram can be viewed at <http://www.oar.noaa.gov/aboutus/orgchart.html>.

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