



General Programmatic Terms and Conditions (PTCs) for the Critical Zone Observatory National Office (CZO-NO) (NSF 12-595) Cooperative Agreement(s)

NSF 12-595: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf12595

1. Key Personnel:

Except for the Principal Investigator (PI) or Co-PIs identified in this award, requests to make any changes to personnel, organizations, and/or partnerships specifically named in the proposal, that have been approved as part of this award, shall be submitted in writing to the cognizant NSF Program Director for approval prior to any changes taking effect. Requests for prior approval of changes to the PI(s) must be submitted through FastLane for review by the cognizant NSF Program Director and approval by an NSF Grants Officer.

2. Program Description:

Critical Zone Observatories (CZOs) address pressing interdisciplinary scientific questions concerning geological, physical, chemical, and biological processes and their couplings that govern critical zone system dynamics. CZOs will individually and collectively, 1) measure and quantify the significant processes of the critical zone on appropriate time and space scales; 2) develop a unifying theoretical framework that integrates new understanding of coupled hydrological, geochemical, geomorphological, sedimentological and biological processes; and 3) develop, couple and validate system-level models to predict how the Critical Zone responds to external forces such as anthropogenic, climatic, and/or tectonic processes. Each observatory must contribute to strengthen the scientific basis for decision-making, particularly with regards to impacts on human health, human safety, ecosystem services and environmental function due to observed and predicted external forcings and changes in the Critical Zone.

The Critical Zone Observatory National Office (CZO-NO) will facilitate activities of the network of Critical Zone Observatories (CZO). The CZO-NO will facilitate coordination of research and educational programs of the CZO network and provide a centralized entity, which will represent the CZO network with the scientific community and the public. The CZO-NO will have two main functions: to coordinate the network of CZOs, and to disseminate information to a number of audiences. The CZO-NO is expected to work with the CZO PIs, the CZO community, and NSF, and to share CZO discoveries, data and research opportunities with the broad scientific community capable of using these data and information.

3. **Project Governance:**

The Awardee will contribute to an efficient and effective overarching governing structure throughout the award period to support all critical or significant project activities. Among the governing components of the CZO-NO will be the Director, the CZO-NO Implementation Team (see section 3.c. for membership), the CZO Network Implementation Group (see section 3.d. for membership), and the CZO Network Steering Committee.

- a. **The Awardee organization**, Cornell University, will accept the overall management and budgetary responsibility for the proposed CZO-NO, and will ensure that an efficient and effective project governing structure is in place throughout the award period to support all critical or significant project activities.
- b. **PI/Director:** The PI is the Director of the CZO-NO. The Director will oversee all CZO-NO activities, serve as the lead in terms of the overall administration and integration of the activities and goals of the CZO-NO and be the intellectual leader of the CZO-NO. The CZO-NO Director must have the capacity to manage a geographically distributed team to fulfill the vision and responsibilities of the CZO-NO. Key responsibilities include:
 - i. being the primary point of contact with NSF for all CZO-NO related matters;
 - ii. being the primary point of contact for network related matters;
 - iii. effectively managing the CZO-NO, including mechanisms for integrating all CZOs into a cohesive CZO Network, focusing CZO Network activities, allocating resources across all CZO-NO activities, and facilitating the involvement of other scientific and educational groups;
 - iv. meeting frequently with the CZO-NO Implementation Team to help them implement, assess, and achieve their goals, as well as overall CZO-NO goals, and establish new goals when appropriate;
 - v. establishing yearly project goals and assessment milestones as reference in the strategic plan;
 - vi. compiling and contributing data and information needed to assess scientific progress and administrative effectiveness of the CZO Network in achieving its strategic goals;
 - vii. submitting annual reports at least 90 days before the end of each funding period (e.g. end of the third quarter); these should include a description of activities and time table and a detailed budget for the coming year;
 - viii. participating in NSF-initiated meetings and reviews conducted via telephone or site visit, as needed, during the course of the project;
 - ix. assisting the EAR and CZO network to fulfill policies for data management and sharing;
 - x. representing, together with the Project Coordinator, the CZO-NO in the CZO network implementation group by participating in regular CZO-NIG teleconferences; and semi-annual face-to-face meetings held in conjunction with Spring and Fall annual CZO principal investigators meetings, and at the Fall AGU meeting;
 - xi. responding to guidance from NSF, the CZO Data project, and the CZO PIs in working to interface productively with other CZO efforts.

