

NOTICE OF FUNDING OPPORTUNITY EXECUTIVE SUMMARY

Federal Agency Name(s): Oceanic and Atmospheric Research (OAR), National Oceanic and Atmospheric Administration (NOAA), Department of Commerce

Funding Opportunity Title: FY2022 Weather Program Office Research Programs

Announcement Type: Initial

Funding Opportunity Number: NOAA-OAR-WPO-2022-2006969

Dates: For each of the six competitions within this Fiscal Year 2022 funding opportunity, full applications must be received by 5:00 pm Eastern Time (ET) on November 17, 2021.

Applications received after this deadline will not be considered. Pre-proposal Letters of Intent (LOIs) are strongly encouraged for potential applicants to all competitions and must be received by 5:00 pm ET on September 14, 2021, in order to receive a pre-proposal review. Award decisions are expected in May 2022. Financial awards for all competitions will be up to two to three years in length and are recommended to begin either August 1 or September 1, 2022, as described in Section II.B “Project/Award Period”.

Funding Opportunity Description: NOAA’s Weather Program Office (WPO; formerly OWAQ, the Office of Weather and Air Quality) is soliciting proposals for weather, atmospheric composition, and earth system modeling and observations research reflecting multiple science objectives spanning time scales from hours to seasons, and from weather and water observations and earth system modeling to fire weather and social, behavioral, and economic science. There will be six grant competitions from this notification valued at approximately \$16,500,000 per year as follows: 1) [Fire Weather & Atmospheric Composition](#) (FWAC), 2) [Climate Testbed](#) (CTB), 3) [Weather Testbeds](#), 4) [Joint Technology Transfer Initiative](#) (JTTI), 5) [Subseasonal-to-Seasonal](#) (S2S) , and 6) [Verification of the Origins of Rotation in Tornadoes Experiment in the United States](#) (VORTEX-USA).

In alignment with the [Weather Forecasting and Innovation Act of 2017](#) (Public Law 115-25), the funded projects should improve the weather community’s understanding and ultimately its services of weather and water forecasting through engagement with the external scientific community on key science gaps of mutual interest. Through this funding opportunity, NOAA will support new weather, water, climate, earth system, and air quality observing and forecasting applications, including improved analysis techniques, better statistical or dynamic forecast models and techniques, and communication of that information to better inform the public. Forecast model improvements must focus on developing the Unified Forecast System (UFS), with an aim towards addressing forecaster priorities. These priorities were articulated in a recent series of workshops, and the top priorities are listed at

<https://www.weather.gov/media/sti/Final%20Consolidated%20Forecasters%20requests%20April%202021.pdf>.

To achieve success with these objectives, selected projects should focus on advancing science and technology from the research stage to transitionable outputs or prototype products that NOAA or external partners could further develop into practical applications and operations. For the purposes of NOAA-funded projects, the maturity of projects is broadly classified using [Readiness Levels \(RLs\)](#), as adopted by NOAA and other federal agencies. The numerical RL scale from 1 to 9 is designed to track project maturity across the progressive spectrum from research to development to demonstration to deployment. RLs are defined in the context of NOAA's overall process for transitioning funded research into operations, commercialization, or other applications in NOAA's Policy on Research and Development Transitions described in NOAA Administrative Order 216-105B and in Section VIII. Additional information can be found in the Procedural Handbook for NOAA's Policy on Research & Development Transitions at

<https://www.noaa.gov/organization/administration/nao-216-105b-policy-on-research-and-development-transitions>, or at the website for the OAR Office of Research, Transition, and Application (ORTA) at <https://orta.research.noaa.gov/>.

Depending on the program objectives, the individual competitions within this notice of funding opportunity (NOFO) may favor projects at specific stages of maturity as signified by their estimated current RL. Program-specific project maturity considerations for funding are included in Section I.A "Program Objectives." While all programs in this funding opportunity encourage an acceleration of research toward operationalization and/or other application, no program directly supports an actual research-to-NOAA operations transition (i.e., the RL 8-to-9 transition) itself; the funded projects are, however, expected to work with NOAA operational center representatives to develop strategies if future transitions to NOAA are anticipated.

NOAA, OAR, and WPO encourage applicants and awardees to write their proposals and perform their work in a manner consistent with NOAA's core values, including those on diversity, inclusion, accessibility, civil rights, and scientific integrity. Applicants and awardees are urged to consider their ability to expand and diversify NOAA capabilities for all Americans in an equitable and just manner. Diversity is defined as a collection of individual attributes that together help organizations achieve objectives. Inclusion is defined as a culture that connects each employee to the organization, and the recognition, appreciation, and use of the talents and skills of employees of all backgrounds. The term "accessibility" means the design, construction, development, and maintenance of facilities, information and communication technology, programs, and services so that all people, including people with disabilities, can fully and independently use them. Promoting diversity and inclusion improves creativity, productivity, and the vitality of the weather and water research community in which WPO engages.