



WEATHER PROGRAM OFFICE

National Oceanic and Atmospheric Research

Who We Are The **Weather Program Office (WPO)** supports world-class weather and air quality research to save lives, reduce property damage, and enhance the national economy. In pursuit of its vision and mission, OWAQ works closely with weather enterprise and the National Weather Service (NWS) to develop and transition weather and air quality research from minutes out to seasons, including hurricanes, severe thunderstorms, heavy precipitation, and air pollution.

Joint Technology Transfer Initiative Program

The Joint Technology Transfer Initiative (JTTI) Program was first created by the U.S. Congress in 2016 to accelerate the transition of matured research from the American Weather Enterprise to NWS and later it was included in the Weather Research and Forecasting Act of 2017 (The Weather Act). The mission of the JTTI is to ensure continuous, cost effective development and transition of the latest scientific and technological advancements into NWS operations therefore OWAQ manages and implements the JTTI program in close collaboration with the NWS.

Focus JTTI meets WPO's objectives through funding matured transition projects that can transition to operations within 3-5 years. Pursuant to NOAA Administrative Order 216-105B, JTTI funded projects are required to have a research to operations transition plan. In order to achieve successful transitions, JTTI program activities are closely coordinated with NWS' Science and Technology integration Office. To address the requirement gaps identified in the NWS operations, JTTI priority areas include but are not limited to:

- Advancing data assimilation of new observations and data assimilation techniques including Artificial Intelligence (AI)/Machine Learning (ML) techniques to support Unified Forecast System (UFS).
- Developing, testing and evaluating AI/ML methods to post-process ensemble weather model data on global and regional-scale predictions out to sub-seasonal time scale.
- Improving water prediction capabilities through enhancements to National Water Model.
- Improving forecasts of extreme weather and high impact weather events.
- Utilizing social and behavioral science to Communicate forecast uncertainty.

Goals The goal of the JTTI program is to ensure continuous, cost effective development and transition of the latest scientific and technological advancements into NWS operations.

Funding Objectives JTTI funding objective is to support development, testing and evaluation of the matured weather research that can potentially transition to the NOAA's NWS operations and/or the community based Unified Forecast System.



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