

NOAA
WEATHER
PROGRAM OFFICE

GENERAL INFORMATION SHEET

NOTICE OF FUNDING OPPORTUNITY 2025

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 2025 (FY25 NOFO) was developed with this in mind.

This Information Sheet expands upon some sections of the FY25 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 with your question(s) at wpo.nofo.competitions@noaa.gov.

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1. INFORMATION FOR FEDERAL INSTITUTIONS

Costs incurred by NOAA federal collaborators, as defined in the FY25 NOFO, 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 as defined in the FY25 NOFO, not including conference or workshop travel.
- ✓ Allowed: NOAA Federal funding may also cover project-critical equipment as defined in the FY25 NOFO, 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 National Weather Service (NWS) forecaster travel support for NOAA Testbed activities must be determined and coordinated with the relevant Testbed Manager(s). This information should *not* be included in your proposal.

For the purposes of this funding opportunity, federal contractors are subject to the same restrictions as federal employees, please reference FY25 NOFO Section III.A for further guidance.

All funding requested by a federal institution as defined in the FY25 NOFO, to cover overhead or otherwise:

1. 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;
2. Requires a letter of support from the requesting organization's director;
3. May not exceed 20% of the overall project-total cost (excluding pre-agreed upon indirect cost rates);
4. 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;
5. Will be reviewed by the appropriate competition's Program Manager and, if approved, will be provided directly to the NOAA organization;
6. 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 (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

NOAA's Testbeds 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 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 Testbed Collaboration Form should be signed by the NOAA Testbed Manager and submitted with the proposal. Additional information, including a list of Testbeds and their points of contact, is available at <https://www.testbeds.noaa.gov/> and in the FY25 Testbeds Information Sheet.

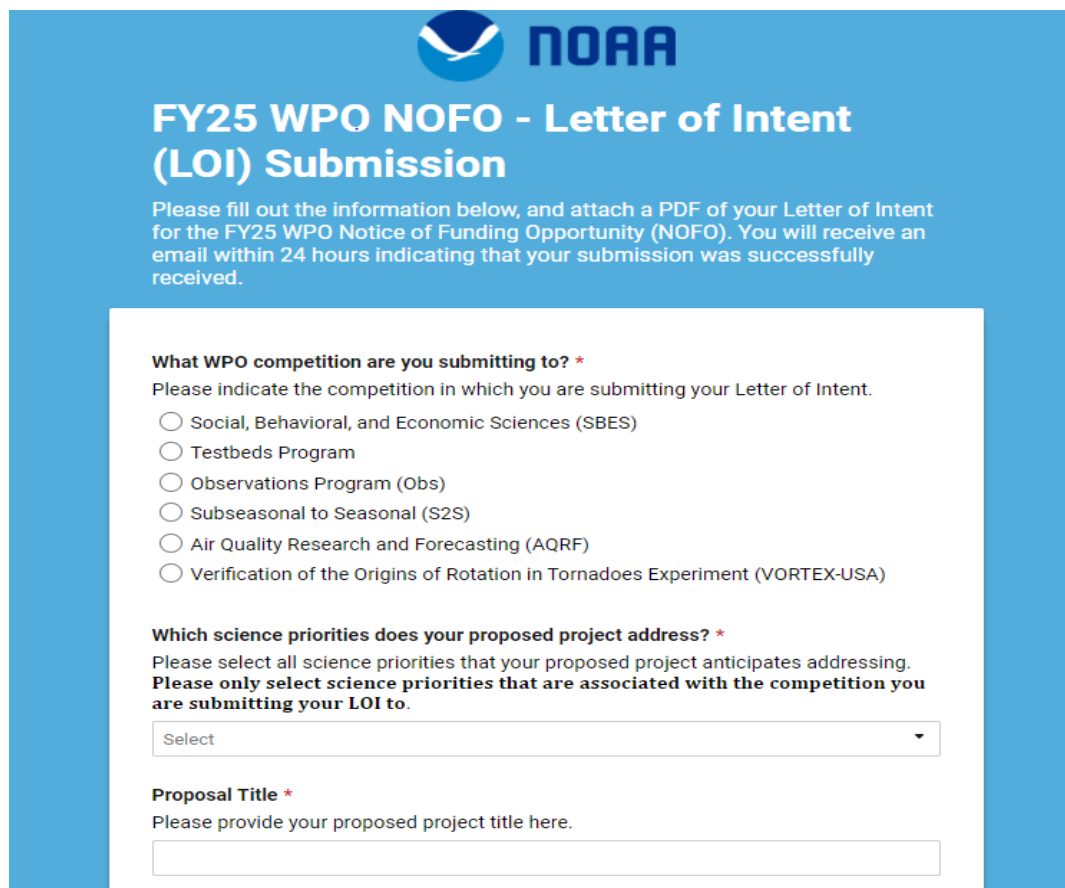
The need for federal NWS forecaster travel support for NOAA Testbed activities must be determined and coordinated with the relevant Testbed Manager(s). This information should *not* be included in your proposal, but rather negotiated between the relevant Testbed Manager(s) and the appropriate WPO Program Manager after the award selection process concludes.



