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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 CFR (Code of Federal Regulations) §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 General Conditions unless otherwise specified in the award. Certain applicable Federal administrative standards are incorporated by reference. The applicable requirements are contained in:

      1. 2 CFR §215, Uniform Administrative Requirements for Grants and Cooperative Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations. NSF has determined that 2 CFR §215 standards also will be applied to commercial organizations, including small businesses;

      2. 45 CFR §602 (the Common Rule implementing OMB Circular A-102), for units of State and Local Government.

   c. By acceptance of this award, the awardee agrees to comply with the applicable Federal requirements for cooperative agreements and to the prudent management of all expenditures and actions affecting the award. 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 award terms and conditions;

      2. is consistent with NSF and awardee policies;

      3. represents effective utilization of resources; and

      4. does not constitute a significant project change (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 §215.

   d. The awardee is responsible for ensuring that the Principal Investigator(s) or Project Director(s) receives a copy of the award conditions, including: the award, the budget, these general terms and conditions, any special terms and conditions, and any subsequent changes in the award conditions. These award conditions are made available to the awardee by NSF in electronic form at [http://www.nsf.gov/awards/managing/co-op_conditions.jsp?org=NSF](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 awards for their organizations and Principal Investigators (PIs) can access their individual awards through use of the FastLane system.

2. NSF Responsibilities

a. NSF has overall responsibility for NSF-funded awards, including providing award oversight for technical and programmatic, and financial and administration 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 will submit all requests for review and for approval and will receive all approvals electronically. Requests shall be submitted in accordance with the procedures identified in 3.c. below.

c. The NSF Program Officer will only request additional work within the scope of the award; will only issue instructions that do not constitute significant changes 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.

3. Prior Approval Requirements

Unless otherwise specified in the award, provisions of the applicable Federal cost principles and other Federal administrative requirements for prior agency approval apply only to the activities and expenditures specified below.

a. Written prior approval from the NSF Grants and Agreements Officer is required for:

1. Significant Project Changes

   (a) Transfer of the project effort (see Article 8);

   (b) Change in objectives or scope (see Article 8);

   (c) Absence or change of PI (see Article 8);

   (d) Change in the amount of cost sharing reflected on Line M of the award budget (see Article 22); or

2. Rearrangements/Alterations aggregating $25,000 or over (Construction) (see Article 11).
b. Written prior approval from the NSF Program Officer is required for reallocation of funds provided for participant or trainee support (see Article 7).

c. The prior approval requirements identified above (as well as other types of award related notifications stipulated in the Grant Policy Manual (GPM) Exhibit III-1) must be submitted electronically to NSF through use of the NSF FastLane system at https://www.fastlane.nsf.gov/ unless other arrangements or accommodations are made in advance with the Grants and Agreements Officer.

4. Pre-Award Costs

a. Awardees may approve pre-award costs incurred within the ninety calendar day period immediately preceding the effective date of the award. Requests for approval of pre-award costs for periods greater than 90 calendar days must be submitted electronically via the NSF FastLane system. Pre-award expenditures prior to 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 expected.

5. Consultant Services

Payments to individuals for consultant services under this cooperative agreement shall not exceed the daily equivalent of the then current maximum rate paid to an Executive Schedule Level IV Federal employee (exclusive of indirect cost, travel, per diem, clerical services, fringe benefits and supplies). The current rate (as well as prior archived rates) is available on the NSF Web site at: http://www.nsf.gov/bfa/dias/policy/start.htm.

6. Equipment

a. Title to Equipment – Universities and Other Non-profit Organizations. Unless otherwise specified in the cooperative agreement, title to equipment purchased or fabricated with NSF award funds shall vest in the awardee upon acquisition. Such equipment is considered exempt property and shall be acquired and used in accordance with paragraph c. below.

b. Title to Equipment - Commercial Organizations.

Unless otherwise specified in the award, title to equipment purchased or fabricated with NSF award funds by a small business or other commercial firm shall vest in the Government. Such equipment shall be acquired and used in accordance with paragraph c. below.

c. Conditions for Acquisition and Use of Equipment.

1. Grantee Assurance. The grantee will assure that each purchase of equipment is:
(a) necessary for the research or activity supported by the grant;
(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 (see GPM Section 612.2c) are unallowable unless the equipment is primarily or exclusively used in the actual conduct of the research.

