

Cooperative Institutes 101





What is a NOAA Cooperative Institute?

A National Oceanic and Atmospheric Administration (NOAA) Cooperative Institute (CI) is a partnership between NOAA and a research institution sustained by a cooperative agreement. The first CI was created in 1967 by the Environmental Science Services Administration, a predecessor to NOAA. The NOAA CIs are academic and non-profit research institutions that demonstrate the highest performance level and conduct research that supports NOAA's Mission Goals and Strategic Plan. CIs have been essential to the success of NOAA's research and development (R&D) enterprise.

The University of Oklahoma has had a continuous cooperative program with NOAA since 1978 (formerly CIMMS)





What is a NOAA Cooperative Institute?

- The definition of a cooperative institute is a NOAA-supported, non-Federal, academic, and/or non-profit institution that has an established, outstanding research program in one or more areas relevant to NOAA's mission.
- A CI is established at a research institution that has a strong education program with established degree programs in NOAA-related sciences.
- NOAA CIs support graduate education and professional scientific training of a workforce well-versed in NOAA disciplines and provide opportunities for students to interact with NOAA scientists.





What is a NOAA Cooperative Institute?

- A CI engages in research directly related to NOAA's long-term mission needs that require substantial involvement of one or more research units within the research institution(s) and one or more NOAA programs. A CI may include multiple research institutions. A CI provides significant coordination of resources among all non-government partners and promotes the involvement of students and postdoctoral scientists in NOAA-funded research.
- NOAA CIs provide a mechanism to allow external partners to address emerging needs and evolving NOAA research priorities.
- A CI provides mutual benefits, with value provided by all parties.





How is the Cooperative Institute Structured?

- Per the NOAA NOFO, CIs are units within an academic or non-profit, degree-granting research institution that meet the criteria listed in the NOFO. In addition, where it is consistent with university policy, the CI Director shall be a tenured faculty member in good standing; otherwise, the CI Director shall hold a permanent research faculty position within the university.
- The CI can consist of multiple member institutions. The consortium determines how the administrative entity operates. The CI's chief administrator is responsible for all technical and programmatic aspects of the CI.





How is the Cooperative Institute Structured?

- Initial CI awards have an award period of five years, with a potential renewal period of up to five additional years upon successfully completing a scientific and administrative review held in year four of the initial five-year award period. CIs remain eligible to apply for other CI competitive announcements during and after the current award.
- CIs must have strong educational components with established graduate degree programs in one or more NOAA-related fields, and they must promote student and postdoctoral involvement in research projects.





How is a Cooperative Institute created?

- CIs are established through a competitive process with an internal NOAA request presented jointly to the NSC by LOs. The Under Secretary must approve competitive announcements for new CIs.
- The CI Administrative Office (CIAO) makes a recommendation to the NSC on whether to solicit proposals for a new CI; the NSC decides whether to convene a prospectus development working group.
- NOAA line offices and programs are involved in the working group to determine the focus and estimate the annual funding amount for the CI.
- The process is outlined in the CI Handbook.





How is a Cooperative Institute created?

- The NOFO specifically outlines the scope of research for the proposed new cooperative institute. The NOFO lists the program priorities (themes) that the cooperative institute is allowed to complete research within. **The research priorities are set by NOAA, not the cooperative institutes.**
- NOAA outlines the capabilities and requirements for potential proposals and the evaluation criteria for reviewers.





CIWRO - CISHIWRO

- CIWRO (Cooperative Institute for Severe and High Impact Weather Research and Operations) was awarded under NA21OAR4320204, with an initial five-year period of performance from **October 1, 2021 – September 30, 2026**, and an award *ceiling* of **\$208,000,000**.
- CIWRO (CISHIWRO) consists of the University of Oklahoma (lead institution), Howard University, Pennsylvania State University, Texas Tech University, and the University of Albany.





CIWRO – Research Themes

- The five research themes of CIWRO per the NOAA NOFO are:
 - **Weather Radar and Observations** – To accelerate the transfer of knowledge between the meteorological and engineering communities (in academia, and government and private laboratories) to improve the design, usability, and supportability of the NEXRAD WSR-88D Doppler weather radar.
 - **Mesoscale and Stormscale Modeling** – To understand cloud and mesoscale dynamics, microphysics and the precipitation process and their relationships to large and small scale forcing, and to develop procedures for assimilation of meteorological data into simulation and prediction models of these processes. The work done here represents a fundamental building block for eventual applied techniques.





