



**NATIONAL SCIENCE FOUNDATION (NSF)
Cooperative Agreement
Financial & Administrative Terms and Conditions (CA-FATC)
Effective December 13, 2021**

Effective December 13, 2021, new NSF cooperative agreements and funding amendments to existing NSF cooperative agreements will begin referencing, and are subject to, the *Cooperative Agreement Financial & Administrative Terms and Conditions (CA-FATC)* dated 12/13/21.

TABLE OF CONTENTS

Article Subject

1. Awardee Responsibilities and Compliance with Federal Requirements
2. NSF Responsibilities
3. Prior Approval Requirements
4. Pre-award Costs
5. Consultant Services
6. Equipment
7. Participant Support Costs
8. Project Changes
 - a. Subawarding or Transferring Part of an NSF Award (Subaward)
 - b. Changes in Objectives or Scope
 - c. Long-Term Disengagement or Change of Principal Investigator (PI) or co-PI
9. Procurement Standards
10. Travel
11. Rearrangement and Reconversion Costs
12. Allowable Costs
13. Payments
14. Cooperative Agreement Increments
15. Project Reporting Requirements
16. Expenditure Reports
17. Information Collection
18. Responsible and Ethical Conduct of Research
19. Reporting Subawards and Executive Compensation
20. System for Award Management and Universal Identifier Requirements
21. Academic Technology Transfer and Commercialization of University Research
22. Federal Tax Obligations
23. Unpaid Federal Tax Liability
24. Criminal Convictions
25. Copyrighted Material
26. Public Access to Copyrighted Material
27. Program Income
28. Publications

29. Intangible Property
30. Cost Sharing or Matching
31. Audit and Records
32. Site Visits
33. Termination and Enforcement
34. Termination Review Procedure
35. Non-Discrimination Statutes
36. Reporting Classifiable Information
37. Animal Welfare
38. Research Involving Recombinant or Synthetic Nucleic Acid Molecules
39. Clean Air and Water
40. Human Research Subjects
41. Life Sciences Dual Use Research of Concern (DURC)
42. Investigator Financial Disclosure Policy
43. Whistleblower Protection
44. State Sales and Use Taxes
45. Domestic Preferences for Procurements
46. Made in America
47. Recipient Integrity and Performance Matters
48. Breach of Personally Identifiable Information
49. Notification Requirements Regarding Sexual Harassment, Other Forms of Harassment, or Sexual Assault
50. Post-award Disclosure of Current Support and In-Kind Contribution Information
51. Fee Payments
52. Section 889 of the National Defense Authorization Act (NDAA) for Fiscal Year (FY) 2019
53. Debarment and Suspension
54. Changes to the Cooperative Agreement
55. Limitation of Funds
56. Ensuring Adequate COVID-19 Safety Protocols
57. Resolution of Conflicting Conditions
58. Resolution of Disagreements and Disputes

Other Considerations

59. Liability
60. Sharing of Findings, Data and Other Research Products
61. Partnerships with Foreign Collaborators
62. Government Permits and Activities Abroad

1. Awardee Responsibilities and Compliance with Federal Requirements

a. The awardee has full responsibility for the conduct of the project or activity supported under this award and for adherence to the award conditions. Although the awardee is encouraged to seek the advice and opinion of NSF on special problems that may arise, such advice does not diminish the awardee's responsibility for making sound scientific and administrative judgments and should not imply that the responsibility for operating decisions has shifted to NSF. The awardee is responsible for notifying NSF about: (1) any allegation of research misconduct that it concludes has substance and requires an investigation in accordance with NSF research misconduct regulations published at 45 Code of Federal Regulations (CFR) Part 689; or (2) any significant problems relating to the administrative or financial aspects of the award.

b. The requirements of this award are contained in these *Cooperative Agreement Financial & Administrative Terms and Conditions* unless otherwise specified in the award notice. The applicable Federal administrative standards are incorporated by reference and are contained in 2 CFR §200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards*. These *Cooperative Agreement Financial & Administrative Terms and Conditions* (CA-FATC) serve as the Foundation's implementation of 2 CFR §200.

c. By acceptance of this award, the awardee agrees to comply with the applicable Federal requirements and to the prudent management of all expenditures and actions affecting the award, including the monitoring of subrecipients (if applicable). Specific guidance on subrecipient monitoring and management can be found in 2 CFR §200.331-332. A listing of National Policy Requirements the awardee must adhere to, where applicable, is located at: <https://nsf.gov/awards/managing/rtc.jsp>.

d. Documentation for each expenditure or action affecting this award must reflect appropriate organizational reviews or approvals that should be made in advance of the action. Organizational reviews are intended to help assure that expenditures are allowable, necessary and reasonable for the conduct of the project and that the proposed action:

1. is consistent with the award terms and conditions;
2. is consistent with NSF and awardee policies;
3. represents effective utilization of resources; and
4. does not constitute a project change which requires NSF prior written approval (see Article 8).

Nothing in this article shall be construed to require administrative reviews or documentation that duplicates those already required by existing organizational systems or by applicable Federal standards, e.g., 2 CFR §200.

e. The awardee is responsible for ensuring that the Principal Investigator(s) (PI)¹ and co-PIs receive a copy of the award conditions, including: the award notice, the budget, these general terms and conditions, any special or award specific terms and conditions and any subsequent changes in the award conditions. These award conditions are made available to the awardee by

¹ For purposes of the terms and conditions, the term Principal Investigator (PI) and co-PI also includes the term Project Director and co-Project Director.

NSF in electronic form (http://www.nsf.gov/awards/managing/co-op_conditions.jsp?org=NSF), and may be duplicated, copied or otherwise reproduced by the awardee as appropriate. This provision does not alter the awardee's full responsibility for conduct of the project and compliance with all award terms and conditions. Cooperative agreements are available electronically via the NSF FastLane system at <https://www.fastlane.nsf.gov/>. Sponsored Project Offices are able to view, print and/or download NSF award notices for their organizations and PIs and co-PIs can access their individual award notices through use of the FastLane system.

2. NSF Responsibilities

- a. The awardee has overall responsibility for NSF-funded cooperative agreements, including providing award oversight for technical/programmatic, as well as financial and administrative performance. The cognizant NSF Program Officer may participate in discussions of programmatic, technical, managerial and/or scheduling concerns; provide guidance and/or advice, especially with regard to the integration, collaboration and coordination with other education projects funded by NSF; will review and, where required by the Agreement, approve technical or programmatic reports and information submitted by the awardee; and may schedule desk and on-site reviews as necessary to resolve any NSF award questions or resolve follow-up audit issues.
- b. The awardee shall submit all requests for prior approval in accordance with the procedures identified in Article 3.b. below.
- c. The cognizant NSF Program Officer will only request additional work within the scope of the award; will only issue instructions that do not constitute a project change as defined in Article 8; and will only suggest changes that will not increase or decrease the estimated cost or time required for performance under the Cooperative Agreement (see Article 55 Limitation of Funds).

3. Prior Approval Requirements

Unless otherwise stated in the award notice, Institutions of Higher Education (IHEs) and non-profit organizations must obtain NSF prior written approval as specified in the [Research Terms and Conditions Appendix A Prior Approval Matrix](#). State and local governments and for-profit organizations must obtain NSF prior written approval as specified in the [NSF Prior Approval Matrix for State and Local Governments and For-Profit Organizations](#).

- a. All requests for no cost extensions must be submitted in accordance with the procedures set forth in [PAPPG Chapter VI.D.3.c.\(ii\)](#)². Grantee-approved extensions are not applicable to NSF cooperative agreements.
- b. Requests for NSF prior written approval in the matrices specified above must be submitted via the use of NSF's electronic systems. Those prior approval requirements that do not already have a specific request type in NSF's electronic systems must be submitted via use of the "Other" category in Research.gov.

4. Pre-award Costs

- a. The awardee may approve pre-award costs incurred within the 90-calendar day period before the start date of the award. Requests for approval of pre-award costs for periods greater

² The awardee is not authorized to extend an award that contains a zero balance.

than 90 calendar days must be submitted electronically via NSF's electronic systems. Pre-award expenditures prior to the funding of an increment within a continuing award are not subject to this limitation or approval requirement but are subject to paragraph c. below.

b. Pre-award costs must be necessary for the effective and economical conduct of the project and the costs must be otherwise allowable in accordance with Article 12.

c. Pre-award expenditures are made at the awardee's risk. Awardee authority to approve pre-award costs does not impose an obligation on NSF: (1) in the absence of appropriations; (2) if an award is not subsequently made; or (3) if an award is made for a lesser amount than the awardee anticipated.

d. In accordance with 2 CFR §200.458, if pre-award costs are charged to the award, these costs must be charged to the initial budget period, unless otherwise specified in the award notice.

5. Consultant Services (also referred to as Professional Service Costs)

Costs for professional and consultant services, including those who are members of a particular profession or possess a special skill and who are not officers or employees of the performing organization, are allowable when reasonable in relation to the services rendered and when not contingent upon recovery of costs from NSF. If not included in the award budget, anticipated services must be justified and information furnished on each individual's expertise, primary organizational affiliation, normal daily compensation rate and number of days of expected service. Consultants' travel costs, including subsistence, may be included. If requested, the awardee must be able to justify that the proposed rate of pay is reasonable. Additional information on the allowability of consultant costs is available in 2 CFR §200.459.

6. Equipment

Equipment falls under the umbrella of property, which consists of real property and personal property (tangible and intangible). The standards for managing, tracking, and disposing of property funded by NSF or any property acquired for a project under an NSF award are outlined in 2 CFR §§200.310-316.

a. Title to Equipment – Exempt Property

Unless otherwise specified in the cooperative agreement, title to equipment purchased or fabricated with NSF award funds will vest with the awardee upon acquisition. Such equipment is considered exempt property and shall be acquired and used in accordance with paragraph b. below. The awardee holds title to the property in trust, consistent with 2 CFR §200.316, unless and until the expiration of 120 days from the award end date providing the government has not exercised its conditional interest as further described in paragraph b.7.

b. Conditions for Acquisition and Use of Equipment

1. Awardee Assurance. The awardee will assure that for each purchase of equipment, it is:

(a) necessary for the research or activity supported by the award;

(b) not otherwise reasonably available and accessible;

- (c) of the type normally charged as a direct cost to sponsored agreements; and
 - (d) acquired in accordance with organizational practice.
2. General Purpose Equipment. Expenditures for general-purpose equipment are typically not eligible for support (see [PAPPG Chapter IX.D.2.b](#)).
 3. Equipment Usage. The equipment must remain in use for the specific project for which it was obtained in accordance with 2 CFR §200.313(c)(1), unless the provision in 2 CFR §200.313(c)(4) applies.
 4. Equipment Sharing. The equipment must be shared on other projects or programs in accordance with 2 CFR §200.313(c)(1).
 5. Property Management Requirements. The awardee shall maintain a property management system that, at a minimum, meets the requirements of 2 CFR §200.313(d).
 6. Competition. The awardee must not use equipment acquired with the Federal award to provide services for a fee that is less than private companies charge for equivalent services, unless specifically authorized by Federal statute for as long as the Federal government retains an interest in the equipment in accordance with 2 CFR §200.313(c)(3).
 7. Right to Transfer Title. In accordance with 2 CFR §200.313(e), NSF may identify items of equipment having an acquisition cost of \$5,000 or more where NSF reserves the right to transfer the title to the Federal Government or a third party named by the Federal Government at any time during the award period. In cases where NSF elects to transfer the title, disposition instructions will be issued no later than 120 days after the end date of the NSF-supported project for which it was acquired.
 8. Disposition. When requested by NSF, the awardee must follow all disposition requirements in accordance with 2 CFR §200.313(e).

c. Requirements for Federally-owned Property

In the event that title to equipment is vested in the Federal Government, such Federally-owned property (FOP) must be identified, tagged or segregated in such a manner as to clearly indicate its ownership by the Federal government. Unless otherwise provided in the grant, such FOP must be used only for the performance of the project. An annual inventory report must be submitted in accordance with paragraph 1. below and a physical inventory of FOP must be conducted every two years pursuant to 2 CFR §200.313(d)(2).