3. Equipment Usage. The equipment will remain in use for the specific project for which it was obtained in accordance with 2 CFR §215.34(c), unless the provision in 2 CFR §215.34e. applies.

4. Equipment Sharing. The equipment must be shared on other projects or programs in accordance with 2 CFR §215.34(d).

5. Property Management Standards. The grantee shall maintain a property management system that, at a minimum, meets the requirements of 2 CFR §215.34(f). Because of increasing threats to information technology systems, the grantee is reminded that, under 2 CFR sections 215.34.f. (4) and (5), "[a] control system shall be in effect to insure adequate safeguards to prevent loss, damage, or theft of the equipment" and "[a]dequate maintenance procedures shall be implemented to keep the equipment in good condition." This requirement imposes on the grantee a duty to adequately maintain and to insure adequate safeguards against the loss, damage, or theft of information technology equipment and systems purchased with NSF funds.

6. Inventory Requirements.

   (a) In accordance with the requirements of 2 CFR §215.33(a)(1), for all equipment exceeding $5,000, the grantee must submit an annual inventory listing of government-owned property to the NSF Property Administrator, Division of Administrative Services (DAS). The listing should include all government-owned equipment purchased under the award or acquired by screening excess through the General Services Administration (GSA); and include the type of equipment, serial number, acquisition price, acquisition date and condition of the equipment. The inventory listing and a copy of the organization’s audited financial statement should be submitted electronically to fsrpts@ NSF.gov and must be received by DAS no later than September 1 each year. If financial statements are not available electronically, a paper copy should be submitted to:

National Science Foundation
Division of Administrative Services
Attention: NSF Property Administration
4201 Wilson Boulevard,
Room 295
Arlington, VA 22230

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(b) A physical inventory of Government-owned equipment shall be conducted every two years pursuant to 2 CFR §215.34(f). Upon expiration of the award, the grantee shall report the property to the DAS Property Administrator for further agency utilization.

7. Competition. The grantee shall not use equipment acquired with Federal funds to provide services to non-Federal outside organizations for a fee that is less than private companies charge for equivalent services, unless specifically authorized by statute in accordance with 2 CFR §215.34(b).

8. Right to Transfer Title.

(a) 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 grant period.

(b) In cases where NSF elects to transfer the title, disposition instructions will be issued no later than 120 calendar days after the expiration date of the NSF-supported project for which it was acquired.

7. Participant Support Costs

a. Participant support costs are direct costs for items such as stipends or subsistence allowances, travel allowances and registration fees paid to or on behalf of participants or trainees (but not employees) in connection with meetings, conferences, symposia or training projects. (See also GPM Section 618.) Awardee organizations must account for participant support costs separately. Note: No indirect costs may be charged against participant support costs (See GPM Section 633.2).

b. Funds provided for participant support may not be used by awardees for other categories of expense without the specific prior written approval of the cognizant NSF Program Officer. Such requests must be submitted electronically via the NSF FastLane system.

8. Significant Project Changes

The awardee is required to obtain prior written approval from the NSF Grants and Agreements Officer whenever there are significant changes in the project or its direction as stipulated below.

a. Transfer of the Project Effort.

1. NSF authorization to contract or otherwise transfer a significant part of the research or substantive effort to another organization that has been disclosed in the proposal is not needed unless approval has been specifically withheld in the award. (See GPM Section 313.)

2. If it becomes necessary to transfer, by contract or other means, a significant part of the research or substantive effort after an award has been made, notification of this intent should be submitted to NSF electronically via the NSF FastLane system and electronically signed by an Authorized Organizational Representative (AOR). At a minimum, the request shall include a clear description of the work to be performed and the basis for selection of the subawardee (except for collaborative/joint arrangements; see GPM Section 313 for a definition.)
NSF approval of such changes will be by an amendment to the award signed by the NSF Grants and Agreements Officer.

3. The awardee remains responsible for maintaining the necessary documentation on all subawards and making it available to NSF upon request. The awardee shall include subaward activities in the annual progress and final project reports that are submitted to NSF.

