INFORMATION SHEET

NOTICE OF FUNDING OPPORTUNITY
2024

WPO recognizes the federal funding competition process can be difficult, time-intensive, and potentially confusing at times for all parties, including applicants, administrators, reviewers, and grants managers. The Notice of Funding Opportunity for Fiscal Year 2024 (FY24 NOFO) was developed with this in mind.

This Information Sheet expands upon some sections of the FY24 NOFO and provides additional context and guidance for applicants. If there is any conflicting information between the NOFO announcement and this Information Sheet, then the NOFO announcement takes priority and should be followed over this Information Sheet. For more information, visit wpo.noaa.gov/nofo or email us at oar.wpo.nofocompetition@noaa.gov. For questions regarding a specific competition, please contact the appropriate Program Manager listed in Section VII of the NOFO.

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1. INFORMATION FOR FEDERAL INSTITUTIONS

Costs incurred by NOAA federal collaborators are eligible for funding through this NOFO only if they fit into one of the categories listed below.

- ✓ Allowed: NOAA federal collaborator travel is only eligible in critical project-dependent cases, not including conference or workshop travel.
- ✓ Allowed: NOAA Federal funding may also cover project-critical equipment, indirect (overhead) costs for NOAA affiliate institutions, infrastructure, and testbed-related costs.
- × NOT Allowed: Any other direct funding for federal institutions, including employee salaries or other costs not listed as eligible in Section III.A, will not be considered as part of this funding opportunity.

The need for federal NWS forecaster travel support for NOAA Testbed activities must be determined and coordinated with the relevant Testbed Manager(s). Requested support for federal NWS forecaster travel for testbeds may be renegotiated pending availability of NOAA Testbed resources following coordination with NOAA Testbed Managers.

For the purposes of this funding opportunity, federal contractors are subject to the same restrictions as federal employees.

All funding requested by a federal institution, to cover overhead or otherwise,

- Will count against the maximum total project cost as specified for the competition (Section II.A), and the proposed project-total cost must not exceed that limit;
- Requires a letter of support from the requesting organization's director;
- May not exceed 20% of the overall project-total cost (excluding pre-agreed upon indirect cost rates);
- Must be clearly documented in the proposal's budget table located on the Title Page and in the Budget section of the Project Narrative, but should NOT be included in the SF-424A;
- Will be considered by the WPO Program Manager and, if approved, will be provided directly to the NOAA organization if the proposal is selected;
- May be rejected without review if this proposed funding is not properly and clearly documented.

2. INFORMATION FOR COOPERATIVE INSTITUTES

For the purposes of this funding opportunity, employees of NOAA-affiliated Cooperative Institutes (CI) shall be treated as employees of their affiliated universities. Applications should be submitted by the university on behalf of the CI, and any funding awards will be made directly to the university. If the CI is subject to overhead (indirect) costs imposed by a host NOAA Laboratory, then those costs will be transferred directly from NOAA to the Laboratory.

Indirect cost requests must be documented in the proposal as part of the application for funding and must be consistent with the pre-negotiated Indirect Cost Agreement (IDC). Entities that have never had an IDC with the federal government can elect to use the de minimis rate of 10% of the modified total direct costs (MTDC) or apply for an indirect cost rate agreement with the Department of Commerce (as allowable under 2 C.F.R. §200.414). Additional information can be found in the NOAA Acquisition and Grants Office (AGO) Frequently Asked Questions page.