- c. **CZO-NO Implementation Team:** consists of the CZO-NO Director, the Program Coordinator, Network Communications Coordinator (Post-doctoral fellow), E&O Coordinator (PRI representative), and webmaster; this team will support the activities of the CZO Network. CZO-NO Implementation Team members have the experience and qualifications to administer their component of the CZO-NO, as well as the integration of components into the whole. The CZO-NO Implementation Team will aid the Director in making administrative decisions, and overseeing the progress of the CZO-NO as a whole.
- d. **CZO Network Implementation Group (CZO-NIG):** The CZO-NO Director and Program Coordinator will participate in the CZO-NIG, along with the PIs and Co-PIs of the CZOs. Among the goals of the CZO-NIG are to facilitate communication among the CZOs. Communication occurs through regular teleconferences (at least monthly); and face-to-face meetings held (1) in conjunction with Spring and Fall PI meetings, and (2) the AGU Fall meeting.
- e. **CZO Network Steering Committee (SC):** The CZO-NO PI, through the CZO-NIG, may work with NSF to form a Steering Committee, which will be composed of a minimum of six independent, highly qualified scientists whose expertise crosses the spectrum represented at the CZOs. Initial and replacement members of the SC should be approved by the cognizant NSF Program Director. The CZO-NO PI will be an ex-officio member of the SC representing the CZO-NO. The SC will periodically review CZO-NO, individual CZOs and the CZO Network.

4. Governing Requirements:

The Awardee will support the efficient and effective performance of all project responsibilities by the governing components through the award period. The Awardee works with the CZO-NO Director to promote the success of the overall program. The Awardee, with support from the CZO-NO Director and CZO-NO Implementation Team, is responsible for planning, operating, and managing the day-to-day activities of the CZO-NO including, but not limited to:

- a. managing, staffing, allocating resources, and overseeing general operations of the CZO-NO in accordance with plans submitted to and approved by the cognizant NSF Program Director;
- b. meeting the responsibilities of the CZO-NO through the CZO-NO Implementation Team led by the CZO-NO Director and as agreed to by the cognizant NSF Program Director;
- c. continuing operation of the CZO-NO and its programs in the event of the absence or loss of key personnel and developing thorough procedures for succession and back up of personnel.

5. **Reporting Requirements:**

The Awardee, through the CZO-NO Director, will provide ad hoc and regular reports as designated by the NSF cognizant Program Director with content, format, and submission timeline specified by the NSF cognizant Program Director. The CZO-NO Director is required to develop and submit for approval by the cognizant NSF Program Director:

- a. **A CZO-NO Management Plan:** A Management Plan to be submitted to the cognizant NSF Program Director within forty-five (45) days of the effective date of this CA. The Management Plan should include details on the management structure of the CZO-NO, roles and responsibilities of each member of the CZO-NO Implementation Team, timeline to get different components of the management structure in place, and details on how the different components of the CZO-NO Implementation Team will interact with each other and with the CZOs.
- b. **A CZO-NO Strategic and Implementation Plan (CZO-NO SIP):** A Strategic and Implementation Plan to be submitted to the cognizant NSF Program Director within sixty (60) days of the effective date of this CA. The CZO-NO SIP will contain sufficient milestones to allow the cognizant NSF Program Director to monitor progress being made and to determine if continued NSF support is warranted. Metrics will be identified for reaching these milestones and such milestone/metrics shall be reported as an integral part on any report to NSF. The CZO-NO SIP must address the following goals:
 - i. facilitating ongoing communication among CZOs through both virtual and face-to-face mechanisms;
 - ii. fostering development of a common identity for the CZOs that serves the collective concerns and needs of the CZO Network;
 - iii. identifying internal and external opportunities to leverage resources or develop synergistic activities;
 - iv. promoting dissemination of information and resources both among the CZOs and to additional communities beyond the reach of individual CZOs;
 - v. informing and coordinating implementation of data-gathering activities needed for CZO Network wide evaluation.
- c. **Meeting Documents:** The CZO-NO Director will submit copies of agendas, minutes, and other documents from each meeting of the CZO-NIG to the cognizant NSF Program Director as soon as they are available;
- d. **Annual Project Reports:** An annual project report is to be submitted each year at the end of the third quarter via www.research.gov. At the Spring CZO PI meeting, the CZO-NO Director will present the annual report to the CZO NIG, SC, and the cognizant NSF Program Director. The annual report should focus on activities and progress made by the CZO-NO during the year, as well as planned activities for the coming year, and it will include:
 - i. summary of status and results of activities supported by the CZO-NO, including web links, abstracts, publications, reports and products;