4. Awardees shall ensure that the following articles, if applicable, flow down to all subawardees, or are appropriately addressed in the subaward instrument: Articles 5, 7, 9, 10, 11, 12, 17, 18, 19, 20, 21, 22, 23, 24, 27, 28, 29, 30, 31, 32, 34, 35, 39, 40, 41, 42, 43, and 44. If the awardee issues subawards exceeding $2,000 for construction, alteration or repair that are within the scope of the Acts found in 2 CFR §215 Appendix A, “Contract Provisions,” the appropriate clauses applicable to construction activities also will be included in applicable subawards.

b. Change 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 to NSF via use of the FastLane notification and request module https://www.fastlane.nsf.gov/. NSF approval of such changes will be by an amendment to the award signed by the NSF Grants and Agreements Officer.

c. Absence or Change of Principal Investigator. If a named Principal Investigator or Project Director 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 as a reduction of 25% or more in time); (2) sever his or her connection with the awardee organization; or (3) be absent for a continuous period of three months or more, or otherwise relinquish active direction of the project, he or she shall advise both the NSF Program Officer and awardee’s Authorized Organizational Representative via use of the NSF FastLane notification and request module. Action appropriate to the situation will be initiated in accordance with the guidelines described in GPM Section 312.

9. Procurement Standards

Whether or not approval of a procurement is required under Article 9.a., where appropriate, the awardee (including commercial organizations) is responsible for compliance with the procurement standards identified in 2 CFR 215 §§.40 through .48. The awardee also is responsible for ensuring that the appropriate NSF conditions from this award (including Article 23, Audit and Records) are made a part of any contract or other arrangement whose award amount exceeds the simplified acquisition threshold (currently $100,000).

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 GPM Section 614) who are in travel status on business related to an NSF-supported project are allowable as prescribed in the governing cost principles. The requirements for prior approval detailed in the governing cost principles 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. However, if such travel 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 following conditions:

1. the individual is a key person who is essential to the project on a full-time basis;

2. the individual’s residence away from home and in a foreign country is for a continuous period of six months or more and is essential to the effective performance of the project; and

3. the dependents’ travel allowance is consistent with the policies of the organization administering the award.

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


2. 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.

3. 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.

4. 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.

(c) a U.S.-flag air carrier involuntarily reroutes the traveler via a foreign-flag air carrier, the foreign-flag air carrier may be used notwithstanding the availability of alternative U.S.-flag air carrier service.

d. Use of Foreign-Flag Air Carriers.

1. Travel To and From the U.S.

Use of a 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 2 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.

2. Travel Between Points Outside the U.S.

Use of a 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.

3. 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. Rearrangements and Alterations

a. Rearrangement and alteration costs that do not constitute construction (i.e., rearrangements and alterations aggregating less than $25,000) to adapt space or utilities within a completed structure to accomplish the objectives of the award, are allowable and approved, provided the:
1. The building has a usable life consistent with project purposes and is architecturally suitable for conversion; 
2. Rearrangements and alterations are essential to the project; and 
3. Space involved will be occupied by the project.

b. Rearrangements and alterations (construction) aggregating $25,000 or over require the prior written approval of the NSF Grants and Agreements Officer.

12. Allowable Costs

a. The allowability of costs 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 applicable Federal cost principles in effect on the effective date of the award and the terms of the award.

b. The Federal cost principles applicable to specific types of awardees are contained in:
   1. OMB Circular A-21 for both public and private institutions of higher education;
   2. OMB Circular A-122 for other non-profit organizations, except those organizations specifically exempted by the Circular;
   3. OMB Circular A-87 for State and Local Governments;
   4. Federal Acquisition Regulation 31.2 [48 CFR §31.2] for commercial firms and those non-profit organizations specifically exempted from the provisions of OMB Circular A-122; and

c. Certain prior approval requirements contained in these Federal cost principles have been modified by Article 3.

13. Payments

a. Unless otherwise specified in the award, the awardee shall receive payments through electronic fund transfers by the Automated Clearing House Payment System. An awardee should request payments in amounts necessary to meet their current needs, pursuant to the procedures contained in 31 CFR §205. Requests must be made electronically via NSF’s FastLane Cash Request System or the Department of the Treasury’s ASAP system (Automated Standard Application for Payments). The awardee agrees to comply with all applicable Treasury regulations and National Science Foundation implementing and reporting procedures, which are outlined in GPM Chapter IV.

