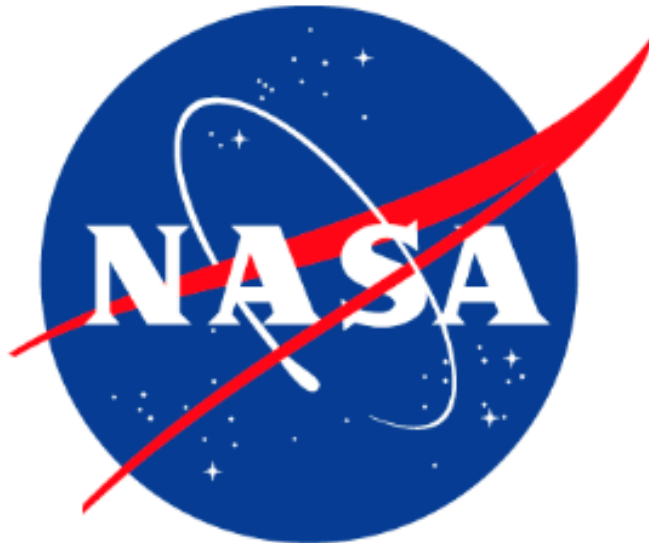


Grant and Cooperative Agreement Manual (GCAM)



National Aeronautics and Space Administration
Office of the Chief Financial Officer
Grants Policy and Compliance Branch

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1.0 Acronyms

| | |
|----------|------------------------------------------------------------------------|
| AO | Announcement of Opportunity |
| AOR | Authorized Organization Representative |
| BAA | Broad Agency Announcement |
| CAN | Cooperative Agreement Notice |
| CFO | Chief Financial Officer |
| CFR | Code of Federal Regulations |
| DAA | Document Availability Authorization |
| DCMA | Defense Contract Management Agency |
| DoD | Department of Defense |
| DUNS | Data Universal Numbering System |
| FAPIIS | Federal Awardee Performance and Integrity Information System |
| FAR | Federal Acquisition Regulation |
| FGCAA | Federal Grants and Cooperative Agreements Act |
| FIPS PUB | Federal Information Processing Standards Publication |
| FPDS-NG | Federal Procurement Data System-Next Generation |
| FFATA | Federal Funding Accounting and Transparency Act |
| FFR | Federal Financial Report |
| FSRS | Federal Subaward Reporting System |
| GCAM | Grant and Cooperative Agreement Manual |
| GIC | Grant Information Circular |
| GPC | Grants Policy and Compliance Branch |
| ICPMO | Internal Central Printing Management Officer |
| ISS | International Space Station |
| ITAR | International Traffic in Arms Regulations |
| JAUP | Justification for Acceptance of Unsolicited Proposal |
| JPL | Jet Propulsion Laboratory |
| JUNG | Justification for Non-competitive Grants |
| MOA | Memorandum of Agreement |
| NASA | National Aeronautics and Space Administration |
| NAIS | NASA Acquisition Internet Service |
| NEPA | National Environmental Policy Act |
| NFS | NASA FAR Supplement |
| NOFO | Notice of Funding Opportunity |
| NPR | NASA Procedural Requirements |
| NSPIRES | NASA Solicitation and Proposal Integrated Review and Evaluation System |
| NRA | NASA Research Announcement |
| NSSC | NASA Shared Services Center |
| OCFO | Office of the Chief Financial Officer |
| OCI | Organizational Conflict of Interest |
| OMB | Office of Management and Budget |
| ONR | Office of Naval Research |
| PI | Principal Investigator |
| PMR | Procurement Management Review |
| PCSA | Property Control System Analyses |

| | |
|-------|-----------------------------------------------------|
| PCSR | Plant Clearance System Reviews |
| PPS | Procurement for the Public Sector |
| RFP | Request for Proposal |
| SAM | System for Award Management |
| SPOC | Single Point of Contact |
| STI | Scientific and Technical Program Information |
| STIPO | Scientific and Technical Information Program Office |
| TAS | Treasury Account Symbol |
| UEI | Unique Entity Identifier |

2.0 Purpose

The National Aeronautics and Space Administration (NASA) Grant and Cooperative Agreement Manual (GCAM) provides policy guidance to NASA Grant Officers, Technical Officers, Program Managers, and all other award-management-related personnel to implement government-wide and NASA-specific regulations for awarding and administering grants and cooperative agreements with educational and non-profit organizations; State, local, and Indian tribal governments; and for-profit organizations. The GCAM is written, maintained, and distributed by NASA’s Office of the Chief Financial Officer (OCFO), Grants Policy and Compliance Branch (GPC). In June 2018, NASA-wide grant and cooperative agreement policy roles and responsibilities transferred from NASA’s Office of Procurement to the OCFO. As such, all grant and cooperative agreement guidance has been updated to reflect the transition of duties and responsibilities to the appropriate Office and approving officials. Unless otherwise indicated, throughout this Manual the term “grant” includes cooperative agreements, and the term “award” includes grants and cooperative agreements.

2.1 General

2.2 Applicability

The GCAM applies to all grants and cooperative agreements issued by NASA. Policies established in the GCAM are based primarily on the following regulations:

- **Title 2 of the U.S. Code of Federal Regulations (CFR) Part 200 (2 CFR 200)** – Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards. The requirements in this part apply to all Federal agencies that make Federal awards to non-Federal entities. For NASA awards subject to 2 CFR 200, Subparts A through F shall apply to all award recipients except for for-profit organizations. Also, only Subparts A through D of 2 CFR 200 apply to for-profit organizations.
- **2 CFR 1800** – Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards. This is the NASA supplement to 2 CFR 200. The requirements in this part are applicable to awards issued by NASA to non-Federal entities, for-profit organizations, and foreign organizations as allowed by 2

CFR 200.101, Applicability.

All requirements in 2 CFR 200, 2 CFR 1800, and an award's terms and conditions flow down to subaward recipients unless stated otherwise. All recipients shall ensure that subaward recipients comply with all applicable sections of the aforementioned regulations.

The GCAM does not apply to awards issued under 14 CFR 1274, Cooperative Agreements with Commercial Firms, and awards issued under this regulation shall continue to adhere to 14 CFR 1274 until the award is closed out. If the award is amended, then the award shall be updated to adhere to 2 CFR 200, 2 CFR 1800, and this Manual. NASA is in the process of rescinding 14 CFR 1274, and upon rescission no new awards shall be issued under 14 CFR 1274. The full text of 14 CFR 1274 will be maintained at https://prod.nais.nasa.gov/pub/pub_library/srba/index.html for reference once the regulation is rescinded.

2.3 Relationship between the GCAM and the Federal Acquisition Regulation (FAR)

The FAR only applies to grants and/or cooperative agreements if they are issued to a for-profit organization. In the case of an award issued to a for-profit organization, the FAR cost principles at part 30 (Cost Accounting Standards Administration) and part 31 (Contract Cost Principles and Procedures) apply. Any Notice of Funding Opportunity (NOFO) that may result in a contract award is subject to the GCAM Appendix A, Standard Format for a NASA Notice of Funding Opportunity, and the FAR. NOFOs that will not result in the award of a contract are subject only to the GCAM.

The NASA FAR Supplement (NFS) describes two types of Broad Agency Announcements (BAAs): Announcements of Opportunity (AOs) and NASA Research Announcements (NRAs). AOs and NRAs may result in the award of contracts, cooperative agreements, and/or grants. In addition to FAR part 35, Research and Development Contracting, AOs are subject to the NFS Part 1872, Acquisition of Flight Investigations, and NRAs are subject to NFS 1835.016-71, NASA Research Announcements.

If a BAA is subject to the FAR during the solicitation process, the GCAM applies when it is determined, after the receipt of proposals, that the resulting award will be a grant or cooperative agreement. If a BAA results in the award of a grant or cooperative agreement, then the Grant Officer must include the terms and conditions required by this Manual in the resulting award document, rather than the terms and conditions in the FAR and the NFS.

Awards issued through a Cooperative Agreement Notice (CAN) must always be cooperative agreements. A CAN is used to solicit research and related programs and activities that involve a high degree of interaction and cooperation between NASA and the selected recipient(s) to achieve NASA's desired objectives (for example, to develop and operate a research institute, carry out an extensive educational/public outreach activity, or acquire a specified technology capability).

2.4 Award Issuance

Agency policy requires that all grant and cooperative agreement actions be processed, awarded, managed, and administered by the NASA Shared Services Center (NSSC). Although the NSSC will issue and administratively manage all awards, personnel at NASA Centers and Headquarters will continue to serve as Technical Officers on their awards; perform pre-award activities, such as drafting NOFOs, conducting proposal reviews, and submitting Technical Requirements Packages (TRP) to the NSSC; and perform Technical Officer related post-award activities, such as reviewing performance reports and responding to applicable technical assistance questions. Open awards issued at Centers will remain with that Center until the period of performance has ended and all closeout activity has been completed in accordance with 2 CFR 200.344, Closeout, and GCAM Section 9.0.

2.5 Roles and Responsibilities

GPC is responsible for developing agency-wide award policies and guidance, ensuring that NASA complies with applicable statutes and regulations, and providing technical assistance and training to NASA's award-management community. GPC is also responsible for coordinating NASA's responses to award-related audits and inspections that impact the entire agency and coordinating Office of Management and Budget (OMB) and Congressional inquiries and requests regarding award management on behalf of the agency. GPC does not issue or manage awards, and GPC does not develop policies for or manage contracts. The Office of Procurement is responsible for contract management.

Various program offices throughout NASA manage Federal award programs. Each NASA award must be assigned a Technical Officer who is an official from the program office that will be managing the programmatic, scientific, and technical aspects of the award. Program offices are responsible for identifying funding for their program; soliciting, evaluating, and selecting proposals for their projects; and monitoring their awards to ensure performance goals are met and deliverables are achieved. Technical Officers are responsible for reviewing the technical aspects of performance reports and providing feedback to recipients, addressing recipients' technical questions, conducting site visits as necessary, and working with the NSSC to provide programmatic input on recipients' requests for any changes to the award (e.g., key personnel changes, no-cost extension requests, etc.).

The NSSC grants team is responsible for issuing awards, monitoring awards after they have been issued to ensure compliance with applicable statutes and regulations, issuing award amendments, approving post-award actions, providing administrative assistance, and closing out awards after a project has concluded. Only a NSSC Grant Officer (who may also be a Contracting Officer) may issue new awards, amend awards, and provide prior approval for certain post-award actions per 2 CFR 200.407, Prior written approval. Grant Officers are also the only personnel that are able to make the final determination regarding the allowability, allocability, and reasonableness of a recipient's expenditures charged to an award. If an award must be terminated, Grant Officers are the final approving official on such termination decisions.

3.0 Type of Award Instruments

Determining the type of award instrument is the first step required to decide whether or not the GCAM applies. [The Federal Grant and Cooperative Agreements Act of 1977 \(FGCAA\)](#), 31 United States Code (U.S.C.) §6301 et. seq., was enacted to give agencies a better understanding of the types of instruments executive agencies may award by characterizing the relationship between executive agencies and contractors, States, local governments, and other recipients in acquiring property and services and in providing Federal financial assistance. See 2 CFR 200.1 for a definition of Federal financial assistance. The FGCAA characterizes instruments by defining the terms *procurement contract*, *grant*, and *cooperative agreement*.

The FGCAA defines a **procurement contract** as a legal instrument reflecting the relationship between the U.S. Government and a State, a local government, or other recipient when:

- The principal purpose of the instrument is to acquire (by purchase, lease, or barter) property or services for the direct benefit or use of the U.S. Government or
- The agency decides in a specific instance that the use of a procurement contract is appropriate.

The FGCAA defines a **grant** as a legal instrument reflecting a relationship between the U.S. Government and a State or local government or other recipient when:

- The principal purpose of the relationship is to transfer a thing of value to the State or local government or other recipient to carry out a public purpose of support or stimulation authorized by a law of the United States instead of acquiring (by purchase, lease, or barter) property or services for the direct benefit or use of the U. S. Government; and
- Substantial involvement is not expected between the executive agency and the State or local government or other recipient when carrying out the activity contemplated in the agreement.

The FGCAA defines a **cooperative agreement** as a legal instrument reflecting a relationship between the U.S. Government and a State or local government or other recipient when:

- The principal purpose of the relationship is to transfer a thing of value to the State or local government or other recipient to carry out a public purpose of support or stimulation authorized by a law of the United States instead of acquiring (by purchase, lease, or barter) property or services for the direct benefit or use of the U.S. Government; and
- Substantial involvement is expected between the executive agency and the State or local government or other recipient when carrying out the activity contemplated in the agreement.

Congress enacted the FGCAA because it was concerned about the perceived misuse of grants and cooperative agreements, specifically using grants and cooperative agreements to circumvent competition and procurement rules. If the principal purpose of the funded activity is to provide something for the direct benefit or use of the Federal government, then a contract is the appropriate legal instrument to use. Grants and cooperative agreements, on the other hand, are considered a type of financial assistance because they support or stimulate a public purpose.

3.1 Basic Considerations in Determining Award Instrument

The decision whether to use a contract, grant, or cooperative agreement as an award instrument must be based on the principal purpose of the relationship or arrangement. Normally this decision is made by the Program Manager in consultation with the Technical Officer. The type of recipient is not a factor in determining the type of award instrument.

Two essential questions should be asked in determining the appropriate funding instrument. The first question is: Will NASA be prevented from furthering a specific Agency mission or program requirement if the research or project is not accomplished? The answer to this question must be “No” if a grant or cooperative agreement is to be used.

The second question is: Is the work being performed by the recipient primarily for its own purposes, with NASA merely providing financial support or other assistance? The answer to this question must be “Yes” if a grant or cooperative agreement is to be used. If these two criteria are met in the manner specified, the research or project effort is generally not representative of a NASA requirement, and then the consideration is whether it supports or stimulates a public purpose.

3.1.1 Questions to Determine Principal Purpose

When NASA, within its authority, enters into a transaction in which the principal purpose is to accomplish a public purpose of support or stimulation authorized by Federal statute, a grant or cooperative agreement is the appropriate instrument. When the principal purpose of a transaction is to accomplish a NASA need, requirement, or service, then a contract shall be used as the award instrument. The decision whether to use a contract, grant, or cooperative agreement as an award instrument must be based on the principal purpose of the relationship or arrangement. Proposers may request a grant or contract, but NASA (i.e., the Grant or Contracting Officer) will determine the correct award instrument based on the above factors and NASA requirements.

The Principal Purpose often can be determined through the Benefit or Use Test and the Support and Stimulation Test. The Benefit and Use Test assists in determining if NASA directly benefits from or directs the research or project. A contract should be awarded when any of the answers to the following questions are “yes.”

The following are questions for the Benefit or Use Test:

- Is NASA the primary beneficiary or user of the activity?
- Is NASA providing the specifications for the project?
- Is NASA having the project completed based on its own identified needs?
- Does NASA require the delivery of tangible property at the completion of the activity?

The Support and Stimulation Test refers to the recipient of the grant or cooperative agreement. If a grant or cooperative agreement is to be issued, then the recipient must implement the research or project for its own purposes, and NASA must merely be providing the financial support or other assistance. A grant or cooperative agreement should be awarded when any of the answers to the

following questions are “yes.”

The following are questions for the Support or Stimulation Test:

- Is the applicant performing the project for a public purpose?
- Is NASA merely supporting the project with financial or other assistance?
- Is the benefit to NASA incidental (i.e., do funded activities complement NASA's mission)?

3.1.2 Determining Whether to Issue a Grant or Cooperative Agreement

The distinguishing factor between a grant and a cooperative agreement is the degree of Federal participation or involvement during the performance of the award activities. Substantial involvement pertains to programmatic involvement rather than administrative oversight. Examples of substantial NASA involvement and contribution could include or involve:

- NASA plays an active role in collaborative relations;
- Government personnel, property, facilities, equipment, or research capabilities are used or shared;
- The recipient works for a substantial amount of time at a NASA Center or NASA personnel work at the recipient's facility, provided the shared facility arrangements is at no cost to either party; or
- The collaboration serves to produce and/or enhance a jointly authored report or educational product.

3.2 Nature of Awards

Although NASA's authority is not limited to research awards, typically NASA issues awards to support research and research-related activities. Research-related activities may include, but are not limited to, education, travel, conferences, and training. Unless otherwise specified, performance will be assessed through the requirements outlined in Sections 7.1 of this Manual.

3.3 Organizational Conflict of Interest Policy

Attending to the issues of conflict-of-interest, bias, and confidentiality is critical to ensuring the fairness and credibility of the proposal, evaluation, selection, award, and administration of Federal awards. Any actual or apparent conflicts of interest must be disclosed. Such a conflict would arise when the employee, officer, agent or any member of their immediate family, their partner, or an organization which employs or is about to employ any of the parties has a financial or other interest in a proposing organization. NASA has established policies and procedures to avoid, to the maximum extent practicable, conflicts of interests associated with Federal awards.

The award recipient shall maintain written standards of conduct governing the performance of its employees engaged in the award and administration of contracts. The recipient may set standards for situations in which the financial interest is not substantial, or a gift is an unsolicited item of nominal value. The standards of conduct shall provide for disciplinary actions to be applied for violations of such standards by officers, employees, or agents of the recipient.

4.0 Limitations

1. NASA does not award grants or cooperative agreements to provide monetary donations to individuals, groups or institutions regardless of the purpose(s).
2. NASA's ability to award grants and cooperative agreements is limited by appropriations available to carry out authorized Agency programs. Advice of NASA legal counsel will be sought in unusual situations.
3. Excess Government research property may be donated to educational institutions and non-profit organizations pursuant to 15 U.S.C. 3710(I), and such donation is not considered a grant. See 2 CFR 200.312(b), Federally-owned and exempt property.
4. Loans of other Government property not associated with a contract, grant, or cooperative agreement under 31 U.S.C. 6301 to 6308, and made under the National Aeronautics and Space Act of 1958 (51 U.S.C 20101 et. Seq.), are accomplished through separate NASA loan agreements that are neither grants nor cooperative agreements.
5. Neither grants nor cooperative agreements shall be used as legal instruments for consulting services to NASA.
6. Grants and cooperative agreements shall not be used as legal instruments for facility design or construction services for NASA.
7. NASA grants and cooperative agreements are typically not used to fund, in whole or in part, real property or general remodeling, construction, or demolition of a new or existing non-NASA building or any other type of facility, including exterior spaces. This limitation does not prevent eligible recipients (such as research and/or education organizations, museums and/or planetariums, parks, etc.) from using funds from a NASA grant or cooperative agreement to acquire equipment or to enhance, establish, and/or replace permanent NASA-related exhibits with total costs in excess of \$5,000. This limitation also does not prevent recipients from using funds from grants or cooperative agreements for the design, fabrication (commonly called construction), delivery, and/or installation of a NASA-related-permanent exhibit; for installation and/or operation of fixed or permanent planetarium equipment; for outdoor exhibits such as solar system walks or Mars Rover yards; or for the delivery, installation, operation, and/or maintenance of permanent, large research equipment.
8. Requesting an exception to facility, real estate, real property or construction limitations: it is unlikely that an award to create or enhance a facility or to purchase real estate or property will be approved unless specifically authorized by Congress. A review by Center legal counsel to assure legal sufficiency is required. When legal authority exists for a non-NASA entity to receive a grant or cooperative agreement

for the design or construction of a NASA or non-NASA facility, the NASA Center must submit a request package to the Grants Policy and Compliance Policy Director that at minimum includes:

- a. A copy and full citation of the Congressional Authorization.
- b. Dollar value of the recipient's proposal.
- c. Organization identifiers, such as, but not limited to, name, address, and contact information of the recipient.
- d. The request package should state that a proposal has been received, accepted by the NASA Center as adequate for evaluation, evaluated, and determined suitable for funding.
- e. The request package shall include a copy of the proposal and the technical and cost evaluations.
- f. A proposal that is adequate for evaluation shall include, at a minimum, a reasonable description of the work to be performed and its technical objectives, a description of the resources needed, and an adequate justification of the proposed budget.
- g. The evaluation shall be conducted following the procedures in 2 CFR 200.204, Notice of funding opportunities, and 200.205, Federal award agency review of merit proposals. The standards for determining that a proposal is suitable for funding are technical soundness and cost reasonableness and realism.
- h. In addition, the proposal should be reviewed by Center facilities National Environmental Policy Act (NEPA) Center representatives and historical preservation specialists to ensure compliance with the National Environmental Protection Act and the National Historic Preservation Act, and their findings should be included in the request package.

5.0 Pre-award

5.1 Program Planning and Design

Per 2 CFR 200.202, Program Planning and Design, NASA must design a program and create an Assistance Listing before soliciting award proposals. The program must be designed with clear goals and objectives that facilitate the delivery of meaningful results consistent with the program's authorizing legislation. Program performance must be measured based on the goals and objectives developed during program planning and design (See section 7.1 of this Manual for more information on performance measurement). Performance measures may differ depending on the type of program. The program must align with the strategic goals and objectives within NASA's performance plan and should support NASA's performance measurement, management, and reporting as required by Part 6 of OMB Circular A-11 (Preparation, Submission, and Execution of the Budget). The program must also be designed to align with the Program Management Improvement and Accountability Act (Pub. L. 114-264).

5.2 NASA Assistance Listings

The Federal Program Information Act (Pub. L. 95-220) requires the annual dissemination of Federal domestic assistance information through the Federal Assistance Listings, which is the

single, authoritative, government-wide source of Federal financial assistance program information produced by the Federal Government. NASA must create an Assistance Listing for each program, and programs must be designed with clear goals and objectives that facilitate the delivery of meaningful results. Each NASA Assistance Listing must include, where appropriate, the information in 2 CFR 200.203, Requirement to provide public notice of Federal financial assistance programs, which includes a program description, purpose, goals, objective, and measurement.

Each Assistance Listing is associated with a unique five-digit number called the “Assistance Listing number.” Technical Officers or program managers shall enter the applicable Assistance Listing number, as set forth in the Assistance Listing /Treasury Account Symbol (TAS) crosswalk table provided herein, when creating NOFOs for all new grant or cooperative agreement funding opportunities that will be posted on NSPIRES and Grants.gov. For all new NOFOs that may result in the award of a grant or cooperative agreement, the Technical Officer or Program Manager shall post the applicable Assistance Listing number in the Grants.gov synopsis for that particular announcement. Some NOFOs can result in the award of a grant, cooperative agreement, or contract; however, Assistance Listing numbers are not applicable to NASA contracts. Therefore, if the NOFO results in the award of a contract, the Assistance Listing number will not be used post award. If more than one funding source/ Assistance Listing number is associated with the action, the Assistance Listing number associated with the highest percentage from a single funding source should be cited. Below is a chart of the current NASA Assistance Listing numbers.

| ASSISTANCE LISTING TITLE | TREASURY ACCOUNT SYMBOL | ASSISTANCE LISTING NUMBER |
|-----------------------------------------------------------------------|--------------------------------|----------------------------------|
| Science | 80 0120 | 43.001 |
| Aeronautics | 80 0126 | 43.002 |
| Exploration | 80 0124 | 43.003 |
| Space Operations | 80 0115 | 43.007 |
| Office of STEM Engagement | 80 0128 | 43.008 |
| Safety, Security and Mission Services (Formerly Cross Agency Support) | 80 0122 | 43.009 |
| Construction & Environmental Compliance & Restoration | 80 0130 | 43.010 |
| Space Technology | 80 0131 | 43.012 |

5.3 Assistance Listing Numbers

1. For reporting purposes under the Federal Funding Accountability and Transparency Act, Pub. L. 109-282, and 2 CFR 200, Subpart F, Audit Requirements, Grant Officers shall convey the assigned assistance listing number to recipients using wording similar to that suggested below. The suggested wording for conveying the

assistance listing number to recipients is included in the Procurement for the Public Sector clause templates for grants and cooperative agreements. Grant Officers shall convey the assigned assistance listing number to the recipients retrospectively, by email, fax, or regular mail. If more than one funds source/ assistance listing number is associated with a given action, the assistance listing number associated with the highest percentage of funds source should be selected.

