An Update on the NOAA Arctic Test Bed

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ABSTRACT

The National Oceanic and Atmospheric Administration (NOAA) test beds, such as the Joint Hurricane Test Bed (Miami, FL) and the Hazardous Weather Test Bed (Norman, OK) have been highly effective in meeting unique or pressing science and service challenges for the National Weather Service (NWS). NWS Alaska Region is in the process of implementing the NOAA Arctic Test Bed to enable significant enhancements to our operational forecast and decision support capabilities in Alaska to address the emerging requirements of the Arctic. Historically, the complexity of forecast operations and the inherent challenges in Alaska have not been addressed well by the R&D programs and projects that support the Continental U.S. (CONUS) regions of the NWS. In addition, there are unique science, technology, and support challenges (e.g., sea ice forecasts and arctic drilling prospects) and international opportunities (bilateral agreements and World Meteorological Organization research projects) that would best be worked through Alaska operations. A dedicated test bed will provide a mechanism to transfer technology, research results, and observational advances into operations in a timely and effective manner in support of the NWS Weather Ready Nation goals and to enhance decision support services in Alaska. A NOAA Arctic Test Bed will provide a crucial nexus for ensuring NOAA's developers understand Alaska's needs, which are often cross disciplinary (atmosphere, ocean, cryosphere, and hydrologic), to improve NOAA's responsiveness to its Arctic-related science and service priorities among the NWS and NOAA’s research laboratories, and enable better leveraging of other research initiatives and data sources external to NOAA, including academia, other government agencies, and the private sector, which are particular to the polar region. A review of initial projects and future capabilities will be presented. An update will be provided on the implementation of the Arctic Test Bed, including the initial staffing plan, workspace plan, and initial partnerships and projects.