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1 An awardee may contact the Division of Financial Management at (703) 292-8280 for information on using the FastLane Cash Request System.
b. In accordance with 2 CFR §215.22, where appropriate, awardees are required to maintain advances of Federal funds in interest-bearing accounts. For awardees not subject to the Cash Management Improvement Act (CMIA), (State agencies or instrumentalities) interest earned on Federal advances deposited in interest bearing accounts shall be remitted annually to:

Department of Health and Human Services (DHHS)
Payment Management System
P.O. Box 6021
Rockville, MD 20852

In keeping with Electronic Funds Transfer rules [31 CFR §206], interest should be remitted to the DHHS Payment Management System through an electronic medium such as the FEDWIRE Deposit System. Awardees that do not have this capability should use a check. Interest amounts up to $250 per year may be retained by the awardee for administrative expenses. Interest earned on advance payments to other than State agencies shall be reported to NSF on the Federal Cash Transactions Report, SF 272 (if payments are made in accordance with paragraph a. above).

14. Cooperative Agreements Increments

Unless otherwise specified, each successive increment of a cooperative agreement will be funded at the level indicated in the original award without a formal request from the awardee provided an annual project report has been received from the Principal Investigator(s) and accepted by the 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 (including the requisite cost sharing notification, when applicable (see Article 22)).

15. Project Reporting Requirements

a. Annual Project Reports.

1. Submission Requirement. Annual project reports are required for both standard and continuing awards.²

2. Content of Annual Project Reports. Unless otherwise specified in the award, grantees are required to submit annual reports electronically via the project reporting system in FastLane. The NSF FastLane system may be accessed at https://www.fastlane.nsf.gov/fastlane.jsp. The content requirements for annual project reports are specified in the FastLane system and may be supplemented in the award document.

3. Timing of Annual Project Reports. Unless otherwise specified in the award, annual project reports shall be submitted at least three months prior to the end of the current budget period. Failure to submit timely reports may delay processing of funding increments.

² Submission of an "interim" report via the NSF FastLane system does not constitute compliance with the annual reporting requirement.

1. Submission Requirement. Unless otherwise specified in the award, the grantee shall submit a Final Project Report within 90 days following the expiration date of the award.

2. Content of Final Project Report. Unless otherwise specified in the award, grantees shall submit final reports electronically via the project reporting system in FastLane. The NSF Fastlane system may be accessed at: https://www.fastlane.nsf.gov/fastlane.jsp.

3. Additional Requirements. The grantee also shall provide to the cognizant NSF Program Officer, within 90 days following the expiration date of the award, any unique reports or other end products specified in the award (e.g., special cost sharing reports), including report requirements set forth in any NSF brochure, guide, solicitation, etc. referenced in the award as being directly related to either the award or administration of the award.

c. Special Reports. The grantee shall provide the NSF with such other special reports as the NSF may reasonably require or, the grantee may deem appropriate. Insofar as possible, such reports shall be requested with sufficient advance notice to ensure care and thoroughness in their preparation by the grantee. Any addenda to the reports shall be sent to the cognizant NSF Program Officer.

16. Expenditure Reports

All awardees shall submit a Federal Cash Transaction Report (FCTR) (SF-272) by the 10th day of the 2nd month (i.e. Feb. 10, May 10, Aug. 10, and Nov. 10) following the end of each quarter. All FCTRs must be submitted electronically via use of the Financial Administration functions in FastLane available at https://www.fastlane.nsf.gov/.

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. Copyrightable Material

a. Definition. Subject writing means any material that:

   1. is or may be copyrightable under Title 17 of the U.S.C.; 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.

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.

19. Program Income

a. Definition. 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. Program income includes, but is not limited to, income from fees for services performed, the use or rental of real or personal property acquired under the award, the sale of commodities or items fabricated under the award, license fees and royalties on patents and copyrights, and interest on loans made with award funds. Interest earned on advances of Federal funds is not program income. Program income does not include the receipt of principal on loans, rebates, credits, discounts, etc., or interest earned on any of them.

b. Standard Treatment. Unless otherwise specified in the award, program income (except as noted in (1) below) received or accrued to the awardee during the period of this award shall be retained and added to the funds committed to the project by NSF and used to further project objectives. Also, unless otherwise specified, the awardee shall have no obligation to NSF with respect to: (1) license fees and royalties for copyrighted material, patents, patent applications, trademarks, and inventions received or accrued at any time; or (2) program income received beyond the period of this award.

c. Records Retention. The awardee is required to retain appropriate financial and other records relating to project income earned during the award period and for three years beyond the end of the award period.
20. 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 Grant No. (NSF grant 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 NSF Program Officer or his/her 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.

e. Metric System. All reports and publications resulting from this NSF award are encouraged to use the metric system of weights and measures.