CIWRO – Research Themes

- **Forecast Applications Improvements** – To accelerate the transfer of research knowledge and skills between the academic and NOAA operational meteorological communities to both improve the design and utilization of weather observing systems and improve weather analysis, prediction and warning products.
- **Subseasonal to Seasonal Predictions for Extreme Weather Events (S2S)** – To extend and apply the understanding of mesoscale processes to the problem of climate maintenance and change and S2S predictability in the context of extreme events.
- **Social and Socioeconomic Impacts of High Impact Weather** – To estimate the societal and socioeconomic impacts and values of stormscale and mesoscale high-impact weather systems and regional-scale climate variations of extreme events to facilitate the mitigation (enhancement) of the adverse (beneficial) impacts.





What does a Cooperative Institute do?

- Propose and conduct research within their prescribed research themes, in collaboration with affiliated NOAA research laboratories, line offices, and programs (OAR, Fisheries, NESDIS, NWS, etc.)
- Play a role in the development of the future NOAA workforce through student engagement at universities and early career employment as a training ground for traditional and emerging NOAA staffing needs
- Facilitate research collaborations between top tier research institutions and the federal government to enhance NOAA's strategic mission and vision





What does a Cooperative Institute **not** do?

- Cooperative Institutes **cannot** engage in **operational** work on behalf of the federal government. Cooperative institutes are focused on **research and development** related to the NOAA mission and can assist and facilitate in the **transition from research to operations**.
- Cooperative Institutes **cannot** have ‘**deliverables**’ that would indicate a contractual relationship. The research and development done by cooperative institutes is **proposed via projects** (Task I, II, III) and annual reports provide updates on the **best efforts of the proposed research goals and outcomes**.
- Cooperative Institute employees are **not** federal employees and are **not** supervised by federal employees. They engage in **joint research projects**, but function as **separate** organizations.





How are cooperative institutes funded?

- Cooperative Institutes are funded through proposed projects, as outlined in the NOFO and CI Handbook. The CI ceiling **is not** a guarantee of funding from NOAA; all funding is contingent on proposed projects and available funding from NOAA each federal fiscal year
- Project proposals fall under three categories:
 - Task I – administrative, education, outreach
 - This fee is set by the NOAA CIAO office annually and is charged to every Task II and Task III project awarded by NOAA
 - Task II – research projects that involve ongoing direct collaboration with NOAA scientists; scientific direction is provided **jointly between NOAA and the CI employees**
 - Task III – research projects that are performed by CI personnel outside of Task I or II and typically require **minimal collaboration with NOAA scientists**





How are cooperative institutes funded?

- CIWRO works with our federal partners to understand the research priorities with the funding lab or line office
- CIWRO then creates proposals based on research priorities from the funding lab and the capabilities that exist at the CI and submits them through either Task II or Task III projects (based on if there is substantial federal engagement or not)
- The funding lab then reviews the proposal for funding availability and research alignment to process for approval or denial
- **Funding varies between different research themes at CIWRO based on federal funding availability, not from lack of CIWRO research interest**





How are cooperative institutes reviewed?

- Cooperative Institutes submit annual reports to NOAA with an overview of all research activities that took place during the previous year and outcomes
 - Regular research meetings and research updates are shared with federal technical advisors throughout the year
- Cooperative Institutes are reviewed by an independent scientific review panel and a NOAA administrative review panel during year 4 of their initial five-year award to determine if they should receive a second five-year award on a non-competitive basis
 - The science review panel is chaired by a member of the NOAA Science Advisory Board, with assistance from the Technical Program Manager (TPM) of the institute





How are cooperative institutes reviewed?

- There is a three-day on-site review of the Cooperative Institute (two science review days and one administrative review day) in which the institute presents their scientific research and organizational information, as requested and outlined in the CI Handbook
- Within 45 days of completion of the review, the Cooperative Institute receives a draft of the science report and the administrative report from their respective review panels for initial comments and responses
- The review panel can recommend an outstanding, satisfactory, or unsatisfactory rating to the SAB for final approval
 - Outstanding: NOAA **will renew** a CI for up to 5 additional years at a funding level commensurate with their level of performance
 - Satisfactory: NOAA **may opt** to renew a CI for a period of less than 5 years that may be at a **significantly reduced** funding level
 - Unsatisfactory: NOAA **will not** renew the award and/or **terminate** current CI award





How are cooperative institutes reviewed?

- If NOAA renews the award, a new NOFO is created for the next project period of up to 5 years, and the Cooperative Institutes submits an updated proposal for the award
- At the end of this second award, a competitive NOFO will be created within NOAA (if there is a demonstrated need for the research) and any eligible institution is open to apply for the Cooperative Institute
 - New research themes may be set and updated requirements may be outlined by NOAA at that time