1. Annual Inventory Report for Federally-owned Property

- (a) Submission Requirement: The awardee must submit an annual inventory report by NSF award number for all FOP having an original acquisition cost of \$5,000 or more in accordance with 2 CFR §200.312(a). The annual inventory report should be submitted to the NSF Property Administrator, Division of Administrative Services (DAS), no later than October 15 each year using the NSF Central Property Inventory Repository (CPIR) system.
- (b) Content of Annual Inventory Report: The report should include the below information for all FOP purchased or constructed under the award, including land and buildings, inclusive of all

subawards. In addition, the report should include any FOP acquired through the General Services Administration (GSA) Federal Excess Personal Property Utilization Program and the Federal Surplus Personal Property Donation Program. In the event that the awardee is in possession of FOP under multiple awards, the reporting must be specific to each NSF award number. The awardee may use the Office of Management and Budget (OMB)-approved Post-Award Reporting forms for Tangible Personal Property (Standard Form (SF)-428, SF-428A, SF-428B, SF-428C, and SF-428S) accessed on the [Grant.gov](https://www.grant.gov) website.

Required inventory information:

- description of the property;
- serial number or other identification number;
- cost of the property;
- acquisition date;
- use and condition of the property;
- the source of funding for the property (including the Federal Award Identification Number (FAIN));
- who holds title;
- percentage of Federal participation in the project costs for the Federal award under which the property was acquired;
- the location;
- any ultimate disposition data including the date of disposal and sale price of the property; and
- a description of Construction-in-Progress (CIP) and Work-in-Progress (WIP) items and construction costs incurred to date.³

2. Final Inventory Report for Federally-owned Property

Upon expiration of the award, the awardee will report all the FOP purchased or constructed under the award or acquired through the GSA Federal Excess Personal Property Utilization Program and the Federal Surplus Personal Property Donation Program to the NSF Property Administrator for further agency utilization and disposition using the CPIR system. The final inventory report must include the same contents as the annual inventory report described in paragraph c.1 above and include the awardee's disposition request (see [PAPPG Chapter IX.D.3](#)).

7. Participant Support Costs

a. *Participant support costs* as defined in 2 CFR §200.1 are direct costs for items such as stipends or subsistence allowances, travel allowances and registration fees paid to or on behalf of participants (but not employees) in connection with NSF-sponsored conferences. NSF prior written approval is required for any additional categories of participant support costs, such as incentives, gifts, souvenirs, t-shirts and/or memorabilia. The request must be submitted via use of NSF's electronic systems. NSF approval of such changes will be by an amendment to the award. The awardee must account for participant support costs separately. Indirect costs (Facilities and Administrative Costs (F&A)) are not allowed on participant support costs (see [PAPPG Chapter II.C.2.g\(v\)](#)).

³ CIP is defined as real property that is in the process of being manufactured or fabricated but is not yet complete. WIP is defined as equipment that is in the process of being manufactured or fabricated but is not yet complete. CIP and WIP consist of the costs of direct materials, direct labor, direct purchased services and indirect costs, including general and administrative and overhead costs. Costs coded CIP or WIP should not be depreciated.

b. Funds provided for participant support must not be used by the awardee for other categories of expense without specific NSF prior written approval. Such requests must be submitted electronically via use of NSF's electronic systems.

8. Project Changes

Consistent with 2 CFR §200.308(c), the awardee is required to obtain NSF prior written approval whenever there are changes in the project as stipulated below.

a. Subawarding or Transferring Part of an NSF Award (Subaward)

1. If the intention to subaward or transfer part of the project to another organization has been disclosed in the proposal, NSF authorization is not needed unless approval has been specifically withheld in the award notice.

2. If it becomes necessary to subaward or transfer part of an NSF award after an award has been made, notification of this intent should be submitted via use of NSF's electronic systems and must be electronically signed by an Authorized Organizational Representative (AOR). The request shall include a clear description of the work to be performed and a proposed budget (see [PAPPG Chapter VII.B.4](#) for additional information). NSF approval of such changes will be by an amendment to the award.

3. The awardee remains responsible for monitoring of the activities of the subrecipient as necessary to ensure that the subaward is used for authorized purposes, in compliance with Federal statutes, regulations and the terms and conditions of the subaward as outlined in 2 CFR §§200.331-332. This includes ensuring necessary documentation for all subawards is maintained for the same retention period as the awardee's and making it available to NSF upon request. The awardee shall include subaward activities in the annual and final project reports that are submitted to NSF.

4. Consistent with the requirements specified in 2 CFR §200.332, the awardee must adhere to the requirements for pass-through entities in establishing and managing subawards issued under the award. In addition, the awardee shall ensure that the following articles, if applicable, flow down to all subawardees, or are appropriately addressed in the subaward instrument: Articles 5, 6, 7, 9, 10, 11, 12, 17, 18, 19, 20, 25, 27, 28, 29, 30, 31, 32, 35, 36, 37, 38, 39, 40, 41, 43, 44, 45, 46, 47, 48, 49, 51, 52, 56, 59, 60, 61, and 62. If the awardee issues contracts exceeding \$2,000 for construction, alteration or repair that are within the scope of the Acts found in 2 CFR §200, Appendix II, "*Contract Provisions for Non-Federal Entity Contracts Under Federal Awards*," the appropriate clauses applicable to construction activities also will be included in applicable contracts.

b. Changes in Objectives or Scope

A proposed change in the phenomenon or phenomena under study or the objectives of the project stated in the proposal or agreed modifications thereto should be communicated via use of NSF's electronic systems. NSF approval of such changes will be by an amendment to the award.

c. Long-Term Disengagement or Change of PI or co-PI

If a named PI or co-PI plans to or becomes aware that he or she will: (1) devote substantially less effort to the work than anticipated in the approved proposal (defined in 2 CFR §200.308(c)(3) as a reduction of 25% or more in time devoted to the project); (2) sever his or her connection with the awardee; or (3) be disengaged from the project for a continuous period of more than 3 months, or otherwise relinquish active direction of the project, he or she shall advise the appropriate official at the awardee, who shall initiate action appropriate to the situation in accordance with the guidelines described in [PAPPG Chapter VII.B.2](#).

9. Procurement Standards

The awardee (including commercial organizations) is responsible for compliance with the procurement standards identified in 2 CFR §§200.317-327.

10. Travel

a. Allowability of Travel Expenses

1. Expenses for transportation, lodging, subsistence and related items incurred by project personnel and by outside consultants employed on the project (see [PAPPG Chapter II.C.2.g\(iv\)](#)) who are in travel status on business related to an NSF-supported project are allowable as prescribed in the governing cost principles. Except as noted in paragraph b. below, the requirements for NSF prior written approval specified in 2 CFR §200.475 are waived.

2. Except as provided in the governing cost principles, the difference between economy airfare and a higher-class airfare is unallowable. A train, bus or other surface carrier may be used in lieu of, or as a supplement to, air travel at the lowest first-class rate by the transportation facility used. If such travel, however, could have been performed by air, the allowance will not normally exceed that for jet economy airfare.

b. Travel Support for Dependents of Key Project Personnel

Travel support for dependents of key project personnel is allowable only under the conditions outlined in 2 CFR §475(c)(2). See also 2 CFR §200.432.

NSF prior written approval is required for travel costs for dependents and must be requested via use of NSF's electronic systems. NSF approval of such changes will be by an amendment to the award.

Temporary dependent care costs (as dependent is defined in 26 United States Code (USC) §152) above and beyond regular dependent care that directly results from travel to conferences is allowable as outlined in 2 CFR §200.475(c)(1).

c. Use of U.S.-Flag Air Carriers

1. In accordance with the Fly America Act (49 USC §40118), any air transportation to, from, between or within a country other than the U.S. of persons or property, the expense of which will be assisted by NSF funding, must be performed by or under a code-sharing arrangement with a U.S.-flag air carrier if service provided by such a carrier is available (see Comptroller General

Decision B-240956, dated September 25, 1991). Tickets (or documentation for electronic tickets) must identify the U.S. flag air carrier's designator code and flight number.

2. For the purposes of this requirement, U.S.-flag air carrier service is considered available even though:

- (a) comparable or a different kind of service can be provided at less cost by a foreign-flag air carrier;
- (b) foreign-flag air carrier service is preferred by, or is more convenient for, NSF or traveler; or
- (c) service by a foreign-flag air carrier can be paid for in excess foreign currency.

3. The following rules apply unless their application would result in the first or last leg of travel from or to the U.S. being performed by a foreign-flag air carrier:

- (a) a U.S.-flag air carrier shall be used to destination or, in the absence of direct or through service, to the farthest interchange point on a usually traveled route.
- (b) if a U.S.-flag air carrier does not serve an origin or interchange point, a foreign-flag air carrier shall be used only to the nearest interchange point on a usually traveled route to connect with a U.S. flag air carrier.

d. Use of Foreign-Flag Air Carriers

There are certain circumstances under which use of a foreign-flag air carrier is permissible. These circumstances are outlined below:

1. Airline "Open Skies" Agreements

A foreign flag air carrier may be used if the transportation is provided under an air transportation agreement between the United States and a foreign government, which the Department of Transportation has determined meets the requirements of the Fly America Act. For information on "open skies" agreements in which the United States has entered, please refer to the General Services Administration's (GSA) website at <http://www.gsa.gov/portal/content/103191>.

Note on U.S./European Union Open Skies Agreement

In 2007, the U.S. entered into an "Open Skies" Agreement with the European Union ("EU"). This agreement was modified in June 2010. The current Agreement gives European Community airlines (airlines of Member States) the right to transport passengers and cargo on flights funded by the U.S. government, when the transportation is between: (1) any two points outside the United States; or (2) a point in the United States and any point outside the United States that the EU airline is authorized to serve under the "Open Skies" Agreement.

In 2011, two significant changes were made to the U.S./EU Open Skies Agreement. First, EU airlines are now granted the right to transport civilian agency-funded passengers who are NOT eligible to travel on GSA Airline City Pair Contract fares (e.g., the awardee) between a point in the United States and a point outside the United States even if there is a GSA Airline City Pair Contract fare in effect between the origin and destination points. An individual, however, who is

traveling on a route for which there is a City Pair Contract fare in effect, and who is eligible for such a fare (e.g., Federal employee), is required to fly on a U.S. carrier, absent another applicable exception.

Second, under the amended Agreement, EU airlines are now authorized to transport passengers between points in the United States and points outside the EU if the EU airline is authorized to serve the route under the Agreement. This includes flights that originate, arrive or stop in the EU. Prior to this change, EU airlines were limited to flying passengers between points in the U.S. and points in the EU.

2. Involuntary Rerouting

Travel on a foreign-flag carrier is permitted if a U.S.-flag air carrier involuntarily reroutes the traveler via a foreign-flag air carrier, notwithstanding the availability of alternative U.S.-flag air carrier service.

3. Travel To and From the U.S. on non-European Community Airlines

Use of a non-European Community foreign-flag air carrier is permissible if the airport abroad is:

- (a) the traveler's origin or destination airport, and use of U.S.-flag air carrier service would extend the time in a travel status by at least 24 hours more than travel by a foreign-flag air carrier; or
- (b) an interchange point, and use of U.S.-flag air carrier service would increase the number of aircraft changes the traveler must make outside of the U.S. by two or more, would require the traveler to wait four hours or more to make connections at that point, or would extend the time in a travel status by at least six hours more than travel by a foreign-flag air carrier.