4. SUBMITTING A LETTER OF INTENT

For FY25, 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 this [link](#). The form consists of seven questions that collect important information needed by WPO to prepare the LOIs' 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 wpo.nofo.competitions@noaa.gov.

All LOIs must be submitted by 5:00 pm ET on October 2, 2024. Regardless of submission method, if no confirmation message is received within 24 hours of the LOI submission, please contact WPO (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.



 **NOAA**

FY25 WPO NOFO - Letter of Intent (LOI) Submission

Please fill out the information below, and attach a PDF of your Letter of Intent for the FY25 WPO Notice of Funding Opportunity (NOFO). 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.

- ☐ Social, Behavioral, and Economic Sciences (SBES)
- ☐ Testbeds Program
- ☐ Observations Program (Obs)
- ☐ Subseasonal to Seasonal (S2S)
- ☐ Air Quality Research and Forecasting (AQR)
- ☐ Verification of the Origins of Rotation in Tornadoes Experiment (VORTEX-USA)

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.**

Select ▼

Proposal Title *
Please provide your proposed project title here.

5. 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, co-PI, and co-Investigator (co-I) as well as each respective institutional representative: full name, title, organization, telephone number, email address;

- Mailing address for the institution's Lead 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;
- The competition and priority(ies) to which the proposal is addressing; and
- The starting and ending Readiness Levels (RLs).

If there are several institutions submitting separate applications for the same multi-institution project, the title pages of each application should be identical. Each title page should include the names of all institutions with their PI information, and the 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:

Lead Principal Investigator (PI): The first investigator named on a proposal, who serves as the point of contact and the project lead. This person 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, it is expected that the Lead PI will lead the collaboration for these responsibilities with their Co-PIs at each institution.

Co-Principal Investigator (Co-PI): Co-PI refers to an investigator who may share scientific and administrative leadership responsibilities for a project with the PI. They may be a secondary investigator at the same institution as the Lead PI or, for multi-institution proposals, they may be at a different institution than the Lead PI. On a multi-institution proposal, a Co-PI may serve as an Institutional Lead PI who shares equal responsibility and authority as the PI. In this case, 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): Co-I refers to a senior or key investigator involved in a study who makes significant contributions to the project, but does not have the overall responsibility and/or authority for the project.

Collaborator: 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.

6. COMPLETING THE PROPOSAL ABSTRACT PAGE

The abstract page of your funding application is essential for capturing key information necessary for Research and Development (R&D) tracking as well as externally communicating the value of your work. If funded, NOAA may, at its own discretion, make publicly visible the abstract or components of it to increase public awareness of research knowledge. An abstract page template and example are available online [here](#).