2. Grant Officers shall “select” the applicable Agency assistance listing number from the drop- down list when entering grant or cooperative agreement awards in PPS, as set forth in the assistance listing /TAS crosswalk table provided in Section 5.2 of this Manual. If more than one funds source/ assistance listing number is associated with the action, the assistance listing number associated with the highest percentage funds source should be cited. CAUTION: To ensure data quality and integrity, Grant Officers should avoid manually entering the assistance listing number in PPS select from the drop-down menu only.
3. Grant Officers shall enter the corresponding TAS in FPDS-NG, as set forth in the assistance listing /TAS crosswalk table provided in Section 5.2 of this Manual.
4. The NASA HQ, OCFO Policy Division, Grants Policy and Compliance Branch serves as the Agency Assistance Listing Program Coordinator, which is responsible for the overall management and administration of the NASA Assistance Listing Program. As requested by the NASA HQ OCFO, Budget Division, the Agency Assistance Listing Program Coordinator is responsible for the establishment of new assistance listing numbers, updates to existing assistance listing numbers, and/or disposition of obsolete assistance listing numbers.
5. The NASA HQ, OCFO, Budget Division is responsible for notifying the Agency Assistance Listing Program Coordinator whenever NASA assistance listing information changes are required. The OCFO is responsible for providing to the Agency Assistance Listing Program Coordinator any financial/budget-related data that is required.
6. Assistance Listing Exceptions: Assistance Listing Numbers do not apply to NASA grants and cooperative agreements awarded prior to October 1, 2010, provided the total value of the award is not increased for any reason and by any amount throughout the total term of the award.

5.4 System for Award Management (SAM) and Unique Entity Identifier (UEI)

In accordance with 2 CFR 25, Universal Identifier and System for Award Management, all entities that apply for or receive an award from NASA must be registered in SAM prior to submitting their application, maintain an active SAM registration with current information at all times during which it has an active Federal award or application under consideration, and provide its UEI in each application it submits to NASA. UEIs are also referred to as data universal numbering system (DUNS) numbers, and a DUNS number may be obtained from Dun & Bradstreet at dnb.com. Applicants are required to review and update their information in the SAM database annually from

the date of initial registration or subsequent updates.

NASA may not issue an award or financial modification to an existing award until the entity has complied with the requirements to provide a valid UEI and maintain an active SAM registration with current information (unless the requirements are not applicable per the exceptions listed below). At the time of issuing an award, if the intended recipient has not complied with the UEI or SAM requirements, NASA may determine that the applicant is not qualified to receive an award and use that determination as a basis for non-selection and making an award to another applicant.

An applicant does not need to register in SAM or obtain a UEI if:

- a. The entity is exempted by statute.
- b. The entity is an individual who applies for or receives Federal financial assistance as a natural person (i.e., unrelated to any business or non-profit organization they may own or operate in their name).
- c. If one of the following determinations is made:
 - i. NASA determines that it must protect information about the entity from disclosure if it is in the national security or foreign policy interests of the United States, or to avoid jeopardizing the personal safety of the applicant or recipient's staff or clients.
 - ii. For a foreign organization or foreign public entity applying for or receiving a Federal award or subaward for a project or program performed outside the United States valued at less than \$25,000, if NASA deems it to be impractical for the entity to comply with the requirement(s). This exemption must be determined by NASA on a case-by-case basis while utilizing a risk-based approach and does not apply if subawards are anticipated.
 - iii. For an applicant, if NASA makes a determination that there are exigent circumstances that prohibit the applicant from receiving a UEI and completing SAM registration prior to receiving a Federal award. In these instances, NASA must require the recipient to obtain a UEI and complete SAM registration within 30 days of the award date.

A recipient may not make a subaward to a subrecipient unless that subrecipient has obtained and provided to the recipient a UEI. Subrecipients are not required to complete full SAM registration to obtain a UEI. A recipient must notify any potential subrecipients that the recipient cannot make a subaward unless the subrecipient has obtained a UEI as described in the preceding sentence.

5.5 Proposals Involving Non-U.S. Organizations

Per 2 CFR 1800.3(b), NASA does not normally fund foreign research proposals from foreign organizations, nor research efforts by individuals at foreign organizations as part of U.S. research proposals. This includes subawards from U.S. organizations to investigators at foreign organizations and travel by individuals at foreign organizations to conduct research, fieldwork, and present at conferences. Rather, each country agrees to bear the cost of discharging their

respective responsibilities (i.e., the work to be done by team members affiliated with organizations in their country). The direct purchase of supplies and/or services, which do not constitute research, from non-U.S. sources by U.S. award recipients is permitted.

NASA welcomes proposals from non-U.S. organizations and proposals that include the participation of non-U.S. organizations, except as set forth in the certification regarding restriction on doing business with China. Proposals that propose research to be performed by a non-U.S. organization or with a non-U.S. organization as part of a proposal submitted by a U.S. organization are normally supported on a no-exchange-of-funds basis. NASA's policy on performing research with foreign organizations on a no-exchange-of-funds basis is set forth at NFS 1835.016.

This policy pertains to the nature of the proposing organization and not the nationality or citizenship of the individuals listed in the proposal. If a proposal with a non-U.S. partner is selected, NASA will determine whether such participation should be covered by and implemented through an international agreement between NASA and the sponsoring foreign agency or funding/sponsoring institution under which the parties agree to each bear the cost of discharging their respective responsibilities.

5.6 Proposals Involving Improvements to Private Property

While NASA has general authority to award grants and cooperative agreements under the National Aeronautics and Space Act, 51 U.S.C. 20113(c)(5), specific statutory authority is required to fund improvement of private property, including construction, maintenance, and disposition of facilities of any kind. Facilities include, but are not limited to, property used for production, maintenance, research, development, or testing. Where the agency lacks specific statutory authority, the Grant Officer should ordinarily reject a proposal for permanent improvement of private property. Grant Officers must obtain prior approval from the Grants Policy and Compliance Branch Chief before implementing a proposal for permanent improvement of private property. Grant Officers shall support requests for approval with requisite documentation and shall obtain Center Office of the General Counsel review of such requests and documentation to ensure legal sufficiency. Section 4.0, paragraph 8 of this Manual outlines the required components for Grant Officer request packages, and this request is in addition to, and does not replace, the requirements that the Grant Officer evaluate the proposal following the procedures in 2 CFR 200.205, Federal awarding agency review of merit of proposals, and 2 CFR 200.206, Federal awarding agency review of risk posed by applicants.

Any proposal for permanent improvement to private property that cannot be supported by statutory authority as well as all required documentation, but that the Grants Officer nonetheless believes to be appropriate for agency consideration, shall be referred to the GPC Chief, who shall consult with the Headquarters Office of the General Counsel. Any subsequent action at the Center on such a proposal shall be as directed by the GPC Chief. However, it is unlikely that such a proposal will be accepted and funded.

5.7 Competition

Consistent with the FGCAA, competition is not required but encouraged in the award process for grants and cooperative agreements. Grants and cooperative agreements are classified into two

major categories: discretionary and non-discretionary. Discretionary awards are those which NASA, in keeping with specific statutory authority that enables the Agency to exercise judgement, selects the recipient and/or amount of Federal funding through a competitive process or based on the merit of proposals. Generally, such awards are made using merit-based peer or scientific reviews following the procedures in 2 CFR 200.205, Federal awarding agency review of merit of proposals. Non-discretionary awards are those made by NASA to specific recipients in accordance with statutory eligibility and compliance requirements, such that in keeping with specific statutory authority the Agency has no ability to exercise judgement.

NASA may award grants or cooperative agreements using three different methods: awarded on a competitive basis, awarded on a single-source basis, or awarded on the basis of an unsolicited proposal. Although competitive awards are encouraged when practicable, NASA has the authority to make awards on a non-competitive basis from single-source proposals and unsolicited proposals. The difference between single-source proposals and unsolicited proposals is that the Agency solicits proposals in single-source awards from only one recipient but does not solicit proposals when an award is based on an unsolicited proposal.

5.8 Competitive Awards

5.8.1 Synopsis Requirements

All announcements of grant and cooperative agreement funding opportunities shall be synopsisized using the standard set of data elements described in 2 CFR 200.204, Notice of funding opportunities. For funding opportunities that will only result in grants and cooperative agreements, program managers shall prepare synopses in the NASA Solicitation and Proposal Integrated Review and Evaluation System (NSPIRES). A synopsis shall be posted to Grants.gov within three business days of the synopsis being posted to NSPIRES. For funding opportunities that may result in a contract, as well as a grant or cooperative agreement, program managers may prepare the synopsis in NSPIRES or beta.sam.gov, which is the new location of what was formerly called Federal Business Opportunities. If the program manager posts the synopsis in beta.sam.gov, they must also post the synopsis in Grants.gov within three business days.

All competitive NOFOs that can result in the award of a grant or cooperative agreement shall be posted on NSPIRES. Procurement offices shall notify program offices issuing NOFOs of the requirement to use NSPIRES. Those posting NOFOs on NSPIRES shall register for an account at <https://i-nspires.nasaprs.com/internal/index.faces>. Instructions for using NSPIRES will be available through user desk guides at <https://i-nspires.nasaprs.com/tutorials/>. If additional help is needed, the NSPIRES Help Desk can be contacted at (202) 479- 9376, or by email at nspires-help@nasaprs.com.

This requirement applies to all announcements of grant and cooperative agreement funding opportunities with the following exceptions:

- a. Announcements of opportunities for awards less than \$25,000 for which 100 percent of eligible applicants live outside of the United States.
- b. Single-source announcements of opportunities that are specifically directed to a known recipient.

5.8.2 Notice of Funding Opportunity (NOFO)

All NOFOs (also referred to as solicitations, NRAs, BAAs, and CANs) are prepared by the cognizant technical/program office in accordance with 2 CFR 200, this Manual, and NASA Procedural Requirement (NPR) 5810, as amended, Standard Format for NASA Research Announcement and Other Announcements for Grants and Cooperative Agreements, when soliciting competitive grant and cooperative agreement proposals. The announcement shall include the information and formatting specified under 2 CFR 200.204 and include the standard and agency specific language found in the template located in Appendix A of this Manual. Program offices shall use the NOFO numbering scheme stated in Section 5.8.3 of this Manual. All NOFOs must be posted to NSPIRES and Grants.gov. Per 2 CFR 200.204, NOFOs must generally be made available for application for at least 60 calendar days. NOFOs may not be posted for less than 30 calendar days unless exigent circumstances exist.

To ensure that all NOFOs include the required language, all omnibus NOFOs and their associated appendices must receive concurrence from GPC. To receive concurrence of a NOFO, the program office must send the omnibus NOFO or appendix, along with a completed NASA NOFO checklist, to GPC for review. The checklist should be used as guidance to identify and include information required by 2 CFR 200, this Manual, and NPR 5810, as amended. The checklist can be found in the document repository on the Grants Policy and Compliance Max.gov website. To facilitate the NOFO drafting and review process, it is recommended that program offices include all mandatory NOFO language in their omnibus NOFOs and simply reference the omnibus NOFO number in related appendices. This will prevent program offices from having to repeat the required language in NOFO appendices.

To reduce administrative burden, the cognizant technical and program offices are encouraged to solicit in a manner that diminishes pre-award requirements, (e.g., a 2016 GAO study (<https://www.gao.gov/assets/680/677949.pdf>) suggested "...postponing certain pre-award requirements until after making a preliminary decision about an applicant's likelihood of funding"). This could be done in a number of ways, such as delaying detailed budgets or other elements of an application until after the application has gone through initial peer review and has received a qualifying score from reviewers.

Another potential way to diminish work by some proposers (and NASA) is to use a two-step approach for proposal submission, in which the full proposal is preceded by a mandatory abbreviated presentation of the intended research submitted either by the Authorized Organizational Representative (AOR) or the prospective Principal Investigator (PI). The two-step process can be either non-binding, in which a Step-2 proposal may be submitted even if the preceding Step-1 was "discouraged", or binding, in which a Step-2 proposal cannot be submitted if it is not "invited." In the latter case, since not being invited is a declination, that decision must be made by a selecting official, just like any proposal declination.

As always, the funding opportunity must clearly lay out the proposal requirements, submission process, timing, and evaluation criteria. The required contents for the Step-1 and Step-2 proposals must be specified in the NOFO, including the criteria against which the Step-1 proposal is evaluated to determine if a proposer will be encouraged or invited to submit a Step-2 proposal. For

example, the Step-1 proposal may merely be a short statement reviewed by NASA to determine if the proposed research seems sufficiently relevant and responsive to the NOFO, or it may be a multipage document evaluated for merit by a peer review. Though the Step-1 proposal is a prerequisite for submission of a full Step-2 proposal, it does not obligate the proposer to submit a Step-2 (full) proposal.

Step-1 proposals may include:

- A description of the science goals and objectives to be addressed by the proposal.
- An explanation of how the stated science goals and objectives are relevant to the Funding Opportunity.
- A description of the methodology to achieve the goals and objectives.
- The title of the proposed project, description of the proposed project and how it relates to the goals and objectives of the funding opportunity, a list of PIs and Co-PIs, and the estimated total budget cost (including any cost share).

Since Step-1 proposals are brief, determinations as to which proposals will be encouraged or invited to proceed to Step-2 will more often be based on scope, relevance, and responsiveness to the funding opportunity, rather than the methodology, which generally requires greater detail to describe.

Technical Officers should consult with their Center Office of the General Counsel regarding how to respond to Step-1 proposals or required Notice of Intent (NOI) in advance of submission of the Step-2 proposal.

For Step-2 proposals, the NOFO (see Appendix A) will specify:

- The process for submitting a Step-2 proposal,
- Whether or not changes to Step-1 proposals can be incorporated into the Step-2 proposal, and
- Additional documents or explanations that are required to evaluate the Step-2 proposal.

5.8.3 NOFO Numbering Scheme

Programs that have an established NOFO numbering scheme may continue to use that scheme. Programs that do not have NOFO numbering schemes should use the scheme below. For purposes of this section, NOFOs include Requests for Information, BAAs, NRAs, AOs, CANs, and any other document that solicits proposals for grants or cooperative agreements.

- (1) The first two characters shall be NN.
- (2) The third character shall designate the Center/Installation issuing the NOFO as follows: A=ARC, C=GRC, D=AFRC, G=GSFC, H=HQ, J=JSC, K=KSC, L=LaRC, M=MSFC, N=NMO-JPL, P=NMO-APL, S=SSC, and X=NSSC.
- (3) The fourth and fifth characters shall be two numeric characters for the fiscal year in

which the solicitation is expected to be issued.

- (4) The sixth through eleventh characters shall be the last six digits of the purchase request (PR) number except for cases where the solicitation is to be issued without an assigned PR number, for example NASA Research Announcements and Announcements of Opportunity. In those cases: the sixth character shall be the letter Z; the seventh and eighth characters shall represent the issuing organization's code; and the ninth through eleventh characters shall be an action number (001-999), assigned sequentially by the issuing organization.
- (5) The twelfth character shall be one alpha character for type of NOFO, as follows: C= CAN, E = IFB, K = BAA (other than AOs or NRAs) or other award announcements, L = RFI, N = NRA, O = AO, Q = RFQ, R = RFP.

5.8.4 Proposal Evaluation Requirements and Selection Documentation

1. The program office that will be managing the technical aspects of an awarded effort is responsible for the technical evaluation, which may be based on peer review. Per 2 CFR 200.205, Federal awarding agency review of merit of proposals, all applications for NASA discretionary awards must be subject to a merit review with the objective of selecting the recipient most likely to be successful in delivering results based on the program objectives outlined in that program's Assistance Listing. A merit review is an objective process of evaluating award applications in accordance with written standards. Each program office is responsible for developing written standards for their merit review process, and, for competed awards, evaluation criteria must be described in the NOFO. Per 2 CFR 200.205, program offices must also periodically review their merit review processes. The program office must provide to the Grant Officer a completed selection package as outlined in paragraph 2 below.
2. Program offices will furnish the documentation listed below in a Technical Requirements Package (TRP) submitted via NSPIRES. A complete TRP should be submitted to the NSSC at least 29 calendar days prior to the requested award date, or before the expiration of the funded period in the case of the renewal of an existing effort.
 - a. A copy of the NOFO or as requested just a copy of the front page of the NOFO to confirm the award is made as a result of a selection under a NOFO.
 - b. A copy of the proposals selected for award to include budget justification.
 - c. A copy of the selection statement and technical or peer evaluation document.
 - d. Funded procurement request, any other support documentation required for the specific award, such as protocol for animal testing, and any data deliverables that may be required when potentially hazardous operations, such as those related to flight and/or mission critical ground systems, have been proposed (e.g., Payload Safety Data Review Package).

3. If sub-recipients are stated in a proposal that has been selected for award through a competitive announcement, on rare occasions, a separate award may be made to the proposed sub-recipients when NASA deems it appropriate. Such grants are considered to be competed. The competitive announcement cover page, prime proposal, and its corresponding technical evaluation may be used to satisfy file documentation requirements for the sub-recipient grant.
4. For an unsolicited proposal, the program office should submit a completed NASA Form (NF) 884 and a justification for acceptance of an unsolicited proposal requesting financial assistance.
5. For a single-source proposal, the Technical Officer should submit a copy of the approved justification. (See Section 5.9.1 of this Manual, Single-source proposal, and Section 5.9.2 Unsolicited Proposals). Merit reviews are required for unsolicited and single-source proposals.
6. The evaluation of the proposal budget will conform to the following procedure:
 - a. The Technical Officer will review the proposer's estimated cost for conformance to program requirements and funding availability. New budgets are not required when the program office recommended funding is within twenty (20) percent of the proposed amount, provided that, if requested by the proposer, a revised scope-of-work based on the recommended funding is submitted by the proposer for acceptance by the Technical Officer. However, when funding decreases in equipment and/or sub-contracts are involved, the cognizant program office is required to identify the cost element(s) affected by the change in funding level.
 - b. The Grant Officer will review the budget and any changes made by the Technical Officer to identify any item that may be unallowable under the cost principles or that appears unreasonable or unnecessary. Requests for details from the recipient should be limited to the minimum necessary to conduct the review.
 - c. The Grant Officer will address requests for direct charge of equipment in the negotiation summary, and state whether the purchase is approved as a direct cost.
7. If a proposal is not selected, the proposer will be notified by the selecting official in accordance with the procedures set forth in the NOFO.
8. Analysis of the budget shall be documented and maintained in the award file.
9. Proposals for efforts that involve printing, binding, and duplicating in excess of 25,000 pages are subject to the Government Printing and Binding Regulations, No. 26, February 1990, S. Pub. 101-9, U.S. Government Printing Office, Washington, DC 20402, published by the Congressional Joint Committee on Printing. The program office will refer such proposals to the Installation Central Printing Management Officer (ICPMO). The Grant Officer will be advised in writing of the

results of the ICPMO review.

Award renewals provide for continuation of research beyond the original scope, period of performance, and funding levels. Therefore, new proposals, certifications, and technical evaluations are required prior to the execution of an award renewal. Award renewals will be awarded as new grants or cooperative agreements. Continued performance within a period specified under the Multiple Year Award terms and conditions does not constitute a renewal. For research originally awarded through a competitive NOFO that has completed its period of performance, peer review of a proposal to continue the research should be accomplished prior to selecting the research award for renewal. Renewals of such awards are considered competed. If the effort was originally awarded through an unsolicited proposal or single-source proposal, a new justification to accept the unsolicited or single-source proposal would be required. Multiple-year award term and conditions may be incorporated into renewals.

5.8.5 Notice of Intent to Make a Federal Award

It is the practice of certain Mission Directorates and program offices to notify proposers that they will be receiving a grant or cooperative agreement prior to providing the official Notice of Federal award signed by a Grant Officer. This practice of issuing a Notice of Intent to Make a Federal Award (formerly referred to as a Selection Letter) is optional and allowable; however, if a Mission Directorate or program office chooses to issue such a notification, the Notice of Intent to Make a Federal Award template must be used. This template can be found on the [Grants Policy and Compliance Branch Max.gov website](#).

Additionally, when the practice of issuing a Notice of Intent to Make a Federal Award is employed, the Mission Directorate or program office must include the language in Appendix A, section F, of this Manual in their NOFO. This language states that a Notice of Intent to Make a Federal Award is not an authorization to begin performance or a binding commitment by NASA or the United States government.

5.8.6 Electronic Submission

NASA discretionary award applications must be submitted electronically, as instructed in the NOFO. NASA will not accept other types of application submission, except when a waiver of this requirement is approved by the NASA point of contact listed in the NOFO. The process for applying for a waiver is described in Appendix B. See the [NASA Guidebook for Proposers Responding to a NASA Notice of Funding Opportunity \(NOFO\)](#) for more information on application submissions.

5.9 Non-competitive Awards

5.9.1 Single-source Proposals

1. Single-source proposals for grants and cooperative agreements are applications for financial assistance for support of an idea, method, or approach to carry out a project for a public purpose that is relevant to NASA. Single-source proposals are submitted in response to a cognizant technical office's request made only to the

proposing organization. A single-source proposal must not resemble the substance of a current or pending competitive NASA NOFO and shall include sufficient technical and cost detail to persuade NASA that the project represents a worthwhile approach to satisfy the criteria below:

- a. The proposing organization has unique qualifications or
 - b. The circumstances surrounding the proposed project necessitate the use of a non-competitive grant or cooperative agreement award.
2. A merit review is required for all NASA awards, and peer review of proposals is always preferred. All single-source proposals will be thoroughly reviewed by NASA before award. Proposals exceeding the Simplified Acquisition Threshold as set forth in the FAR at 2.101, Definitions, must be evaluated by at least three peer reviewers. Due regard for conflicts of interest and protection of proposal information is always part of the peer review process.
3. In support of the selection of a single-source proposal, the cognizant NASA Technical Officer shall prepare a written Justification for a Single-source Grant or Cooperative Agreement that thoroughly addresses all of the following items:
 - a. Specific identification of the document as a "Justification for a Single-source Grant or Cooperative Agreement Action;
 - b. Identification of the NASA funding sponsor;
 - c. Identification of the intended recipient (to include the legal name of the institution, entity, or individual; the name of the principal investigator; and the recipient's address);
 - d. A concise description of the proposed project;
 - e. Total anticipated project budget;
 - f. Period of performance;
 - g. A statement as to whether this is a new project or a continuation of an existing project;
 - h. A demonstration that (1) the proposed recipient's unique qualifications or (2) the circumstances surrounding the proposed project necessitate the use of a non- competitive grant or cooperative agreement award;
 - i. The NASA Technical Officer's certification and signature stating that the justification is accurate and complete to the best of their knowledge and belief;
 - j. In addition to the Technical Officer's signature required per paragraph (i) above, an additional concurring signature is required from an individual at a level above the Technical Officer. However, this concurring signature is not required if the individual signing the justification per paragraph (i) above is at a division chief level or higher.
4. Each single-source grant or cooperative agreement action shall also be subject to the policies, procedures, concurrences, and/or approvals established by the NASA funding sponsor's organization and/or Center.