4. Travel Between Points Outside the U.S. on non-European Community Airlines

Use of a non-European Community foreign-flag air carrier is permissible if:

- (a) travel by a foreign-flag air carrier would eliminate two or more aircraft changes en route;
- (b) travel by a U.S.-flag air carrier would require a connecting time of four hours or more at an overseas interchange point; or
- (c) the travel is not part of the trip to or from the U.S. and use of a U.S.-flag air carrier would extend the time in a travel status by at least six hours more than travel by a foreign-flag air carrier.

5. Short Distance Travel

For all short distance travel, regardless of origin and destination, use of a foreign-flag air carrier is permissible if the elapsed travel time on a scheduled flight from origin to destination airport by a foreign-flag air carrier is three hours or less and service by a U.S.-flag air carrier would double the travel time.

11. Rearrangement and Reconversion Costs

- a. Costs incurred for ordinary and normal rearrangement and alteration of facilities are allowable as indirect costs.
- b. Special arrangements and alterations costs incurred specifically for the NSF award aggregating \$25,000 or less to adapt space or utilities within a completed structure to accomplish the objectives of the award, are allowable and approved, provided the:
 1. building has a usable life consistent with project purposes and is architecturally suitable for conversion;
 2. rearrangement and reconversion costs are essential to the project supported by the award; and
 3. space involved will be occupied by the project. In situations where the space is rented, in order for the costs of the rearrangement and reconversion to be allowed, the awardee must secure a lease for the length of the project.
- c. Rearrangement and reconversion costs exceeding \$25,000 require NSF prior written approval via use of NSF's electronic systems. Note that Appendix II of 2 CFR §200 contains provisions that must be included in contracts made by the awardee.

12. Allowable Costs

- a. The allowability of costs⁴ and cost allocation methods for work performed under this award, up to the amount specified in the award, shall be determined in accordance with the governing cost principles as specified below and must conform with NSF policies, award special provisions and awardee internal policies in effect on the start date of the award.
- b. The cost principles applicable to IHEs, State, local and Tribal governments and non-profit organizations (other than hospitals) can be found in 2 CFR §200, Subpart E.
- c. Separate guidance for hospitals can be found in 45 CFR Part 74, Appendix E, "*Principles for Determining Costs Applicable to Research and Development Under Grants and Contracts with Hospitals.*"
- d. Separate guidance for for-profit organizations can be found in the Federal Acquisition Regulation, 48 CFR Part 31.
- e. Indirect Cost Reimbursement
 1. Reimbursement of indirect costs should be calculated by applying the approved, negotiated indirect cost rate(s) to the appropriate base(s).
 2. Institutions of Higher Education. 2 CFR §200, Appendix III, paragraph C.7. requires use of the negotiated F&A rate that is in effect at the time of the initial award throughout the life of the award.

⁴ Consistent with 2 CFR §200.453(c), for computing devices, charging as a direct cost is allowable for devices that are essential and allocable, but not solely dedicated, to the performance of the award.

3. For other recipient types, in the event that new U.S. Federally negotiated rate agreements are approved during the award performance period, revised negotiated rates may be applied.

4. Excess indirect costs charged to NSF awards due to use of an incorrect rate will be disallowed.

f. Publication and Printing Costs

In accordance with 2 CFR §200.461, costs for publication or dissemination of research results may be charged to this award during closeout if the costs are not incurred during the period of performance. If charged to the award during closeout, these costs must be charged to the final budget period, unless otherwise specified by NSF.

g. Certain prior approval requirements contained in the governing cost principles have been modified by Article 3.

13. Payments

a. Except as noted in [PAPPG Chapter VIII.C](#), the awardee is required to request payments electronically through the Award Cash Management Service (ACM\$). Under ACM\$, the awardee must provide award level detail at the time of the payment request. The awardee should request payments in amounts necessary to meet their current needs, pursuant to the guidelines contained in 31 CFR Part 205. Unless otherwise specified in the award, the awardee agrees to comply with all applicable Treasury regulations and National Science Foundation implementing and reporting procedures, which are outlined in [PAPPG Chapter VIII](#).

b. In accordance with 2 CFR §200.305, where appropriate, the awardee is required to maintain advances of Federal funds in interest-bearing accounts. The awardee may retain interest earned on amounts up to \$500 per year for administrative expenses. Any additional interest earned on Federal advance payments deposited in interest-bearing accounts must be remitted annually to the Department of Health and Human Services Payment Management System (PMS) through an electronic medium using either the Automated Clearing House (ACH) network or a Fedwire Funds Service payment. Instructions on submission of remittances is contained in 2 CFR §200.305(b)(9).

14. Cooperative Agreement Increments

Unless otherwise specified, each successive increment of a cooperative agreement will be funded at the level specified in the original award notice without a formal request from the awardee provided an annual project report has been received from the PI and accepted by the cognizant NSF Program Officer.

Continuing funding is contingent on: (1) availability of funds; (2) satisfactory scientific/technical progress; and (3) fulfillment of any special conditions of the award.

15. Project Reporting Requirements

a. Annual Project Reports

1. Submission Requirement. Annual project reports are required for cooperative agreements.⁵

2. Content of Annual Project Reports. Unless otherwise specified in the award, the Research Performance Progress Report (RPPR), as implemented by NSF in Research.gov, must be used for preparation of annual project reports to address progress in all activities of the project, including any activities intended to address the Broader Impacts criterion that are not intrinsic to the research. The awardee shall include subaward activities in annual project reports that are submitted to NSF.

3. Timing of Annual Project Reports. Unless otherwise specified in the award, annual project reports should be submitted electronically no later than 90 days prior to the end of the current budget period to allow adequate time for the cognizant NSF Program Officer to review and approve the report. As reflected in the Project Report System, the report is considered due during the 90-day period. The report becomes overdue **the day after the 90-day period ends.** It should be noted that the final annual report serves as the project's final report and must be submitted in accordance with paragraph b. below.

Failure to submit timely reports will delay NSF review and processing of pending proposals and processing of additional funding and administrative actions, including, but not limited to, no cost extensions for all identified PIs and co-PIs on a given award. Failure to submit timely reports may delay processing of funding increments.

b. Final Project Report

1. Submission Requirement. Unless otherwise specified in the award, the final project report should be submitted electronically no later than 120 days following the end date of the award. As reflected in the Project Report System, the report is considered due during the 120-day period. The report becomes overdue **the day after the 120-day period ends.**

2. Content of Final Project Report. The RPPR, as implemented by NSF in Research.gov, also should be used for preparation of the Final Project Report to address progress in all activities of the project, including any activities intended to address the Broader Impacts criterion that are not intrinsic to the research. The awardee shall include subaward activities in final project reports that are submitted to NSF. By submitting the final project report, the awardee is signifying that the scope of work for the project has been completed and the awardee does not anticipate that any further research activities (including a no-cost extension, supplemental funding, or transfer of the grant) need to be completed on the project. Submission of the final project report, however, does not preclude the awardee from requesting any further payments for costs incurred during the period of performance.

3. Additional Requirements. The awardee also shall provide to the cognizant NSF Program Officer, no later than 120 days following the end date of the award, any unique reports or other items specified in the award (e.g., special cost sharing reports), including any reporting

⁵ Submission of an "interim" report via [Research.gov](https://www.research.gov) does not constitute compliance with the annual reporting requirement.

requirements set forth in the applicable program solicitation referenced in the award as being directly related to either the award or the administration of the award.

c. **Project Outcomes Report for the General Public**

No later than 120 days following the end date of the award, a project outcomes report for the general public must be submitted electronically via Research.gov. This report serves as a brief summary, prepared specifically for the public, of the nature and outcomes of the project. This report will be posted electronically by NSF exactly as it is submitted. By submitting the project outcomes report, the awardee is signifying that the scope of work for the project has been completed and the awardee does not anticipate that any further research activities (including a no-cost extension, supplemental funding, or transfer of the grant) need to be completed on the project. Submission of the project outcomes report, however, does not preclude the awardee from requesting any further payments for costs incurred during the period of performance.

For information about the content of the report, see [PAPPG Chapter VII.D.3](#).

d. In accordance with 2 CFR §200.344(i), if the awardee does not submit all required reports within one year of the period of performance end date, NSF must report the awardee's material failure to comply with the terms and conditions of the award with the OMB-designated integrity and performance system (currently Federal Awardee Performance and Integrity Information System (FAPIS)). NSF may also pursue other enforcement actions per 2 CFR §200.339.

16. Expenditure Reports

The awardee must submit final payment requests through ACM\$ no later than 120 days after the end date of the award. This requirement applies to all current awards and funding amendments to existing NSF awards, as well as to all new NSF awards.

NSF uses the payment request entries in ACM\$ to collect the final financial data for awards paid through that system. No additional interim or final financial reporting is required.

For instructions regarding final disbursement reporting, see [PAPPG Chapter VIII.E](#).

17. Information Collection

Information collection activities performed under this award are the responsibility of the awardee, and NSF support of the project does not constitute NSF approval of the survey design, questionnaire content or information collection procedures. The awardee shall not represent to respondents that such information is being collected for or in association with the National Science Foundation or any other Government agency without the specific written approval of such information collection plan or device by the Foundation. This requirement, however, is not intended to preclude mention of NSF support of the project in response to an inquiry or acknowledgment of such support in any publication of this information.

18. Responsible and Ethical Conduct of Research

In accordance with Section 7009 of the America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education, and Science (COMPETES) Act (42 USC §1862o–1) NSF requires that the awardee must have a plan in place to provide appropriate training and oversight in the responsible and ethical conduct of research (RECR) to undergraduates, graduate students

and postdoctoral researchers who will be supported by NSF to conduct research. Training plans are subject to review, upon request.

The awardee must designate one or more persons to oversee compliance with the RECR training requirement. The awardee is responsible for verifying that undergraduate students, graduate students and postdoctoral researchers supported by NSF to conduct research have received training in the responsible and ethical conduct of research, in accordance with the plan the awardee has put in place for their organization.

The awardee shall ensure that these RECR requirements flow down to all subrecipients or are otherwise appropriately addressed in the subaward.

19. Reporting Subawards and Executive Compensation

This award term was extracted verbatim from Appendix A to Part 170. For these purposes, the term “you” means the NSF awardee.

a. Reporting of first-tier subawards.

1. Applicability. Unless exempt as provided in paragraph d. of this award term, you must report each action that equals or exceeds \$30,000 in Federal funds for a subaward to a non-Federal entity or Federal agency (see definitions in paragraph e. of this award term).

2. Where and when to report.

i. The non-Federal entity or Federal agency must report each obligating action described in paragraph a.1. of this award term to <http://www.fsrs.gov>.

ii. For subaward information, report no later than the end of the month following the month in which the obligation was made. (For example, if the obligation was made on November 7, 2010, the obligation must be reported by no later than December 31, 2010.)

3. What to report. You must report the information about each obligating action that the submission instructions posted at <http://www.fsrs.gov> specify.

b. Reporting total compensation of recipient executives for non-Federal entities.

1. Applicability and what to report. You must report total compensation for each of your five most highly compensated executives for the preceding completed fiscal year, if—

i. the total Federal funding authorized to date under this Federal award equals or exceeds \$30,000 or more as defined in 2 CFR §170.320;

ii. in the preceding fiscal year, you received—

(A) 80 percent or more of your annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR §170.320 (and subawards), and

(B) \$25,000,000 or more in annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR §170.320 (and subawards); and,

iii. the public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at <http://www.sec.gov/answers/execomp.htm>.)

2. Where and when to report. You must report executive total compensation described in paragraph b.1. of this award term:

i. As part of your registration profile at <https://www.sam.gov>.

ii. By the end of the month following the month in which this award is made, and annually thereafter.

c. Reporting of Total Compensation of Subrecipient Executives.

1. Applicability and what to report. Unless you are exempt as provided in paragraph d. of this award term, for each first-tier non-Federal entity subrecipient under this grant, the recipient shall report the names and total compensation of each of the subrecipient's five most highly compensated executives for the subrecipient's preceding completed fiscal year, if—

i. in the subrecipient's preceding fiscal year, the subrecipient received—

(A) 80 percent or more of its annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR §170.320 (and subawards) and,

(B) \$25,000,000 or more in annual gross revenues from Federal procurement contracts (and subcontracts), and Federal financial assistance subject to the Transparency Act (and subawards); and

ii. The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at <http://www.sec.gov/answers/execomp.htm>.)