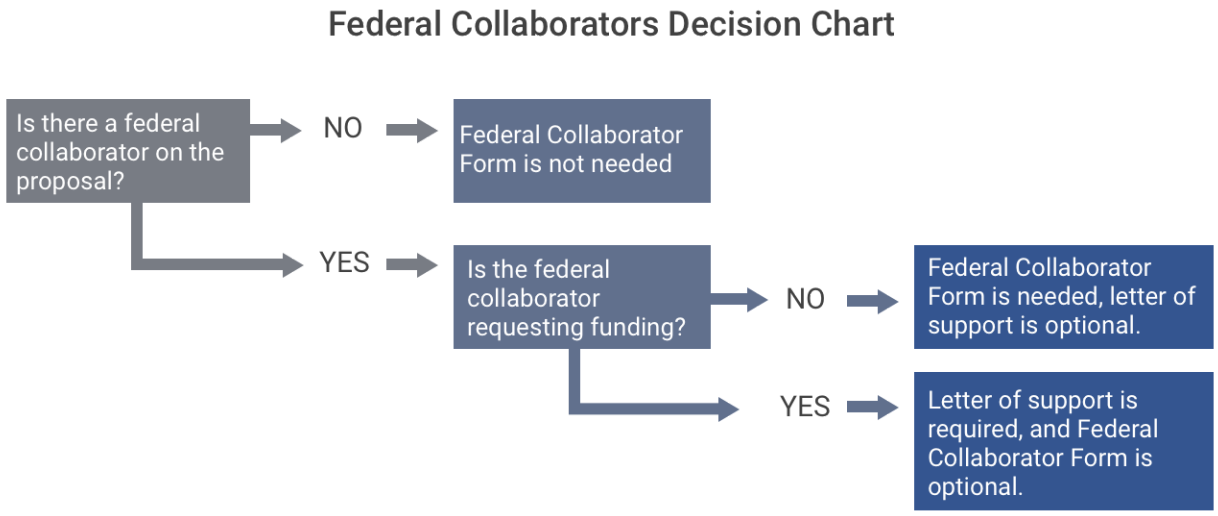
3. NOAA TESTBEDS AND PROVING GROUNDS

NOAA's Testbeds and Proving Grounds allow researchers to bring project outputs, such as new observing systems, improved data products and analysis techniques, or better statistical or dynamical models and forecast techniques, before operational forecasters to be evaluated for potential future implementation in the National Weather Service (NWS) forecast offices at the local, regional, and/or national center levels to improve services to the public. Applicants should coordinate with the appropriate NOAA Testbed manager(s) prior to completing an application if the proposal includes a plan to conduct tests in a NOAA Testbed or otherwise intends to leverage NOAA Testbed resources. In these instances, a Collaboration Form should be signed by the NOAA Testbed Manager and submitted with the proposal. Additional information, including a list of Testbeds and Proving Grounds and their points of contact, is available at https://www.testbeds.noaa.gov/.

The need for federal NWS forecaster travel support for NOAA Testbed activities must be determined and coordinated with the relevant Testbed Manager(s). Requested support for federal NWS forecaster travel for testbeds may be renegotiated pending availability of NOAA Testbed resources following coordination with NOAA Testbed Managers.

4. COLLABORATION FORM DETAILS

Any NOAA federal employee listed as a co-PI, co-I, or collaborator on the title page of a proposal (if eligible) must have provided explicit pre-approval to the PI to be identified as a contributor to the proposed project. Proposals including a federal collaborator should include a signed letter of support or a completed Collaboration Form, depending on whether the federal collaborator is requesting funding. See the decision chart below to determine forms needed for your proposal.



<u>If funding is requested:</u>
-a signed letter of support is required, and
-a Collaboration Form is optional.