5.9.2 Unsolicited Proposals

Unsolicited proposals for grants and cooperative agreements are applications for financial assistance for support of an idea, method, or approach to carry out a project for a public purpose that is relevant to NASA. Unsolicited proposals are not submitted in response to a NOFO but must be submitted via NSPIRES, as described in paragraph 3a, below. Offerors considering preparing an unsolicited proposal should refer to *NASA's Guidance for the Preparation and Submission of Unsolicited Proposals*, located on the [NASA Grants and Cooperative Agreements webpage](#) or search the NSPIRES [page for unsolicited proposals](#).

1. Circumstances for the return of unsolicited proposals without review:
 - a. NASA may return without review any unsolicited proposal that falls within the scope of a current NOFO or one that is planned for the near future. Before expending effort preparing a proposal, potential proposers should review the NOFO at <http://solicitation.nasaprs.com/open> to determine whether there is a NOFO under which the proposal could be submitted.
 - b. NASA also will return without review any proposal that is not relevant to NASA's mission. Before expending effort preparing a proposal, potential proposers should review the current version of the NASA Strategic Plan and documents from the specific directorate, office, or program within NASA (e.g., [the Science Plan](#), [Space Technology Roadmaps](#)) to determine if the work planned is sufficiently relevant and closely related to current Agency goals to warrant a formal submission.
 - c. NASA may return without review any unsolicited proposal that does not contain enough detail to allow for an adequate evaluation.
2. NASA may accept an unsolicited proposal only if it meets all of the following criteria (see the *NASA Guidebook for Proposers*, Section C.2 Evaluation Criteria):
 - a. The proposer could not have submitted a responsive proposal to a current or pending competitive NASA NOFO, see paragraph 1.a above;
 - b. Is of high scientific and/or technical merit;
 - c. Is relevant to NASA; and
 - d. The proposed costs are reasonable and realistic.
3. Submission of unsolicited proposals
 - a. All unsolicited proposals must be submitted via NSPIRES by creating a proposal in response to the unsolicited proposal response structure at <http://solicitation.nasaprs.com/>.
 - b. NASA Headquarters and each NASA field installation shall designate at least one point of contact to receive and coordinate the handling and evaluation of unsolicited proposals. NASA will not accept for formal evaluation unsolicited proposals initially submitted to another agency or to the Jet Propulsion Laboratory (JPL) without the offeror's express consent.
 - c. Each Center shall establish procedures for handling proposals initially received through NSPIRES. Points of contact are also responsible for providing guidance to potential offerors regarding the appropriate NASA

officials to contact for general mission-related inquiries or other pre-proposal discussions.

4. Evaluation of unsolicited proposals
 - a. Peer review of proposals is always preferred, and a merit review is required, as described in paragraph 2 in Section 5.9.1 of this Manual.
 - b. Any proposal considered for funding must be evaluated based on the criteria given in paragraph 2 in Section 5.9.2 of this Manual.
5. Selection or declination of unsolicited proposals
 - a. The decision to fund or not fund an unsolicited proposal is made by the selecting official based on NASA technical personnel's recommendation.
 - b. If an unsolicited proposal is selected for funding, the program office shall provide a justification that thoroughly addresses the criteria in this Manual at Section 5.9.1, paragraph 2, and the circumstances surrounding the proposed project that necessitate the use of a non-competitive grant or cooperative agreement.
 - c. Concurrence on the justification is obtained as described in this Manual at Section 5.9.1, paragraph 3.
6. Whether an unsolicited proposal is selected or declined, NASA will notify the proposer of the decision in writing in a timely manner. Whenever practicable, the evaluation summary that formed the basis of the decision shall be provided to the proposer in writing. Notifications will be made, and evaluations should be provided via NSPIRES but may also be communicated by other methods.

5.9.3 Grant and Cooperative Agreement Renewals

1. Renewals are new non-competitive awards that provide for continuation of successful currently supported projects beyond the original period of performance and funding levels.
 - a. Renewals support the same work, or work that is a natural extension of and closely related to current work, not new projects unrelated to the predecessor award.
 - b. Renewals differ from extensions, as described in this Manual at Section 7.10, Administrative Changes and Supplements, since renewals are new awards. Continuation within the original period of performance specified under a Multiple Year Grant or Cooperative Agreement does not constitute a renewal.
 - c. Renewals generally are longer duration awards, as opposed to shorter term lengthening of existing work, which can be achieved through extensions described in this Manual at Section 7.10.
 - d. The start date of the renewal award should be instituted concurrent with the original expiration date so that the support is continuous and there is no break in funding. As new proposals, certifications, and technical evaluations are required prior to the execution of a renewal.

2. Renewals will be justified as single-source proposals as described in Section 5.9.1 of this Manual, with the following exceptions:
 - a. For awards that are derived from previous competitions, the requirements for justification are:
 - 1) A determination that the work is still meritorious.
 - 2) A determination that the work is still relevant.
 - 3) A determination that the costs are reasonable and realistic.
 - 4) An explanation of why the work should be renewed rather than re-competed, e.g., relating to long-term continuity.
 - 5) This type of justification may only be used once to renew grants that have been previously competed.
 - b. Renewals of efforts that have been previously competed may resemble the substance of a current or pending competitive NASA NOFO. However, renewals of efforts that have not been previously competed cannot resemble the substance of a current or pending competitive NASA NOFO.
 - c. Renewals of previously non-competitive awards must satisfy the requirements in Sections 5.9.1 and 5.9.2 of this Manual. In addition, these justifications must address: (1) why the renewal is necessary, and (2) why, if NASA decided to support the work previously, the work was not subsequently incorporated into a NOFO.
 - d. Higher scrutiny for approval will apply when an effort is renewed more than once.

5.9.4 Appealing NASA's Decision to Decline a Proposal for Financial Assistance

This section describes the types of reconsideration that NASA may make available for grant and cooperative agreement proposals that entities have submitted to NASA. This section does not apply to proposals returned without review by NASA for an applicant's failure to:

1. Submit the proposal with enough lead time before the activity is to commence.
2. Submit a late proposal where information regarding the proposal deadline (i.e., date, time, and location) for submission had been previously specified.
3. Meet the NASA proposal preparation requirements, such as page limitations, formatting, instructions, and electronic submission as specified in the Guidebook for Proposers Responding to a NASA Notice of Funding Opportunity or the NOFO.

Appeals Policy

1. When a proposal for a NASA federal assistance award is declined or returned by the Agency without review, NASA provides the applicant the opportunity to dispute the Agency decision and present information and documentation to request reconsideration of this decision per the NASA Proposer's Guide, Appendix H. For a declined or returned proposal to be reconsidered for funding, the applicant shall, within 30 calendar days of receiving the synopsis of reviewers' comments, submit a written Request for Reconsideration to the Selecting Official. If the applicant did not receive a synopsis of the reviewers' comments, the Request for Reconsideration

shall be submitted within 60 calendar days of receiving the notification that the proposal has been declined or returned. The Selecting Official will respond to the Request for Reconsideration within 30 calendar days of receiving it. If additional time is required to prepare a response, the Selecting Official will provide an explanation of the need for more time to the applicant by the deadline for a response.

2. The goal of the reconsideration process is to ensure that NASA's review of the proposal has been fair and reasonable, both substantively and procedurally. The scientific and technical merits may be examined within the context of budget availability and program priorities. Reconsideration may also address any procedural errors in peer review or other aspects of proposal review, including unidentified conflicts of interest.
3. All NASA awards are discretionary, and reconsideration is not an adversarial process. Therefore, a formal hearing will not be held as part of the reconsideration process. Because factors such as program budget and priorities factor into the decision to select or not select each proposal, NASA cannot ensure proposers that reconsideration will result in an award even if an error is discovered to have occurred in the initial review.
4. After declining or returning a proposal, NASA will not consider any revisions that the applicant has made to its original proposal. However, this does not preclude an applicant from sending a substantially revised proposal to the Agency in response to a subsequent and different (new) NOFO. NASA reserves the right to return without review a proposal that is substantially the same as one that was previously reviewed and declined or returned, regardless of whether a request for reconsideration was made.

Appeals above the Selecting Official

If the applicant is dissatisfied with the explanation provided by the NASA Selecting Official, they may request in writing an appeal of the Selecting Official's decision. This appeal shall be submitted to the Assistant or Associate Administrator of the Mission Directorate or Office issuing the NOFO or one of their authorized designees. This appeal request shall explain why the applicant believes that the decision to decline or return the proposal was unwarranted. Appeal requests will be considered only if two conditions are met: (1) the applicant has first sought and obtained an explanation from the NASA Selecting Official, and (2) the appeal request is received by NASA within 60 days after the applicant received notice of the declination or return. Appeals of the Selecting Official's reconsideration decision shall be made within 30 calendar days of the applicant receiving that decision. NASA will provide a response to the applicant regarding the appeal within 30 calendar days of receipt.

5.10 Information Contained in a NASA Award

Per 2 CFR 200.211, Information contained in a Federal award, all Federal awards must contain the following information:

1. Federal award performance goals
 - a. Performance goals, indicators, targets, and baseline data must be included in NASA awards, where applicable. NASA must also specify how performance will be assessed in the terms and conditions of the award, including the timing and scope of expected performance (See Section 7.1 of this Manual for more information on performance measurement). If this information is applicable, it must be included in the award's terms and conditions.
2. Recipient name
3. Recipient's UEI (currently the DUNS number)
4. Unique Federal Award Identification Number (FAIN) (i.e., award number)
5. Federal award date
6. Period of performance start and end dates
7. Budget period start and end date
 - a. If the period of performance will include multiple budget periods, the award must indicate that subsequent budget periods are subject to the availability of funds, program authority, satisfactory performance, and compliance with the terms and conditions of the award.
8. Amount of Federal funds obligated by the action
9. Total amount of Federal funds obligated
10. Total approved cost sharing or matching, where applicable
11. Total amount of the Federal award including approved cost sharing or matching
12. Budget approved by NASA
13. Federal award description
14. Name of Federal awarding agency (i.e., NASA) and contract information for awarding official
15. Assistance Listing number and title
16. Identification of whether the award is R&D
17. Indirect cost rate for the award (including if the de minimis rate is charged per 2 CFR 200.414).

NASA Form (NF) 1687 is the cover page for all awards. Terms and conditions for awards with U.S. organizations shall be incorporated by reference, unless otherwise specified in Appendix D of this Manual, which contains the full text of the NASA terms and conditions. Terms and conditions for awards with foreign organizations will be incorporated in the award in full text. An acceptance block may be added when the Grant Officer finds it necessary to require bilateral execution of the award. Program budgets are not generally attached to the award document. When it is necessary to attach the budget due to revisions to the original proposed budget or other reasons, this information should be suitably marked as confidential, and is not to be disclosed outside the Government without the consent of the grantee.

Grants and cooperative agreements will be sequentially numbered. All grant and cooperative agreement FAINs shall be 13 digits in length. The Identification Numbering System to be used for all types of NASA grants and cooperative agreements will be applied as follows:

- Agency Prefix: NASA is represented by 80.
- Center: The Center is represented by four characters.
- Fiscal Year: Current Fiscal Year (FY) will be represented by two digits.
- Grant or Cooperative Agreement: Grant is coded K and Cooperative Agreement is coded M.

For example, FAIN “80NSSC17K0001” would be a NSSC grant action signed in FY17. It would be the first one issued at the Center.

| | | | | |
|------|--------|------|-------|--------------|
| 80 | NSSC | 17 | K | 0001 |
| | | | | |
| NASA | Center | FY17 | Grant | Serial No. 1 |

5.11 Budget Period and Period of Performance

All NASA awards must state a budget period and period of performance. The budget period is the time interval from the start date of a funded portion of an award to the end date of that funded portion during which recipients are authorized to expend the funds awarded, including any funds carried forward. A period of performance is the total estimated time interval between the start of an award and the planned end date, which may include one or more budget periods. Identification of a period of performance in an award does not commit NASA to fund the award beyond the currently approved budget period.

Period of performance: Typically, the duration of an award does not exceed five (5) years unless it is in the best interest of the government or otherwise specified by a program’s unique needs, policies, or procedures. However, grants that will exceed \$5 million and have a period of performance in excess of 5 years shall require the approval of the HQ OCFO, Director of Policy prior to award. Requests for approval are not required when the 5-year limitation is exceeded due to a no-cost extension.

1. Grants with periods of performance in excess of 5 years may be appropriate when the NASA Technical Officer determines at the inception of the grant that a longer period of performance would be in the interest of NASA and more conducive to the effort. Requests for approval shall include a justification for exceeding 5 years and evidence that the extended years can be reasonably estimated. Awards exceeding 5 (funded) years in duration shall also be subject to the policies, procedures, concurrences, and/or approvals established by the NASA funding sponsor's organization and/or Center.
 - a. If the decision to provide multiple year funding to a proposal is made, the terms and conditions in Appendix D25, Period of Performance, Budget Period, and Multiple Year Awards, will be included in the award.
 - b. Periods approved under the Multiple Year Grant or Cooperative Agreement

term and condition and funded at the levels specified in the term are not considered to be new awards. Therefore, new proposals, new proposal certifications, new technical evaluations and new budget proposals are not required. However, certifications will be required if necessary to implement new restrictions in appropriations that were not in existence at the time of the original award.

- c. If NASA program constraints or developments within the project dictate a reduction in the funding level specified under a Multiple Year Grant period, work may continue at the reduced level under the terms and conditions; however, the recipient may rebudget under the grant terms and conditions to keep the project within the funding provided.
- d. If NASA approves an award extension or a recipient with subawards approves a subaward extension, then the period of performance will be amended to end at the completion of the extension. If a termination occurs, the period of performance will be amended to end upon the effective date of the termination. If a renewal award is issued, a distinct period of performance will begin.

5.12 Funding

1. NASA may support an award as outlined in the proposal budget, may offer to fund only selected tasks, may offer to fund all tasks for a shorter duration (e.g., a one-year pilot study), or a combination of the above.
2. For multiyear awards, NASA may provide support in increments (e.g., by fiscal year to diminish uncosted carryover), may provide support for more than one year, or may provide support for the total award in advance.
3. Regarding incremental funding:
 - a. When funding incrementally by fiscal year, NASA should provide at least one month of funding from the prior fiscal year that carries into the subsequent fiscal year.
 - b. NASA should minimize incremental funding actions; small increments (<\$25K) should be avoided when practical.
 - c. The provision for incremental funding as outlined in Appendix D26 will be included in any grant that is incrementally funded. The Grant Officer will determine the number of incremental funding actions that will be allowed.
4. For awards funded in advance for future years, performance reports are still required and shall be reviewed by the NASA point of contact. Grant Officers should be aware that funds may expire and will no longer be available to grantees at the end of long awards (see 31 USC §1552, Procedure for Appropriation Accounts Available for Definite Periods). If the primary effect of the award is to provide a guaranteed customer base for new commercial space hardware or services, the Space Act at 51 U.S.C. 30301 prohibits NASA from funding a grant for longer than one year. The only exception is if an Appropriations Act specifies the new

commercial space hardware or services to be used.

5. While NASA normally provides full funding support for research grants, alternate methods of grant funding are as follows:
 - a. Since NASA grant recipients usually gain no measurable commercial or economic benefit from grants, other than conducting research, cost sharing for research grants is not generally required. NASA may, however, accept cost sharing when voluntarily offered. Additionally, in instances when the Grant Officer determines that the recipient will benefit from the research results through sales to non-Federal entities, cost sharing based upon this mutuality of interest will apply. When cost sharing is used, the Grant Officer shall insert the term as shown in Appendix D27 of this Manual.
 - b. NASA may provide partial support for a research project or conference where additional funding is being provided by other Federal agencies. If the grant also involves cost sharing by the recipient, the Grant Officer will ensure that the recipient's share does not include any Federal funds.

5.13 Pre-award Risk Assessment

5.13.1 Overview

In accordance with 2 CFR 200.206, Federal awarding agency review of risk posed by applicants, NASA Grant Officers are required to conduct a risk assessment for each award applicant prior to making an award to that entity. The purpose of the risk assessment is to determine a potential Federal award recipient's risk of fraud, waste, and abuse and their ability to effectively manage Federal awards. NASA requires that the risk assessment be conducted for all award recipients regardless of the award amount utilizing the Pre-Award Risk Assessment (PARA) Tool, which is located on NASA's Grants Policy and Compliance Max.gov website. The tool consists two primary components: 1) An entity-specific risk assessment that includes a range of evaluation questions pertaining to an applicant's administrative, programmatic, and financial management capabilities, and 2) an award-specific risk assessment that includes evaluation questions pertaining to a specific award. In addition to determining a recipient's risk, this tool is also used to inform the level of post-award monitoring required for a recipient.

NASA requires that risk assessments utilize data from multiple government-wide repositories such as the System for Award Management (SAM.gov), the Federal Awardee Performance and Integrity Information System (FAPIIS), the Federal Audit Clearinghouse (FAC), USAspending.gov, and GrantsSolutions Recipient Insight. Additional internal data collection systems, such as the NASA Enhanced Procurement Data Warehouse, shall also be used to access information required to complete the risk assessments.

5.13.2 Risk Assessment Methodology

NASA conducts a pre-award risk assessment using a series of risk evaluation questions in the PARA Tool. These questions assess an applicant's administrative risk profile, history of performance and compliance, and financial controls and capabilities in compliance with 2 CFR 200. The evaluation questions are grouped into three (3) categories: Administrative, Programmatic

& Compliance, and Financial.

- **Administrative Questions:** These questions pertain to the recipient's organizational type, size, prior experience managing federal awards, and complexity of awards managed.
- **Programmatic & Compliance Questions:** These questions pertain to the recipient's prior findings on single audits and financial statement audits.
- **Financial Questions:** These questions pertain to the amount of federal funding an award recipient manages.

Risk categories and the evaluation questions in each category are weighted and assigned a numerical score based on the risk assessor's response. Once all evaluation questions have been answered, the tool automatically generates a risk determination, and this risk determination informs the type and extent of post-award monitoring activities to be implemented.

5.13.3 The Pre-award Risk Assessment Tool

The PARA Tool consists of multiple components (tabs) in a Microsoft Excel document. Two key components are the entity-specific risk assessment and the award-specific risk assessment. As described above, the entity-specific risk assessment contains evaluation questions to address the full set of NASA risk assessment criteria. The award-specific risk assessment contains fewer evaluation questions that focus on award-specific risk indicators.

NASA requires completion of the entity-specific risk assessment at least once every three calendar years for each recipient organization regardless of award amount. The result of the entity-specific risk assessment will apply to all awards issued to that entity over the three years in which that assessment is valid. If an entity-specific risk assessment has been completed for an entity within the past three calendar years, then NASA requires that only an award-specific risk assessment be conducted prior to issuing each new award. The risk scores resulting from the entity- and award-specific assessments will then be combined to produce the overall risk determination that will guide post-award monitoring for the new award being issued. Grant Officers must maintain a copy of the completed PARA Tool in each award's official award file. If post-award monitoring indicates that the risk determination should be revised, then risk assessors or a Grant Officer may revise the risk determination at any time.

5.13.4 Risk Assessment Procedures and Risk Determination

The PARA Tool contains instructions for completing the entity-specific and award-specific risk assessment tabs within the tool. The entity-specific assessment tab contains a set of evaluation questions to address the administrative, programmatic, and financial management-related risk assessment criteria. The NASA risk assessor is required to select the appropriate response to each evaluation question, which in turn calculates the applicant's entity-specific risk score based on NASA's risk tolerance. Once the entity-specific assessment has been completed, the assessor must complete the award-specific assessment, which produces an award-specific risk score. The scores

from the entity- and award-specific assessments are then added, and the PARA Tool generates an overall risk determination. The determination will indicate that the recipient falls into one of three risk tiers:

| Risk Tier | Risk Score Percentage | Risk Status |
|------------------|------------------------------|--------------------|
| Tier 1 | 0% - 50% | Low |
| Tier 2 | 51% - 80% | Medium |
| Tier 3 | 81% -100% | High |

Tier 1

The following characteristics describe an applicant that is designated Tier 1:

- The applicant and programmatic profile (e.g., legal entity type, period of performance, award instrument type, and/or funding amount) may contain some complexity; however, the applicant has a history of managing Federal awards and/or history of past programmatic compliance.
- The applicant has financial capabilities and financial management systems that meet the standards set forth in 2 CFR Part 200 (Subpart D-Post Federal Award Requirements).
- The applicant demonstrates financial stability as well as the ability to properly manage Federal funds with minimal Federal monitoring.
- All Tier 1 recipients will be subject to routine post-award monitoring.

Tier 2

The following characteristics describe an applicant that is designated Tier 2:

- The applicant and NASA program profile (e.g., legal entity type, period of performance, award instrument type, and/or funding amount) may contain some complexity; however, the applicant has a history of managing Federal awards and/or history of past programmatic compliance.
- The applicant has existing but minimal financial controls that meet some but not all requirements of standards set forth in 2 CFR Part 200 (Subpart D-Post Federal Award Requirements).
- The applicant demonstrates moderate financial stability as well as the ability to properly manage Federal funds with Federal oversight slightly beyond routine monitoring.
- All Tier 2 recipients will be subject to routine post-award monitoring and may be subject to additional terms and conditions based on the Grant Officer’s discretion.

Tier 3

The following characteristics describe an applicant that is designated Tier 3:

- The applicant and NASA program profile (e.g., legal entity type, period of performance, award instrument type, and/or funding amount) is more complex than the average NASA federal assistance award.
- The applicant has a history of unsatisfactory performance and failure to comply with programmatic requirements of a Federal award.

- The applicant has a management system that does not meet the standards set forth in 2 CFR Part 200 (Subpart D-Post Federal Award Requirements).
- The applicant demonstrates financial instability through findings, unresolved findings, or an adverse/disclaimer audit opinion. The applicant should be further reviewed for award decision. At a minimum, the applicant requires substantial Federal monitoring to properly manage Federal funds.
- All Tier 3 recipients will be subject to routine post-award monitoring and may be subject to additional terms and conditions based on the Grant Officer's discretion.

5.14 Budget Analysis

The recipient institution is responsible for ensuring that costs charged are allowable, allocable, and reasonable under the applicable cost principles set out in 2 CFR 200 for educational organizations, non-profit organizations, state governments, local governments and tribal governments and FAR subpart 31.2 for for-profit organizations. NASA does not allow the payment for profit or fee through grant awards.

Grant officers will conduct and document a budget analysis of the proposed work. The purpose of this analysis is to determine if all the proposed costs are allowable, allocable, and reasonable under the applicable cost principles either in 2 CFR 200 or FAR subpart 31. Proposals for multiple year awards shall describe the entire research project and include a complete budget for year one, separate estimates for each subsequent year, and a cumulative budget for the entire period. Recipient should submit proposal budgets and detail in accordance with *NASA Proposer's Guidebook* (https://prod.nais.nasa.gov/pub/pub_library/srba/proposers_guidebooks.html). This should minimize requests for detail from the recipient. An example of different cost categories from 2 CFR 200 Subpart E may be found in Appendix G. During the analysis, the Grant Officer should review any recommendations for or changes made to the proposed budget by the Technical Officer.

5.14.1 Pre-award Costs

Pre-award costs are those incurred prior to the effective date of an award directly pursuant to the negotiation and in anticipation of the award where such costs are necessary for efficient and timely performance of the scope of work. Such costs are allowable only to the extent that they would have been allowable if incurred after the date of the award. If charged to the award, these costs shall be charged to the initial budget period of the award, unless a NASA Grant Officer specifies otherwise. Per 2 CFR 1800, NASA has waived the requirement for award recipients to obtain written approval prior to incurring project costs up to 90 calendar days before NASA issues an award. However, expenses incurred more than 90 calendar days before the award require prior written approval from a NASA Grant Officer. All costs incurred before NASA makes the award are at the recipient's risk (i.e., NASA is not required to reimburse such costs if for any reason the recipient does not receive an award or if the award is less than anticipated and inadequate to cover such costs).