The abstract must appear on a separate one page document. Instead of using a single paragraph format to write the body of your abstract, we ask that you provide a concise response to several prompts. Each response should be a maximum of 50 words (not to exceed 1-2 sentences). Please ensure your descriptions are clear, concise, and informative. Avoid technical jargon by using plain-language, and focus on the key points that highlight the significance and impact of your project. Please provide concise responses to the following prompts:

- **Project Goal:** Describe the primary goal or purpose of the project.
- **Problem/Opportunity Statement:** Explain the specific operational problem you are aiming to address or the opportunity you are exploring.
- **Methodology/Activities to be Performed:** Summarize the approach, methods, or activities you will use to conduct the research.
- **Primary Project Products/Outputs:** Describe the main output(s) or product(s) you expect to result from your project.
- **Expected Results, Outcomes, and Benefits:** Outline the expected results and outcomes of this project, as well as the intended operational and/or societal benefits.
- **Intended Beneficiaries and Recipients:** Include who you anticipate will use the outputs and how they will (or may) be applied.

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

Examples of project products or 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.

NOAA values the advancement of scientific knowledge and activities that contribute to the achievement of operational and societally relevant outcomes. Such operational outcomes include, but are not limited to: improvements in detection, accuracy, reliability, coverage, latency, lead time, skill, processing speed, efficiency, cost, knowledge. Societal benefits include, but are not limited to: increased scientific literacy and engagement with science and technology among members of the public; improved awareness of weather hazards and their corresponding recommended protective actions; better access to weather information; effective delivery of life-saving information to the public; enhanced preparation, adaptation, and resilience to extreme weather events; more informed decision making during extreme weather events; improved national security; and increased economic competitiveness of the United States.

8. COMPLETING THE REQUIRED STANDARD FORMS

The full proposal package includes the following required federal forms (which can be found [here](#)):

- (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 (1) show the yearly budget breakout on page 1A of the SF-424A for multi-year proposals and (2) ensure the name of the authorized representative and the signature of the authorized representative match on both the SF-424 form and the CD-511 form.

9. SUBMITTING PROPOSALS AND NAVIGATING 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.

To be eligible to apply or receive an award, applicant organizations must complete and maintain **three** system registrations and access to include: SAM.gov, Grants.gov, and eRA Commons. Prior to registering with eRA Commons, applicant organizations must first obtain a Unique Entity Identifier (UEI) from SAM.gov (see above). Organizations can register with eRA Commons in tandem with completing their full SAM and Grants.gov registrations; however, all registrations must be in place by time of application submission. Additional information about the Grants.gov registration process can be found online at <https://www.grants.gov/web/grants/applicants/registration.html>.

Once registered, 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.

New this year, with the implementation of eRA as NOAA's new grant management platform, is an **additional** proposal validation check in eRA following the Grants.gov validation check that occurs upon submission. ***An application must pass both sets of validation checks before a NOFO due date to be successfully submitted.*** This section details some of the most common validation errors applicants have been encountering and tips to avoid them. Additional training and information for DOC Applicants can be found [here](#).

Understanding the Submission Process in Grants.gov and eRA Commons

- (1) The first check occurs at Grants.gov and only checks for: (1) on-time submission and (2) that attachments are attached to each required form in the application package. If an application passes those checks, Grants.gov will indicate a successful submission by sending an email to the applicant from do_not_reply@grants.gov that contains a tracking number. However, this does not mean that the application has successfully passed the eRA check.
- (2) The second, more robust check, happens at the eRA level and has been causing numerous rejections. After Grants.gov submission, the PI listed on the application will receive an email notification from era-notify@mail.nih.gov. This email will either confirm a successful submission to eRA or list validation errors and warnings associated with the application. **If validation errors are indicated**, (1) they must be addressed, (2) the application must be resubmitted via Grants.gov (which will create a new Grants.gov tracking number) **before the NOFO closes**, and (3) the listed PI must receive an email from era-notify@mail.nih.gov with no errors indicated before an application will be considered a successful submission to eRA. Validation warnings will not prevent a successful submission. Applicants can also view the submission status of an application in eRA Commons.

Common eRA Validation Errors

- **eRA Commons Username**

If an organization needs to register for an eRA account, **we recommend doing so as soon as possible** because this account can take weeks to be approved by eRA staff. Applicants can find more information on registering your organization in eRA Commons [here](#).