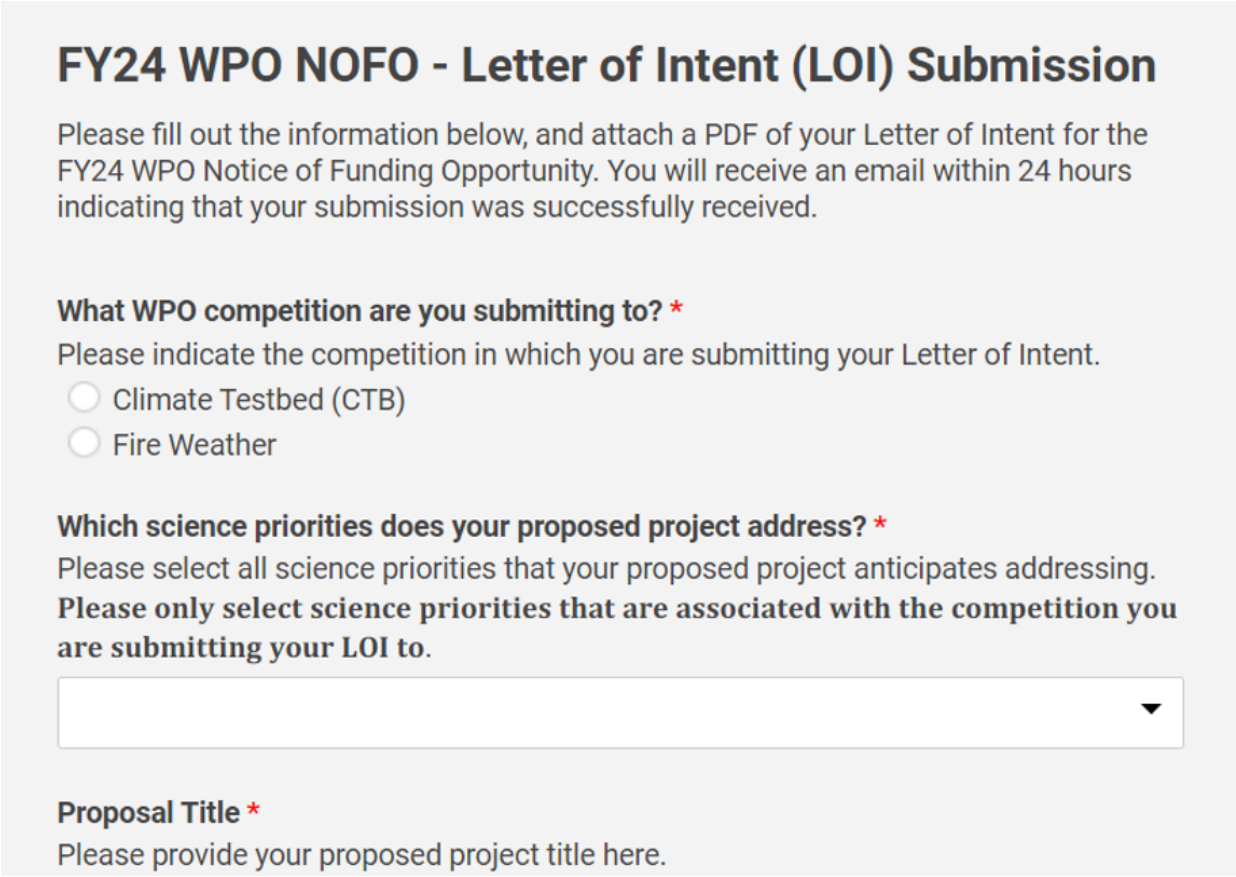
<u>If funding is NOT requested:</u>
-a Collaboration Form is required, and
-a letter of support is optional.

5. SUBMITTING A LETTER OF INTENT

For FY24, WPO is utilizing Smartsheet for submission of Letters of Intent (LOIs). While LOIs will still be accepted via email, it is preferred that applicants use the LOI Submission Form at https://tinyurl.com/FY24WPOCompetition. The form consists of seven questions that collect basic information needed by WPO to prepare the LOI's review (see image below). The LOI should then be uploaded as a PDF using the same form. Once the form is submitted, the applicant should receive an automated confirmation email from Smartsheet. Please check your email's spam folder if the message is not received. Alternatively, an LOI may also be submitted via

email using the address oar.wpo.nofocompetition@noaa.gov.

All LOIs must be submitted by 5:00 pm ET on September 19, 2023. Regardless of submission method, if no confirmation message is received within 24 hours of the LOI submission, please contact the appropriate Program Manager for your competition (Section VII of the NOFO) to confirm receipt. Exceptions may be made to accept late LOI submissions if evidence of on-time submission attempts can be provided.



FY24 WPO NOFO - Letter of Intent (LOI) Submission

Please fill out the information below, and attach a PDF of your Letter of Intent for the FY24 WPO Notice of Funding Opportunity. You will receive an email within 24 hours indicating that your submission was successfully received.