2. Where and when to report. You must report subrecipient executive total compensation described in paragraph c.1. of this award term:

i. To the recipient.

ii. By the end of the month following the month during which you make the subaward. For example, if a subaward is obligated on any date during the month of October of a given year (i.e., between October 1 and 31), you must report any required compensation information of the subrecipient by November 30 of that year.

d. Exemptions

If, in the previous tax year, you had gross income, from all sources, under \$300,000, you are exempt from the requirements to report:

i. Subawards,

and

ii. The total compensation of the five most highly compensated executives of any subrecipient.

e. Definitions. For purposes of this award term:

1. *Federal Agency* means a Federal agency as defined at 5 U.S.C. 551(1) and further clarified by 5 U.S.C. 552(f).

2. *Non-Federal entity* means all of the following, as defined in 2 CFR part 25:

i. A Governmental organization, which is a State, local government, or Indian tribe;

ii. A foreign public entity;

iii. A domestic or foreign nonprofit organization; and,

iv. A domestic or foreign for-profit organization.

3. *Executive* means officers, managing partners, or any other employees in management positions.

4. *Subaward*:

i. This term means a legal instrument to provide support for the performance of any portion of the substantive project or program for which you received this award and that you as the recipient award to an eligible subrecipient.

ii. The term does not include your procurement of property and services needed to carry out the project or program (for further explanation, see 2 CFR §200.331).

iii. A subaward may be provided through any legal agreement, including an agreement that you or a subrecipient considers a contract.

5. *Subrecipient* means a non-Federal entity or Federal agency that:

i. Receives a subaward from you (the recipient) under this award; and

ii. Is accountable to you for the use of the Federal funds provided by the subaward.

6. *Total compensation* means the cash and noncash dollar value earned by the executive during the recipient's or subrecipient's preceding fiscal year and includes the following (for more information see 17 CFR 229.402(c)(2)).

20. System for Award Management and Universal Identifier Requirements

This award term was extracted verbatim from Appendix A to Part 25. For these purposes, the term “you” means the NSF awardee.

A. Requirement for System for Award Management

Unless you are exempted from this requirement under 2 CFR §25.110, you as the recipient must maintain current information in the SAM. This includes information on your immediate and highest level owner and subsidiaries, as well as on all of your predecessors that have been awarded a Federal contract or Federal financial assistance within the last three years, if applicable, until you submit the final financial report required under this Federal award or receive the final payment, whichever is later. This requires that you review and update the information at least annually after the initial registration, and more frequently if required by changes in your information or another Federal award term.

B. Requirement for Unique Entity Identifier

If you are authorized to make subawards under this Federal award, you:

1. Must notify potential subrecipients that no entity (see definition in paragraph C of this award term) may receive a subaward from you until the entity has provided its Unique Entity Identifier to you.
2. May not make a subaward to an entity unless the entity has provided its Unique Entity Identifier to you. Subrecipients are not required to obtain an active SAM registration but must obtain a Unique Entity Identifier.

C. Definitions

For purposes of this term:

1. *System for Award Management (SAM)* means the Federal repository into which a recipient must provide information required for the conduct of business as a recipient. Additional information about registration procedures may be found at the SAM Internet site (currently at <https://www.sam.gov>).
2. *Unique Entity Identifier* means the identifier assigned by SAM to uniquely identify business entities.
3. *Entity* includes non-Federal entities as defined at 2 CFR §200.1 and also includes all of the following, for purposes of this part:
 - a. A foreign organization;
 - b. A foreign public entity;
 - c. A domestic or foreign for-profit organization; and
 - d. A Federal agency.

4. *Subaward* has the meaning given in 2 CFR §200.1.
5. *Subrecipient* has the meaning given in 2 CFR §200.1.

21. Academic Technology Transfer and Commercialization of University Research

a. Any institution of higher education (as such term is defined in section 101(A) of the Higher Education Act of 1965 (20 USC §1001(a)) that receives National Science Foundation research support (i.e., any grant or cooperative agreement awarded by NSF) and has received at least \$25,000,000 in total Federal research awards in the most recently completed Federal fiscal year shall keep, maintain, and report annually to the National Science Foundation the universal resource locator (URL) for a public website that contains information concerning its general approach to and mechanisms for transfer of technology and the commercialization of research results, including:

1. contact information for individuals and university offices responsible for technology transfer and commercialization;
2. information for both university researchers and industry on the institution's technology licensing and commercialization strategies;
3. success stories, statistics, and examples of how the university supports commercialization of research results;
4. technologies available for licensing by the university where appropriate; and
5. any other information deemed by the institution to be helpful to companies with the potential to commercialize university inventions.

For purposes of determining whether an institution meets the threshold for this requirement, both the NSF research support and the Federal research awards must have been active at some point during the most recently completed Federal fiscal year.

The institution's URL containing the information required in section a. must be electronically submitted to the following email alias: ACA520@nsf.gov. The URLs are available to the public on Research.gov at: <http://www.research.gov/acasection520>.

b. Trade Secret Information - Notwithstanding section a., an institution shall not be required to reveal confidential, trade secret, or proprietary information on its website.

22. Federal Tax Obligations

Article 22 applies only to awards that have cumulative budgets that exceed \$5,000,000.

In accordance with the *Commerce, Justice, Science and Related Agencies Appropriations Act, 2020*, the awardee affirms that they:

- (1) have filed all required Federal tax returns during the three years preceding the certification;

(2) have not been convicted of a criminal offense under the Internal Revenue Code of 1986; and

(3) have not, more than 90 days prior to certification, been notified of any unpaid Federal tax assessment for which the liability remains unsatisfied, unless the assessment is the subject of an installment agreement or offer in compromise that has been approved by the Internal Revenue Service and is not in default, or the assessment is the subject of a non-frivolous administrative or judicial proceeding.

23. Unpaid Federal Tax Liability

Article 23 applies only to awardees that are corporations.

In accordance with the *Financial Services and General Governmental Appropriations Act, 2020*, the awardee affirms that the corporation has no unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

24. Criminal Convictions

Article 24 applies only to awardees that are corporations.

In accordance with the *Financial Services and General Governmental Appropriations Act, 2020*, the awardee affirms that the corporation has not been convicted of a felony criminal violation under any Federal law within the preceding 24 months.

25. Copyrighted Material

a. Definition

Subject writing means any material that:

1. is or may be copyrighted under Title 17 of the USC; and
2. is produced by the awardee or its employees in the performance of work under this award.

Subject writings include such items as reports, books, journal articles, software, databases, sound recordings, videotapes and videodiscs.

b. Copyright Ownership, Government License

Except as otherwise specified in the award or by this paragraph, the awardee may own or permit others to own copyright in all subject writings. The awardee agrees that if it or anyone else does own copyright in a subject writing, the Federal government will have a nonexclusive, nontransferable, irrevocable, royalty-free license to exercise or have exercised for or on behalf of the U.S. throughout the world all the exclusive rights provided by copyright. Such license, however, will not include the right to sell copies or phonorecords of the copyrighted works to the public.

c. Awards Affected by International Agreements

If the award indicates it is subject to an identified international agreement or treaty, NSF can direct the awardee to convey to any foreign participant or otherwise dispose of such rights to subject writings as are required to comply with that agreement or treaty. In such cases, the standard clauses for Copyrighted Material or Patents Rights will be modified through the addition of the following:

“This project is supported under the cooperative program listed below. Your rights in inventions, writings and data may be affected.”

The applicable agreement or treaty will be identified immediately beneath that sentence.

d. Awardee Action to Protect Government Interests

The awardee agrees to acquire, through written agreement or an employment relationship, the ability to comply with the requirements of the preceding paragraphs and, in particular, to acquire the ability to convey rights in a subject writing to a foreign participant if directed by NSF under the previous paragraph. The awardee further agrees that any transfer of copyright or any other rights to a subject writing, by it or anyone whom it has allowed to own such rights, will be made subject to the requirements of this article.

26. Public Access to Copyrighted Material

NSF's policy on public access to copyrighted material ([Public Access Policy](#)) reflects the Foundation's commitment to making certain that, to the extent possible, the American public, industry and the scientific community have access to the results of federally funded scientific research. Pursuant to this policy, the awardee must ensure that all articles in peer-reviewed scholarly journals and papers in juried conference proceedings:

- are deposited in a public access compliant repository (as identified in the Public Access Policy);
- are available for download, reading and analysis within 12 months of publication;
- possess a minimum set of machine-readable metadata elements as described in the Public Access Policy;
- are reported in annual and final reports with a persistent identifier.

Either the final printed version or the final peer-reviewed manuscript is acceptable for deposit.

27. Program Income

a. Definition

The following provisions implement applicable portions of 2 CFR §200.307. *Program income* means gross income earned by the awardee that is directly generated by a supported activity or earned as a result of the award during the period of performance.

Except as otherwise provided in Federal statutes, regulations or the terms and conditions of the award, program income does not include rebates, credits, discounts and interest earned on any of them. Note that registration fees collected under NSF-supported conferences are considered program income.

b. NSF Policy

1. Standard Treatment

Unless otherwise specified in the award, program income received or accruing to the awardee during the period of the award is to be retained by the awardee, added to the funds committed to the project by NSF, and thus used to further project objectives. The awardee has no obligation to NSF with respect to program income received beyond the period of the award. The awardee also shall have no obligation to NSF with respect to program income earned from license fees and royalties for copyrighted material, patents, patent applications, trademarks and inventions produced under an award (see [PAPPG Chapter VIII.D.4](#)). However, Patent and Trademark Amendments (35 USC §18) shall apply to inventions made under an award.

Efforts should be made to avoid having unexpended program income remaining at the end date of the award. Program income earned during the project period should be expended prior to requesting reimbursement against the award. In the event an awardee has unexpended program income remaining at the end of the award, it must be remitted to NSF by crediting costs otherwise chargeable against the award. If it is not possible to record the credit via ACM\$, the excess program income must be remitted to NSF electronically or by check payable to the National Science Foundation.

2. Special Treatment

In exceptional circumstances, NSF may approve use of a special award provision to restrict or eliminate an awardee's control of income earned through NSF-supported activities if it determines that this would best serve the purposes of a particular program or award. The special provisions may require treatment of the program income via use of the deductive method, the Federal share of program income be kept in a separate account, or reported on and/or remitted for such periods as may be reasonable under the circumstances.

If, in accordance with the award terms and conditions program income is designated for deductive treatment, it must be remitted to NSF by crediting costs otherwise chargeable against the award. Program Income in excess of the award will be remitted to NSF electronically or by check payable to the National Science Foundation.

c. Records Retention

The awardee is required to retain appropriate financial and other records relating to program income earned during the award period of performance and for three years beyond the date of submission of the final financial disbursements in ACM\$. For instructions regarding final disbursement reporting, see [PAPPG Chapter VIII.E](#).

d. Reporting Requirements

On an annual basis, the awardee is required to submit a Program Income Reporting Worksheet to NSF in order to report program income earned and expended for any of their awards or to

validate that they did not earn and expend program income for any of their awards during the applicable period. The Program Income Reporting Worksheet utilizes the standard OMB-approved Government-wide data elements from the Program Income section of the Federal Financial Report (SF 425) and is due 45 days after the end of the Federal Fiscal Year. The Program Income Reporting Worksheet and related instructions are available through Research.gov (<http://research.gov/programincome>).

Failure to report program income or to validate that no program income was earned/expended could result in suspension of future award payments.

28. Publications

a. Acknowledgment of Support

The awardee is responsible for assuring that an acknowledgment of NSF support:

1. is made in any publication (including World Wide Web sites) of any material based on or developed under this project, in the following terms:

"This material is based upon work supported by the National Science Foundation under Cooperative Agreement No. (NSF award number)."