5.14.2 Indirect Costs

Indirect costs are those costs incurred for a common or joint purpose benefitting more than one cost objective and cannot be readily identified with a particular final cost objective. Indirect costs, also known as facilities and administrative costs or overhead, must be applied to awards in accordance with 2 CFR 200, Subpart E, and can only be charged to an award when:

- The recipient has a Negotiated Indirect Cost Rate Agreement (NICRA).
- The recipient has never had a NICRA, and they elect to charge a de minimis rate of ten (10) percent of the modified total direct costs (MTDC).

Award applicants may voluntarily choose to apply an overhead rate that is lower than their NICRA rate or the 10 percent de minimis rate. However, NASA must not encourage or coerce applicants or award recipients to apply a lower rate.

NASA Fellowship and Scholarship awards shall not provide for the payment of facilities and administrative, overhead, or indirect costs.

As of October 1, 2017, the Department of Interior (DOI) has been given the responsibility of determining and approving indirect rates for entities in which NASA is the cognizant agency. The DOI's contact information is as follows:

DOI Interior Business Center
650 Capitol Mall, Suite 7-400
Sacramento, CA 95814-4706
Phone: 916-930-3803 Fax: 916-930-3804
Email: ICS@IBC.DOI.Gov
<https://ibc.doi.gov/ICS>

5.14.3 Cost Share and Matching

Cost sharing or matching, hereafter referred to as cost sharing, is any portion of project costs not paid by Federal funds (unless otherwise authorized by Federal statute). Cost sharing must be a specific amount or a percentage of the Federal award amount, and 2 CFR 200.306(b) defines the types of contributions that a Federal agency may accept as an award recipient's cost share. All cost share expenditures must be allowable, allocable, and reasonable and comply with 2 CFR 200 Subpart E – Cost Principles. It is the responsibility of NASA program offices to determine if cost sharing or matching is required for their respective programs and inform their award applicants accordingly.

NASA may require mandatory cost sharing in award proposals if the mandatory cost sharing requirement is explicitly stated in a NOFO. If an applicant's cost sharing will be considered in the application review process, the NOFO must also specifically address how cost sharing will be considered. Voluntary cost sharing is not expected, but it may be considered if criteria for considering voluntary cost sharing and any other program-specific factors that may be used to determine who may receive a NASA award are explicitly described in a NOFO. If cost sharing is required in a NOFO, the NOFO must state the amount or the percentage of the award that the

applicant must contribute; vague statements encouraging cost sharing are not allowed.

Recipient's cost share proposals are approved when the cost share is identified in the official award budget, and a Grant Officer has issued the award. Mandatory and voluntary cost sharing must be verifiable from the recipient's records, and those records are subject to audit. Should the recipient become aware that it may not be able to meet its cost share requirement, the recipient shall notify its NASA Grant Officer and request that the approved cost sharing amount be revised. This request must describe why the cost sharing contribution cannot be met and how the recipient plans to continue or close out the project in the absence of the approved cost share. If the Grant Officer approves the request, then the award must be modified through an amendment, and the award amount may be reduced in proportion to the cost share not provided. If the Grant Officer does not approve the request, then the award may be terminated. All requests and amendments regarding the modification of cost share contributions and any relevant supporting documentation shall be included in the Grant Officer's award file.

When a recipient's mandatory or voluntary cost share is approved, the recipient is obligated to meet that cost share requirement and report on contributions. Recipients' Federal Financial Reports (SF-425), which must be submitted quarterly and upon award conclusion, should describe cost share contributions in the "Recipient Share" section. If cost share requirements are not met, the recipient may be deemed non-compliant with their award terms and conditions, and corrective actions may be taken. Corrective actions may include withholding payments, disallowing costs, additional reporting requirements, and/or award termination.

5.15 Terms and Conditions

5.15.1 Terms and Conditions in Award Document

1. Unless otherwise specified, the terms and conditions outlined in Appendix D1 through D38 of this Manual apply to all NASA awards. Additionally, the following requirements apply to all awards:
 - a. 2 CFR Part 25, Universal Identifier and System for Award Management;
 - b. 2 CFR Part 170, Reporting Subaward and Executive Compensation Information;
 - c. 2 CFR Part 175, Award Term for Trafficking in Persons;
 - d. 2 CFR Part 182, Government-wide requirements for Drug-Free Workplace; and
 - e. 2 CFR Part 183, Never Contract with the Enemy. (Note: This part only applies when an award is performed outside the United States, including U.S. territories; is in support of a contingency operation in which members of the Armed Forces are actively engaged in hostilities, and the award is expected to exceed \$50,000).
 - f. The Grant Officer shall reference these terms and conditions and requirements by including the following statement in all award documents: *"Unless otherwise specified, the terms and conditions in Appendix D of the GCAM and the requirements in 2 CFR 170, 175, 182, and 183 apply and are incorporated by reference."*

2. The Grant Officer shall also indicate any other terms and conditions in Appendix D of the GCAM that apply by including the provision's number and name in the award document.
3. The Grant Officer must include any provision in full text in the award document if:
 - a. The instructions in Appendix D require a provision to be included in full text,
 - b. The provision is different from that referenced in Appendix D,
 - c. The provision is a programmatic or special condition required for the specific grant, or
 - d. The Grant Officer determines it is appropriate to include a provision in full text.
4. For awards to foreign institutions, the following terms and conditions must be developed with the assistance of the Office of the General Counsel and the Office of International and Interagency Relations:
 - a. Payment to foreign organizations
 - b. Customs clearance and visas
 - c. Taxes
 - d. Exchange of technical data and goods
 - e. Choice of Law
 - f. In addition, the Grant Officer must review other terms and conditions in Appendix D of this Manual to determine whether they should be modified
5. Grant officers shall also include the following terms and conditions when applicable:
 - a. Cross-Waiver of Liability for International Space Station Activities
 - b. Cross-Waiver of Liability for Science or Space Exploration Activities Unrelated to the International Space Station
 - c. Personal identity verification of recipient personnel
 - d. Micro-purchase threshold
 - e. Reporting Requirements Regarding Sexual Harassment, Other Forms of Harassment, or Sexual Assault

Appendix D of this Manual contains the full text of these terms and conditions and prescribes when these terms and conditions apply. These terms and conditions, as well as the certifications, assurances, and representations found in Appendix C, were previously incorporated into grants and cooperative agreements by reference to 2 CFR 1800. The certifications, assurances, and representations, as well as terms and conditions, have been removed from 2 CFR 1800 and incorporated in the GCAM in Appendices C and D, respectively.

5.15.2 Research Terms and Conditions (RTC)

1. When a new or renewal NASA research grant or cooperative agreement is applicable to 2 CFR 1800, as designated on the cover sheet NF1687, the Grant Officer will include the Research Terms and Conditions (RTC). The side-by-side RTCs depict pertinent sections of the Uniform Guidance and clarifications for research and research-related awards together on the same document.

2. In addition to the RTCs, three companion resources, Appendix A, Prior Approval Matrix; Appendix B, Subaward Requirements Matrix; and Appendix C, National Policy Requirements Matrix, are posted on the National Science Foundation (NSF) website at: <http://www.nsf.gov/awards/managing/rtc.jsp>. The RTCs include award flexibilities, and NASA has provided clarification through the incorporation of Appendices A through C and Agency-Specific Requirements.

5.15.3 Deviations

1. Deviations provide exceptions to award regulations, policies, or procedures when highly beneficial to either NASA or an award's goals or fiscal stewardship. When an award recipient or NASA program office requires an approval for an action that conflicts with NASA award regulations, policies, or procedures the appropriate NASA staff may submit a deviation request to the OCFO Policy Division, Grants Policy and Compliance Branch. The Grants Policy and Compliance Branch may issue case-by-case and class deviations to policies set forth in the GCAM, and they may issue case-by-case deviations to regulations in 2 CFR 200. Class deviations to 2 CFR 200 may only be approved by the OMB.
2. A deviation is required for any of the following:
 - a. When a prescribed term or condition set forth verbatim in the GCAM is modified or omitted.
 - b. When a term or condition is set forth in the GCAM, but not for use verbatim, and the program office or Grant Officer substitutes a term or condition that is inconsistent with the intent, principle, and substance of the term or condition.
 - c. When a form prescribed by the GCAM is altered or another form is used in its place.
 - d. When limitations, imposed by 2 CFR 1800 or the GCAM upon the use of an award term or condition, form, procedure, or any other award action, are changed.
 - e. When a form is created for recipient use that constitutes a "Collection of Information" within the meaning of the Paperwork Reduction Act (44 U.S.C. §35) and its implementing regulations at 5 CFR part 1320, Controlling Paperwork Burdens on the Public.
 - f. Where it is necessary to obtain an exception from 2 CFR 200.
3. Requests for authority to deviate from any of the regulations listed above shall be submitted, by appropriate NASA staff to GPC for approval. Requests signed by the designated Approving Official must include:
 - a. A full description of the deviation, the circumstances in which it will be used, and identification of the requirement from which a deviation is sought;
 - b. The rationale for the request, pertinent background information, and the intended effect of the deviation;
 - c. The name of the recipient, identification of the award affected, and the dollar value;

- d. A statement as to whether the deviation has been requested previously, and, if so, details of that request; and
- e. A copy of legal counsel's concurrence or comments.

5.16 The Federal Procurement Data System

Grant officers or their delegates are required to enter all grant and cooperative agreement awards and all supplements into the Federal Procurement Data System (FPDS) in accordance with the highlighted data fields on the input screen. When completing the description field, the E-Government Act (44 U.S.C. §101) requires Federal agencies to provide a "meaningful" description of the research or project being funded. For this guidance, a meaningful description is one that sufficiently demonstrates the general purpose or nature of the NASA-sponsored research or project. In addition, Grant Officers or their delegates are required to complete the following FPDS data fields:

- Field of Science or Engineering
- Principal Investigator
- Installation Unique –Assistance listing number shall be entered in the “Installation Unique” field. For every grant and cooperative agreement award, there must be a corresponding NASA assistance listing number identified; a null value is not a valid option.

5.17 Award Distribution

1. Distribution may be done electronically.
2. Copies of grants and supplements shall be provided to:
 - a. Payment offices (original copy)
 - b. Award recipient
 - c. Technical Officers
 - d. Administrative Grant Officers if delegated
 - e. NASA Scientific and Technical Program (STI) Program; and
 - f. Other appropriate offices as determined by the Grant Officer
3. In addition to receipt of grants and supplements, the administrative Grant Officer will receive a copy of the approved budget.
4. The file will record the addresses for distribution.

6.0 Delegation of Authority

1. The Grant Officer retains the grant administration functions at NASA except: (1) when a grant or cooperative agreement is awarded with Government-furnished property; (2) when the government retains title to recipient acquired property; or (3) as set forth in paragraphs 2 and 3 below.
2. When the grant or cooperative agreement is awarded with Government-furnished or recipient acquired Government property, the Grant Officer must delegate the property administration function to:
 - Office of Naval Research (ONR) for grants to educational institutions and

non- profit organizations.

3. The Grant Officer shall delegate the grant or cooperative agreement administration to ONR by using NF 1674. The type of administrative functions that are delegated shall be consistent with the memoranda of understanding (MOUs) between NASA and DOD and between NASA and ONR. Examples of administration functions delegated for previous awards include:
 - Property administration and plant clearance system reviews (PCSRs) and Property Control System Analyses (PCSAs); and
 - Quality Assurance, Engineering Support and Safety Engineering.
4. When administration duties have been assigned to ONR, the Grant Officer will send the NF 1674, the award document, supplements, any relevant property documentation, and the approved budget to ONR and the NSSC in a single package (electronically, when possible).
5. Upon acceptance of a delegation, ONR agrees to follow Department of Defense (DoD) property administration policies and procedures, as well as the following NASA requirements:
 - The recipient shall maintain property records and manage non-expendable personal property in accordance with 2 CFR 200. During PCSA, ONR, will check the recipient's understanding and test compliance of property management requirements, including the accuracy of recipient property reports. ONR will provide one copy of each PCSA Report to the appropriate NASA center industrial property officer.
 - ONR will investigate and notify NASA as appropriate for any unauthorized property acquisitions by the recipient. See the provision in Appendix D9 of this Manual.
 - ONR will notify the cognizant Grant Officer and industrial policy officer when any property is lost, damaged, or destroyed.
 - Under no circumstances will Government property be disposed of without written approval and instructions from NASA.
 - Before disposition, except when returned to NASA or reutilized on other NASA programs, ONR will ensure that all NASA identifications are removed or obliterated from the property, and that computer hard drives are cleared of sensitive or NASA owned/licensed software/data.

7.0 Post-award Procedures

7.1 Performance Measurement

As stated in Section 5.10 of this Manual, all NASA awards must state performance goals, indicators, targets, and baseline data, where applicable. Per 2 CFR 200.1, Definitions, "performance goal" means a target level of performance expressed as a tangible, measurable objective, against which actual achievement can be compared, including a goal expressed as a quantitative standard, value, or rate. 2 CFR 200 notes that in some instances (e.g., discretionary

research awards), a performance goal may be limited to the requirement to submit performance reports.

Per 2 CFR 200.301, Performance measurement, NASA must measure award recipients' performance to show achievement of program goals and objectives, share lessons learned, improve program outcomes, and foster adoption of promising practices. Program goals and objectives should be derived from program planning and design (See Section 5.1 of this Manual for more information on program planning). Where appropriate, NASA may include specific program goals, indicators, targets, baseline data, data collection, or expected outcomes (such as outputs, services performance, or public impacts of any of these) with an expected timeline for accomplishment. Where applicable, this should also include any performance measures or independent sources of data that may be used to measure progress. NASA program offices are responsible for determining how performance progress is measured, which may differ from program to program. NASA program offices may also include program-specific measurement requirements, as applicable. These requirements must be aligned, to the extent permitted by law, with NASA's strategic goals, strategic objectives, or performance goals that are relevant to the program. See section 7.5 below for information on performance report requirements.

To assist agencies in measuring the performance of their awards, the President's Management Agenda Cross Agency Priority Goal, Result-Oriented Accountability for Grants, Performance Workgroup has released the guide, [“Managing for Results: The Performance Management Playbook for Federal Awarding Agencies.”](#) The Playbook is not OMB guidance but rather a resource for Federal awarding agencies as they continue to improve the design and implementation of Federal awards. Program offices are encouraged to review the Playbook as it contains valuable information on program design, how to include performance measurement requirements in NOFOs, articulating performance and reporting expectations in award terms and conditions, and assessing recipients' performance reports to determine how recipients are performing against expected benchmarks or targets.

7.2 Post-award Monitoring

Per 2 CFR 200.300, Statutory and national policy requirements, NASA must manage and administer all awards in a manner so as to ensure that Federal funding is expended, and associated programs are implemented, in full accordance with the U.S. Constitution, Federal law, and public policy requirements. The goal of post-award monitoring is to provide a level of oversight that will allow NASA to collect accurate data on award performance throughout the life of the award and ensure recipient compliance with applicable rules and regulations. The specific objectives of ongoing award monitoring and oversight are to:

- Ensure the achievement of an award's purpose.
- Identify and track awards results.
- Identify the technical assistance needs of award recipients.
- Ensure timely expenditure of award funds.
- Prevent fraud, waste, and abuse.
- Identify innovative tools and techniques for the achievement of award objectives.
- Identify best practices to assist in effective award management.

Grant Officers and Technical Officers are responsible for routine post-award monitoring on all awards, regardless of the award's risk determination. At a minimum, routine monitoring includes reviewing award recipients' annual performance reports, quarterly financial reports (SF-425) (this is a Grant Officer responsibility), and all other reports that may be required (See Appendix F for a full list of required reports). When reviewing performance reports, Grant Officers must ensure that recipients are complying with 2 CFR 200, 2 CFR 1800, 14 CFR 1274 (as applicable), this Manual, and the award's terms and conditions. Technical Officers must review performance reports to ensure that recipients are meeting the project's goals, objectives, and outputs. Grant Officers shall review financial reports to ensure funding is drawn down consistent with award activities performed, the recipient does not have too much cash on hand, and that cost share requirements have been met, if required. If additional terms and conditions have been placed onto an award because it has a risk determination of Tier 2 or Tier 3, then the Grant Officer shall also ensure that the recipient is compliant with the additional terms and conditions. The Grant Officer shall also remove additional terms and conditions if a Tier 2 or Tier 3 designation is no longer warranted.

If routine monitoring indicates that performance or financial management is unsatisfactory or noncompliant, the Grant Officer must communicate this with the Technical Officer and the recipient and seek to resolve the issue. If the recipient is unable to resolve the issue on their own, then NASA may impose additional terms and conditions on the award recipient per 2 CFR 200.208, Specific conditions. If those additional conditions are not sufficient, then NASA may take one or more of the following corrective actions per 2 CFR 200.339, Remedies for noncompliance:

1. Temporarily withhold cash payments pending correction of the deficiency.
2. Disallow all or part of the cost of the activity or action not in compliance.
3. Wholly or partly suspend or terminate the award.
4. Initiate suspension and debarment proceedings as authorized under 2 CFR Part 180 and agency regulations.
5. Withhold further Federal awards for the project or program.
6. Take other remedies that may be legally available.

The award recipient is responsible for oversight of the operations of the award-supported activities. The recipient shall monitor its activities under NASA awards to ensure compliance with applicable Federal requirements and that performance expectations are being achieved. Additionally, if a recipient issues a subaward, then that recipient is responsible for monitoring the subaward and ensuring that the subaward recipient complies with all applicable Federal statutes, regulations, and award terms and conditions. See 2 CFR 200.329, Monitoring and reporting program performance, for more information award recipients' monitoring requirements. Also see 2 CFR 200.332, Requirements for pass-through entities, for more information on pass-through entities' award management and subaward monitoring requirements.

7.3 Monitoring Cost Share and Matching

It is the duty of the Grant Officer and Technical Officer to ensure that the recipient is contributing their cost share. Recipients must maintain records to support all cost share contributions and expenditures, and NASA has the right of access to any of the recipient's records that are pertinent to the award in order to verify cost share contributions. The recipient must also report the amount of cost sharing they have contributed to each award under the "Recipient Share" section of their

quarterly and final Federal Financial Reports (SF-425) that are submitted in the HHS Payment Management System. Grant Officers must review the SF-425s to ensure that cost share requirements are met.

If cost share requirements are not being met, Grant Officers and Technical Officers should inquire with the award recipient to determine why and implement appropriate corrective actions. Failure to provide the level of cost sharing reflected in the approved budget may result in NASA withholding payments, disallowing costs, applying additional reporting requirements, and/or terminating an award.

7.4 Payments

7.4.1 Advance Payment Requirements

Per 2 CFR 200.305, Federal payment, the default payment method will be an advance payment for recipients except where they have demonstrated an inability or unwillingness to maintain written procedures or a financial management system, or if they have shown to pose a risk during Agency review, and reimbursement rather than advance payment is imposed as a specific condition to the award.

NASA uses an advance payment method to aid in minimizing the time elapsing between the transfer of funds from the Department of Treasury and the disbursement by the recipient, whether the payment is made by electronic funds transfer or issuance or redemption of checks, warrants, or payment by other means. The advance payment allows the recipient to withdraw cash concurrently with disbursements. Advance payment mechanisms include, but are not limited to, Treasury check and electronic funds transfer and should comply with applicable guidance in 31 CFR Part 208.

- a. NASA uses the advance payment method unless it has determined that the recipient has not met the minimum criteria for advance payment. The recipient will demonstrate a willingness to maintain:
 - (1) Written procedures that will minimize the time elapsing between the drawdown of funds and their disbursement.
 - (2) Financial management systems that meet the standards as established in 2 CFR 200.302, Financial management.
 - (3) When applicable, specific conditions as set by NASA.
- b. If the recipient is unable to meet these criteria and has been determined to not have enough working capital when the reimbursement method is designated, NASA may provide cash as a working capital advance with subsequent reimbursement payments. Under this modified advance payment method, NASA would advance a cash payment to the recipient to cover estimated disbursement needs for an initial period, which is generally based on the recipient's disbursing cycle. Refer to 2 CFR 200.305 (b)(4) for additional information on the use of this method.

7.4.2 Advance Payment Administration

NASA uses a service provider, currently the Department of Health and Human Services (HHS) Payment Management Services (PMS), to provide Federal funds to recipients. PMS will provide instructions to the recipients for requesting funds through the system.

- a. NASA pays states in accordance with 31 CFR Part 205 and Treasury Financial Manual (TFM) 4A-2000.
- b. Recipients will submit requests for funds electronically through the PMS that (a) are the minimum amount of funds needed; and (b) are scheduled so that cash drawdowns coincide with actual, immediate cash requirements.
- c. Recipients will promptly refund any balances of undisbursed cash that NASA has provided to them that are not authorized to be retained by the recipient for use in other projects. The only exceptions to the requirement for promptly refunding undisbursed cash balances is when the funds will be disbursed by the recipient within three calendar days.
- d. If the request for funds was made erroneously, the recipient shall contact its financial institution and request that the payment be returned. The recipient is responsible for promptly remitting funds to PMS and noting the reason, e.g., excess funds, funds not spent, or interest. Instructions for returning funds are on the PMS website. PMS reports any interest collected on excess Federal funds to the designated NASA Administrative Grant Officer and to Treasury.
- e. Records created in the process of financial management of Federal awards will be maintained and disposed of in accordance with NASA Records Retention Schedules (NRRS) 1441.1, as provided in National Archives and Administration Records (NARA) general record schedules requirements, <http://www.archives.gov/records-mgmt/grs.html>.

7.4.3 Suspension and Termination of Advance Payments

When a recipient has demonstrated an unwillingness or inability to comply with cash management, financial management system, or financial reporting requirements, or the award's terms and conditions, the Grant Officer, after consultation with the NSSC CFO and the award's Technical Officer, may temporarily suspend advance payment to the recipient pending corrective action by the recipient. In addition to the financial requirements, if a recipient fails to comply with specific conditions of the grant or cooperative agreement, the Grant Officer may request the NSSC CFO to suspend or terminate the advance payment. In limited circumstances, the severity of the violation may warrant an immediate termination of advance payment.

- a. A decision to terminate advance payment is predicated upon a recipient's consistent demonstration of an unwillingness or inability to comply with cash management, financial management system, financial reporting requirements, or grant and

cooperative agreement terms/conditions/objectives. The Grant Officer may initiate termination of the advance payment after the recipient has failed to implement the agreed upon corrective action or the advance payment has been suspended a minimum of two times.

- b. The grant officer notifies the recipient in writing. At a minimum, the notification will include the determination, the supporting documentation, and the effective date. Following termination of advance payment, the recipient will receive payment through the reimbursement payment method (2 CFR 200.305(b)(3)).

7.4.4 Payment Suspension and Termination Conditions

This section describes common situations when a Grant Officer may suspend or terminate advance payments to a recipient.

- a. Recipient withdraws funds in excess of current requirements. A Grant Officer may suspend the advance payments as an initial remedy to give the recipient time to correct the situation. If the recipient continues to withdraw funds in excess of current needs, the Grant Officer may terminate advance payments. The recipient would be placed on the reimbursement payment method to finance its operations with its own working capital.
- c. Recipient fails to establish procedures that minimize the time elapsing between drawdown and their related disbursements. The Grant Officer may suspend the advance payment when a recipient is unwilling or unable to establish required cash management procedures. The suspension gives the recipient time to establish the required procedures.
- d. Recipient is unwilling or unable to establish a financial management system that meets the standard requirements as evidenced by an inability to meet financial requirements or as identified in an audit report. The Grant Officer may place the recipient on the reimbursement payment method until the recipient is able to correct and validate the situation.
- e. Recipient fails to submit a financial report by established due dates. When a recipient fails to submit required financial reports on a timely basis, PMS may suspend drawdowns until the recipient complies with reporting requirements. PMS provides NSSC a status report on a quarterly basis. This status report indicates the status of each recipient submitting the financial report.
- f. Recipient fails to comply with the non-financial terms and conditions of the award. The Grant Officer may initiate suspension or termination of advance payments in this situation. In these cases, the grant officer shall consult with the NSSC CFO.