What WPO competition are you submitting to? *

Please indicate the competition in which you are submitting your Letter of Intent.

- Climate Testbed (CTB)
- Fire Weather

Which science priorities does your proposed project address? *

Please select all science priorities that your proposed project anticipates addressing. **Please only select science priorities that are associated with the competition you are submitting your LOI to.**

Proposal Title *

Please provide your proposed project title here.

6. COMPLETING THE PROPOSAL TITLE PAGE

The title page of a funding application is crucial for making basic information about the proposal. Example title page templates are available online here.

For all competitions in this opportunity, a proposal title page should include the following:

- For each PI and the respective institutional representative: full name, title, organization, telephone number, email address;
- Mailing address for the institution's PI;
- Total requested funds for each annual period for the project as a whole, and for each individual institution (including each internal federal and external non-federal institution), including indirect costs; and
- The competition to which it is being submitted.

If there are several institutions submitting separate applications for the same multi-institution project, the title pages of each application should be identical. Each should include the names of all institutions with their PI information and total requested funding for each annual period for each institution must appear on the title page of each separate application.

If the requested information does not fit onto a single title page with reasonable effort, then a second title page that does not count against the proposal page limit may be added.

Please use the following definitions to aid in labeling each PI as appropriate:

Principal Investigator (PI): The project lead who is responsible for implementation of the project plan as written in the project narrative. Responsibilities include intellectual conduct of the project, financial responsibility, and compliance with progress and financial reporting. If it is a multi-institution project, these responsibilities will be shared with Co-PIs at each institution.

Lead Principal Investigator (Lead PI): The first investigator named on a proposal, who is the point of contact for the project. This is another name for the Principal Investigator.

Co-Principal Investigator (Co-PI): A lead investigator at a different institution than the PI, who has equal responsibility and authority as the PI. They are responsible for progress and financial reporting for their institutions' share of the project. A co-PI has more authority and responsibility than a co-investigator.

Co-Investigator (Co-I): This individual makes significant contributions to the project, but does not have overall responsibility and authority for the project.

Investigator: individual(s) with this title make contributions to the project and have no responsibility or authority for the project. When used in plural, it refers to the entire research team, regardless of rank or title.

7. POSSIBLE PROJECT PRODUCTS/OUTPUTS and PROJECT IMPACTS/BENEFITS/OUTCOMES

Examples of project outputs include: instruments, sensors or observing platforms; tools, widgets, and technologies; model codes, software, or algorithms and associated documentation; published data sets or databases; reports, research-guided recommendations, or other formal summary documents; methodologies; visual displays or other graphical prototypes; inventions, patent applications, and/or licenses; audio or video products; outreach, education, and training events; websites; publications, conference papers, and presentations. This list is not exhaustive.

Example project impacts, benefits, and outcomes include: improvements in detection, accuracy, reliability, coverage, latency, lead time, skill, processing speed, efficiency, cost, knowledge. This list is not exhaustive.

8. COMPLETING THE REQUIRED STANDARD FORMS

The full proposal package includes the following required federal forms:
(1) Standard Form 424 - Application for Federal Assistance
(2) Standard Form 424A - Budget Information - Non-Construction Programs
(3) Standard Form 424B - Assurances - Non-Construction Program
(4) Form CD-511 - Certifications Regarding Lobbying
(5) Standard Form LLL - Disclosure of Lobbying Activities

Applicants must use the Standard Form SF-424A Budget Information-Non Construction Programs that is contained in the standard NOAA Grants and Cooperative Agreement Package. Pay careful attention to show the yearly budget breakout on page 1A of the SF 424A for multi-year proposals.

9. SUBMITTING PROPOSALS AND THE SYSTEM FOR AWARD MANAGEMENT





The new Unique Entity Identifier (UEI) replaced the DUNS number and is the primary means of identifying entities registered for federal awards government-wide in the System for Award Management (SAM), which may be accessed online at https://www.sam.gov. The UEI is important for enhancing the quality of information available to the public as required by the Federal Funding Accountability and Transparency Act, 31 U.S.C. 6101 note. If your entity is already registered in SAM, it has been assigned a UEI and is viewable in SAM. While the UEI is assigned by and viewable within SAM, applicants can also find it listed under their organization profile in Grants.gov.

