



## NOAA SATELLITES AND INFORMATION SERVICE

### COMPREHENSIVE LARGE ARRAY-DATA STEWARDSHIP SYSTEM (CLASS)

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**The National Requirement:** The Nation requires a robust, reliable and secure system from which archived environmental data can be readily accessed by users to support products and services enhancing the Nation's environmental, national, homeland and economic security.

**NOAA's Response:** NOAA archives and provides access to atmospheric, oceanographic, geophysical, and solar-terrestrial data observed from remotely sensed and in-situ platforms through NOAA National Data Centers. NOAA's archive currently holds over one petabyte of environmental data and information. This is expected to grow to well over 18 petabytes by 2011. Within the decade, NOAA will have commissioned space-based and ground-based observation systems that will increase the rate, volume and complexity of data it must archive and provide access to. To meet this two-order of magnitude increase in the rate and volume of data, NOAA has been developing and implementing the Comprehensive Large Array-data Stewardship System (CLASS). CLASS will support operations requirements within NOAA and other US users as well as the scientific community. CLASS is designed to serve data supporting operational users to improve warnings and forecasts necessary to: save lives and protect property; enhance the economic prosperity and quality of life in the United States; and inform decision makers on public policy issues. Scientists and advisors also have a critical need for a long time-series of historical and recent environmental data to assess long-term environmental trends, evaluate the current environmental status, and to predict future conditions and events.

The near-term challenge that CLASS must satisfy is to ready to archive and access data from the NPOESS Preparatory Project (NPP) mission which will be launched in 2006, followed by NPOESS in 2009, and GOES-R series in 2012. The President has directed the development of a robust climate science capability. Access to data from NPP will be a critical component of meeting the climate science mandate. CLASS is designed to dramatically improve the service to NOAA's customers and users for reliable, timely, and secure access to environmental data and information from all of NOAA's National Data Centers. The FY 2005 Request will continue the implementation of CLASS to archive and provide access to data from the NPP launch in 2006, NPOESS in 2009, and GOES-R in 2012.

**Partners and Customers:** CLASS customers include the full range of Federal, state, and local government users in the areas of homeland defense, agriculture, utilities, research, insurance, legal, healthcare, and transportation sectors. CLASS partners include NASA, DoD, and NOAA Offices and Programs.

**Financing:** The FY 2005 Budget Request includes **\$6.6 million** for CLASS. This request will prepare NOAA National Data Centers to establish the infrastructure necessary to archive and provide access to all its data, and be ready to provide access and archive of the NPP data stream in 2006.

**For additional information:** [www.nesdis.noaa.gov](http://www.nesdis.noaa.gov)