Suspension, termination, and reinstatement of advance payment may be initiated by PMS, or the responsible Grant Officer, depending on the offending condition. For any offending condition, the

recipient will promptly be notified in writing of the determination and the effective date and provided supporting documentation.

The following are the notification requirements for non-PMS initiated actions:

- a. The Grant Officer shall promptly notify the recipient, in writing:
 - i. Of the determination to temporarily withhold further payments pending corrective action by the recipient or pending a decision to terminate. For suspensions imposed by PMS for negligence in providing required financial report, the recipient will be notified by e-mail that the report is delinquent.
 - ii. Of the determination, the reasons for termination, and the effective date.
 - iii. That a previously suspended or terminated arrangement is to be reinstated, including the reasons for the reinstatement and the effective date.

- b. The Grant Officer shall:
 - i. Coordinate the action with the award's relevant Technical Officer before implementing the action.
 - ii. Notify HHS, in writing, of any determination to suspend, terminate, or reinstate a recipient's advance payment.

7.4.5 Payment Roles and Responsibilities

The NSSC finance team shall:

- a. Serve as liaison between the recipient and HHS personnel, as required, by:
 - i. Receiving the recipient's payment packages and forwarding to PMS for processing.
 - ii. Assisting HHS with the establishment of accounts for the new recipient.
 - iii. Monitoring and reconciling drawdowns.
 - iv. Preparing the quarterly Federal Financial Report (FFR) status report and forwarding to designated Grant Officers.
 - v. Reconciling the final FFR and forwarding the reconciliation to the NSSC close-out team.
 - vi. Receiving and processing PMS refunds (through Intragovernmental Payment and Collection (IPAC)) into appropriate U.S. Standard General Ledger (USSGL) accounts.

7.5 Performance Report Requirements

All NASA award recipients must submit annual and final performance reports. Annual reports are due to NASA 60 days prior to the anniversary date of the award, except in the award's final year or if the award has a period of performance of less than a year. Awards that are in their final year or have a period of performance of less than a year are only required to submit final performance reports. Final performance reports are due within 120 days after the expiration of the award's period of performance. Note that subaward recipients are still required to submit their final reports to their pass-through entity within 90 days after the expiration of their subaward's period of performance.

If necessary, Grant Officers may require that performance reports be submitted more frequently than annually (e.g., semiannually or quarterly) but no more frequently than quarterly except in unusual circumstances, such as when more frequent reporting is necessary for effective award monitoring. See Appendix F of this Manual, Required Publications and Reports, for a description of all required reports and their due date.

Information Contained in a Performance Report

In 2010, the National Science and Technology Council (NSTC) developed a set of standard performance report data elements for research awards called the Research Performance Progress Report (RPPR). On behalf of the NSTC, the National Science Foundation (NSF) sponsored and maintained the RPPR format for all Federal award issuing agencies through 2019, and they continue to host an RPPR website at <https://www.nsf.gov/bfa/dias/policy/rppr/>. The RPPR format benefits award recipients by making it easier for them to administer awards through the standardization of the types of information required in performance reports, thereby reducing their administrative effort and costs. For all NASA awards, program offices must utilize the Research Performance Progress Report (RPPR) format, unless they have another OMB-approved report format. The RPPR is not a template or form but rather a set of standard data elements against which award recipients will report, and it is not available as a template or form from NASA. Although the format contains the word “research,” the data elements are broad enough to be applicable to all types of awards that NASA may issue.

The RPPR format includes several mandatory data elements and one mandatory reporting category as well as optional reporting categories. All performance reports must contain the mandatory data elements and reporting category required for RPPRs.

All reports **must** include the following data elements on the report’s cover page:

- Federal agency (i.e., NASA) and program office to which the report is submitted.
- Award number.
- Project title.
- Principal Investigator name, title, and contact information (e-mail address and phone number).
- Name of submitting official, title, and contact information (e-mail address and phone number), if other than PI.
- Submission date.
- Unique Entity Identifier (UEI) number, also known as a DUNS number, and EIN number.
- Recipient organization name and address.
- Recipient identifying number or account number, if any.
- Period of performance start and end date.
- Reporting period end date.
- Report term or frequency (annual, semi-annual, quarterly, other).
- Final Report? Indicate “Yes” or “No”
- Signature of submitting official (either handwritten or electronic)

In addition to the data elements above, all NASA performance reports **must** report on one mandatory reporting category, “accomplishments.” Reporting in the “accomplishments” category must address the following questions, when applicable. Recipients are only required to report on the questions that are relevant to their award.

Accomplishments data element:

1. What were the major goals and objectives of this project?

The recipient must list the major goals of the project as stated in the approved application or as approved by NASA, including the scientific or technological objectives of this effort. Describe the proposed technical approach to obtain those goals. If the recipient listed milestones/target dates for important activities or phases of the project, identify these dates and show actual completion dates or the percentage of completion. Generally, the goals will not change from one reporting period to the next and are unlikely to change during the final reporting period. However, if NASA approved changes to the goals during the reporting period, list the revised goals and objectives. Also explain any significant changes in approach or methods from the approved application or plan.

2. What was accomplished under these goals?

For this reporting period the recipient must describe: 1) major activities; 2) specific objectives; 3) significant results or key outcomes, including major findings, developments, or conclusions (both positive and negative); and/or 4) other achievements. Include a discussion of stated goals not met. As the project progresses to completion, the emphasis in reporting in this section should shift from reporting activities to reporting accomplishments.

3. What opportunities for training and professional development has the project provided?

If the project was not intended to provide training and professional development opportunities or there is nothing significant to report during this reporting period, the recipient states “Nothing to Report.” Describe opportunities provided for training and professional development to anyone who worked on the project or anyone who was involved in the activities supported by the project for this reporting period. “Training” activities are those in which individuals with advanced professional skills and experience assist others in attaining greater proficiency. Training activities may include, for example, courses or one-on-one work with a mentor. “Professional development” activities result in increased knowledge or skill in one’s area of expertise and may include workshops, conferences, seminars, study groups, and individual study. Include participation in conferences, workshops, and seminars not listed under major activities.

4. How were the results disseminated to communities of interest?

If there is nothing significant to report during this reporting period, the recipient states “Nothing to Report.” Describe how the results were disseminated to

communities of interest for this reporting period. Include any outreach activities that were undertaken to reach members of communities who are not usually aware of these project activities for the purpose of enhancing public understanding and increasing interest in learning and careers in science, technology, and the humanities.

5. What do you plan to do during the next reporting period to accomplish the goals and objectives?

If there are no changes to the NASA-approved application or plan for this project or if this is the final report, the recipient states “Nothing to Report.” Describe briefly what the recipient plans to do during the next reporting period to accomplish the goals and objectives.

Besides the mandatory “accomplishments” category, recipients may choose to report on optional reporting categories defined in the RPPR format. Descriptions of the optional categories and instructions for recipients reporting on those categories can be found at https://www.nsf.gov/bfa/dias/policy/rppr/frpprformat_2016.pdf. The optional categories are:

- Products,
- Participants and other collaborating organizations,
- Impact,
- Changes/problems,
- Special reporting requirements,
- Budgetary information,
- Project outcomes, and
- Demographic information for significant contributors.

Program offices may also develop program-specific reporting categories and instructions in addition to the RPPR categories listed above; however, to maintain maximum uniformity, program offices are instructed to minimize the degree to which they supplement the standard RPPR categories. Such program-specific requirements will require review and clearance by the OMB.

Events may occur between the scheduled performance reporting dates that have significant impact on the NASA-supported activity. In such cases, the award recipient must inform NASA or their pass-through entity as soon as the following types of conditions become known:

1. Problems, delays, or adverse conditions that will materially impair the ability to meet the objective of the award. This disclosure must include a statement of the action taken, or contemplated, and any assistance needed to resolve the situation.
2. Favorable developments that enable meeting time schedules and objectives sooner or at less cost than originally anticipated or producing more or different beneficial results than originally planned.

7.6 FFATA Reporting Requirements

Agencies are responsible for the quarterly verification of recipient reports in the Federal Award Accountability and Transparency Act (FFATA) Subaward Reporting System (FSRS). Ultimately, this is a Grant Officer responsibility, but Centers may elect to have other individuals or teams undertake this quarterly verification. This verification is limited to ensuring consistency with grant and cooperative agreement information that is readily available to the Grant Officer. The review is necessary because the integrated system will cross-check recipient entries against Federal Procurement Data System - Next Generation (FPDS-NG) data. Any anomalies will require correction by either the recipient or the Grant Officer. Examples of data fields that Grant Officers must verify include:

- Grant/Cooperative Agreement Number
- Awarding Agency Name (NASA)
- Awarding Agency Code (8000)
- Funding Agency Name (NASA)
- Funding Agency Code (8000)
- Treasury Account Symbol (TAS)
- Applicable Agency Assistance Listing Number

The prime recipient's reporting requirements include many data elements that Grant Officers will not know and, therefore, are not responsible for verifying, such as:

- Whether a first-tier subaward has been issued,
- Whether a reported first-tier subaward value, place of performance, etc., is accurate, or
- Whether a prime recipient or first-tier subaward meets the thresholds or qualifies under an exemption to executive compensation reporting.

Grant Officers must follow this guidance for all new NASA grants and cooperative agreements under which the total Federal funding will be equal to \$30,000 or more at any time during the term of the award.

7.7 Public Release of Scientific and Technical Information (STI) by NASA

1. The Technical Officer must obtain Document Availability Authorization (DAA) before STI can be:
 - a. Publicly released by NASA,
 - b. Publicly released at the direction of NASA, or
 - c. Presented by NASA or at the direction of NASA at any event at which foreign nationals may be present. The Center STI/Publication Manager shall forward the approved STI and a copy of the approved DAA form to Scientific and Technical Information Program Office (STIPO) per NPR 2200.2, Appendix C Forms Used to Publish STI, and notify the Technical Officer.
2. Centers shall establish procedures for notifying the grantee or cooperative agreement recipient if and when the STI has been approved for publication by

NASA. Generally, this notification is provided by the office responsible for approval of the DAA or the Center STI/Publication Manager.

3. DAA is not required from grantee or cooperative agreement recipients for release of information (such as presentations, publications, reports, webpages, etc.) unless specified in the terms and conditions of the award. Of course, the recipient is required to follow statutes and regulations on export control when releasing information.
4. In response to a 2013 request from the White House Office of Science and Technology Policy, directing science-funding agencies to develop plans to increase access to the results of federally funded research. NASA has partnered with HHS to allow NASA-funded authors and co-authors to deposit as-accepted manuscript versions of their peer-reviewed articles from scientific journal publications and associated data into a publication repository. NASA is using PubMed Central (PMC) to permanently preserve and provide easy public access to the peer-reviewed papers resulting from NASA-funded research. Beginning with research funded in 2016, all NASA-funded authors and co- authors (both civil servant and non-civil servant) are required to deposit copies of their peer-reviewed scientific publications and associated data into NASA's publication repository called NASA PubSpace. This EXCLUDES patents, publications that contain material governed by personal privacy, export control, proprietary restrictions, or national security law or regulations. NASA PubSpace is part of PMC which is managed by the National Institute of Health (NIH).

7.8 Methods of procurement

Award recipients must have and use documented procurement procedures consistent with State, local, and tribal laws and regulations and the standards set forth in 2 CFR 200.318, General procurement standards. The recipient's documented procurement procedures must conform to the procurement standards identified in 2 CFR 200.317, Procurement by states, through 2 CFR 200.327, Contract provisions.

Note that 2 CFR 200.322, Domestic preferences for procurements, states that as appropriate and to the extent consistent with law, award recipients should provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States, to the greatest extent practical under an award. Pass-through recipients must also include this requirement in subawards or contracts issued under NASA awards.

1. Micro-purchase Threshold. The non-Federal entity must use one of the methods of procurement as prescribed in 2 CFR 200.320, Methods of procurement to be followed. As defined in 2 CFR 200.1, Definitions, the micro-purchase threshold for acquisitions of supplies or services made under grant and cooperative agreement awards is not to exceed the amount set by FAR 2.101, Definitions, unless a higher threshold is requested by the recipient and approved by the cognizant agency for indirect costs. See 2 CFR 200.320 for more information on the micro-purchase threshold.

2. Simplified acquisition threshold. As defined in 2 CFR 200.1, Definitions, award recipients are responsible for determining an appropriate simplified acquisition threshold based on internal controls, an evaluation of risk, and its documented procurement procedures. However, in no circumstance can this threshold exceed the dollar value established at FAR 2.101, Definitions.

7.9 Change of Principal Investigator or Recipient Institution

1. When a principal investigator changes organizational affiliation, the current recipient institution is given an opportunity to find a replacement. The final decision on whether an acceptable replacement is available, or that the research effort should follow the original principal investigator to the new location, is at the discretion of the NASA Technical Officer. Grant Officers should process a potential change of principal investigator as follows:
 - a. If the decision is made that the grant will not follow the PI to the new institution, and the current institution does not recommend a substitute for NASA approval, the grant with the current institution is ended by mutual consent or, if necessary, unilaterally by the Grant Officer.
 - b. If the decision is made that the grant will not follow the PI to the new institution, and the current recipient institution does recommend for NASA approval a new PI, the Grant Officer will seek concurrence/non-concurrence from the Technical Officer. The current recipient shall provide a PI curriculum vitae and any other documentation that might aid in the evaluation of the new PI submission by NASA. Upon Technical Officer concurrence of the recommendation, the Grant Officer may initiate a supplement to change the PI. If the Technical Officer does not concur with a recommended new PI and the grant will not follow the PI to the new institution, then the grant with the current institution may be ended by mutual consent or, if necessary, unilaterally by the Grant Officer.
 - c. If the decision is made that the research activity will follow the PI to the new institution and the funds on the grant are still available, the grant with the current institution may be ended and a replacement grant issued to the new institution. When the termination/new award process is used, a fully endorsed proposal for a replacement grant will be requested from the PI's new institution to continue the research. Although such a proposal will be reviewed in the normal manner, every effort will be made to expedite a decision. Regardless of the action taken on the new proposal, final reports on the original grant, describing the scientific progress and expenditure to date will be required.
 - 1) When transferring research activities, the Grant Officer, with concurrence from the award's Technical Officer, performs steps for a new award, such as determination of appropriate funding for the original institution, receiving in writing the intent of the original institution to relinquish the grant, de-obligating any remaining funds from the original grant with the original institution, ensuring sufficient

funds are available for the new institution's proposal, and updating records or files.

- 2) Following a review and evaluation of the proposal from the new institution by the program office, if the proposal is accepted, the Technical Officer will forward a recommendation to the Grant Officer to award to the new institution.
 - d. If the current institution recommends that both the PI and institution be changed, then a new award must be issued per paragraph C above.
2. The evaluation and recommendation from the Technical Officer for the transfer of the research activity to the new institution must include:
 - a. Verification that the PI changing institutions still has the prerequisite scientific and/or technical expertise, and knowledge of the research activity (as supported by the basis for the original award to the PI's old institution);
 - b. Verification that the new institution has the necessary facilities and support to continue the original research;
 - c. Statement from the Technical Officer verifying that NASA is satisfied with the scientific and/or technical progress of the current PI;
 - d. Statement, with supporting rationale, that it will not be cost effective nor time efficient to recompute the effort, and that it is not likely NASA will realize any benefit by recompeting the research activity; and
 - e. Identification of the suggested amount of unexpended research funding to be transferred from the initial recipient institution to the PI's new institution.

Grants involving a transfer to another institution do not need to be re-advertised and there is no requirement to perform a market research analysis or market survey. After receiving approval of the new institution's proposal from the Technical Officer and coordinating with the Center Chief Financial Officer (CFO) on the intended new award to include verification that sufficient funds are available, the contracting or Grant Officer may make the award to the new institution.

7.10 Administrative Changes and Supplements.

1. Requests to have a grant modified must come from the award recipient and must be in writing to the Grant Officer for approval.
2. Supplements are administrative award documents (NF 1687) used to modify grants and cooperative agreements. Types of supplements include the following:
 - a. No-cost Extensions (NCE): A supplement used to extend the grant beyond the expiration date at no additional cost to the government. NCEs are awarded when additional time beyond the established period of performance is required to assure adequate completion of the original scope of work within the available funding. In accordance with 2 CFR 200.308, Revision of budget and program plans, a one-time no-cost extension can be initiated by the recipient. The recipient must notify the NASA Grant Officer in writing with the supporting reasons and revised period of performance at

least 10 calendar days before the end of the period of performance specified in the award. This one-time extension may not be exercised merely for the purpose of using unobligated balances. Special note: NCEs may include funding when incremental funding balance of the year ending is still due.

- b. Funded Extensions: A supplement used to extend the grant beyond the expiration date and that would require additional funding. Funded extensions must be supported by a proposal and new technical evaluation submitted at least three months in advance of the expiration date (See Provision in Appendix D5 of this Manual).
- c. Administrative Supplements: A supplement used to enact administrative revisions to the grant. Examples of such revisions are PI changes (See Appendix D7 of this Manual), Technical Officer changes, and general corrections. A NASA Grant Officer can unilaterally make minor or administrative changes to a grant.
- d. Incremental Funding Supplements: A supplement used to obligate funding in furtherance of the original scope and total award amount (history) of the approved proposal. (Appendix D26 of this Manual)
- e. Augmentations: A supplement used at any time when work is introduced which is outside the scope of the approved proposal or when there is a need for substantial unanticipated funding. The Grant Officer must first determine whether the augmentation requires a separate approval as a non-competitive addition to the scope of the effort to be performed under the grant. Augmentations require the submission of revised budget proposals and technical evaluations covering the additional effort. Since augmentations will be performed within the existing period of performance, certifications will not normally be required.
- f. Combination of the above.
- g. Change of recipient institution (PI Transfer): Includes a supplement to end the original award. (See Section 7.9 of this Manual).

7.11 Novation and Change-of-name Agreements

Novation and change-of-name agreements are administrative actions requiring the involvement of the Grant Officer. Novation's are legal instruments under which obligations of an organization, (including the performance of grants), are assumed by a new organization arising out of a transfer of assets, usually as a result of a merger or acquisition by the new organization. Change-of-name agreements are legal instruments executed by an organization and NASA that recognizes the legal change of name of the organization without disturbing the original rights or obligations of the parties. Procedures for completing novation and change-of-name agreements are the same as those set forth at FAR Subpart 42.12, Novation and Change of Name Agreements. All novation agreements and change-of- name agreements of the recipient, prior to execution, shall be reviewed by legal counsel for legal sufficiency.

7.12 Approval of Equipment

This section applies to both the purchase of equipment by the recipient and the request for NASA to provide government owned equipment. As with all budget requests, the recipient must demonstrate and justify the need for the requested equipment.

Grant Officers shall conform with the following procedures to approve acquisition of equipment (these procedures apply to pre-award and post-award requests for equipment)

- a. In accordance with 2 CFR 200.439, Equipment and other capital expenditures, prior approval of equipment acquisitions by the NASA Grant Officer is required for both special and general-purpose equipment with a unit cost over \$5,000 (unless a lower threshold has been established by the recipient). Grant award constitutes approval for any equipment provided and was requested in the original proposal. When two or more components are fabricated into a single coherent system in such a way that the components lose their separate identities, and their separation would render the system useless for its original purpose, the components will be considered as integral parts of a single system.
- b. Requests by grant recipients for the acquisition of equipment with a unit cost over \$5,000 (unless a lower threshold has been established by the recipient) shall be supported by written documentation setting forth the description, purpose, and acquisition value of the equipment. (A change in the model number of a prior approved piece of equipment does not require re-submission for approval.)

7.13 Exempt Equipment

Exempt equipment includes a system with a recipient-owned component (See 2 CFR 200.312, Federally-owned and exempt property). The requirement for agreement regarding NASA's retention of its option to take title shall apply where it is expected that one or more recipient-acquired components costing \$5,000 or less will be fabricated into a single system costing in excess of \$5,000. However, an item that is used ancillary to a system, without loss of its separate identity and usefulness, will be considered as a separate item and not as an integral component of the system.

7.14 Award Termination

Per 2 CFR 200.340, Termination, NASA or a pass-through entity may terminate an award in whole or in part as follows:

1. By NASA or a pass-through entity if a recipient fails to comply with the terms and conditions of an award.
2. By NASA or a pass-through entity, to the greatest extent authorized by law, if an award no longer effectuates the program goals or agency priorities.
3. By NASA or a pass-through entity with the consent of the award recipient, 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; or

4. By the recipient upon sending to NASA or a pass-through entity 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 NASA or a pass-through entity determines in the case of partial termination that the reduced or modified portion of the award or subaward will not accomplish the purposes for which the award was made, NASA or a pass-through entity may terminate the award in its entirety; or.
5. By NASA or a pass-through entity pursuant to termination provisions included in the award.

When NASA terminates an award prior to the end of the period of performance due to the recipient's material failure to comply with the award's terms and conditions, the cognizant NASA Grant Officer must report the termination in FAPIIS, in accordance with requirements at 2 CFR 200.340(c)(1) through (c)(3). Only a NASA Grant Officer may officially terminate an award; however, the decision to terminate an award should be made in consultation with the award's cognizant Technical Officer. If an award is terminated, the Grant Officer terminating the award must follow the notification of termination requirements established in 2 CFR 200.341, Notification of termination requirement.

7.15 Appealing a Suspended or Terminated Award

This section describes the appeal and reconsideration process that NASA makes available to award recipients concerning suspended or terminated grants and cooperative agreements.

1. 2 CFR 200.340, Termination, authorizes Federal entities to suspend or terminate an award in whole or in part (see Section 7.13 Award Termination). After the Federal entity has informed a recipient of its intent to terminate an award, NASA will terminate the award if the recipient:
 - a. Fails to submit a timely appeal or request for reconsideration.
 - b. Fails to provide a satisfactory justification to maintain its Federal assistance award.
 - c. Fails to resolve its non-compliance within the time specified by NASA.
2. Per 2 CFR 200.342, Opportunities to object, hearings and appeals, NASA provides award recipients the opportunity to appeal and provide information and supporting documentation to dispute the decision to suspend or terminate a Federal assistance award.
3. Per 2 CFR 200.342, NASA must comply with requirements for hearings, appeals, or other administrative proceedings to which award recipients are entitled.
4. If a recipient disagrees with NASA's decision to suspend or terminate, it may appeal that decision in writing to NASA within 30 days of receipt of NASA's written notice. The appeal shall include:

- a. The reason the decision is being disputed and a justifiable reason its Federal assistance award should not be suspended or terminated. The recipient must provide a satisfactory rationale for maintaining its Federal assistance award.
 - b. Details of the methods to resolve its non-compliance within a time to be reviewed and deemed acceptable by NASA (if applicable).
 - c. The appeal will be reviewed by the award's relevant Grant Officer, with concurrence from the Technical Officer. After review, NASA's initial decision to suspend or terminate an award will be affirmed, modified, or reversed, and this determination will constitute NASA's final decision.
5. NASA will not take any action to terminate or suspend a recipient's award until the recipient has exhausted all of its appeal and reconsideration rights, including judicial review.