Users will be able to download a copy of the application package on Grants.gov, complete it offline, and then upload and submit the application via the Grants.gov site. If an applicant has problems downloading the application forms from Grants.gov, contact Customer Support at 1-800-518-4726 or support@grants.gov.

NOAA may not make a federal award to an applicant until the applicant has complied with all applicable UEI and SAM requirements. It is recommended that these requirements are satisfied by the application deadline, and if an applicant has not fully complied with the requirements by the time NOAA is ready to make a federal award, NOAA may determine the applicant is not qualified to receive a federal award and use that determination as a basis for making a federal award to another applicant.

In all, there are approximately eight steps needed to set up your organization's Grants.gov account. It can take between 3–5 business days or as long as 3 weeks to register if all steps are not completed in a timely manner. Organizations already registered with Grants.gov are not required to re-register but should ensure their Grants.gov password is up-to-date. Additional information about the Grants.gov registration process can be found online at https://www.grants.gov/web/grants/applicants/registration.html.

10. DIVERSITY, EQUITY, INCLUSION, AND ACCESSIBILITY (DEIA)

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. Promoting diversity and inclusion improves creativity, productivity, and the vitality of the weather and water research community in which WPO engages.

NOAA values the advancement of scientific knowledge and activities that contribute to the achievement of societally relevant outcomes. Such outcomes include, but are not limited to: increased public scientific literacy and public engagement with science and technology; improved well-being of individuals in society; development of a diverse, globally-competitive STEM workforce; increased partnerships between academia, industry, and others; improved national security; increased economic competitiveness of the United States; and enhanced infrastructure for research and education.

Diversity is the mixture of the unique attributes that shape an individual's identity which they bring into the workplace to help NOAA accomplish its goals. Diversity refers to demographic diversity (e.g., race, gender, sexual orientation), experiential diversity (e.g., affinities, hobbies, and abilities), and cognitive diversity (e.g., sensory processing and problem solving). Inclusion is a culture that values the unique attributes of all team members. It is an environment which is respectful, collaborative, supportive, and one that allows for equal access. Inclusion requires active and intentional engagement on the part of everyone and provides a feeling of belonging.Accessibility refers to 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.

As a way to actively promote such outcomes, WPO requires a formal statement on DEIA as part of its proposal process. A strong DEIA statement communicates that creating and fostering a diverse and inclusive workforce is a priority for the applicant and their institution. Proposals should include, and will be evaluated on (among other criteria; see Section V.A.5), specifics on ongoing or planned project activities that encourage diversity, accessibility, and an inclusive research environment, including, but not limited to:

- A diverse project team;
- Utilization of educational and research partnerships with institutions serving minority and

underrepresented populations (such as Minority Serving Institutions, NOAA Cooperative Science Centers, and other institutions that work in underserved communities);

- Utilization of active collaborative programs seeking diversity in science, technology, engineering, and mathematics (STEM); Involvement with existing education and outreach programs (such as the NOAA Educational Partnership Program);
- The provision of accommodations and modifications to ensure equal access to employment and participation in activities for people with disabilities, the reduction or elimination of physical and attitudinal barriers to equitable opportunities, a commitment to ensuring that people with disabilities can independently access every outward-facing and internal activity or electronic space, and the pursuit of best practices such as universal design;
- Project team or individual training, such as for awareness and prevention of sexual assault and sexual harassment (SASH); and
- Any other initiatives that build the capacity of and materially foster a diverse and inclusive research team and environment.

11. MINORITY SERVING INSTITUTIONS

Promoting accessibility of funding opportunities to MSIs and other institutions in underserved communities is a key priority for WPO. As such, WPO strongly encourages proposals that include direct involvement with or provide opportunities for MSIs.