21. Patent Rights

Unless otherwise provided in the award, if this award is for experimental, developmental, or research work, the following clause (implementing the Bayh-Dole Act, [35 U.S.C. §§200 et seq.]) shall apply. The awardee shall include this clause in all subawards for experimental, developmental, or 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. 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.

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 Patent Rights clause 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.


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 publication, on sale, or public use 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. The awardee will file patent applications in additional countries or international patent offices within either ten months of the corresponding initial patent application, or six months from the date when permission is awarded by the Commissioner of Patents and Trademarks to file foreign patent applications when such filing has been prohibited by a Secrecy Order.

4. 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.

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; provided that NSF may only request title within 60 days after learning of the failure of the awardee to disclose or elect within the specified times;

   2. in those countries in which the awardee fails to file patent applications within the times specified in paragraph c. above, 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 application for, to pay the maintenance fees 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 §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 thirty 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 §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, 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. The awardee will notify NSF of any decision not to continue prosecution of a patent application, pay maintenance fees, or defend in a reexamination or opposition proceeding on a patent, in any country, not less than 30 days before the expiration of the response period required by the relevant patent office.

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 the award) 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. **Subcontracts.**

1. The awardee will include this Patent Rights clause, suitably modified to identify the parties, in all subcontracts, regardless of tier, for experimental, developmental or research work. The subcontractor will retain all rights provided for the awardee in this Patent Rights clause, and the awardee will not, as part of the consideration for awarding the subcontract, obtain rights in the subcontractors’ subject inventions.
2. In the case of subcontracts, at any tier, when the prime award by NSF was a contract (but not a cooperative agreement), NSF, subcontractor, and contractor agree that the mutual obligations of the parties created by this Patent Rights clause constitute a contract between the subcontractor and the Foundation with respect to those matters covered by this Patent Rights clause.

h. Reporting on Utilization of Subject Inventions. 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 Patent Rights clause. 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 Patent Rights clause, 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 NSF regulations at 45 CFR §650.13 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:

1. such action is necessary 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. such action is necessary to alleviate health or safety needs which are not reasonably satisfied by the awardee, assignee, or their licensees;

3. such action is necessary 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. such action is necessary because the agreement required by paragraph i. of this Patent Rights clause 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 non-profit 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)](https://www.govinfo.gov/content/pkg/CFR-2018-title37-vol2/pagel) and [37 CFR §401.10](https://www.govinfo.gov/content/pkg/CFR-2018-title37-vol2/page/pag174041);

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 the Secretary of Commerce 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 the Secretary when the Secretary’s review discloses that the awardee could take reasonable steps to implement more effectively the requirements of this paragraph k.4.

l. **Communications.** All communications required by this Patent Rights clause should be sent to:

Patent Assistant
Office of the General Counsel
National Science Foundation
4201 Wilson Boulevard
Arlington, VA 22230

22. **Cost Sharing and Cost Sharing Records**

a. **General.** The awardee must cost share under this award in accordance with any specific requirements contained in or referenced by the applicable program solicitation or award document. If the award has no specific requirements and if the work supported by this award is for research resulting from an unsolicited proposal, the awardee may meet the statutory cost sharing requirement by choosing either of two alternative methods:

1. by cost sharing a minimum of one percent on this project; or
2. by cost sharing a minimum of one percent on the aggregate total costs of all NSF-supported projects requiring cost sharing.

b. **Specific Cost Sharing Requirements.**

1. If the award has specific cost sharing requirements in excess of the one percent minimum indicated above, 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, unless otherwise stated in the applicable program solicitation.

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: 1) immediately provide written notification to the Grants and Agreements Officer of the situation; 2) indicate steps it plans to take to secure replacement cost sharing; or 3) indicate the plans it has to either continue or phase out the project in the absence of cost sharing.