8.0 NASA Insignia Guidelines

NASA has formulated new guidelines that aim to simplify and expand NASA insignia use by NASA award recipients. Recipients are strongly encouraged to use the NASA Insignia Format identified in GCAM Appendix D36, Restrictions on the Use of the NASA Seal, Insignia, Logotype, Program Identifiers, or Flags, and on the [NASA Shared Services Center grants website](#). The purpose of these guidelines is to increase awareness of NASA's mission activities for a broader and more diverse population.

9.0 Closeout Procedures

1. Grant and cooperative agreements are physically and administratively complete and ready for closeout when:
 - a. The Grant Officer has received all financial, technical, and other reports required by the terms and conditions of the grant or cooperative agreement, and has obtained all required concurrences and/or approvals;
 - b. For research grants or cooperative agreements including a Patent Rights Clause or a New Technology Clause, the Grant Officer has received concurrence from the patent counsel office regarding the recipient's Subject Inventions/Reportable Items Final Summary Report;
 - c. For those grants and cooperative agreements containing Government property and for which property administration has been delegated to the ONR, property disposition has been completed and the Grant Officer has received written notification from the ONR Administrative Grants Officer indicating that all property administration duties have been completed, via either a DD Form 1593, Contract Administration Completion Record or other equivalent electronic notification (email is an acceptable form and mechanism for this notification);
 - d. For grants or cooperative agreements awarded with provisional indirect rates see 2 CFR 200.345 (a)(3), Post-closeout adjustments and continuing responsibilities. When such grants or cooperative agreements are closed, the

recipient should be notified of their obligation to return any funds due as a result of final indirect cost rate adjustments.

- e. A final Standard Form SF-425 has been received; all payments have been made to the recipient; all reimbursements have been received and reconciled; and any remaining unused balance has been deobligated from the grant or cooperative agreement;
 - f. The Grant Officer has verified that a copy of all required deliverables is in the grant or cooperative agreement file.
2. Per 2 CFR 200.344, Closeout, NASA must make every effort to complete closeout actions no later than one year after the end of the period of performance unless otherwise directed by authorizing statutes.
 3. Records shall be retained in accordance with 2 CFR 200.334, Retention requirements for records, and NASA Procedural Requirements (NPR) 1441.1A, *NASA Records Retention Schedules*. As set forth in the NPR, grant and cooperative agreement files are generally retired to the Federal Records Center two years after completion of the grant or cooperative agreement, and destroyed ten years after final action is taken on the file (General Records Schedules 1.2-2.0).
 4. A recipient is considered non-compliant with the terms and conditions of an award when they do not provide acceptable final reports by the identified due date or an extension granted. Under these conditions, the Grant Officer shall initiate unilateral close out (close out without the cooperation of the recipient) of the award within 270 days of the due date of the final report. Unilateral closeout allows the Grant Officer to comply with the OMB requirements for closeout.
 - a. The Grant Officer shall document all contact, and attempts, with the recipient to obtain the required documents. The decision memo(s) for either the bilateral or unilateral closeout decision, made under this unilateral closeout guidance, will be kept in the official grant file.
 - b. If an award recipient does not submit all reports required for award closeout within one year of the period of performance end date, the award's cognizant Grant Officer must report in FAPIIS the recipient's material failure to comply with the award terms and conditions.
 - c. To close out an award unilaterally, a Grant Officer shall send a letter to the recipient specifying, at a minimum,
 - 1) The recipient is considered non-compliant with the terms and conditions of its award because they have not provided acceptable final reports as identified in the award.
 - 2) The Center responsible for unilaterally closing out the award based on non- receipt of acceptable final reports;
 - 3) The federal funding amount at which the NASA will close the award (when the recipient has not submitted a final FFR expenditure report)
 - A. For advance payments, the amount reported as "cumulative cash

- disbursement” in the latest federal cash report,
- B. For reimbursement payments, the total amount of payments requested before the end of the project period.

4) For recipients receiving advanced payments:

- A. Review the most recently submitted cash status information on item 5 of the Federal Financial Report (FFR) Attachment or, as applicable, line 10.b of the latest or final (if available) FFR, to determine the amount reported as disbursed.
- B. Compare the reported disbursement with the award amount and with any updated drawdown information obtained from the payment system.
- C. For single-award reporting of advance payments, the amount shown as “cash on hand” on line 10.c of the FFR must be repaid and is considered a debt.
- D. For multiple-award reporting of advance payments, unless substantiated by the recipient in accordance with any instructions provided by the Center, any reported drawdown or disbursement of funds attributable to the award being closed after the end of the latest federal cash reporting quarter will be treated as disallowed costs and may be appealed by the recipient.

5) For recipients receiving reimbursement payment:

- A. Review the latest invoice to determine the cumulative amount requested and payment records to determine the amount paid as of the end of the project period.
- B. Compare the cumulative payment requests with the latest or final (if available) FFR to determine whether the recipient has requested reimbursement for the amount reported as spent through that reporting period.
- C. If the latest invoice covers a period beyond that covered by the latest FFR, compare the amount reported on line 11.g, “Federal share of amount on line e,” with the amount reported on line 10.e, “Federal share of expenditures,” of the FFR, to determine which is greater.
- D. For reimbursement payments, the difference between the amounts shown on line 10.e, “Federal share of expenditures,” on the last FFR submitted or, if greater, the amount shown latest available invoice will be treated as disallowed costs and may be appealed by the recipient.

10.0 Appendices

Appendix A – Standard Format for a NASA Notice of Funding Opportunity (NOFO)

Appendix B – Waiver of Electronic Submission Requirement Request Process

Appendix C – Certification, Assurances, and Representations

Appendix D – Award Terms and Conditions

Appendix E – Additional Terms and Conditions

1. Cross-Waiver of Liability for International Space Station Activities.
2. Cross-Waiver of liability for Science or Space Exploration Activities Unrelated to the International Space Station.

3. Personal identity verification of Recipient Personnel.
4. Micro-purchase Threshold.
5. Reporting Requirements Regarding Sexual Harassment, Other Forms of Harassment, or Sexual Assault.

Appendix F – Required Publications and Reports

Appendix G – Examples of Costs Categories from 2 CFR 200 Subpart E

Appendix A – Standard Format for a NASA Notice of Funding Opportunity (NOFO)

As required in 2 CFR 200, this Manual, and NPR 5810.1A Standard Format for NASA Research Announcement and Other Announcements for Grants and Cooperative Agreements, NASA NOFOs shall include all information specified under 2 CFR 200.204, Notice of funding opportunities. In order to assist program officials in writing NOFOs, this appendix has been created to provide instructions and formatting based on all of the required information in 2 CFR 200.204 and additional NASA- specific requirements. Language marked as “Required” is mandatory for all NOFOs per 2 CFR 200. Language marked as a “NASA Requirement” is mandatory for all NOFOs per Federal statutes, regulations (including 2 CFR 1800), or NASA policy (including this GCAM).

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)
Center issuing announcement and Mission Directorate

Program Title and Fiscal Year

NASA RESEARCH ANNOUNCEMENT (NRA)

Type of Project (science research, etc.)

ANNOUNCEMENT NUMBER:

ASSISTANCE LISTING NUMBER:

OMB Control Number: 2700.092

ANNOUNCEMENT TYPE:

Either initial announcement of this funding opportunity or a modification of a previously announced opportunity

ISSUED: Date NOFO posted to NSPIRES

KEY DATES

Key dates include due dates and time for applications or Executive Order 12372 submissions (if applicable), as well as for any letters of intent or pre-applications. For any announcement issued before a program's application materials are available, key dates also include the date on which those materials will be released. Insert any other additional information as deemed applicable by the relevant NASA program office.

Table of Contents

- A. Program Description – Required
- B. Federal Award Information – Required
- C. Eligibility Information – Required
- D. Application and Submission Information – Required
- E. Application Review Information – Required
- F. Federal Award Administration Information – Required
- G. NASA Contact(s) – Required
- H. Other Information – Optional

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)

Center issuing announcement

Mission Directorate

A. Program Description – Required

This section contains the full program description of the funding opportunity. It may be as long as needed to adequately communicate to potential applicants the areas in which funding may be provided.

It describes NASA's funding priorities or the technical or focus areas in which NASA intends to provide assistance. As appropriate, it may include any program history (e.g., whether this is a new program or a new or changed area of program emphasis).

This section must include program goals and objectives, a reference to the relevant Assistance Listings, a description of how the award will contribute to the achievement of the program's goals and objectives, and the expected performance goals, indicators, targets, baseline data, data collection, and other outcomes that NASA expects to achieve, where applicable. This section may include examples of successful projects that have been funded previously.

This section also may include other information NASA deems necessary and must at a minimum include citations for authorizing statutes and regulations for the funding opportunity.

If this is a broad announcement that is soliciting proposals for multiple projects (such as ROSES) then a description of each project should be included.

B. Federal Award Information – Required

Relevant information should include:

- a. The total amount of funding that NASA expects to award through the announcement;
- b. The expected performance indicators, targets, baseline data, and data collection, where applicable;
- c. The anticipated number of Federal awards;
- d. The expected amounts of individual Federal awards (which may be a range);
- e. The amount of funding per Federal award, on average, experienced in previous years; and
- f. The anticipated start dates and periods of performance for new Federal awards.

This section also should address whether applications for renewal or supplementation of existing projects are eligible to compete with applications for new Federal awards.

This section also must indicate the type(s) of assistance instrument (e.g., grant, cooperative agreement) that may be awarded if applications are successful.

If cooperative agreements may be awarded, this section either should describe the “substantial involvement” that NASA expects to have or should reference where the potential applicant can find that information (e.g., in the funding opportunity description in A. Program Description—Required or Federal award administration information in section D. Application and Submission Information) If procurement contracts also may be awarded, this must be stated.

C. Eligibility Information – Required

This section addresses the considerations or factors that determine applicant or application eligibility. This includes:

- a. The eligibility of particular types of applicant organizations,
- b. Any factors affecting the eligibility of the principal investigator or project director, and,
- c. Any criteria that make particular projects ineligible.

Federal agencies should clarify whether an applicant's failure to meet an eligibility criterion by the time of an application deadline will result in NASA returning the application without review or, even though an application may be reviewed, will preclude the NASA from making a Federal award.

Key elements to be addressed are:

1. Eligible Applicants – Required. Announcements must clearly identify the types of entities that are eligible to apply.

If there are no restrictions on eligibility, this section may simply indicate that all potential applicants are eligible.

If there are restrictions on eligibility, it is important to be clear about the specific types of entities that are eligible, not just the types that are ineligible. For example, if the program is limited to non-profit organizations subject to 26 U.S.C. 501(c)(3) of the tax code, the announcement should so state. Similarly, and as an example, it is preferable to state explicitly that Native American tribal organizations are eligible than to infer that they are eligible by stating that non-profit organizations may apply.

Eligibility also can be expressed by exception, (e.g., open to all types of domestic applicants other than individuals). This section should refer to any portion of Section IV specifying documentation that must be submitted to support an eligibility determination (e.g., proof of 501(c)(3) status as determined by the Internal Revenue Service or an authorizing tribal resolution).

To the extent that any funding restriction in D6 may affect the eligibility of an applicant or project, the announcement must either restate that restriction in this section or provide a cross-reference to its description in Section D6.

2. Cost Sharing or Matching – Required.

Announcements must state whether there is required cost sharing, matching, or cost participation without which an application would be ineligible. If cost sharing is not required, the announcement must explicitly say so. Required cost sharing may be a certain percentage or amount or may be in the form of contributions of specified items or activities (e.g., provision of equipment). It is important that the announcement be clear about any restrictions on the types of cost (e.g., in-kind contributions) that are acceptable as cost sharing.

Cost sharing as an eligibility criterion includes requirements based in statute or regulation, as described in 2 CFR 200.306, Cost sharing or matching. This section should refer to the appropriate portion(s) of section D, Application and Submission Information, stating any pre-award requirements for submission of letters or other documentation to verify commitments to meet cost-sharing requirements if a Federal award is made.

3. Other – Required, if applicable.

If there are other eligibility criteria (i.e., criteria that have the effect of making an application or project ineligible for Federal awards, whether referred to as “responsiveness” criteria, “go-no go” criteria, “threshold” criteria, or in other ways), must be clearly stated and must include a reference to the regulation of requirement that describes the restriction, as applicable. For example, if entities that have been found to be in violation of a particular Federal statute are ineligible, it is important to say so.

This section must also state any limit on the number of applications an applicant may submit under the announcement and make clear whether the limitation is on the submitting organization, individual investigator/program director, or both. This section should also address any eligibility criteria for beneficiaries or for program participants other than Federal award recipients.

NASA REQUIREMENT

Possible Ineligibility of Proposals that Include Participation of China or Chinese-owned Companies (Required)

Sample Language

Proposals involving bilateral participation, collaboration, or coordination in any way with China or any Chinese-owned company, whether funded or performed under a no-exchange-of-funds arrangement, may be ineligible for award.

D. Application and Submission Information – Required

1. Address to Request Application Package – Required

NOTE – it is NASA policy to encourage open competition to include all eligible parties. Therefore, though it is NASA preference that all applications should be submitted electronically. Appendix B outlines the NASA process for submitting a non- electronic application.

Potential applicants must be told how to get application forms, kits, or other materials needed to apply (if this announcement contains everything needed, this section need only say so).

- An Internet address where the materials can be accessed is acceptable.
- However, since high-speed Internet access is not yet universally available for downloading documents, and applicants may have additional accessibility requirements, there also should be a way for potential applicants to request paper copies of materials, such as a U.S. Postal Service mailing address, telephone or FAX number, Telephone Device for the Deaf (TDD), Text Telephone (TTY) number, and/or Federal Information Relay Service (FIRS) number.

2. Content and Form of Application Submission – Required

This section must identify the required content of an application and the forms or formats that an applicant must use to submit it.

If any requirements are stated elsewhere because they are general requirements that apply to multiple programs or funding opportunities, this section should refer to where those requirements may be found.

This section also should include required forms or formats as part of the announcement or state where the applicant may obtain them.

This section should specifically address content and form or format requirements for:

- Pre-applications, letters of intent, or white papers required or encouraged (see Section D4), including any limitations on the number of pages or other formatting requirements similar to those for full applications.
- The application as a whole. For all submissions, this would include any limitations on:
 - The number of pages,
 - Font size and typeface, margins,
 - Paper size,
 - Number of copies, and
 - Sequence or assembly requirements.
- If electronic submission is permitted or required, this could include special requirements for formatting or signatures.
- Component pieces of the application (e.g., if all copies of the application must bear original signatures on the face page or the program narrative may not exceed 10 pages).
- This includes any pieces that may be submitted separately by third parties (e.g., references or letters confirming commitments from third parties that will be contributing a portion of any required cost sharing).
- Information that successful applicants must submit after notification of intent to make a Federal award, but prior to a Federal award. This could include evidence of compliance with requirements relating to human subjects or information needed to comply with the National Environmental Policy Act (NEPA) (42 U.S.C. 4321- 4370h).

NASA REQUIREMENT

DATA Management Plan (required for all Research NOFOs)

Note - NSPIRES now has a mandatory field that must be addressed. Any section that lays out the required elements for NSPIRES should include the “Data Management Plan” with instructions to complete as required in the NOFO or why the data management plan does not apply to that proposal.

Sample language for NOFOs requiring a data management plan.

All proposals submitted under this Funding Announcement are required to submit a Data Management Plan (DMP), in accordance with the NASA Plan for Increasing Access to the Results of Scientific Research located at

http://www.nasa.gov/sites/default/files/files/NASA_Data_Plan.pdf. That plan must include:

- Specific data requirements and expectations;
- An example DMP or outline for the specific type of data likely to result from the funded projects; or
- A statement that a DMP is not required because of the nature of the activity (e.g., no data or proprietary or personally identifiable data are expected).

See SARA Q&A at <http://science.nasa.gov/researchers/sara/faqs/dmp-faq-roses/> for more information on this plan.]

3. Unique Entity Identifier and System for Award Management (SAM) - Required

This paragraph must state clearly that each applicant (unless the applicant is an individual, or Federal awarding agency that is excluded from those requirements under 2 CFR 25.110 Exceptions to this part, (b) or (c), or has an exception approved by NASA under 2 CFR 25.110(d) is required to:

- Be registered in SAM before submitting its application or plan;
- Maintain an active SAM registration with current information, including information on a recipient’s immediate and highest level owner and subsidiaries, as well as on all predecessors that have been awarded a Federal contract or grant within the last three years, if applicable, at all time during which it has an active Federal award or an application or plan under consideration by NASA; and
- Provide its unique entity identifier in each application or plan it submits to NASA. UEs may be obtained from Dun & Bradstreet at <https://www.dnb.com/>.

It also must state that NASA may not issue an award or financial modification to an existing award to an applicant or recipient entity until the entity has complied with the requirements to provide a valid UEI and maintain an active SAM registration with current information (unless the requirements are not applicable per the exceptions listed in 2 CFR 25.110. At the time of issuing an award, if the intended recipient has not complied with the UEI or SAM requirements, NASA may determine that the applicant is not qualified to receive an award and use that determination as a basis for making an award to another applicant.

4. Submission Dates and Times – Required

Announcements must identify due dates and times for all submissions. This includes not only the full applications but also any preliminary submissions (e.g., letters of intent, white papers, or pre-applications). It also includes any other submissions of information before Federal award that are separate from the full application. If the funding opportunity is a general announcement that is open for a period of time with no specific due dates for applications, this section should say so.

NOTE: that the information on dates that is included in this section also must appear with other overview information in a location preceding the full text of the announcement (see 2 CFR 200.204, Notices of funding opportunities).

Each type of submission should be designated as encouraged or required and, if required, any deadline date (or dates, if NASA plans more than one cycle of application submission, review, and Federal award under the announcement) should be specified.

The announcement must state (or provide a reference to another document that states):

- Any deadline in terms of a date and local time. If the due date falls on a Saturday, Sunday, or Federal holiday, the reporting package is due the next business day.
- What the deadline means (e.g., whether it is the date and time by which NASA must receive the application, the date by which the application must be postmarked, or something else) and how that depends, if at all, on the submission method (e.g., mail, electronic, or personal/courier delivery).
- The effect of missing a deadline (e.g., whether late applications are neither reviewed nor considered or are reviewed and considered under some circumstances).
- How the receiving Federal office determines whether an application or pre-application has been submitted before the deadline. This includes the form of acceptable proof of mailing or system-generated documentation of receipt date and time.

This section also may indicate whether, when, and in what form the applicant will receive an acknowledgement of receipt. This information should be displayed in ways that will be easy to understand and use. It can be difficult to extract all needed information from narrative paragraphs, even when they are well written. A tabular form for providing a summary of the information may help applicants for some programs and give them what effectively could be a checklist to verify the completeness of their application package before submission.

5. Intergovernmental Review – Required, if applicable

If the funding opportunity is subject to Executive Order 12372, “Intergovernmental Review of Federal Programs,” the notice must say so. In alerting applicants that they must contact their state’s Single Point of Contact (SPOC) to find out about and comply with the state’s process under Executive Order 12372, it may be useful to inform potential applicants that the names and addresses of the SPOCs are listed in the Office of Management and Budget’s Web site.

6. Funding Restrictions – Required

Notices must include information on funding restrictions in order to allow an applicant to develop an application and budget consistent with program requirements. Examples are:

- Whether construction is an allowable activity,
- If there are any limitations on direct costs such as foreign travel or equipment purchases, and
- If there are any limits on indirect costs (or facilities and administrative costs) – such as not paying a cost of money percentage.

NOTE: Applicants must be advised if Federal awards will not allow reimbursement of pre-Federal award costs.

NASA REQUIREMENT

Funding Restrictions (Required)

Sample language

- a. All proposed funds must be allowable, allocable and reasonable. Funds may only be used for the project. All activities charged under indirect cost must be allowed under 2 CFR 200 cost principles.
- b. Grants and cooperative agreements shall not provide for the payment of fee or profit to the recipient.
- c. Unless otherwise directed in 2 CFR 200, for changes to the negotiated indirect cost rate that occur throughout the project period, the recipient must apply the rate negotiated for that year, whether higher or lower than at the time the budget and application was awarded.
- d. Proposals must not include bilateral participation, collaboration, or coordination with China or any Chinese-owned company or entity, whether funded or performed under a no-exchange-of-funds arrangement.
- e. Any funds used for match or cost sharing must be allowable under 2 CFR 200.
- f. The non-Federal entity must use one of the methods of procurement as prescribed in 2 CFR 200.320, Methods of procurement to be followed.

NOTE: For funding opportunities that will result in Fellowships or Scholarships the following statement shall be added to this section of the announcement:

Awards made under NASA Fellowship and Scholarship funding opportunities shall not provide for the payment of Facilities and Administration (F&A), overhead or indirect costs.

7. Other Submission Requirements – Required

This section must address any other submission requirements not included in the other paragraphs of this section. This might include the format of submission, i.e., paper or electronic, for each type of required submission.

Applicants should not be required to submit in more than one format and this section should indicate whether they may choose whether to submit applications in hard copy or

electronically, may submit only in hard copy, or may submit only electronically.

This section also must indicate where applications (and any pre-applications) must be submitted if sent by postal mail, electronic means, or hand-delivery. For postal mail submission, this must include the name of an office, official, individual or function (e.g., application receipt center) and a complete mailing address. For electronic submission, this must include the URL or email address; whether a password(s) is required; whether particular software or other electronic capabilities are required; what to do in the event of system problems and a point of contact who will be available in the event the applicant experiences technical difficulties.

NOTE: With respect to electronic methods for providing information about funding opportunities or accepting applicants' submissions of information, NASA is responsible for compliance with Section 508 of the Rehabilitation Act of 1973 (29 U.S.C. 794d).

NASA REQUIREMENT

Collection of STEM information (Required)

Sample Language

NASA is implementing a process to collect demographic data from grant applicants for the purpose of analyzing demographic differences associated with its award processes. Information collected will include name, gender, race, ethnicity, disability status, and citizenship status. Submission of the information is voluntary and is not a precondition of award.

E. Application Review Information

1. Criteria—Required.

This section must address the criteria that NASA will use to evaluate applications. This includes the merit and other review criteria that evaluators will use to judge applications, including any statutory, regulatory, or other preferences (e.g., minority status or Native American tribal preferences) that will be applied in the review process. These criteria are distinct from eligibility criteria that are addressed before an application is accepted for review and any program policy or other factors that are applied during the selection process, after the review process is completed.

The intent is to make the application process transparent so that applicants can make informed decisions when preparing their applications to maximize fairness of the process.

The announcement should clearly describe all criteria, including any sub-criteria. If criteria vary in importance, the announcement should specify the relative percentages, weights, or other means used to distinguish among them.

For statutory, regulatory, or other preferences, the announcement should provide a detailed explanation of those preferences with an explicit indication of their effect (e.g., whether they result in additional points being assigned).

If an applicant's proposed cost sharing will be considered in the review process (as opposed to being an eligibility criterion described in Section C.2), the announcement must specifically address how it will be considered (e.g., to assign a certain number of additional points to applicants who offer cost sharing, or to break ties among applications with equivalent scores after evaluation against all other factors).

If cost sharing will not be considered in the evaluation, the announcement should say so, so that there is no ambiguity for potential applicants. Vague statements that cost sharing is encouraged, without clarification as to what that means, are unhelpful to applicants. It also is important that the announcement be clear about any restrictions on the types of cost (e.g., in-kind contributions) that are acceptable as cost sharing.

2. Review and Selection Process—Required.

This section may vary in the level of detail provided. The announcement must list any program policy or other factors or elements, other than merit criteria, that the selecting official may use in selecting applications for Federal award (e.g., geographical dispersion, program balance, or diversity).