Minority Serving Institutions (MSI) are institutions of higher education that serve minority populations. Some of these colleges and universities are located in remote regions of the country, whereas others serve urban neighborhoods. Some are only a few decades old, whereas others have been striving for more than a century to give their constituents the social and educational skills needed to overcome racial discrimination and limited economic opportunities. In 2022, over 700 institutions are formally recognized as MSIs, according to the U.S. Department of Education Office of Postsecondary Education. Categories and definitions of recognized MSIs are provided below, from the U.S. Department of Interior and the Higher Education Act.

- Historically Black Colleges and Universities (HBCU) include 91 four-year and 17 two-year institutions of higher education established prior to 1964, for the

primary purpose of educating African-Americans. HBCUs comprise 3% of America's institutions of higher education, yet enroll 16% of all African-American students in higher education and award 24% of all baccalaureate degrees earned by African-Americans nationwide.

- Hispanic Serving Institutions (HSI) are accredited, post-secondary, higher educational institutions with at least 25% total full-time enrollment of Hispanic undergraduate students. HSIs include four-year and two-year, public and private educational institutions. HSIs enroll 40% of all Hispanic-American students of higher education.

- Tribally Controlled Colleges and Universities (TCCU) are public and private higher educational institutions that provide a response to the higher education needs of American Indians, and generally serve geographically-isolated populations that have no other means of accessing education beyond the high school level.

- Asian American and Native American Pacific Islander-Serving Institutions (AANAPISI) are defined under the Higher Education Act (HEA) as colleges or universities with an undergraduate enrollment that is at least 10% Asian American and Native American Pacific Islander.

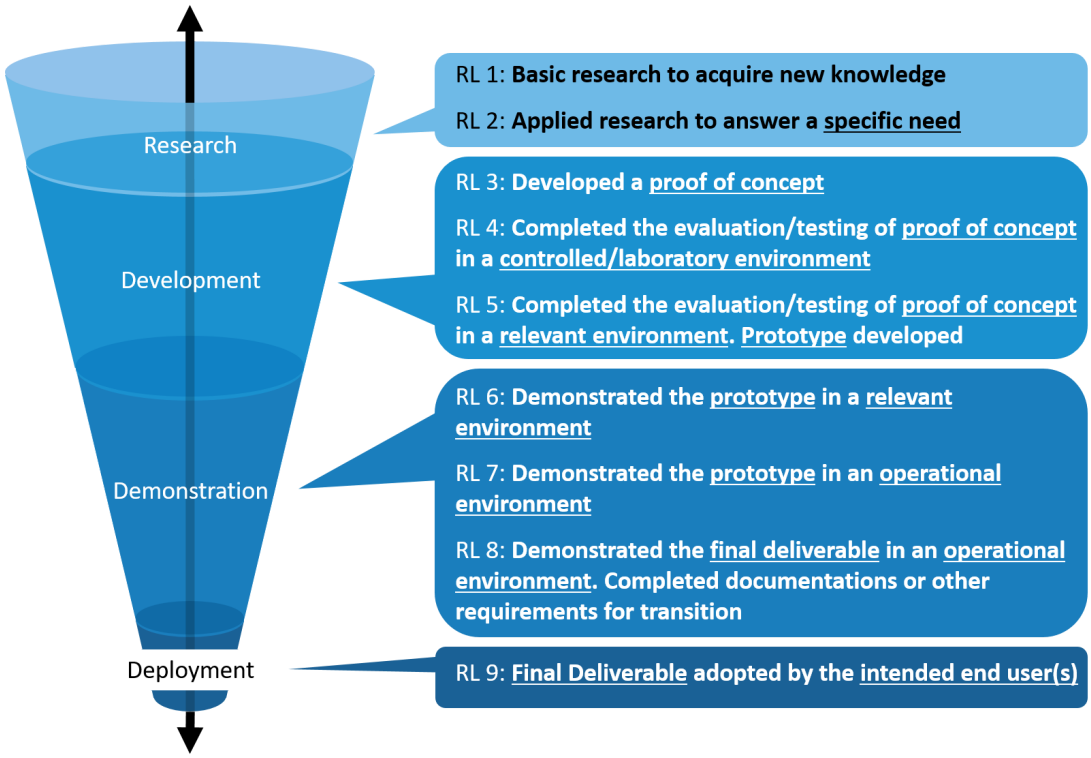
- Alaska Native and Native Hawaiian Serving Institutions (ANNHSI) collectively refers to schools that serve Alaska Native or Native Hawaiian students. At least 20% of students attending these schools must possess primarily Alaskan or Hawaiian native heritage.