2. is orally acknowledged during all news media interviews, including popular media such as radio, television and news magazines.

b. News Releases

The awardee is strongly encouraged to consult with and notify the cognizant NSF Program Officer or their designee prior to issuing news releases concerning NSF-supported activities.

c. Disclaimer

The awardee is responsible for assuring that every publication of material (including World Wide Web pages) based on or developed under this award, except scientific articles or papers appearing in scientific, technical or professional journals, contains the following disclaimer:

"Any opinions, findings and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation."

d. Copies for NSF

The awardee is responsible for assuring that the cognizant NSF Program Officer is provided access to, either electronically or in paper form, a copy of every publication of material based on or developed under this award, clearly labeled with the award number and other appropriate identifying information, promptly after publication.

29. Intangible Property⁶

The following Intangible Property article (implementing the Bayh-Dole Act., [35 USC §200 et seq.]) shall apply to all awards for scientific or engineering research unless special provisions have been negotiated. The awardee shall include this article in all subawards for scientific or engineering research activities.

a. Definitions

1. *Invention* means any invention or discovery which is or may be patentable or otherwise protectable under Title 35 of the USC, to any novel variety of plant which is or may be protected under the Plant Variety Protection Act (7 USC §2321 et seq.).

2. *Subject Invention* means any invention of the awardee conceived or first actually reduced to practice in the performance of work under this award, provided that in the case of a variety of plant, the date of determination (as defined in section 41(d)) must also occur during the period of performance.

3. *Practical Application* means to manufacture in the case of a composition or product, to practice in the case of a process or method, or to operate in the case of a machine or system; and, in each case, under such conditions as to establish that the invention is being utilized and that its benefits are to the extent permitted by law or Government regulations available to the public on reasonable terms.

4. *Made* when used in relation to any invention means the conception or first actual reduction to practice of such invention.

5. *Small Business Firm* means a small business concern as defined at section 2 of Public Law 85-536 (15 USC §632) and implementing regulations of the Administrator of the Small Business Administration. For the purpose of this article, the size standards for small business concerns involved in government procurement and subcontracting at 13 CFR §121.3-8 and 13 CFR §121.3-12, respectively, will be used.

6. *Non-profit Organization* means a domestic university or other institution of higher education or an organization of the type described in Section 501(c)(3) of the Internal Revenue Code of 1954 (26 USC §501(c)) and exempt from taxation under Section 501(a) of the Internal Revenue Code (26 USC §501(a)) or any domestic non-profit scientific or educational organization qualified under a State non-profit organization statute.

7. *Statutory Period* means the one-year period before the effective filing date of a claimed invention during which exceptions to prior art exist per 35 USC §102(b) as amended by the Leahy-Smith America Invents Act, Public Law 112-29.

8. *Contractor* means any person, small business firm or nonprofit organization, or, as set forth in section 1, paragraph (b)(4) of Executive Order 12591, as amended, any business firm regardless of size, which is a party to a funding agreement.

⁶ The awardee is reminded that, in view of the U.S. Supreme Court decision in Stanford v. Roche, employee assignment agreements should include a present conveyance of rights ("I hereby assign" rather than a promise or intent to assign) in order to effectively convey patent rights to the institution, allowing the institution to meet its responsibility under the Bayh-Dole Act to provide the agency with a license to patented inventions.

b. Allocation of Principal Rights

The awardee may retain the entire right, title and interest throughout the world to each subject invention subject to the provisions of this Intangible Property article and 35 USC §203. With respect to any subject invention in which the awardee retains title, the Federal Government shall have a non-exclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the U.S. the subject invention throughout the world. If the award indicates it is subject to an identified international agreement or treaty, the National Science Foundation (NSF) also has the right to direct the awardee to convey to any foreign participant such patent rights to subject inventions as are required to comply with that agreement or treaty.

c. Invention Disclosure, Election of Title and Filing of Patent Applications by Awardee

1. The awardee will disclose each subject invention to NSF within two months after the inventor discloses it in writing to awardee personnel responsible for the administration of patent matters. The disclosure to NSF shall be in the form of a written report and shall identify the award under which the invention was made and the inventor(s). It shall be sufficiently complete in technical detail to convey a clear understanding of the nature, purpose, operation and, to the extent known, the physical, chemical, biological or electrical characteristics of the invention. The disclosure shall also identify any publication, on sale or public use of the invention and whether a manuscript describing the invention has been submitted for publication and, if so, whether it has been accepted for publication at the time of disclosure. In addition, after disclosure to NSF, the awardee will promptly notify NSF of the acceptance of any manuscript describing the invention for publication or of any on sale or public use planned by the awardee.

2. The awardee will elect in writing whether or not to retain title to any such invention by notifying NSF within two years of disclosure to NSF. However, in any case where a patent, a printed publication, public use, sale or other availability to the public has initiated the one-year statutory period wherein valid patent protection can still be obtained in the U.S., the period for election of title may be shortened by NSF to a date that is no more than 60 days prior to the end of the statutory period.

3. The awardee will file its initial patent application on an invention to which it elects to retain title within one year after election of title or, if earlier, prior to the end of any statutory period wherein valid patent protection can be obtained in the U.S. after a publication, on sale, or public use. If the awardee files a provisional application as its initial patent application, it shall file a non-provisional application within 10 months of the filing of the provisional application. The awardee will file patent applications in additional countries or international patent offices within either ten months of the first filed patent application, or six months from the date when permission is granted by the Commissioner of Patents to file foreign patent applications when such filing has been prohibited by a Secrecy Order.

4. For any subject invention with NSF and awardee co-inventors, where NSF determines that it would be in the interest of the government, pursuant to 35 USC §207(a)(3), to file an initial patent application on the subject invention, NSF, at its discretion and in consultation with the awardee, may file such application at its own expense, provided that the awardee retains the ability to elect title pursuant to 35 USC §202(a).

5. Requests for extension of the time for disclosure to NSF, election and filing under subparagraphs 1., 2. and 3 may, at the discretion of NSF, be awarded. When an awardee has

requested an extension for filing a non-provisional application after filing a provisional application, a one-year extension will be granted unless NSF notifies the contractor within 60 days of receiving the request.

d. Conditions When the Government May Obtain Title

The awardee will convey to NSF, upon written request, title to any subject invention:

1. if the awardee fails to disclose or elect the subject invention within the times specified in paragraph c. above, or elects not to retain title;
2. in those countries in which the awardee fails to file patent applications within the times specified in paragraph c. above, provided, however, that if the awardee has filed a patent application in a country after the times specified in paragraph c. of this article, but prior to its receipt of the written request of NSF, the awardee shall continue to retain title in that country; or
3. in any country in which the awardee decides not to continue the prosecution of any non-provisional patent application for, to pay a maintenance, annuity or renewal fee on, or defend in a reexamination or opposition proceeding on, a patent on a subject invention.

e. Minimum Rights to Awardee

1. The awardee will retain a non-exclusive royalty-free license throughout the world in each subject invention to which the Government obtains title, except if the awardee fails to disclose the subject invention within the times specified in paragraph c. above. The awardee's license extends to its domestic subsidiaries and affiliates, if any, within the corporate structure of which the awardee is a party and includes the right to award sublicenses of the same scope to the extent the awardee was legally obligated to do so at the time the award was made. The license is transferable only with the approval of NSF except when transferred to the successor of that part of the awardee's business to which the invention pertains.
2. The awardee's domestic license may be revoked or modified by NSF to the extent necessary to achieve expeditious practical application of the subject invention pursuant to an application for an exclusive license submitted in accordance with applicable provisions at 37 CFR Part 404. This license will not be revoked in that field of use or the geographical areas in which the awardee has achieved practical application and continues to make the benefits of the invention reasonably accessible to the public. The license in any foreign country may be revoked or modified at discretion of NSF to the extent the awardee, its licensees or its domestic subsidiaries or affiliates have failed to achieve practical application in that foreign country.
3. Before revocation or modification of the license, NSF will furnish the awardee a written notice of its intention to revoke or modify the license, and the awardee will be allowed 30 days (or such other time as may be authorized by NSF for good cause shown by the awardee) after the notice to show cause why the license should not be revoked or modified. The awardee has the right to appeal, in accordance with applicable regulations in 37 CFR Part 404 concerning the licensing of Government-owned inventions, any decision concerning the revocation or modification of its license.

f. Awardee Action to Protect Government's Interest

1. The awardee agrees to execute or to have executed and promptly deliver to NSF all instruments necessary to: (i) establish or confirm the rights the Government has throughout the world in those subject inventions for which the awardee retains title; and (ii) convey title to NSF when requested under paragraph d. above, and to enable the Government to obtain patent protection throughout the world in that subject invention.

2. The awardee agrees to require, by written agreement, its employees, other than clerical and non-technical employees, to disclose promptly in writing to personnel identified as responsible for the administration of patent matters and in a format suggested by the awardee each subject invention made under this award in order that the awardee can comply with the disclosure provisions of paragraph c. above, to assign to the awardee the entire right, title and interest in and to each subject invention made under the award, and to execute all papers necessary to file patent applications on subject inventions and to establish the Government's rights in the subject inventions. The disclosure format should require, as a minimum, the information requested by paragraph c.1 above. The awardee shall instruct such employees through the employee agreements or other suitable educational programs on the importance of reporting inventions in sufficient time to permit the filing of patent applications prior to U.S. or foreign statutory bars.

3. For each subject invention, the awardee will no less than 60 days prior to the expiration of the statutory deadline, notify NSF of any decision: not to continue the prosecution of a non-provisional patent application; not to pay a maintenance, annuity or renewal fee; not to defend in a reexamination or opposition proceeding on a patent, in any country; to request, be a party to, or take action in a trial proceeding before the Patent Trial and Appeals Board of the U.S. Patent and Trademark Office, including but not limited to post-grant review, review of a business method patent, *inter partes* review, and derivation proceeding; or to request, be a party to, or take action in a non-trial submission of art or information at the U.S. Patent and Trademark Office, including but not limited to a pre-issuance submission, a post-issuance submission, and supplemental.

4. The awardee agrees to include, within the specification of any U.S. patent application and any patent issuing thereon covering a subject invention, the following statement:

"This invention was made with Government support under (identify NSF award number) awarded by the National Science Foundation. The Government has certain rights in this invention."

5. The awardee or its representative will complete, execute and forward to NSF a confirmation of a License to the U.S. Government and the page of a United States patent application that contains the Federal support clause within two months of filing any domestic or foreign patent application.

g. Subawards

1. The awardee will include this Intangible Property article, suitably modified to identify the parties, in all subawards, regardless of tier, for experimental, developmental or research work. The subawardee will retain all rights provided for the awardee in this Intangible Property article, and the awardee will not, as part of the consideration for awarding the subaward, obtain rights in the subawardees' subject inventions.

2. In the case of subawards, at any tier, when the prime award by NSF was a contract (but not a cooperative agreement), NSF, subawardee and contractor agree that the mutual obligations of the parties created by this Intangible Property article constitute a contract between the subawardee and the Foundation with respect to those matters covered by this Intangible Property article.

h. Reporting on Utilization of Subject Inventions

Upon request, the awardee agrees to submit on request periodic reports no more frequently than annually on the utilization of a subject invention or on efforts at obtaining such utilization that are being made by the awardee or its licensees or assignees. Such reports shall include information regarding the status of development, date of first commercial sale or use, gross royalties received by the awardee and such other data and information as NSF may reasonably specify. The awardee also agrees to provide additional reports in connection with any march-in proceeding undertaken by NSF in accordance with paragraph j. of this Intangible Property article.