NASA may also include other appropriate details. For example, this section may:

- a. Indicate who is responsible for evaluation against the merit criteria (e.g., peers external to NASA or NASA) and/or who makes the final selections for Federal awards.
- b. If there is a multi-phase review process (e.g., an external panel advising internal NASA personnel who make final recommendations to the deciding official), the announcement may describe the phases.
- c. The number of people on an evaluation panel and how it operates, the way reviewers are selected, reviewer qualifications, and the way that conflicts of interest are avoided.

In addition, if NASA permits applicants to nominate suggested reviewers of their applications or suggest those they feel may be inappropriate due to a conflict of interest, that information should be included in this section.

NASA REQUIREMENT

Risk Analysis (Required)

Sample Language

NASA Grant Officers will conduct a pre-award review of risk associated with the proposer as required by 2 CFR 200.206, Federal awarding agency review of risk posed by applicants. For all proposals selected for award, the Grant Officer will review the submitting organization's information available through multiple government-wide repositories such as the System for Award Management (SAM.gov), Federal Awardee Performance and Integrity Information System (FAPIIS), the Contractor Performance and Assessment Reporting System (CPARS), the Federal Audit Clearinghouse (FAC), USAspending.gov, and GrantSolutions Recipient Insight.

3. Risk Review – Required

For any Federal award under a notice of funding opportunity, if NASA anticipates that the

total Federal share will be greater than the simplified acquisition threshold over the period of performance (see 2 CFR §200.1, Definitions, for a definition of the simplified acquisition threshold), this section must also inform applicants:

- i. That NASA, prior to making a Federal award with a total amount of Federal share greater than the simplified acquisition threshold, is required to review and consider any information about the applicant that is in the designated integrity and performance system accessible through SAM (currently FAPIIS) (see 41 U.S.C. §2313);
- ii. That an applicant, at its option, may review information in the designated integrity and performance systems accessible through SAM and comment on any information about itself that a Federal awarding agency previously entered and is currently in the designated integrity and performance system accessible through SAM;
- iii. That NASA will consider any comments by the applicant, in addition to the other information in the designated integrity and performance system, in making a judgment about the applicant's integrity, business ethics, and record of performance under Federal awards when completing the review of risk posed by applicants as described in 200.206, Federal awarding agency review of risk posed by applicants.

4. Anticipated Announcement and Federal Award Dates—Optional.

This section is intended to provide applicants with information they can use for planning purposes. If there is a single application deadline followed by the simultaneous review of all applications, NASA can include in this section information about the anticipated dates for announcing or notifying successful and unsuccessful applicants and for having Federal awards in place. If applications are received and evaluated on a “rolling” basis at different times during an extended period, it may be appropriate to give applicants an estimate of the time needed to process an application and notify the applicant of NASA’s decision.

F. Federal Award Administration Information

1. Federal Award Notices—Required

This section must address what a successful applicant can expect to receive following selection.

If NASA’s practice is to provide a separate notice stating that an application has been selected before it actually makes the Federal award, this section would be the place to indicate that the letter is not an authorization to begin performance (to the extent that it allows charging to Federal awards of pre-award costs at the non-Federal entity's own risk).

This section should indicate that the notice of Federal award signed by the grants officer (or equivalent) is the authorizing document, and whether it is provided through postal mail or by electronic means and to whom.

It also may address the timing, form, and content of notifications to unsuccessful applicants. See also 200.211, Information contained in a Federal award.

2. Administrative and National Policy Requirements—Required

This section must identify the usual administrative and national policy requirements NASA's Federal awards may include. Providing this information lets a potential applicant identify any requirements with which it would have difficulty complying if its application is successful. In those cases, early notification about the requirements allows the potential applicant to decide not to apply or to take needed actions before receiving the Federal award.

The announcement need not include all the terms and conditions of the Federal award but may refer to a document (with information about how to obtain it) or Internet site where applicants can see the terms and conditions.

If this funding opportunity will lead to Federal awards with some special terms and conditions that differ from NASA's usual (sometimes called "general") terms and conditions, this section should highlight those special terms and conditions. Doing so will alert applicants that have received Federal awards from NASA previously and might not otherwise expect different terms and conditions.

For the same reason, the announcement should inform potential applicants about special requirements that could apply to particular Federal awards after the review of applications and other information, based on the particular circumstances of the effort to be supported (e.g., if human subjects were to be involved or if some situations may justify special terms on intellectual property, data sharing or security requirements).

NASA REQUIREMENT

Research Terms and Conditions (Required for all NOFOs for research)

Sample language

Awards from this funding announcement that are issued under 2 CFR 1800 are subject to the Federal Research Terms and Conditions (RTC) located at <http://www.nsf.gov/awards/managing/rtc.jsp>. In addition to the RTC and NASA-specific guidance, three companion resources can also be found on the website: Appendix A—Prior Approval Matrix, Appendix B—Subaward Requirements Matrix, and Appendix C—National Policy Requirements Matrix.

NASA REQUIREMENT

Environmental Statement (Required)

Sample language

Awards of proposals related to this NOFO must comply with the National Environmental Policy Act (NEPA); thus, proposers are encouraged to plan and budget for any anticipated environmental impacts. While most research awards will not trigger action-specific NEPA

review, some activities (including international actions) will.

The majority of grant-related activities are categorically excluded as research and development (R&D) projects that do not pose any adverse environmental impact. A blanket NASA Grants Record of Environmental Consideration (REC) provides NEPA coverage for these anticipated activities. The NSPIRES award application cover page includes questions to determine whether a specific proposal falls within the Grants REC and must be completed as part of the proposal submission process. Activities outside of the bounding conditions of the Grants REC will require additional NEPA analysis. Examples of actions that will likely require NEPA analysis include but are not limited to suborbital-class flights not conducted by a NASA Program Office, activities involving ground-breaking construction/fieldwork, and certain payload activities such as the use of dropsondes.

Questions concerning environmental compliance may be addressed to Tina Norwood, NASA NEPA Manager, at tina.norwood-1@nasa.gov or (202) 358-7324.

3. Reporting—Required.

This section must include general information about the type (*e.g.*, financial or performance), frequency, and means of submission (paper or electronic) of post-Federal award reporting requirements. Highlight any special reporting requirements for Federal awards under this funding opportunity that differ (*e.g.*, by report type, frequency, form/format, or circumstances for use) from what NASA’s Federal awards usually require. Federal awarding agencies must also describe in this section all relevant requirements such as those at 2 CFR 180.335, What information must I provide before entering into a covered transaction with a Federal agency?, and 180.350, What must I do if I learn of information required under 180.335 after entering into a covered transaction with a Federal agency? The NOFO may simply state that award recipients must comply with the reporting requirements in 2 CFR 180.335 and 180.350.

If the Federal share of any Federal award may include more than \$500,000 over the period of performance, this section must inform potential applicants about the post award reporting requirements reflected in 2 CFR 200 Appendix XII—Award Term and Condition for Recipient Integrity and Performance Matters.

NASA REQUIREMENT

Access to research (Required for all NOFOs for research)

Sample language

Awards issued under this NOFO must comply with the provision set forth in the NASA Plan for Increasing Access to the Results of Scientific Research (http://www.nasa.gov/sites/default/files/files/NASA_Data_Plan.pdf) including the responsibility for:

- a. Submitting as approved peer-reviewed manuscripts and metadata to a designated repository and
- b. Reporting publications with the annual and final performance reports.

G. NASA Contact(s)—Required

The announcement must give potential applicants a point(s) of contact for answering questions or helping with problems while the funding opportunity is open. The intent of this requirement is to be as helpful as possible to potential applicants, so NASA should consider approaches such as giving:

- a. Points of contact who may be reached in multiple ways (e.g., by telephone, fax, and/or email, as well as regular mail).
- b. A fax or email address that multiple people access, so that someone will respond even if others are unexpectedly absent during critical periods.
- c. Different contacts for distinct kinds of help (e.g., one for questions of programmatic content and a second for administrative questions).

H. Other Information—Optional

This section may include any additional information that will assist a potential applicant. For example, the section might:

- a. Indicate whether this is a new program or a one-time initiative.
- b. Mention related programs or other upcoming or ongoing NASA funding opportunities for similar activities.
- c. Include current Internet addresses for NASA Web sites that may be useful to an applicant in understanding the program.
- d. Alert applicants to the need to identify proprietary information and inform them about the way the NASA will handle it.
- e. Include certain routine notices to applicants (e.g., that the Federal government is not obligated to make any Federal award as a result of the announcement or that only grants officers can bind the Federal government to the expenditure of funds).

NASA REQUIREMENT

Access to NASA facilities/systems (Required)

Sample Language

All recipients must work with NASA project/program staff to ensure proper credentialing for any individuals who need access to NASA facilities and/or systems. Such individuals include U.S. citizens, lawful permanent residents (“green card” holders), and foreign nationals (those who are neither U.S. citizens nor permanent residents).

Limited Release of Proposers Confidential Business Information (Required)

Sample Language

- (a) For proposal evaluation and other administrative processing, NASA may find it necessary to release information submitted by the proposer to individuals not employed by NASA. Business information that would ordinarily be entitled to confidential treatment may be included in the information released to these individuals. Accordingly, by submission of this proposal the proposer hereby consents to a limited

- release of its confidential business information (CBI).
- (b) Except where otherwise provided by law, NASA will permit the limited release of CBI only pursuant to non-disclosure agreements signed by the assisting contractor or subcontractor, and their individual employees who may require access to the CBI to perform the assisting contract.

Cross-Waiver of Liability for International Space Station, Science or Space Exploration Activities (required as appropriate) -The language in the cross waiver is required by the international agreements NASA has with its international partners for the use of the Space Station and/or for exploration of space.

Sample Language

The cross-waivers will require the recipient to extend the cross-waiver terms and conditions to their subcontractors at any tier and related entities, ensuring those subcontractors and related entities also waive all claims against any entity or person defined in the provision for damages arising out of Protected Space Operations. This cross-waiver is intended to be broadly construed, and NASA extends it to its related entities as set forth in the provision. See Appendix D for specific conditions that will apply to an approved award.

Appendix B – Waiver of Electronic Submission Requirement Request Process

Applicants may request a waiver of the requirement for electronic submission if they can provide a compelling reason. The process for applying for a waiver is described below. Questions on applying for a waiver may be directed to NASA contact listed in the funding announcement.

All applicants must register in the System for Award Management (SAM) and NASA Solicitation and Proposal Integrated Review and Evaluation System (NSPIRES) even those who intend to request a waiver. If an applicant does not have an active SAM registration prior to submitting its paper application, it will be screened out and returned to the applicant without review. Registration is necessary to ensure that information required for paper submission is available and that the applicant is ready to submit electronically if the waiver is denied.

A written waiver request must be received by NASA at least 20 calendar days in advance of the application due date stated on the cover page of the Notice of Funding Opportunity (NOFO). The request must be either e-mailed or mailed (USPS or common carrier) to the NASA contact listed in the funding announcement:

When requesting a waiver, the following information must be included:

1. NASA NOFO, or announcement title and announcement number;
2. Name, address, and telephone number of the applicant organization as they will appear in the application;
3. Applicant organization's UEI (also known as a DUNS) number;
4. Authorized Organization Representative (AOR) for the named applicant;
5. Name, telephone number, and e-mail of the applicant organization's Contact Person for the waiver; and
6. Details of why the organization is unable to submit electronically, explaining why their physical location does not have adequate access to the Internet.

The NASA official will either e-mail (if the waiver request was received by e-mail) or express mail/deliver (if the waiver request was received by mail) the waiver decision to the Contact Person no later than seven calendar days prior to the application due date. If the waiver is approved, an application must be submitted either by email or mailed in as a paper copy or using a CD-ROM or similar device. If the waiver is disapproved, the applicant organization must be prepared to submit through Grants.gov or NSPIRES or forfeit the opportunity to apply. The written approval must be included as the cover page of the paper application and the application must be received by the due date.

A paper application will not be accepted without the waiver approval and will be returned to the applicant if it is not included. Paper applications received after the due date will not be accepted.

Instructions for Submitting a Paper Application with a Waiver: Paper submissions must be postmarked by the date and time specified in the announcement. Applications may be emailed to the NASA contact, shipped using only Federal Express (FedEx), United Parcel Service (UPS), or the U.S. Postal Service (USPS). The applicant will be notified by postal mail that their application has been received.

Note: If the applicant uses the USPS, Express Mail must be used. Please remember that mail sent to federal facilities undergoes a security screening prior to delivery. The applicant is responsible for ensuring that its application will arrive by the application due date and time.

NASA will not accept or consider any applications that are sent by facsimile or hand carried.

If the applicant is submitting a paper application, an original application must be submitted. The original and copies must not be bound, and nothing should be attached, stapled, folded, or pasted. Do not use staples, paper clips, or fasteners; however, rubber bands may be used.

If the applicant is submitting a paper application, please follow the funding announcement's instructions for order in which the required forms and documents are to be submitted. The applicant must follow the formatting instructions included in the funding announcement. Oversized pages (e.g., foldouts, posters) will be proportionally calculated against the page count.

With the exception of standard forms in the application package, all pages in the application shall be numbered consecutively, with a notation "page XX out of XX". This notation helps to check that all the pages were received.

Appendix C – Certifications, Assurances, and Representations

On February 2, 2019, the System for Award Management (SAM) implemented a new process that allows financial assistance registrants to submit common federal government-wide certifications and representations. Individuals and businesses (entities) registering on SAM.gov can review and submit financial assistance certifications and representations online. The new process will be required effective January 1, 2020. Guidance on the new process and system change can be found at <https://interact.gsa.gov/blog/certifications-and-representation-improvements-sam>

Separate and apart from the government wide Certifications and Representations listed in SAM, NASA will allow recipients to submit certain certifications, assurances and representations required by statute, executive order, or regulation on an annual basis, if the recipients have ongoing and continuing relationships with the agency. Annual certifications and representations shall be signed by responsible officials with the authority to ensure recipients' compliance with the pertinent requirements. Recipients determine how annual representations affect their responsibility to obtain required certifications from pass-through entities. All Certification required for an application are listed below and are also accessible in NSPIRES.

C1. Certification of Compliance on Proposal Cover Page

By submitting the proposal identified in the Cover Sheet/Proposal Summary in response to this Research Announcement, the Authorizing Official of the proposing organization (or the individual Proposer if there is no proposing organization) as identified below—

- (a) Certifies that the statements made in this proposal are true and complete to the best of his/her knowledge;
- (b) Agrees to accept the obligation to comply with NASA award terms and conditions if an award is made as a result of this proposal; and
- (c) Confirms compliance with all applicable terms and conditions, rules, and stipulations set forth in the Certifications, Assurances, and Representations contained in this NRA or CAN. Willful inclusion of false information in this proposal and/or its supporting documents, or in reports required under an ensuing award, is a criminal offense (U.S. Code, Title 18, Section 1001).

C2. Certification Regarding Lobbying

No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subawards, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000, and not more than \$100,000 for each such failure.

C3. Assurance and Representation on China restrictions set out in section 1340 of PL 112- 10 and section 539 of PL 112-55

By submission of its proposal, the proposer represents that the proposer is not China or a Chinese-owned company, and that the proposer will not participate, collaborate, or coordinate bilaterally with China or any Chinese-owned company, at the prime recipient level or at any subrecipient level, whether the bilateral involvement is funded or performed under a no- exchange of funds arrangement.

C4. Representation Regarding Whistleblower Protection as provided in PL 113-235 Title VII section 743, all subsequent appropriation acts, and 10 U.S.C. § 2409

A corporation or prospective recipient represents that employees or contractors of such entity seeking to report fraud, waste, or abuse are NOT required to sign internal confidentiality agreements or statements prohibiting or otherwise restricting such employees or contractors from lawfully reporting such waste, fraud, or abuse to a designated investigative or law enforcement representative of a Federal department or agency authorized to receive such information. Additionally, the corporation or prospective recipient represents that an employee of a contractor, subcontractor, grantee, or subgrantee or personal services contractor may not be discharged, demoted, or otherwise discriminated against as a reprisal for disclosing to a person or body described in paragraph two of 10 U.S.C. 2409 information that the employee reasonably believes is evidence of gross mismanagement of a National Aeronautics and Space Administration contract or grant, a gross waste of Administration funds, an abuse of authority relating to an Administration contract or grant, or a violation of law, rule, or regulation related to an Administration contract (including the competition for or negotiation of a contract) or grant. A person who believes that the person has been subjected to a reprisal prohibited by 10 U.S.C. 2409 subsection (a) may submit a complaint to the Inspector General of the National Aeronautics and Space Administration.

Appendix D – Award Terms and Conditions

Terms and conditions (T&C) are used to standardize grant and cooperative agreement language. T&Cs shall be incorporated into awards either in full text or by reference as described below.

Terms and Conditions

- (a) Unless otherwise noted, Grant Officers shall incorporate by reference the terms and conditions set forth in sections D1 through D22 of this Appendix for awards with non-Federal entities and for-profit organizations. Any of the terms and conditions in sections D23 through D37 shall be referenced in full text for awards with non-Federal entities and for-profit organizations. The program office may need to include information required for certain terms and conditions to allow for additional information or permit minor modifications. For example, the Grant Officer may substitute appropriate sections of section D3, Technical Publications and Reports, with reporting requirements specified by the program office.
- (b) Additional special terms and conditions may be included to the extent they are required and are not inconsistent with the other terms and conditions in this Appendix. A deviation in accordance with section 5.15.3 is required before a new term and condition inconsistent with the standard terms and conditions can be included in an award.
- (c) Whenever the word “award” appears in this Appendix, it shall be deemed to include, both grants and cooperative agreements, as appropriate.
- (d) Terms and conditions for research awards awarded to foreign organizations, when approved by NASA Headquarters, will be provided in full text. Referenced handbooks, statutes, or other regulations, which the recipient may not have access to, must be made available when requested by the foreign organization.
- (e) Terms and conditions do not supersede state laws.

D1. Compliance with Title 2 of the Code of Federal Regulations, Grants and Agreements

This award is subject to the requirements set forth in 2 CFR part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal awards as adopted by NASA in Part 1800 of Title 2 of the Code of Federal Regulations. Specific terms and conditions set forth in this award document are provided to supplement and clarify, not replace, the OMB Uniform Guidance, except in circumstances where a waiver from OMB Uniform Guidance requirements has been obtained by NASA.

Unless otherwise stated below, 2 CFR 170, Reporting Subaward and Executive Compensation Information; 2 CFR 175, Award Term for Trafficking in Persons; 2 CFR 182, Government Requirements for Drug-free Workplace; and 2 CFR 183, Never Contract with the Enemy apply and are incorporated by reference.

Insert section D1(a) and (b) below when an award is issued to a for-profit organization.

- (a) With the exception of Subpart E and F, this award is subject to the requirements set forth in OMB Guidance on Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal awards at 2 CFR part 200 as adopted by NASA in Part 1800 of Title 2 of the Code of Federal Regulations. Specific terms and conditions set forth in this award document are provided to supplement and clarify, not replace, the Guidance, except in circumstances where a waiver from the OMB Uniform Guidance requirements has been obtained by NASA.
- (b) In lieu of Subparts E and F of 2 CFR part 200, the expenditure of Government funds by the recipient and the allowability of costs recognized as a resource contribution by the recipient shall be governed by the FAR cost principles implemented by the FAR at [FAR part 30, Cost Accounting Standards Administration](#), and [FAR part 31, Contract Cost Principles and Procedures](#). (If the recipient is a consortium which includes non-commercial firm members, cost allowability for those members will be determined by the OMB Uniform Guidance at Subpart E and F of 2 CFR 200.)

D2. System for Award Management and Unique Entity Identifier

Requirement for System for Award Management

Unless a recipient is exempted from this requirement under 2 CFR 25.110, Exceptions to this part, the recipient must maintain current information in the System for Award Management (SAM). This includes information on the recipient's immediate and highest level owner and subsidiaries, as well as on all of the recipient's predecessors that have been awarded a Federal contract or Federal financial assistance within the last three years, if applicable, until the recipient submits the final financial report required under this Federal award or receives the final payment, whichever is later. This requires the recipient to review and update the information at least annually after the initial registration, and more frequently if required by changes in the recipient's information or another Federal award term.

Requirement for Unique Entity Identifier

If the recipient is authorized to make subawards under this Federal award, the recipient:

1. Must notify potential subrecipients that no entity (see definitions below) may receive a subaward from the recipient until the entity has provided its Unique Entity Identifier to the recipient.
2. May not make a subaward to an entity unless that entity has provided its Unique Entity Identifier to the recipient. Subrecipients are not required to obtain an active SAM registration, but must obtain a Unique Entity Identifier.

Definitions

For purposes of this award 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, Definitions, and also includes all of the following, for purposes of this part:
 - a. A Governmental foreign organization
 - b. A foreign public entity;
 - c. A domestic for-profit organization; and
 - d. A Federal agency.
4. Subaward has the meaning set forth in 2 CFR 200.1.
5. Subrecipient has the meaning set forth in 2 CFR 200.1.

D3. Technical Publications and Reports

- (a) NASA encourages the widest practicable dissemination of research results at any time during the course of the investigation.
 - (1) All information disseminated as a result of the award shall contain a statement which acknowledges NASA's support and identifies the award by number (*e.g.*, “the material is based upon work supported by NASA under award No(s) XXXXX (as shown on the award notice).”)
 - (2) Except for articles or papers published in scientific, technical, or professional journals, the exposition of results from NASA supported research should also include 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 Aeronautics and Space Administration.”
 - (3) As a courtesy, any release of a NASA photograph or illustration should list NASA first on the credit line followed by the name of the Principal Investigator's Institution. As an example - “Photograph or illustration, figure, etc. courtesy of NASA or NASA Center managing the mission or program and the Principal Investigator's institution.”
 - (4) For research and research-related awards, see additional reporting requirements in section D35.

(b) Reports shall be in the English language, informal in nature, and ordinarily not exceed three pages (not counting cover page information, bibliographies, abstracts, and lists of other media). The recipient shall submit the following reports -

- (1) A performance report for all but the final year of the award. Each report is due 60 days before the anniversary date of the award and shall briefly describe what was accomplished during the reporting period. A term or condition specifying more frequent reporting may be required.
- (2) A final performance report, Summary of Research, or Educational Activity Report is due within 120 days after the end date for the period of performance, regardless of whether or not support is continued under another award. This report shall be a comprehensive summary of significant accomplishments during the duration of the award.

(c) Performance reports, Summaries of Research, and Educational Activity Reports shall adhere to GCAM Section 7.5 Performance Report Requirements and include the following on the first page:

- Federal agency (i.e., NASA) and program office to which the report is submitted.
- Award number.
- Project title.
- Principal Investigator name, title, and contact information (e-mail address and phone number).
- Name of submitting official, title, and contact information (e-mail address and phone number), if other than PI.
- Submission date.
- Unique Entity Identifier (UEI) number, also known as a DUNS number, and EIN number.
- Recipient organization name and address.
- Recipient identifying number or account number, if any.
- Period of performance start and end date.
- Reporting period end date.
- Report term or frequency (annual, semi-annual, quarterly, other).
- Final Report? Indicate “Yes” or “No.”
- Signature of submitting official (either handwritten or electronic)

(d) Performance reports, Summaries of Research, and Educational Activity Reports shall be distributed as follows:

- (1) The original report, in electronic format, to the NASA Technical Officer and Grant Officer.
- (2) One copy to the NASA New Technology Officer.

D4. Reporting Subawards and Executive Compensation

a. Reporting of first-tier subawards.