12. STUDENT OPPORTUNITIES

WPO strongly encourages proposals that provide opportunities for student involvement. The FY24 NOFO application schedule is intended to allow investigators a chance to hire students during the spring recruitment season rather than waiting until summer, when many students are already committed.

Applicants are encouraged to promote the education and field experience of undergraduate and graduate students and consider leveraging educational scholarship or internship opportunities. Example programs within NOAA include the Ernest F. Hollings Scholarship, William M. Lapenta Internship, and Jose E. Serrano Educational Partnership Program with Minority Serving Institutions (EPP/MSI). For more information on NOAA student opportunities, please visit the website for NOAA's Office of Education.

13. NOAA READINESS LEVELS



RL 1 (Basic Research): Basic research, experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundations of phenomena and observable facts, without any particular application or use in view. Basic research can be oriented or directed towards some broad fields of general interest, with the explicit goal of a range of future applications.

RL 2 (Applied Research): Applied research, original investigation undertaken in order to acquire new knowledge. It is, however, directed primarily towards a specific, practical aim or objective. Applied research is undertaken either to determine possible uses for the findings of basic research, or to determine new methods or ways of achieving specific and predetermined objectives.

RL 3 (Development): Proof-of-concept for system, process, product, service, or tool; this can be considered an early phase of experimental development; feasibility studies may be included.

RL 4 (Development): Successful evaluation of system, subsystem, process, product, service, or

tool in a laboratory or other experimental environment; this can be considered an intermediate phase of development.

RL 5 (Development): Successful evaluation of system, subsystem process, product, service, or tool in relevant environment through testing and prototyping; this can be considered the final stage of development before demonstration begins.

RL 6 (Demonstration): Demonstration of a prototype system, subsystem, process, product, service, or tool in a relevant or test environment (its potential is demonstrated).

RL 7 (Demonstration): Prototype system, process, product, service or tool demonstrated in an operational or other relevant environment (functionality is demonstrated in near-real world environment; subsystem components fully integrated into system).

RL 8 (Demonstration): Finalized system, process, product, service or tool tested, and shown to operate or function as expected within the user's environment; user training and documentation completed; operator or user approval given.

RL 9 (Deployment): System, process, product, service or tool deployed and used routinely.

14. RESEARCH TRANSITIONS

Projects proposing to transition research and development output into operations (NOAA or otherwise), commercialization, or other applications must follow NOAA's Policy on Research and Development Transitions described in NOAA Administrative Order 216-105B. Additional information can be found in the Procedural Handbook for NOAA's Policy on Research & Development Transitions.

Following this policy, development of a comprehensive research **Transition Plan** is required if the project is selected for an award and intends to progress from experimental testing to development in a relevant environment (RL-4 or above) or intends to transition to an application after the completion of the award. This is applicable for all research applications, including (but not limited to) those of technology transfer, observing systems, knowledge, and data. Transition plan guidance will be provided by NOAA for applicable projects once the project begins. While a project funded through this notice should not have the sole purpose of benefiting a federal entity (such as NWS), it may be eligible to transition into NOAA operations outside of an award if an operational center expresses interest.

The project's Program Manager in WPO will be your primary point of contact for coordinating development and possible transition of R&D outputs, but a NWS operational point of contact may be assigned if the project intends to transition to NWS operations. Additional assistance regarding transition plans and R&D policy is available on WPO's Research Transitions website, or through the OAR Office of Research, Transition, and Application (ORTA).

15. UNIFIED FORECAST SYSTEM



Any projects proposing to improve forecast model improvements should focus on development compatible with the Unified Forecast System (UFS), with an aim towards addressing forecaster priorities. These priorities were articulated in a recent series of workshops, and top priorities are accessible in the consolidated list Model Issues and Forecasters' Requests produced by the National Weather Service Office of Science and Technology Integration.