- ii. list of presentations, meetings and lectures attended/given by CZO-NO staff;
 - iii. summary of status and results of cross-CZO activities supported by the CZO-NO, including working-group activities, data efforts, meetings and workshops, outreach, abstracts and other publications;
 - iv. summary of status and results of activities coordinated by the CZO-NO and initiated by the CZOs;
 - v. tabulation of defined performance metrics for the period and comparison with proposed goals;
 - vi. lists of all publications and products from activities within the past year authored/co-authored by CZO-NO staff, including categories for published, accepted, and submitted;
 - vii. an assessment of progress towards meeting the goals for engaging the broader community that are established in the CZO SIP;
 - viii. summarized results of evaluation forms submitted by participants of supported activities;
 - ix. information on any additional funding that impacts and/or overlaps the activities of the CZO-NO, making clear the distinction between on-going research activities that are funded by other NSF awards, other agencies and/or organizations, and the work done under the CZO-NO award;
 - x. unanticipated collaborations, research projects, and other endeavors enabled or stimulated by the CZO-NO or CZO Network;
 - xi. other impacts of the CZO-NO activities, including local community engagement, and policy;
 - xii. data management, including website revisions and updates;
 - xiii. comparison of expenditures versus budget by program area/activity (with explanation of cost overruns), and indication of leveraging from other sources;
 - xiv. a plan for remedial action where project milestones in the CZO SIP have been significantly impacted;
 - xv. problems likely to delay accomplishment of annual, strategic goals;
 - xvi. description of programmatic goals and objectives with specific activities/timetable to be accomplished in the upcoming year; and
 - xvii. projected budget with detailed justification that breaks down costs according to activity and includes individual budget sub-awards using the NSF Budget Form 1030 along with appropriate budget justifications (budget detail is to be provided as an attached spreadsheet to the annual report);
 - xviii. Other items as appropriate.
- e. **Final Project Report:** Within 90 days following expiration of the award, a final project report must be submitted electronically via www.research.gov.
- f. **Project Publications and Reports:** NSF will receive copies of project-related publications, working group reports, and summary reports of evaluations and performance assessments. The CZO-NO PI is requested to notify the NSF Program Director or his/her designee of forthcoming (accepted but not yet published) publications resulting from research and educational activities supported by this award, as well as to consult with the Program Director prior to issuing news press releases concerning these activities.

6. Program Specific Requirements:

- a. CZO-NO will maintain a website to disseminate CZO programmatic information to the research community and the public.
- b. CZO-NO will carry out the proposed programmatic activities and tasks that have been approved for support and identified in the budget incorporated in this award. Additional tasks or programmatic activities will require prior approval of the NSF Program Director.

7. Ongoing Project Management and Oversight:

The Awardee will promote the full commitment and cooperation among the governing structure components and all project staff during all NSF project management and oversight activities. The Awardee will ensure availability of all key institutional partners during any on-site review or reverse site visit as well as timely access to all project documentation.

- a. **Reviews:** NSF, via the CZO Network Steering Committee (SC) and reports submitted to www.research.gov, will conduct annual review to determine the effectiveness of the CZO-NO, individually and as part of the CZO network, and its value to the scientific community. One of these reviews may consist of a visit to the CZO-NO institution by NSF and the SC. The review will include synthesis of results, progress in achieving goals, impact of education and outreach activities, and plans for future work. The SC will submit the review report to the PI and to the cognizant NSF Program Director, and the PI should submit a response to the SC's report in an interim report within 30 days, as needed.
- b. **Notice of Termination of Award:** During each year of the project, NSF will evaluate the CZO-NO to determine whether to continue to support its full operation, or to decrease funding in order to phase out NSF support. If a decision is made to phase out NSF support to the CZO-NO, NSF will negotiate at least a six-month phase-out plan with the Awardee. The phase-out plan will give strong consideration to non-cancelable commitments made by the CZO-NO prior to the decision to phase it out and to students and postdocs.
- c. Additional reviews may be conducted as required by NSF.

8. Recompetition:

In the event of a future recompetition of management of the CZO-NO, the awardee agrees to provide for timely transfer of all information necessary and pertinent to the continued and uninterrupted operation of CZO-NO to any new awardee.