

## NOAA's Satellite Climate Data Record Program

### Executive Summary

The mission of NOAA's Climate Data Record Program is to develop and implement a robust, sustainable, and scientifically defensible approach to producing and preserving climate records from satellite data.

Climate change is one of the greatest challenges of our generation. Nearly everyone, from an industry executive drafting a business plan to a young couple considering the purchase of a shore front home, is aware that climate change could impact the outcome of their decision. In fact, the Congressional Budget Office has a number of comprehensive reports discussing the economics of climate change. Other groups, such as the Center for Naval Analyses have detailed serious threats to national security from climate-driven geo-political instability. Nevertheless, climate change remains a controversial topic and there is no shortage of misinformation, opinion and conjecture. This is especially troubling, as the consequences of inaction or a wrong action may be equally high and costly.

Therefore, as part of its new climate services, NOAA is taking the lead in providing authoritative, measurement-based information on climate change and variability. NOAA's National Climatic Data Center (NCDC) recently initiated a satellite Climate Data Record program to continuously provide objective climate information based on weather satellite data that NOAA has collected over the past 30+ years. This data is the longest global satellite measurement record in the world and represents billions of dollars of investment. For the first time, NOAA is applying modern data analysis methods, which underwent exceptional improvement over the last decade, to the historical global satellite data to unravel the underlying climate trend and variability information and return new societal and scientific value from the records. In parallel, NCDC will extend these Climate Data Records by applying the same methods to present-day and future satellite measurements. The results will provide trustworthy, observation-based information on how, where and to what extent the land, oceans, atmosphere and ice sheets are changing, and will be used by agriculture, health, energy, security, water supplier, coastal community and other interests to improve the Nation's resilience to climate change and variability, maintain our economic vitality and improve the security and well-being of the public.

POC: Jeff Privette