As required by 35 USC §202(c)(5), NSF agrees it will not disclose such information to persons outside the Government without the permission of the awardee.

i. Preference for United States Industry

Notwithstanding any other provision of this Intangible Property article, the awardee agrees that neither it nor any assignee will grant to any person the exclusive right to use or sell any subject invention in the U.S. unless such person agrees that any products embodying the subject invention or produced through the use of the subject invention will be manufactured substantially in the U.S. However, in individual cases, the requirement for such an agreement may be waived by NSF upon a showing by the awardee or its assignee that reasonable but unsuccessful efforts have been made to award licenses on similar terms to potential licensees that would be likely to manufacture substantially in the U.S. or that under the circumstances domestic manufacture is not commercially feasible.

j. March-in Rights

The awardee agrees that with respect to any subject invention in which it has acquired title, NSF has the right in accordance with procedures at [37 CFR §401.6](#) and the NSF [PAPPG Chapter XI.D.1.i](#) to require the awardee, an assignee or exclusive licensee of a subject invention to grant a non-exclusive, partially exclusive or exclusive license in any field of use to a responsible applicant or applicants, upon terms that are reasonable under the circumstances and if the awardee, assignee or exclusive licensee refuses such a request, NSF has the right to grant such a license itself if NSF determines that such action is necessary:

1. because the awardee or assignee has not taken or is not expected to take within a reasonable time, effective steps to achieve practical application of the subject invention in such field of use;
2. to alleviate health or safety needs which are not reasonably satisfied by the awardee, assignee or their licensees;
3. to meet requirements for public use specified by Federal regulations and such requirements are not reasonably satisfied by the awardee, assignee or licensee; or

4. because the agreement required by paragraph l. of this Intangible Property article has not been obtained or waived or because a licensee of the exclusive right to use or sell any subject invention in the U.S. is in breach of such agreement.

k. Special Provisions for Awards with Non-profit Organizations

If the awardee is a nonprofit organization, it agrees that:

1. rights to a subject invention in the U.S. may not be assigned without the approval of NSF, except where such assignment is made to an organization which has as one of its primary functions the management of inventions, provided that such assignee will be subject to the same provisions as the awardee;

2. the awardee will share royalties collected on a subject invention with the inventor, including Federal employee co-inventors (when NSF deems it appropriate) when the subject invention is assigned in accordance with 35 USC §202(e) and 37 CFR §401.10;

3. the balance of any royalties or income earned by the awardee with respect to subject inventions, after payment of expenses (including payments to inventors) incidental to the administration of subject inventions, will be utilized for the support of scientific or engineering research or education; and

4. it will make efforts that are reasonable under the circumstances to attract licensees of subject inventions that are small business firms and that it will give preference to a small business firm if the awardee determines that the small business firm has a plan or proposal for marketing the invention which, if executed, is equally likely to bring the invention to practical application as any plans or proposals from applicants that are not small business firms; provided that the awardee is also satisfied that the small business firm has the capability and resources to carry out its plan or proposal.

The decision whether to give a preference in any specific case will be at the discretion of the awardee. However, the awardee agrees that NSF may review the awardee's licensing program and decisions regarding small business applicants, and the awardee will negotiate changes to its licensing policies, procedures or practices with NSF when NSF's review discloses that the awardee could take reasonable steps to implement more effectively the requirements of this paragraph k.4. In accordance with 37 CFR §401.7, NSF or the awardee may request that the Secretary review the awardee's licensing program and decisions regarding small business applicants.

l. Communications

All communications required by this Intangible Property article must be submitted through the [iEdison Invention Information Management System](#) maintained by the National Institutes of Health unless NSF prior written permission for another form of submission is obtained from the Patent Assistant at patents@nsf.gov or at Office of the General Counsel, National Science Foundation, 2415 Eisenhower Avenue, Alexandria, VA 22314.

30. Cost Sharing or Matching

a. General

1. The awardee must cost share in accordance with any amount specified on Line M of the award budget. Cost sharing participation in other projects may not be counted towards meeting the specific cost sharing requirements of the award, and must come from non- Federal sources.
2. Should the awardee become aware that it may be unable to provide the cost sharing of at least the amount identified on Line M of the NSF award budget, it must: a) immediately provide written notification to the cognizant NSF Grants and Agreements Officer of the situation; and b) indicate steps it plans to take to secure replacement cost sharing; or c) indicate the plans it has to either continue or phase out the project in the absence of the approved level of cost sharing.
3. Should NSF agree to the organization's proposed plans, the cognizant NSF Grants and Agreements Officer will modify the award accordingly, including, if appropriate, reducing the amount of NSF support. Should the organization's plans be unacceptable to NSF, the award may be subject to termination. NSF modifications to proposed cost sharing revisions are made on a case-by-case basis.
4. Failure by the organization to notify NSF, in accordance with paragraph 2. above, may result in the disallowance of some or all of the costs charged to the award; the subsequent recovery by NSF of some or all of the NSF funds provided under the award; possible termination of the award; and may constitute a violation of the terms of the award so serious as to provide grounds for subsequent suspension or debarment.

b. Cost Sharing Records

The awardee must maintain records of all project costs that are claimed by the awardee as cost sharing as well as records of costs to be paid by the Government. Such records are subject to audit. Acceptable forms of cost sharing contributions are those that meet the criteria identified in 2 CFR §200.306. Unless otherwise specified in the award, approval is given to include unrecovered indirect costs (also known as facilities and administrative costs for institutions of higher education) as part of cost sharing or matching contributions. If the awardee's cost participation includes in-kind contributions, the basis for determining the valuation for volunteer services and donated property must be documented.

c. Cost Sharing Reports

The amount of mandatory cost sharing must be documented (on an annual and final basis), certified by the Authorized Organizational Representative, and reported to the cognizant NSF Program Officer via use of NSF's electronic systems. Such notifications must be submitted no later than 90 days prior to the end of the current budget period to meet the annual notification requirement, and no later than 120 days following the end date of the award to meet the final notification requirement. The cost share notification is considered due during the 90-or 120-day period, respectively. The notification becomes overdue **the day after the respective 90-or 120-day period ends.**

31. Audit and Records

- a. Financial records, supporting documents, statistical records and other records pertinent to this award must be retained by the awardee for a period of three years from award financial closeout as described in [PAPPG Chapter VII.E](#), except as noted in 2 CFR §200.334.
- b. The awardee shall arrange for the conduct of audits as required by 2 CFR §200 Subpart F. They shall provide copies of the reports of these audits to the Federal Audit Clearinghouse (see 2 CFR §200.512(b)). Any Federal audit of this project deemed necessary by NSF shall build upon the results of such audit(s).
- c. All awards issued by NSF meet the definition of “*Research and Development*” (R&D) at 2 CFR §200.1. As such, auditees should identify NSF awards as part of the R&D cluster on the Schedule of Expenditures of Federal Awards (SEFA). The auditor should test NSF awards for compliance as instructed in Part V, Clusters of Programs. NSF recognizes that some awards may have another classification for purposes of indirect costs. The auditor is not required to report the disconnect (i.e., the award is classified as R&D for audit purposes but non-research for indirect cost rate purposes), unless the auditee is charging indirect costs at a rate other than the rate(s) specified in the award document(s).

32. Site Visits

NSF, through authorized representatives, has the right, at all reasonable times, to make site visits to review project accomplishments and management control systems and to provide such technical assistance as may be required. If any site visit is made by NSF on the premises of the awardee or a subrecipient under an award, the awardee shall provide and shall require its subrecipients to provide all reasonable facilities and assistance for the safety and convenience of the NSF representatives in the performance of their duties. All site visits and evaluations shall be performed in such a manner that will not unduly delay the work.

33. Termination and Enforcement

- a. Any suspension or termination action taken by NSF must be issued by a cognizant NSF Grants and Agreements Officer and will be in accordance with this article, 2 CFR §200.340, and [PAPPG Chapter XII.A](#).
- b. The award may be suspended or terminated in whole or in part in any of the following situations:
 1. By NSF, if the awardee fails to comply with the terms and conditions of a Federal award;
 2. By NSF, to the greatest extent authorized by law, if an award no longer effectuates the program goals or agency priorities;
 3. By NSF, with the consent of the awardee, in which case the two parties must agree upon the termination conditions, including the effective date and, in the case of partial termination, the portion to be terminated;
 4. By the awardee upon sending to NSF written notification setting forth the reasons for such termination, the effective date, and, in the case of partial termination, the portion to be terminated. However, if NSF determines in the case of partial termination that the reduced or modified portion

of the NSF award will not accomplish the purposes for which the NSF award was made, NSF may terminate the Federal award in its entirety;

5. By NSF, pursuant to termination provisions included in the NSF award; or

6. By NSF, when ordered by the Deputy Director under NSF's Regulation on Research Misconduct [45 CFR Part 689].

c. Normally, action by NSF to suspend or terminate an award will be taken only after the awardee has been informed by NSF of any deficiency on its part and given an opportunity to correct it; but NSF may immediately suspend or terminate the award without notice when it believes such action is reasonable to protect the interests of the Government.

d. No costs incurred during a suspension period or after the effective date of a termination will be allowable, except those costs which, in the opinion of NSF, the awardee could not reasonably avoid or eliminate, or which were otherwise authorized by the suspension or termination notice, provided such costs would otherwise be allowable under the terms of the award and the governing cost principles.

e. Within 30 days of the termination date, the awardee will furnish a summary of progress under the award and an itemized accounting of costs incurred prior to the termination date or pursuant to d, above. Final allowable costs under a termination settlement shall be in accordance with the terms of the award, including this article, and the governing cost principles, giving due consideration to the progress under the award. In no event will the total of NSF payments under a terminated award exceed the award amount, or the NSF pro rata share of the total project costs when cost sharing was anticipated, whichever is less.

f. When an NSF award is terminated or partially terminated, both NSF and the awardee remain responsible for compliance with the requirements in 2 CFR §§200.344 and 200.345.

g. A notice of termination other than by mutual agreement and/or the final settlement amount may be subject to review pursuant to Article 34.

h. NSF will report award terminations to the OMB-designated integrity and performance system in accordance with Federal regulation, but only after the awardee has had an opportunity to exhaust the review procedures contained in [PAPPG Chapter XII.B](#). See also Article 15.d. for additional information on FAPIIS.

34. Termination Review Procedure

a. A request for review of a notice of termination or settlement should be addressed to the Division Director, Division of Grants and Agreements (DGA), National Science Foundation, 2415 Eisenhower Avenue, Alexandria, VA, 22314. It must be postmarked no later than 30 days after the date of the letter notifying the awardee of the termination or settlement.

b. The request for review must contain a full statement of the awardee's position with respect to the disputed matter and the facts and rationale that support the awardee's position.

c. Review of a notice of termination or settlement will be conducted in accordance with [PAPPG Chapter XII.B.3](#).

- d. Pending resolution of the request for review, the notice of termination shall remain in effect.

35. Non-Discrimination Statutes

The award is subject to the provisions of *Title VI of the Civil Rights Act of 1964* [42 USC §§2000d et seq.], *Title IX of the Education Amendments of 1972* [20 USC §§1681 et seq.], the *Rehabilitation Act of 1973* [29 USC §794], the *Age Discrimination Act of 1975* [42 USC §§6101 et seq.], *Equal Employment Opportunity* [E.O. 11246], *Limited English Proficiency (LEP)* [E.O. 13166] and all regulations and policies issued by NSF pursuant to these statutes. Specifically, in accordance with these statutes, regulations and policies, no person on the basis of race, color, national origin, sex, disability, or age shall be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under the award.

36. Reporting Classifiable Information

NSF awards are intended for unclassified, publicly releasable research. The awardee will not be granted access to classified information. NSF does not expect that the results of the research project will involve classified information.

If, however, in conducting the activities supported under an award, the PI or co-PI is concerned that any of the research results involve potentially classifiable information that may warrant Government restrictions on the dissemination of the results, the PI or co-PI should promptly notify the cognizant NSF Program Officer.