3. Should NSF agree to the organization’s proposed plans, the 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.

c. **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 which meet the criteria identified in 2 CFR §215.23. Unless otherwise specified in the award, approval is given to include unrecovered indirect costs (also known as facilities and administrative costs for colleges and universities) 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.

d. **Cost Sharing Reports.** Unless otherwise required by the award or requested by NSF, the actual cost participation by the awardee, while subject to documentation and audit, need not be reported to NSF. In cases, however, where the cost sharing amount reflected on Line M of the cumulative award budget is $500,000 or more, the amount of cost sharing must be documented (on an annual and final basis) and certified by the Authorized Organizational Representative. Such certifications must be submitted electronically via the NSF FastLane system at least:

1. 90 days prior to the end of the current budget period to meet the annual certification requirement; and
2. 90 days following the expiration of the award to meet the final certification requirement.  

e. **Exemptions from Statutory Cost Sharing Requirement.** If the award does not contain or reference any specific cost sharing requirements and provides funds solely for the following purposes (not considered to be in support of “research”), statutory cost sharing is not required:

1. international travel;  
2. construction, improvement or operation of facilities;  
3. acquisition of research equipment;  
4. ship operations;  
5. education and training;  
6. publication, distribution and translation of scientific data and information;  
7. symposia, conferences and workshops; and  
8. special studies authorized or required by Subsections 3a(5) through 3a(7) of the NSF Act, as amended.

23. **Audit and Records**

a. Financial records, supporting documents, statistical records, and other records pertinent to this award shall be retained by the awardee for a period of three years from submission of the final reports specified in Articles 15 and 16.

   1. Records that relate to audits, appeals, litigation or the settlement of claims arising out of the performance of the project shall be retained until such audits, appeals, litigation or claims have been disposed of.

   2. Records relating to projects subject to special project income provisions shall be retained until three years from the end of the awardee’s fiscal year in which the award requirement for reporting income expires.

b. Unless court action or audit proceedings have been initiated, the awardee may substitute microfilm copies of original records.

c. The Director of the National Science Foundation and the Comptroller General of the U.S., or any of their duly authorized representatives, shall have access to any pertinent books, documents, papers and records of the awardee organization and of the performing organization, if different, to make audits, examinations, excerpts and transcripts. Further, any negotiated contract in excess of the simplified acquisition threshold (currently $100,000) made by the awardee shall include a provision to the effect that the awardee, the Director of the National Science Foundation, the Comptroller General of the U.S., or any of their duly authorized representatives, shall have access to pertinent records for similar purposes.
d. In order to avoid duplicate record keeping, NSF may make special arrangements with the awardee to retain any records that are needed for joint use. NSF may request transfer to its custody of records not needed by the awardee when it determines that the records possess long-term retention value. When the records are transferred to, or maintained by NSF, the three-year retention requirement is not applicable to the awardee. In the rare event that this provision is exercised, NSF will negotiate a mutually agreeable arrangement with the awardee regarding reimbursement of costs.

e. Awardees that are States, Local Governments or Non-Profit Organizations, shall arrange for the conduct of audits as required by OMB Circular A-133 “Audits of States, Local Governments, and Non-Profit Organizations” (including colleges and universities.) They shall provide copies of the reports of these audits to the cognizant Federal audit agency. Any Federal Audit of this project deemed necessary by NSF shall build upon the results of such audit(s).

24. **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 contractor under an award, the awardee shall provide and shall require its contractors to provide all reasonable facilities and assistance for the safety and convenience of the Government 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.

25. **Suspension or Termination**

a. Any suspension or termination action taken by NSF must be issued by an NSF Grants and Agreements Officer and will be in accordance with this article and GPM Section 910.

b. The award may be suspended or terminated in whole or in part in any of the following situations by:

1. NSF when the awardee has materially failed to comply with the terms and conditions of the award;

2. NSF when the Foundation has other reasonable cause;

3. NSF when ordered by the Deputy Director under NSF’s Regulation on Research Misconduct [45 CFR § 689];

4. NSF and the awardee by mutual agreement (if NSF and the awardee cannot reach an agreement, NSF reserves the right to unilaterally terminate the award); or

5. the awardee on written notice to NSF setting forth the reasons for such action, the effective date, and, in the case of partial termination, the portion to be terminated or suspended (with the understanding that if NSF determines that the unterminated portion will not accomplish the purposes of the award, it may suspend or terminate the entire award).
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 appropriate Federal 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 appropriate Federal 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. A notice of termination other than by mutual agreement and/or the final settlement amount may be subject to review pursuant to Article 26.