The transition to eRA means that applicants are now required to register in [eRA Commons](#) for grant application and management. In order to successfully submit a proposal through eRA, the PI listed on the application materials **must** have an eRA Commons account, and that Commons account must be (1) affiliated with the applicant organization and (2) hold the PI role within that organization. That valid, affiliated **Commons Username** (not PI name or email address) must then be included on the application materials in the following place(s):

- **In SF424 Packages**: In the “4. Applicant Identifier” box of the SF424.
- **In R&R Packages**: In the “Credential, e.g., agency login” field of the Research & Related Senior/Key Person Profile Form for the first listed PI.

Failure to register in eRA Commons and to include a valid, affiliated PD/PI Commons Username in those places listed above will prevent the successful submission of an electronic application. Additional personnel included on the form do not need to include this information; however, eRA will create a *warning* recommending that those personnel also include their eRA Commons Username(s). *Warning messages do not prevent successful submissions.* Again - it is **not** required that those additional personnel include valid eRA Commons Username(s) regardless of the warnings created by the eRA system.

- **Formatting Issues**

In addition, there have been many error messages resulting from eRA formatting requirements. The majority of errors we've seen related to formatting are:

- All documents MUST be in PDF form
- File sizes that are too large (over 100 MB)
- Including paper (page) size larger than standard letter paper size (8 ½" x 11")
- File names that are too long (greater than 50 characters including spaces)
- Including invalid characters in the file name
- Not “flattening” the PDF prior to attachment

To avoid other common issues, please take the time to review the full list of eRA formatting requirements found [here](#).

Please note: validation or rejection of an application by Grants.gov and eRA may take a minimum of three business days after submission. Further, registering your organization's accounts on any of these three required systems (SAM, Grants.gov, and eRA) can take anywhere from a few days to several weeks. Eligible applicants should consider this in developing their submission timeline to avoid being disqualified for a late submission.

NOAA may not make a federal award to an applicant until the applicant has complied with all applicable UEI, SAM, and eRA 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.

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.

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;
- Use 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);
- Use 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 (MSIs)

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 (MSIs) 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 were 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 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 (HSIs) 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 (TCCUs) 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 (AANAPISIs) 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 (ANNHSIs) collectively

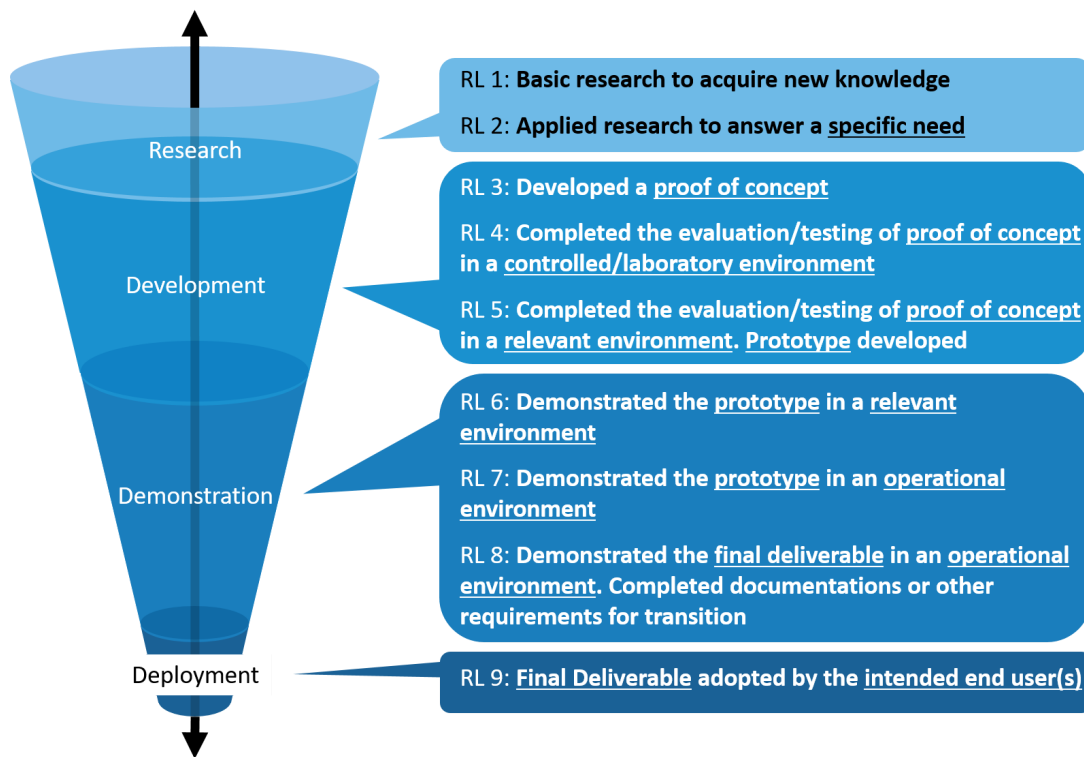
refer to schools that serve Alaska Native or Native Hawaiian students. At least 20% of students attending these schools must possess primarily Alaskan or Hawaiian native heritage.