37. Animal Welfare

a. Any awardee performing research on vertebrate animals⁷ shall comply with the *Animal Welfare Act* [7 USC §2131 et seq.] and the regulations promulgated thereunder by the Secretary of Agriculture [9 CFR §§1.1-4.11] pertaining to the humane care, handling and treatment of vertebrate animals held or used for research, teaching or other activities supported by Federal awards. The awardee is expected to ensure that the guidelines described in the National Academies of Sciences, Engineering and Medicine (NASEM) Publication, "*Guide for the Care and Use of Laboratory Animals*" are followed and to comply with the *Public Health Service Policy and Government Principles Regarding the Care and Use of Animals* (included as Appendix D to the NASEM Guide). Further guidance on the use of vertebrate animals in NSF funded projects can be found in [PAPPG Chapter XI.B.3](#).

b. The awardee must include NSF-supported activities with live vertebrate animals as covered activities in their Office of Laboratory Animal Welfare (OLAW) Animal Welfare Assurance. Further, they must promptly report situations involving NSF-supported animal activities to OLAW as required by the Public Health Service (PHS) Policy on Humane Care and Use of Laboratory Animals (<http://grants.nih.gov/grants/olaw/references/phspol.htm>) Section IV.F.3. The cognizant NSF Program Officer also should be notified.

c. Any changes to, or lapses in, the Institutional Animal Care and Use Committee approved animal use protocols associated with an NSF award should be reported promptly by the awardee to the cognizant NSF Program Officer.

⁷ In addition to vertebrate animals covered by the Animal Welfare Act, the requirements specified in this Article also are extended to rats, birds and mice.

d. In the event the awardee's multi-project Assurance is cancelled or lapses, the awardee must immediately notify the cognizant NSF Grants and Agreements Officer identified in the award notice.

e. Research facilities subject to the Animal Welfare Act using or intending to use live animals in research and who receive Federal funding are required to register the facility with the Animal and Plant Health Inspection Service (APHIS), U.S. Department of Agriculture. The location of the nearest APHIS Regional Office, as well as information concerning this and other APHIS activities, may be obtained at <http://www.aphis.usda.gov/>.

38. Research Involving Recombinant or Synthetic Nucleic Acid Molecules

If this award supports research involving recombinant or synthetic nucleic acid molecules, the awardee agrees to comply with the [Guidelines for Research Involving Recombinant or Synthetic Nucleic Acid Molecules](#) (NIH Guidelines) including the procedural requirements and any subsequent revisions as they are published in the Federal Register. Further information on research awards that involve recombinant or synthetic nucleic acid molecules can be found in [PAPPG Chapter XI.B.2](#).

39. Clean Air and Water

(Applicable only if the award exceeds \$150,000, or a facility to be used has been the subject of a conviction under the *Clean Air Act* [42 USC §7413(c)(1)] or the *Clean Water Act* [33 USC §1319(c)] and is listed by the Environmental Protection Agency (EPA), or the award is not otherwise exempt.)

The awardee agrees as follows:

a. To comply with all the requirements of *Section 114 of the Clean Air Act* [42 USC §7414] and *Section 308 of the Clean Water Act* [33 USC §1318], respectively, relating to inspection, monitoring, entry, reports and information, as well as other requirements specified in Section 114 and Section 308 of the *Clean Air Act and the Clean Water Act*, respectively, and all regulations and guidelines issued thereunder before the issuance of the cooperative agreement.

b. That no portion of the work required by the award will be performed in a facility listed on the EPA List of Violating Facilities on the date that the award was issued unless and until EPA eliminates the name of such facility or facilities from such listing.

c. To use its best efforts to comply with clean air standards and clean water standards at the facility in which the award is being performed.

d. To insert the substance of the provisions of this article into any nonexempt subaward.

40. Human Research Subjects

The awardee is responsible for the protection of the rights and welfare of any human subjects involved in research, development and related activities supported by this award. The awardee agrees to comply with the NSF regulation, entitled, "*Protection of Human Subjects* [45 CFR Part 690]."

41. Life Sciences Dual Use Research of Concern (DURC)

This Article applies to all research, for which NSF award funds may be used, that potentially falls within the scope of the [US Government Policy for Institutional Oversight of Life Sciences Dual Use Research of Concern](#), hereafter referred to as the “Policy”. See also [PAPPG Chapter XI.B.5](#).

The awardee is responsible for monitoring the research progress and for implementation of all appropriate biosafety and biosecurity risk mitigation measures including compliance with all applicable laws and regulations related to that implementation, including the Policy specified above. (See also <https://osp.od.nih.gov/?s=Dual+Use+Research+of+Concern> for Frequently Asked Questions, case studies and other educational materials on DURC.)

42. Investigator Financial Disclosure Policy

If the awardee employs more than 50 persons, the awardee must maintain an appropriate written and enforced policy on conflict of interest consistent with the provisions of [PAPPG Chapter IX.A](#).

43. Whistleblower Protection

The awardee is notified of the applicability of 41 USC §4712, as amended by Public Law (P.L.) 112-239, providing protection for whistleblowers.

44. State Sales and Use Taxes

The awardee is reminded that the governing cost principles cited in Article 12 limit the allowability of taxes to those the organization is required to pay. The awardee must avail itself of any tax exemptions for which any activities supported by Federal funds may qualify, including any applicable exemptions from State or local sales and use taxes on the purchase of goods and services made with NSF award funds.

45. Domestic Preferences for Procurements

The awardee is notified of the applicability of 2 CFR §200.322, entitled *Domestic Preferences for Procurements*.

46. Made in America

In implementation of 2 CFR §200.322, Major Facility Construction Stage awards and Mid-Scale Research Infrastructure implementation awards greater than \$20 million must retain appropriate documentation to substantiate any circumstance where the awardee has deemed a U.S. preference not feasible in acquiring goods, products, or materials. The documentation must identify the basis for the determination and be based on:

- a. Domestic non-availability – articles, materials, or supplies are not mined, produced, or manufactured in sufficient and reasonably available commercial quantities and of a satisfactory quality to meet technical or operational requirements;
- b. Unreasonable cost – the price of the domestic end product (including transport to the construction site) is higher than the price of a foreign end product by 30 percent if offered by small business or 20 percent if offered by other than a small business;
- c. The purchase is related to commercially-available information technology; and/or

d. The purchases are at or below the micro-purchase threshold (currently \$10,000 for most acquisitions), or related to procurements for use outside of the United States.

The requirements of this article must be included in all subawards, contracts and purchase orders for work or products under this award.

47. Recipient Integrity and Performance Matters

The awardee must fully comply with the requirements stipulated in [Appendix XII to Part 200](#) of 2 CFR §200, entitled “*Award Term and Condition for Recipient Integrity and Performance Matters.*” See also Article 33 of these terms and conditions for NSF’s responsibilities regarding reporting award terminations to the OMB-designated integrity and performance system in accordance with Federal regulation. In addition, Article 15.d. specifies NSF responsibilities to report in FAPIIS an awardee’s failure to submit all required reports.

48. Breach of Personally Identifiable Information

An awardee that uses or operates a Federal information system or creates, collects, uses, processes, stores, maintains, disseminates, discloses, or disposes of Personally Identifiable Information (PII) within the scope of an NSF award, must have procedures in place to respond to a breach of PII. These procedures should promote cooperation and the free exchange of information with NSF, as needed to properly escalate, refer and respond to a breach. The awardee must notify NSF upon learning that a breach of PII within the scope of an NSF award has occurred.

49. Notification Requirements Regarding Sexual Harassment, Other Forms of Harassment, or Sexual Assault

The PI and any co-PI(s) identified on an NSF award are in a position of trust. These individuals must comport themselves in a responsible and accountable manner during the award period of performance, whether at the awardee institution, on-line, or at locales such as field sites, facilities, or conferences/workshops.

For purposes of this term and condition, the following definitions apply:

Sexual Harassment: May include but is not limited to gender or sex-based harassment, unwelcome sexual attention, sexual coercion, or creating a hostile environment, as set forth in organizational policies or codes of conduct, statutes, regulations, or executive orders.

Other Forms of Harassment: Non-gender or non-sex-based harassment of individuals protected under federal civil rights laws, as set forth in organizational policies or codes of conduct, statutes, regulations, or executive orders.

Finding/Determination: The final disposition of a matter involving sexual harassment or other form of harassment under organizational policies and processes, to include the exhaustion of permissible appeals exercised by the PI or co-PI, or a conviction of a sexual offense in a criminal court of law.

Administrative Leave/Administrative Action: Any temporary/interim suspension or permanent removal of the PI or co-PI, or any administrative action imposed on the PI or co-PI by the awardee

under organizational policies or codes of conduct, statutes, regulations, or executive orders, relating to activities, including but not limited to the following: teaching, advising, mentoring, research, management/administrative duties, or presence on campus.

The awardee is required to notify NSF of: (1) Any finding/determination regarding the PI or any co-PI⁸ that demonstrates a violation of awardee policies or codes of conduct, statutes, regulations, or executive orders relating to sexual harassment, other forms of harassment, or sexual assault; and/or (2) if the PI or any co-PI is placed on administrative leave or if any administrative action has been imposed on the PI or any co-PI by the awardee relating to any finding/determination or an investigation of an alleged violation of awardee policies or codes of conduct, statutes, regulations, or executive orders relating to sexual harassment, other forms of harassment, or sexual assault.⁹ Such notification must be submitted by the Authorized Organizational Representative (AOR) to NSF's Office of Equity and Civil Rights at www.nsf.gov/harassment within ten business days from the date of the finding/determination, or the date of the placement of a PI or co-PI by the awardee on administrative leave or the imposition of an administrative action, whichever is sooner.¹⁰ Each notification must include the following information:

- NSF Award Number;
- Name of PI or co-PI being reported;¹¹
- Type of Notification: Select one of the following:
 - Finding/Determination that the reported individual has been found to have violated awardee policies or codes of conduct, statutes, regulations, or executive orders relating to sexual harassment, other forms of harassment, or sexual assault; or
 - Placement by the awardee of the reported individual on administrative leave or the imposition of any administrative action on the PI or any co-PI by the awardee relating to any finding/determination or an investigation of an alleged violation of awardee policies or codes of conduct, statutes, regulations, or executive orders relating to sexual harassment, other forms of harassment, or sexual assault.
- Description of the finding/determination and action(s) taken, if any; and
- Reason(s) for, and conditions of, placement of the PI or any co-PI on administrative leave or imposition of administrative action.

The awardee, at any time, may propose a substitute investigator if it determines the PI or any co-PI may not be able to carry out the funded project or activity and/or abide by the award terms and conditions. The awardee is reminded of its responsibility to obtain prior written approval from

⁸ If a co-PI is affiliated with a subawardee organization, the Authorized Organizational Representative of the subawardee must provide the requisite information directly to NSF, as instructed in this paragraph.

⁹ Awardee findings/determinations and placement of a PI or co-PI on administrative leave or the imposition of an administrative action must be conducted in accordance with organizational policies and processes. They also must be conducted in accordance with federal laws, regulations, and executive orders.

¹⁰ Such notification must be provided regardless of whether the behavior leading to the finding/determination, or placement on administrative leave, or the imposition of an administrative action occurred while the PI or co-PI was carrying out award activities.

¹¹ Only the identification of the PI or co-PI is required. Personally identifiable information regarding any complainants or other individuals involved in the matter must not be included in the notification.

NSF in the event the investigator will be disengaged from the project for a period greater than three months. See [PAPPG Chapter VII.B.2.a.](#) for additional information.

In reviewing the notification, NSF will consider, at a minimum, the following factors:

- a. The safety and security of personnel supported by the NSF award;
- b. The overall impact to the NSF-funded activity;
- c. The continued advancement of taxpayer-funded investments in science and scientists; and
- d. Whether the awardee has taken appropriate action(s) to ensure the continuity of science and that continued progress under the funded project can be made.