UFS developments are furthermore encouraged to collaborate with the Earth Prediction Innovation Center (EPIC), leveraging and incorporating EPIC advances to adopt continuous improvement continuous deployment, providing code documentation, incorporating code testing, or utilizing cloud computing. Projects proposing to engage with EPIC may work with the EPIC contract to develop high-quality, well tested, well documented software using continuous integration, continuous delivery methods. EPIC projects may also perform developments in-cloud HPC and may budget for cloud time in the proposals (see the HPC guidance section below). See the EPIC website (https://wpo.noaa.gov/Programs/EPIC) for further information on the EPIC program and how to engage.

16. HIGH-PERFORMANCE COMPUTING

For applications requesting the use of NOAA's high-performance computing (HPC) platform, include the estimated processing and storage requirements, including expected core hours. It is strongly recommended that any proposal leveraging NOAA HPC include strong collaboration with a NOAA institution.

Modest requests for cloud computing expenses may be budgeted in projects proposing to engage with EPIC, but all direct costs incurred by a federal institution may not exceed 20% of the project expense. Otherwise, due to NOAA's shortage of HPC and storage for research, investigators are strongly encouraged to seek computing resources, including cloud computing resources, from other sources and should be aware these NOAA resources may not be available for their project.

17. USE OF HUMAN SUBJECTS

Institutional Review Board (IRB)

Applicants submitting proposals that involve use of human subjects should state so clearly in their application. **Any** proposed research activities that involve human subjects are required to undergo review by the Institutional Review Board at the applicant's institution. This includes, but is not limited to, common testbed experiment designs involving NWS forecasters, surveys, interviews, and focus groups. Applicants with projects using human subjects should contact their institution's IRB representative prior to submitting a proposal to understand regulations and requirements for conducting research with human subjects, and to determine the institution's procedures for submitting research for review and approval.

Approval from the applicant's Institutional Review Board (IRB) is required before any research with human subjects can proceed. Research that involves human subjects is regulated by Federal policy, and human subjects research conducted without IRB approval may result in penalties to your institution and individual researchers, such as the discarding of research findings and the prevention of the publication of results. Applicants are responsible for obtaining IRB approval from their institution and providing documentation to NOAA once the approval is obtained and prior to beginning any NOAA-funded research with human subjects.

Office of Management and Budget (OMB) / Paperwork Reduction Act (PRA) Process

Additionally, if an award recipient uses agency assistance or sponsorship in any collection of information from the public, the recipient must obtain Office of Management and Budget (OMB) clearance as required by The Paperwork Reduction Act (PRA) of 1995. For example, sponsorship may include NOAA disseminating surveys, either directly or through a NOAA social media account, on behalf of award recipients. If a PI is unsure whether their project requires OMB clearance, the PI should budget ample time for clearance in their proposal and if awarded, NOAA staff can help determine whether OMB clearance is necessary. If a funded project is determined by NOAA staff to require OMB clearance, the appropriate NOAA OMB/PRA liaison or point of contact (POC) will work with award recipients to obtain OMB clearance. The award recipient must obtain OMB clearance before collecting information. Because OMB clearance can take anywhere from one week to nine months, the process for obtaining OMB clearance should begin as soon as possible if the project is determined by NOAA staff to require OMB review. For additional information on the OMB/PRA process within NWS, please see the NWS Social Science vLab page. Any proposal intending to use human subjects should specify clearly in the timeline approximately when IRB approval will be obtained, if appropriate, when OMB clearance will be obtained, when documentation will be sent to NOAA, and when the testing is expected to occur.

18. INVENTION DISCLOSURE

NOAA Invention Disclosure: Prior to any public disclosure (including but not limited to presentations at a public meeting, or publications on a public-facing webpage or in scientific literature), a NOAA invention shall be reported to the NOAA Technology Partnerships Office (TPO) for:

- Rights determination;
- Evaluation of patentability and commercial potential; and
- Inclusion in the NOAA technology and innovation portfolio.