26. Termination Review Procedure

a. A request for review of a notice of termination or settlement should be addressed to the Director, Division of Grants and Agreements, National Science Foundation, 4201 Wilson Blvd., Arlington, VA, 22230. 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 and the pertinent facts and reasons in support of such position.

c. Review of a notice of termination or settlement will be conducted in accordance with GPM Section 923.

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

27. Nondiscrimination

a. The award and any program assisted thereby are subject to the provisions of Title VI of the Civil Rights Act of 1964 [42 U.S.C. 2000d], the regulations issued pursuant thereto by NSF [45 CFR §611], and the Assurance of Compliance which the awardee has filed with NSF. No person on the basis of race, color, national origin, or handicap shall be excluded from participation in, be denied benefits of, or otherwise be subjected to discrimination under the award. In addition, if the project involves an education activity or program, as defined by Title IX of the Education Amendments of 1972 [20 U.S.C. §§ 1681, 1682, 1683, 1684, 1685, 1686], no person on the basis of sex shall be excluded from participation in the project. Further, by acceptance of the award, the awardee assures NSF that it will comply with Section 504 of the Rehabilitation Act of 1973 [29 U.S.C. §794] and NSF's implementing regulations [45 CFR §605].
b. The awardee shall obtain from each organization that applies to be or serves as a subrecipient, subawardee or subcontractor under the award (for other than the provision of commercially available supplies, materials, equipment or general support services) an Assurance of Compliance with Title VI of the Civil Rights Act of 1964. Civil Rights Act assurances may be filed with the awardee in one of two ways:

1. by written notification that the appropriate Assurance of Compliance form has been executed and filed either with NSF or the U.S. Department of Health and Human Services; or

2. by executing and filing with the awardee an NSF Assurance of Compliance Form. The awardee shall obtain assurances pursuant to Section 504 of the Rehabilitation Act of 1973, as amended, from subrecipients by incorporating into the subagreement a provision that acceptance of the subagreement constitutes assurance.

c. The awardee agrees to comply with the Age Discrimination Act of 1975 [42 U.S.C. §§ 6101 et seq] as implemented by the Department of Health and Human Service regulations at 45 CFR §90 and the regulations of NSF at 45 CFR §617. In the event the awardee passes on NSF financial assistance to subrecipients, this provision shall apply to the subrecipients, and the instrument under which the Federal financial assistance is passed to the subrecipient shall contain a provision identical to this provision.


a. NSF does not have original classification authority and does not normally support classified projects. It therefore does not expect that results of NSF-supported research projects will be classifiable, except in very rare instances.

b. Executive Order (E.O.) 12958, as amended http://www.whitehouse.gov/news/releases/2003/03/20030325-11.html states that basic research information not clearly related to the national security may not be classified. Nevertheless, some information concerning, among other things, scientific, technological or economic matters relating to the national security or cryptology may require classification.

c. There may be cases when an NSF awardee originates information during the course of an NSF-supported project that the awardee believes requires classification under E.O. 12958.

d. In such a case, the awardee has the responsibility to promptly:

1. submit the information directly to the government agency with appropriate subject matter interest and classification authority or, if uncertain as to which agency should receive the information, to the Director of the Information Security Oversight Office, General Services Administration (GSA);

2. protect the information as though it were classified until the awardee is informed that the information does not require classification, but not longer than 30 days after receipt by the agency with subject matter interest or by the GSA; and

3. notify the cognizant NSF Program Officer.
e. The Executive Order requires the agency with appropriate subject matter interest and classification authority to decide within 30 days whether to classify the material. If it determines the information will require classification, the awardee shall cooperate with that agency, NSF or other appropriate agencies in securing all related project notes and papers.

f. If the information is determined to require classification, the awardee may wish or need to discontinue the project. (See Article 25 and GPM 913, “Termination by Mutual Agreement.”)

29. Animal Welfare

a. Any awardee performing research on vertebrate animals\(^3\) shall comply with the Animal Welfare Act [7 U.S.C. §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 Academy of Science (NAS) Publication, “Guide for the Care and Use of Laboratory Animals” (1996) 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 NAS Guide).