Upon receipt and review of the information provided, NSF will consult with the AOR, or designee. Based on the results of this review and consultation, the Foundation may, if necessary, assert its programmatic stewardship responsibilities and oversight authority to initiate the substitution or removal of the PI or any co-PI, reduce the award funding amount, or where neither of those previous options is available or adequate, to suspend or terminate the award.

Other personnel supported by an NSF award must likewise remain in full compliance with awardee policies or codes of conduct, statutes, regulations, or executive orders relating to sexual harassment, other forms of harassment, or sexual assault. With regard to any personnel not in compliance, the awardee must make appropriate arrangements to ensure the safety and security of other award personnel and the continued progress of the funded project. Notification of these actions is not required under this term and condition.

50. Post-award Disclosure of Current Support and In-Kind Contribution Information

If an organization discovers that a PI or co-PI on an active NSF award failed to disclose current support or in-kind contribution information¹² as part of the proposal submission process (see [PAPPG Chapter II.C.2.h](#)), the AOR must submit the following information within 30 calendar days of the identification of the undisclosed current support or in-kind contribution through use of the “Other Request” category in the Notification and Request Module in Research.gov.¹³

Post-award Disclosure of Project Support Information

- PI/co-PI Name:
- Project Title:
- Award Number (if available):
- Source of Support:

¹² The post-award disclosure requirement applies to current support (including in-kind contributions) that was active as of the date the proposal was submitted to NSF. See [NSF Pre-award and Post-award Disclosures Relating to the Biographical Sketch and Current and Pending Support](#) which has been developed to assist users in determining the types of activities that must be disclosed.

¹³ The requisite information must be entered into the box entitled, “Proposed Change” with the box entitled, “Justification for Change” stating, “See above”.

- Primary Place of Performance:
- Project Start and End Date:
- Total Award Amount (including Indirect Costs): \$
- Brief Description of the Major goals of the project:
- Description of any Overlap/Duplication of the project with the NSF award:
- Impact on the ability of the PI/co-PI to carry out the NSF award:
- Person-Month(s) (or Partial Person-Months) Per Year Committed to the Project:

▪ Enter the applicable year (e.g., 2020, 2021):

Enter the number of person-month(s) (or partial person-months):

▪ Enter the applicable year (e.g., 2020, 2021):

Enter the number of person-month(s) (or partial person-months):

▪ Enter the applicable year (e.g., 2020, 2021):

Enter the number of person-month(s) (or partial person-months):

▪ Enter the applicable year (e.g., 2020, 2021):

Enter the number of person-month(s) (or partial person-months):

▪ Enter the applicable year (e.g., 2020, 2021):

Enter the number of person-month(s) (or partial person-months):

Post-award Disclosure of In-Kind Contribution Information

- PI/co-PI Name:
- Source of Support:
- Primary Place of Performance:
- Summary of In-kind Contributions:
- Description of any Overlap/Duplication of the project with the NSF award:
- Impact on the ability of the PI/co-PI to carry out the NSF award:
- Person-Month(s) (or Partial Person-Months) Per Year Committed to the Project:

▪ Enter the applicable year (e.g., 2020, 2021):

Enter the number of person-month(s) (or partial person-months):

▪ Enter the applicable year (e.g., 2020, 2021):

Enter the number of person-month(s) (or partial person-months):

▪ Enter the applicable year (e.g., 2020, 2021):

Enter the number of person-month(s) (or partial person-months):

- Enter the applicable year (e.g., 2020, 2021):

Enter the number of person-month(s) (or partial person-months):

- Enter the applicable year (e.g., 2020, 2021):

Enter the number of person-month(s) (or partial person-months):

- Dollar Value of In-kind Contribution: \$

Upon receipt and review of the information provided, NSF may consult with the AOR, or designee, if necessary. Based on the results of this review, the Foundation will determine the impact of the new information on the NSF-funded award, and, where necessary, take appropriate action.

51. Fee Payments

Payment of fee is allowable only if expressly authorized by solicitation and the terms and conditions of the NSF award. Payment of profit is not permitted on an NSF award.

52. Section 889 of the National Defense Authorization Act (NDAA) for Fiscal Year (FY) 2019

Section 889 of the National Defense Authorization Act (NDAA) for Fiscal Year (FY) 2019 (Public Law 115-232) prohibits the head of an executive agency from obligating or expending loan or grant funds to procure or obtain, extend, or renew a contract to procure or obtain, or enter into a contract (or extend or renew a contract) to procure or obtain the equipment, services, or systems as identified in section 889 of the NDAA for FY 2019.

(a) In accordance with 2 CFR §200.216 and §200.471, for all awards that are issued on or after August 13, 2020, recipients and subrecipients are prohibited from obligating or expending loan or grant funds to:

(1) Procure or obtain;

(2) Extend or renew a contract to procure or obtain; or

(3) Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115-232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).

(i) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou

Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).

(ii) Telecommunications or video surveillance services provided by such entities or using such equipment.

(iii) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

(b) In implementing the prohibition under Public Law 115-232, section 889, subsection (f), paragraph (1), heads of executive agencies administering loan, grant, or subsidy programs shall prioritize available funding and technical support to assist affected businesses, institutions and organizations as is reasonably necessary for those affected entities to transition from covered communications equipment and services, to procure replacement equipment and services, and to ensure that communications service to users and customers is sustained.

(c) See Public Law 115-232, section 889 for additional information.

53. Debarment and Suspension

The awardee shall fully comply with the requirements stipulated in Subpart C of 2 CFR Part 180, entitled "[*Responsibilities of Participants Regarding Transactions*](#)" as supplemented by NSF's regulations at 2 CFR Part 2520. The awardee is responsible for ensuring that any lower tier covered transaction, as described in Subpart B of 2 CFR Part 180, entitled "*Covered Transactions*," includes a term or condition requiring compliance with Subpart C. The awardee also is responsible for further requiring the inclusion of a similar term or condition in any subsequent lower tier covered transaction. The awardee acknowledges that failing to disclose the information required under 2 CFR §180.335 may result in the termination of the award, or pursuance of other available remedies, including suspension and debarment.

54. Changes to the Cooperative Agreement

The awardee may request changes or additions to the cooperative agreement. Any such changes must be set forth in writing, agreed to by NSF and approved by the cognizant NSF Grants and Agreements Officer.

55. Limitation of Funds

All reimbursements under this award shall be limited to amounts currently obligated to the award. The awardee bears the risk of making its own obligations, expenditures, or commitments above the current obligation of funds on this award and under no circumstance is NSF required to increase the award ceiling to accommodate additional obligations, expenditures, or commitments.

56. Ensuring Adequate COVID-19 Safety Protocols

(a) This clause implements Section 3(b) of Executive Order 14042, Ensuring Adequate COVID Safety Protocols for Federal Contractors, dated September 9, 2021 (published in the Federal Register on September 14, 2021, 86 FR 50985). Note that the Department of Labor has

included “cooperative agreements” within the definition of “contract-like instrument” in its rule referenced at Section 2(e) of this Executive Order, which provides:

For purposes of this order, the term “contract or contract-like instrument” shall have the meaning set forth in the Department of Labor’s proposed rule, “Increasing the Minimum Wage for Federal Contractors,” 86 Fed. Reg. 38816, 38887 (July 22, 2021). If the Department of Labor issues a final rule relating to that proposed rule, that term shall have the meaning set forth in that final rule.

(b) The awardee must comply with all guidance, including guidance conveyed through Frequently Asked Questions, as amended during the performance of this award, for awardee workplace locations published by the Safer Federal Workforce Task Force (Task Force Guidance) at <https://www.saferfederalworkforce.gov/contractors/>

(c) *Subawards.* The awardee must include the substance of this clause, including this paragraph (c), in subawards at any tier that exceed the simplified acquisition threshold, as defined in Federal Acquisition Regulation 2.101 on the date of subaward, and are for services, including construction, performed in whole or in part within the United States or its outlying areas. That threshold is presently \$250,000.

(d) *Definition.* As used in this clause, *United States or its outlying areas* means:

- (1) The fifty States;
- (2) The District of Columbia;
- (3) The commonwealths of Puerto Rico and the Northern Mariana Islands;
- (4) The territories of American Samoa, Guam, and the United States Virgin Islands; and
- (5) The minor outlying islands of Baker Island, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Islands, Navassa Island, Palmyra Atoll, and Wake Atoll.

(e) The Foundation will take no action to enforce this article, where the place of performance identified in the award is in a U.S. state or outlying area subject to a court order prohibiting the application of requirements pursuant to the Executive Order (hereinafter, “Excluded State or Outlying Area”). A current list of such Excluded States and Outlying Areas is maintained at <https://www.saferfederalworkforce.gov/contractors/>.

57. Resolution of Conflicting Conditions

a. If the CA-FATC is silent on a specific area covered by 2 CFR §200, the requirements specified in 2 CFR §200 must be followed.

b. Should there be any inconsistency between CA-FATC and the NSF *Proposal and Award Policies and Procedures Guide*, the CA-FATC governs.

c. Should there be any inconsistency between any special condition(s) specified in the award notice and CA-FATC, the special conditions in the award notice shall govern.

d. Should there be any inconsistency between CA-FATC and any NSF solicitation cited or incorporated by reference in the award notice, the matter should be referred to the cognizant NSF Grants and Agreements Officer for guidance.

58. Resolution of Disagreements and Disputes

Disagreements and disputes of fact arising under this cooperative agreement that are not resolved through informal discussions will be subject to the written decision of the cognizant NSF Grants and Agreements Officer. This decision will be final unless, within 30 days of receipt of the decision, the awardee makes a written request for review to the Division Director, DGA. The request for review must contain a full statement of the awardee's position with respect to the disputed matter and the facts and rationale that support the awardee's position. Review will follow the procedures stipulated under [PAPPG Chapter XII.B.3](#).

Other Considerations

59. Liability

NSF cannot assume any liability for accidents, bodily injury, illness, breach of contract, any other damages or loss or any claims arising out of any activities undertaken pursuant to the award, whether with respect to persons or property of the awardee or third parties. The awardee is advised to insure or otherwise protect itself or others, as it may deem desirable.

60. Sharing of Findings, Data and Other Research Products

a. NSF expects significant findings from research and education activities it supports to be promptly submitted for publication, with authorship that accurately reflects the contributions of those involved. It expects investigators to share with other researchers, at no more than incremental cost and within a reasonable time, the data, samples, physical collections and other supporting materials created or gathered in the course of the work. It also encourages the awardee to share software and inventions or otherwise act to make the innovations they embody widely useful and usable.

b. Adjustments and, where essential, exceptions may be allowed to safeguard the rights of individuals and subjects, the validity of results or the integrity of collections or to accommodate legitimate interests of investigators.

61. Partnerships with Foreign Collaborators

a. The awardee shall provide written notification to the cognizant NSF Program Officer prior to entering into formal arrangements with foreign collaborators. In the notification, the awardee should specify: the projects and individuals involved; the purpose of the cooperative program; the proposed duration; location; and, the magnitude of the proposed activity.

b. This provision is not intended to require notifications to the NSF of the routine use of awardee services and facilities by foreign investigators or foreign students, or the routine use of foreign facilities by project staff in accordance with the awardee's standard policies and procedures.

62. Government Permits and Activities Abroad

a. For awards that include activities requiring permits from appropriate Federal, State or local government authorities, the awardee should obtain any required permits prior to undertaking the proposed activities.

b. The awardee must comply with the laws and regulations of any foreign country in which research is to be conducted. Areas of potential concern include: (1) requirements for advance approval to conduct research or surveys; (2) special arrangements for the participation of foreign scientists and engineers; and (3) special visas for persons engaged in research or studies. NSF does not assume responsibility for awardee compliance with the laws and regulations of the country in which the work is to be conducted.

c. The awardee also should assure that activities carried on outside the U.S. are coordinated as necessary with appropriate U.S. and foreign government authorities and that necessary licenses, permits or approvals are obtained prior to undertaking the proposed activities.