12. STUDENT OPPORTUNITIES

WPO strongly encourages proposals that provide opportunities for student involvement. The FY25 NOFO application schedule can be leveraged to support investigators efforts to hire students. Therefore, 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

Information about project Readiness Levels, often referred to as “RLs” can be found on the [NOAA Office for Research, Transition, and Application](#) webpage and are also described below. Research projects appropriate for these funding competitions range from early applied research (lower RLs) to mature stages of demonstration (higher RLs), and the same proposal may span multiple RLs if multiple methodologies are being proposed. When assessing the RLs of your proposed project, please use your best estimate. WPO uses RLs to evaluate project maturity, *not* to judge the “correctness” of a PI’s RL assessment. Additionally, WPO recognizes research and development takes time, and as such, does not expect projects to progress through all readiness levels in a two- or three-year project period.



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. COLLABORATION AND RESEARCH TRANSITIONS

To enhance the relevance and feasibility of the proposed research, PIs are strongly encouraged to identify opportunities for meaningful engagement with collaborators. These collaborators may include, but are not limited to: broadcast meteorologists, private sector meteorologists, emergency managers, community leaders, NWS forecasters, or NWS Headquarters personnel. While not required, partnering with NWS Weather Forecast Offices and/or NWS Headquarters personnel (i.e., operational collaborators) can provide particularly valuable insights, as these entities are often among the primary users of WPO's research outputs. This collaboration ensures that research outputs are not only theoretically sound but also practically applicable and beneficial to practitioners.

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 (R&D) 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 an award is made and 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.

An awarded project's WPO Program Manager will be the 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 \(ORTA\)](#) website.

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 and continuous deployment (CI/CD), 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 High-Performance Computing (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.

High Performance Computing

For applications requesting the use of NOAA's 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 total cost. 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.

16. DYNAMIC ENSEMBLE-BASED SCENARIOS FOR IMPACT-BASED DECISION SUPPORT (DESI)

NOAA's Dynamic Ensemble-based Scenarios for Impact-based Decision Support (DESI) is a tool that aims to provide ensemble-based weather forecast information and visualizations. Applicants proposing to use DESI can visit the DESI website (<https://sites.gsl.noaa.gov/desi/>) for more information.

For applicants proposing to use DESI, a Testbed Collaboration Form should be signed by the DESI point-of-contact and submitted with the proposal. The DESI point-of-contact at NOAA's Global Systems Laboratory is Ken Fenton (Ken.Fenton@noaa.gov).

17. USE OF HUMAN SUBJECTS

Any proposal intending to use human subjects must clearly specify in their application and proposal timeline the estimated dates for obtaining Institutional Review Board (IRB) approval and, if appropriate, estimated dates for obtaining Office of Management and Budget (OMB) Paperwork Reduction Act (PRA) clearance, and when documentation will be sent to NOAA. Additionally, the proposal timeline should include the expected dates for all research activities involving human subjects. For more information on the IRB and OMB/PRA processes, please

review the sections below.

Institutional Review Board (IRB)

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

If an award recipient uses agency 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 on behalf of award recipients, either directly or through a NOAA social media account. 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 to require OMB clearance, the award recipient will work with their operational collaborator/NWS point of contact (POC) and the NWS OMB PRA liaison (nws.pra@noaa.gov). 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. For additional information on the OMB/PRA process, please see the following resources [guide to the Paperwork Reduction Act](#) and [Frequently Asked Questions](#).

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.