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

NOTE--The awardee may request registration of its facility and a current listing of licensed dealers from the Regional Office of the Animal and Plant Health Inspection Service (APHIS), United States Department of Agriculture, for the region in which its research facility is located. 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/](http://www.aphis.usda.gov/).

30. Research Involving Recombinant DNA Molecules

If this award supports research involving recombinant DNA molecules, the awardee agrees to comply with the requirements of GPM Section 712.

31. Clean Air and Water

(Applicable only if the award exceeds $100,000, or a facility to be used has been the subject of a conviction under the Clean Air Act [42 U.S.C. §7413(c)(1)] or the Clean Water Act [33 U.S.C. §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 U.S.C. §7414] and Section 308 of the Clean Water Act [33 U.S.C. §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 award of the cooperative agreement.

\(^3\) 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.
b. That no portion of the work required by the award will be performed in a facility listed on the Environmental Protection Agency List of Violating Facilities on the date that the award was awarded 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 subcontract.

32. 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 §690]."

33. Investigator Financial Disclosure Policy

If the awardee employs more than 50 persons, the awardee shall maintain an appropriate written and enforced policy on conflict of interest consistent with the provisions of GPM Section 510 (which also is published at 60 Federal Register 35820).

34. State Sales and Use Taxes

Awardees are reminded that each set of cost principles cited in Article 12.b limits the allowability of taxes to those the organization is required to pay. Awardees must avail themselves 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.

35. Debarment and Suspension

Recipients shall fully comply with the requirements stipulated in Subpart C of 45 CFR §620, entitled “Responsibilities of Participants Regarding Transactions.” The recipient is responsible for ensuring that any lower tier covered transaction, as described in Subpart B of 45 CFR §620, entitled “Covered Transactions,” includes a term or condition requiring compliance with Subpart C. The recipient also is responsible for further requiring the inclusion of a similar term or condition in any subsequent lower tier covered transaction. The recipient acknowledges that failing to disclose the information required under 45 CFR §620.335 may result in the termination of the award, or pursuance of other available remedies, including suspension and debarment. Recipients may access the Excluded Parties List System at http://epls.arnet.gov.

36. Changes—Limitation of Funds

Either party to this agreement may request changes or additions to the agreement. Any such changes must be agreed to by both parties, set forth in writing, and approved by the NSF Grants and Agreements Officer. No changes shall be considered as an authorization to the awardee to exceed the amount of funds awarded under this agreement. This agreement, however, may be formally amended to modify the amount of funds awarded.
37. Resolution of Conflicting Conditions

Should there be any inconsistency between any special conditions contained in the award and these Cooperative Agreement General Conditions, the special conditions in the award shall control.

Should there be any inconsistency between these Cooperative Agreement General Conditions, any special conditions contained in the award, and any NSF guides, brochures, etc., cited or included by reference in the award, the matter should be referred to the NSF Grants and Agreements Officer for guidance.

38. 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 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 Director, Division of Grants and Agreements, NSF.

The request for review must contain a full statement of the awardee's position and the pertinent facts and reasons in support of the position. Review will follow the procedures stipulated under GPM Section 923.

OTHER CONSIDERATIONS

39. Liability

NSF cannot assume any liability for accidents, illnesses, injuries, or claims arising out of, or related to, any activities supported by an award or for unauthorized use of patented or copyrighted materials. The awardee organization is advised to take such steps as may be deemed necessary to insure or protect itself, its employees and its property.

40. 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 awardees 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.
41. **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.

42. **Government Permits and Activities Abroad**

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

b. The grantee 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 grantee compliance with the laws and regulations of the country in which the work is to be conducted.

c. The grantee 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.

43. **Sense of the Congress on Use of Funds**

Recent Acts making appropriations to NSF provide “It is the sense of the Congress that, to the greatest extent practicable, all equipment and products purchased with funds made available in this Act should be American-made” and require the Foundation to notify awardees of that statement.

44. **Increasing Seat Belt Use in the United States**

In accordance with [Executive Order 13043](#), *Increasing Seat Belt Use in the United States*, dated April 16, 1997, “grantees are encouraged to adopt and enforce on-the-job seat belt policies and programs for their employees when operating company-owned, rented, or personally owned vehicles.”