1. *Applicability.* Unless the recipient is exempt as provided in paragraph d. of this award term, the recipient must report each action that equals or exceeds \$30,000 or more 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.* The recipient 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.* The recipient must report total compensation for each of its 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 as defined in 2 CFR 170.320, Federal financial assistance subject to the Transparency Act;
 - ii. In the preceding fiscal year, the recipient 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, 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.* The recipient must report executive total compensation described in paragraph b.1. of this award term:
 - i. As part of its 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 exempt as provided in paragraph d. of this award term, for each first-tier non-Federal entity subrecipient under this award, the subrecipient 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.* The subrecipient 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 the recipient makes 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), the subrecipient must report any required compensation information by November 30 of that year.

d. *Exemptions*

If, in the previous tax year, the recipient had gross income, from all sources, under \$300,000, it is 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 the purposes of this award term, the definitions at 2 CFR 170, Appendix A, Section E apply.

D5. Extensions

- (a) It is NASA's policy to provide maximum possible continuity in funding award-supported research and educational activities. Therefore, awards may be extended for additional periods of time when necessary to complete work that was part of the original award. NASA generally only approves such extensions within funds already made available. Any extension that would require additional funding must be supported by a proposal submitted at least three months in advance of the end date of the period of performance.
- (b) Recipients may extend the expiration date of an award if additional time beyond the established end date is required to assure adequate completion of the original scope of work within the funds already made available. For this purpose, the recipient may make a one-time no-cost extension, not to exceed 12 months, prior to the established expiration date. Written notification of such an extension, with the supporting reasons, must be received by the NASA Grant Officer at least ten days prior to the expiration of the award. A copy of the extension must also be forwarded to cognizant Office of Naval Research (ONR) office, if administration has been delegated to ONR. NASA reserves the right to disapprove the extension if the requirements set forth at 200.308 (e)(2), Revision of budget and program plans, are not met.
- (c) Requests for approval for all other no-cost extensions must be submitted in writing to the NASA Grant Officer. A copy of this request must also be forwarded to cognizant Office of Naval Research (ONR) office, if administration has been delegated to ONR.

D6. Termination and Enforcement

Termination and enforcement conditions of awards are specified in 200.339, Remedies for noncompliance, through 200.343, Effects of suspension and termination.

D7. Change in Principal Investigator or Scope

- (a) The recipient shall obtain the approval of the NASA Grant Officer for a change of the Principal Investigator, or for a significant absence of the Principal Investigator from the project, defined as a three-month absence from the program or a 25 percent reduction in time devoted to the project. Significantly, reduced availability of the services of the Principal Investigator(s) named in the award instrument could be grounds for termination, unless alternative arrangements are made and approved in writing by the Grant Officer.
- (b) Prior written approval is required from NASA if there is to be a significant change in the objective or scope of the project.

D8. Financial Management

- (a) Advance payments will be made by the Financial Management Office of the NASA Center assigned financial cognizance of the award, using the Department of Health and Human Services' Payment Management System (DHHS/PMS), in accordance with procedures provided to the recipient. The recipient shall submit a Federal Financial Report (SF-425), and, when applicable, a Federal Financial Report Attachment (SF-425A) electronically to DHHS/PMS within 30 days following the end of each Federal fiscal quarter (i.e., December 31, March 31, June 30, and September 30).
- (b) In addition, the recipient shall submit a final SF-425 in electronic or paper form to NASA within 120 calendar days after the end date of the period of performance. The final SF-425 shall pertain only to the completed award and shall include total disbursements from inception through completion. The report shall be marked "Final." The final SF-425 shall be submitted to NASA per the Grants and Cooperative Agreement Manual (GCAM), Appendix F, Required Publications and Reports. A copy of the GCAM is located at https://prod.nais.nasa.gov/pub/pub_library/srba/index.html.
- (c) By signing any report delivered under the award, the authorizing official for the recipient certifies to the best of his or her knowledge and belief that the report is true, complete, and accurate, and the expenditures, disbursements and cash receipts are for the purposes and intent set forth in the award documents. The authorizing official by signing the report also certified he or she is aware that any false, fictitious, or fraudulent information, or the omission of any material fact, may subject him or her to criminal, civil or administrative penalties for fraud, false statements, false claims or otherwise. (U.S. Code, Title 18, Section 1001 and Title 31 Section 3729-3733 and 3801-3812.)
- (d) Unless otherwise directed by the Grant Officer, any unexpended balance of funds which remains at the end of any budget period, except the final budget period of

the award, may be carried over to the next budget period, and may be used to defray costs of any budget period of the award. This includes allowing the carryover of funds to the second and subsequent years of a multiple year award. Unexpended funds from one award may not be carried over to a new or different award. This term and condition also applies to subawardees/subcontractors performing substantive work under the award. NASA reserves the right to remove unexpended balances from awards when insufficient efforts have been made by the awardee to liquidate funding balances in a timely fashion.

D9. Equipment and other Property

- (a) NASA permits acquisition of special purpose and general-purpose equipment specifically required for use exclusively for research activities.
 - (1) Acquisition of special purpose or general-purpose equipment costing in excess of \$5,000 (unless a lower threshold has been established by the recipient) and not included in the approved proposal budget, requires the prior approval of the NASA Grant Officer. Requests to the Grant Officer for the acquisition of equipment shall be supported by written documentation setting forth the description, purpose, and acquisition value of the equipment, and including a written certification that the equipment will be used exclusively for research, activities. (A change in the model number of a prior approved piece of equipment does not require resubmission for that item.) Research awards are exempt from the prior approval requirement. Special purpose and general purpose equipment costing in excess of \$5,000 (unless a lower threshold has been established by the recipient) acquired by the recipient under an award for the purpose of research shall be titled to the recipient as “exempt” without further obligation to NASA, including reporting of the equipment, in accordance with 200.312(c), Federally owned and exempt property, and 1800.312. Special purpose or general purpose equipment costing in excess of \$5,000 (unless a lower threshold has been established by the recipient) acquired by the recipient under an award for non-research work shall be titled to the recipient in accordance with § 200.313.
 - (2) Special purpose or general purpose equipment acquired by the recipient with award funds, valued under \$5,000 (unless a lower threshold is established by the recipient) are classified as “supplies,” do not require the prior approval of the NASA Grant Officer, shall vest in the recipient and will be titled to the recipient in accordance with 200.314, Supplies.
 - (3) Award funds may be expended for the acquisition of land or interests therein or for the acquisition and construction of facilities only under a facilities award.
- (b) As required, the recipient shall submit an annual Inventory Report, to be received no later than October 15 of each year, which lists all reportable non-exempt equipment and/or Federally owned property in its custody as of September 30.

Negative responses for annual Inventory Reports (when there is no reportable equipment) are not required. A Final Inventory Report of Federally Owned Property, including equipment where title was taken by the Government, will be submitted by the recipient no later than 60 days after the end date of the period of performance. Negative responses for Final Inventory Reports are required.

- (1) All reports will include the information listed in paragraph (d)(1) of 200.313, Equipment. No specific report form or format is required, provided that all necessary information is provided.
- (2) The original of each report shall be submitted to the Deputy Chief Financial Officer (Finance). Copies shall be furnished to the Center Industrial Property Officer and to ONR.

D10. Patent Rights

As stated at 2 CFR 200.315(c), Intangible Property, this award is subject to the provisions of 37 CFR 401 which requires use of the standard clause set out at 37 CFR 401.14 “Patent Rights (Small Business Firms and Nonprofit Organizations)” and the following:

(a) Definitions

The words “contract” or “Contractor” are used in 37 CFR 401.14. Those words shall be replaced by the words “award” or “recipient,” respectively.

The term “Federal Agency,” “agency,” or “funding Federal agency” is used 37 CFR 401.14, the term shall be replaced by the term “NASA.”

The term “award,” as used in this term and condition, means any actual or proposed grant, cooperative agreement, understanding, or other arrangement, and includes any assignment, substitution of parties, subaward, or subcontract executed or entered into thereunder.

(b) The below items are added to the end of paragraph (c) of 37 CFR 401.14 are as follows:

“(5) The recipient may use whatever format is convenient to disclose subject invention required in subparagraph (c)(1). NASA prefers that the recipient use either the electronic or paper version of NASA Form 1679, Disclosure of Invention and New Technology (Including Software), to disclose subject inventions. Both the electronic and paper version of the NASA Form 1679 may be accessed at the electronic New Technology Reporting Web site <https://invention.nasa.gov>.

“(6) In addition to the above, the recipient shall provide the New Technology Representative, as designated under term and condition “Designation of New Technology Representative and Patent Representative” at Appendix D29 of the GCAM, the following:

- (i) A yearly interim new technology summary report listing any subject

inventions required to be disclosed during the preceding year (or a statement certifying there were none).

- (ii) A final new technology summary report listing all subject inventions (or a statement certifying there were none) for the entire award period; which report shall be submitted within 120 days after the end date for the period of performance within the designated system noted within the award document.”
- (c) The below item is added to the end of paragraph (f)(1) of 37 CFR 401.14 “Patent Rights” as follows:
 - “(iii) The recipient shall through employee agreements or other suitable recipient policy, require that its employees “will assign and do hereby assign” to the recipient all right, title and interest in any subject invention under this award.”
- (d) The term “subcontract” in paragraph (g) of 37 CFR 401.14 shall include purchase orders.
- (e) The following constitutes paragraph “(l)” of in 37 CFR 404.14
 - “(I) Communications. A copy of all submissions or requests required 37 CFR 401.14, plus a copy of any reports, manuscripts, publications or similar material bearing on patent matters, shall be sent to the Center Patent Counsel and the NASA Grant Officer in addition to any other submission requirements in the award terms and conditions (*e.g.*, as specified in this term and condition and in term and condition under Appendix D29 of the GCAM “Designation of New Technology Representative and Patent Representative”). If any reports contain information describing a “subject invention” for which the recipient has elected or may elect to retain title, NASA will use reasonable efforts to delay public release by NASA or publication by NASA in a NASA technical series until an application filing date has been established, provided that the recipient identify the information and the “subject invention” to which it relates at the time of submittal. If required by the Patent Representative or requested by the New Technology Representative, as designated under Appendix D29 of the GCAM “Designation of New Technology Representative and Patent Representative,” the recipient shall provide the filing date, serial number and title, a copy of the patent application, and a patent number and issue date for any “subject invention” in any country in which the recipient has applied for patents. Additionally, the NASA shall have an irrevocable power to inspect and make copies of the patent application file, when a Federal Government employee is a co-inventor.”
- (f) NASA Inventions. NASA will use reasonable efforts to report inventions made by NASA employees as a consequence of, or which bear a direct relation to, the performance of specified NASA activities under this agreement and, upon timely request, will use reasonable efforts to grant the recipient an exclusive, or partially exclusive, revocable, royalty-bearing license, subject to the retention of a royalty-free right of the Government to practice or have practiced the invention by or on behalf of the Government.

- (g) The recipient agrees, subject to (g)(1) below, that the Government may duplicate and disclose subject invention disclosures and all other reports and papers furnished or required to be furnished pursuant to this term and condition.
- (1) Publishing information concerning an invention before a patent application is filed on a subject invention may create a bar to a valid patent. To avoid this bar, agencies may withhold information from the public that discloses any invention in which the Government owns or may own a right, title, or interest (including a nonexclusive license) (see 35 U.S.C. 205 and 37 CFR part 401). Agencies may only withhold information concerning inventions for a reasonable time in order for a patent application to be filed. Once filed in any patent office, agencies are not required to release copies of any document that is a part of a patent application for those subject inventions.
 - (2) In the event NASA contractors are tasked to perform work in support of specified activities under a cooperative agreement and inventions are made by contractor employees, the contractor will normally retain title to its employee inventions in accordance with 35 U.S.C. 202, 14 CFR part 1245, and/or Executive Order 12591. In the event the contractor decides not to pursue rights to title in any such invention and NASA obtains or retains title to such inventions, NASA will use reasonable efforts to report such inventions and, upon timely request, will use reasonable efforts to grant the recipient an exclusive, or partially exclusive, revocable, royalty-bearing license, subject to the retention of a royalty-free right of the Government to practice or have practiced the invention by or on behalf of the Government.

D11. Rights in Data

- (a) "Data," as used in this term and condition, means recorded information, regardless of form, the media on which it may be recorded, or the method of recording. The term includes, but is not limited to, data of a scientific or technical nature, and any copyrightable work, including computer software and documentation thereof.
- (b) As to data first produced by recipient in carrying out recipient's responsibilities under this award in which the recipient asserts copyright, or data for which copyright ownership was acquired under the grant, the recipient grants to the Federal Government (Government), a royalty-free, nonexclusive and irrevocable license to use, reproduce, distribute (including distribution by transmission) to the public, perform publicly, prepare derivative works, and display publicly, data in whole or in part and in any manner for Federal purposes and to have or permit others to do so for Federal purposes only.
- (c) In order that the Government may exercise its license rights in data, the Government, upon request to the recipient, shall have the right to review and/or obtain delivery of data resulting from the performance of work under this award or acquired under this award, and authorize others to receive such data to use for Federal purposes.

(d) Cost Sharing and/or Matching Efforts. When the recipient cost shares with the Government on the effort, the following paragraph also applies -

(1) In the event data first produced by the recipient in carrying out recipient's responsibilities under this award is furnished to NASA, and recipient considers such data to embody trade secrets or to comprise commercial or financial information which is privileged or confidential, and such data is so identified with a suitable notice or legend, the data will be maintained in confidence and disclosed and used by the Government and its contractors (under suitable protective conditions) only for experimental, evaluation, research and development purposes, by or on behalf of the Government for an agreed to period of time, and thereafter for Federal purposes as defined in Appendix D11 (b).

(e) For Cooperative Agreements, the following paragraph also applies -

(1) As to data first produced by NASA in carrying out NASA's responsibilities under a cooperative agreement and which data would embody trade secrets or would comprise commercial or financial information that is privileged or confidential if it has been obtained from the recipient, such data will be marked with an appropriate legend and maintained in confidence for 5 years (unless a shorter period has been agreed to between the Government and recipient) after development of the information, with the express understanding that during the aforesaid period such data may be disclosed and used (under suitable protective conditions) by or on behalf of the Government for Government purposes only, and thereafter for any purpose whatsoever without restriction on disclosure and use. Recipient agrees not to disclose such data to any third party without NASA's written approval until the aforementioned restricted period expires.

D12. National Security

NASA awards normally do not involve classified information. However, if it is known in advance that an award involves classified information or if the work on the award is likely to develop classified information, individuals performing on the award who will have access to the information must obtain the appropriate security clearance in advance of performing on the award, in accordance with NASA Procedural Requirements (NPR) 1600.2A, NASA Classified National Security Information (CNSI). When access to classified information is not originally anticipated in the performance of an award, but such information is subsequently sought or potentially developed by the award recipient, the NASA Grant Officer who issued the award shall be notified immediately, and prior to work under the award proceeding, to implement the appropriate clearance requirements.

D13. Non-Discrimination

(a) To the extent provided by law and any applicable agency regulations, this award and any program assisted thereby are subject to the provisions of Title VI of the Civil Rights Act of 1964 (Pub. L. 88-352), Title IX of the Education amendments

of 1972 (Pub. L. 92-318, 20 U.S.C. 1681*et seq.*), section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794), the Age Discrimination Act of 1975 (Pub. L. 94-135), Executive Order 13798, the implementing regulations issued pursuant thereto by NASA, and the assurance of compliance which the recipient has filed with NASA.

- (b) Except for commercially available supplies, materials, equipment, or general support services, the recipient shall obtain an assurance of compliance as required by NASA regulations from each organization that applies or serves as a subrecipient, subawardee, contractor or subcontractor under this award.
- (c) Work on NASA awards is subject to the provisions of Title VI of the Civil Rights Act of 1964 (Pub. L. 88-352; 42 U.S.C. 2000d-1), Title IX of the Education Amendments of 1972 (20 U.S.C. 1680*et seq.*), Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), the Age Discrimination Act of 1975 (42 U.S.C. 6101*et seq.*), Executive Order 13798, and the NASA implementing regulations (14 CFR parts 1250, 1251, 1252, and 1253).

D14. Clean Air and Water

Recipients must:

- (a) Comply with applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended (42 U.S.C. 7401*et seq.*) and of the Federal Water Pollution Control Act (33 U.S.C. 1251*et seq.*).
- (b) Ensure that no portion of the work under this award will be performed in a facility listed on the Environmental Protection Agency (EPA) List of Violating Facilities on the date that this award was effective unless and until the EPA eliminates the name of such facility or facilities from such listings.
- (c) 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) Insert the substance of these terms and conditions into any nonexempt subaward or contract under the award.
- (e) Report violations to NASA and to the EPA.

D15. Investigative Requirements

- (a) NASA reserves the right to perform security checks and to deny or restrict access to a NASA Center, facility, or computer system, or to NASA technical information, as NASA deems appropriate. To the extent the recipient needs such access for performance of the work, the recipient shall ensure that individuals needing such access provide the personal background and biographical information requested by NASA. Individuals failing to provide the requested information may be denied such access.

- (b) All requests to visit a NASA Center or facility must be submitted in a timely manner in accordance with instructions provided by that Center or facility.

D16. Travel and Transportation

- (a) The Fly American Act, 49 U.S.C. 1517, requires the recipient to use U.S. flag air carriers for international air transportation of personnel and property to the extent that service by those carriers is available.
- (b) Department of Transportation regulations, 49 CFR 173, govern recipient shipment of hazardous materials and other items.

D17. Safety

- (a) The recipient shall act responsibly in matters of safety and shall take all reasonable safety measures in performing under this award. The recipient shall comply with all applicable Federal, state, and local laws relating to safety. The recipient shall maintain a record of and will notify the NASA Grant Officer immediately (within one workday) of any accident involving death, disabling injury, or substantial loss of property in performing this award. The recipient will immediately (within one workday) advise NASA of hazards that come to its attention as a result of the work performed. Where the work under this award involves flight hardware, the hazardous aspects, if any, of such hardware will be identified, in writing, by the recipient. Compliance with this term and condition by subawardees/subcontractors shall be the responsibility of the recipient.

D18. Buy American Encouragement

As stated in Section 319 of Public Law 106-391, the NASA Authorization Act of 2000, and 2 CFR part 200.322, Domestic preferences for procurement, recipients are encouraged to purchase only American-made equipment and products.

D19. Investigation and Research Misconduct

Allegations of research misconduct are treated seriously and confidentially at NASA. Allegations are reviewed promptly, and if they meet the definition of research misconduct according to 14 CFR 1275.101 Definitions, they will be forwarded to the NASA Adjudication Official for their oversight. See 14 CFR 1275.101(m) to determine the appropriate Adjudication Official.

1. The NASA Adjudication Official has the authority to oversee and investigate potential research misconduct involving research defined in OMB Circular A-11 in all fields of science, engineering, and mathematics, including, but not limited to, research in space and Earth sciences, economics, education, linguistics, medicine, psychology, social sciences, statistics, and biological and physical research (ground based and microgravity), including research involving human subjects or animals.

2. Whenever feasible, allegations that may be of concern to other federal agencies and/or NASA offices will also be redirected as appropriate.
3. If an individual involved in NASA funded research is found to have committed research misconduct, the administrative actions that may be taken against this person range from minimal restrictions to severe restrictions per 14 CFR 1275.106 Administrative Actions, and do not include possible criminal sanctions.
4. NASA shall afford the accused individual or institution a chance to comment on the investigation report and a chance to appeal the decision resulting from the adjudication. The process for contesting a decision is outlined in 14 CFR 1275.108 Appeals.

D20. Allocation of Risk/Liability

- (a) With respect to activities undertaken under this award, the recipient agrees not to make any claim against NASA or the U.S. Government with respect to the injury or death of its employees or its subawardees/contractors and subaward/subcontractor employees, or to the loss of its property or that of its subawardees/contractors and subawardees/subcontractors, whether such injury, death, damage or loss arises through negligence or otherwise, except in the case of willful misconduct.
- (b) In addition, as applicable, the recipient agrees to indemnify and hold the U.S. Government and its contractors and subcontractors harmless from any third party claim, judgment, or cost arising from the injury to or death of any person, or for damage to or loss of any property, arising as a result of its possession or use of any U.S. Government property. If State law prohibits the recipient from accepting indemnification, then the recipient shall ensure this term and condition applies to all subrecipients, subawardees, contractors or subcontractors under this award.

D21. Export Licenses

- (a) The recipient shall comply with all applicable U.S. export control laws and regulations, including the International Traffic in Arms Regulations (ITAR), 22 CFR Parts 120 through 130, and the Export Administration Regulations (EAR), 15 CFR parts 730 through 799, in the performance of this award. In the absence of available license exemptions/exceptions, the recipient shall be responsible for obtaining the appropriate licenses or other approvals, if required, for exports of hardware, technical data, and software, or for the provision of technical assistance.
- (b) The recipient shall be responsible for obtaining export licenses, if required, before utilizing foreign persons in the performance of this award, including instances where the work is to be performed on-site at [insert name of NASA installation], where the foreign person will have access to export-controlled technical data or software.

- (c) The recipient shall be responsible for all regulatory record keeping requirements associated with the use of licenses and license exemptions/exceptions.
- (d) The recipient shall be responsible for ensuring that the requirements of this provision apply to its subaward recipients and subcontractors.

D22. Restrictions on sale or transfer of technology to foreign firms or institutions.

- (a) The parties agree that access to technology developments under this award by foreign firms or institutions must be carefully controlled. For purposes of this clause, a transfer includes a sale of the company, or sales or licensing of the technology. Transfers include:
 - (1) Sales of products or components,
 - (2) Licenses of software or documentation related to sales of products or components, or
 - (3) Transfers to foreign subsidiaries of the recipient for purposes related to this agreement.
- (b) The recipient shall provide timely notice to the Grant Officer in writing of any proposed transfer of technology developed under this award. If NASA determines that the transfer may have adverse consequences to the national security interests of the United States, or to the establishment of a robust United States industry, NASA and the recipient shall jointly endeavor to find alternatives to the proposed transfer which obviate or mitigate potential adverse consequences of the transfer.

D23. Cooperative Agreement

Include the language below if this award is a cooperative agreement. Otherwise, leave blank.

- (a) This award is a cooperative agreement and it is anticipated there will be substantial NASA involvement during performance of the effort. NASA and the recipient mutually agree to the following statement of anticipated cooperative interactions which may occur during the performance of this effort.

(Reference the approved proposal that contains a detailed description of the work and insert a concise statement of the exact nature of the cooperative interactions NASA and the recipient will provide.)

- (b) The terms “award” and “recipient” mean “cooperative agreement” and “recipient of cooperative agreement,” respectively, wherever the language appears in terms and conditions included in this agreement.
- (c) NASA's ability to participate and perform its collaborative effort under this cooperative agreement is subject to the availability of appropriated funds and nothing in this cooperative agreement commits the United States Congress to appropriate funds, therefore.

D24. Performance Goals and Performance Measurement

Per 2 CFR 200.208, Specific Conditions, NASA must ensure that award terms and conditions are consistent with the program design reflected in 2 CFR 200.202, Program planning and design, and the Grant and Cooperative Agreement Manual (GCAM) Section 5.1, Program Planning and Design. NASA must also ensure that terms and conditions include clear performance expectations of recipients per 2 CFR 200.301, Performance measurement, and GCAM Section 7.1, Performance Measurement.

(Where applicable, insert Federal award performance goals, indicators, targets, and baseline data. In some instances, a performance goal may be limited to the requirement to submit a performance report. Also specify how performance will be assessed, including the timing and scope of expected performance)

D25. Period of Performance, Budget Period, and Multiple Year Awards

(The period of performance and budget period language below is mandatory for all awards. The multiple year award language below is only applicable to multiple year awards)

Period of Performance

This award's total period of performance is [insert POP start date] to [insert POP end date]. This period of performance does not commit NASA to fund the award beyond the currently approved budget period stated below.

Budget Period

This award's budget period is [insert budget period start date] to [insert budget period end date]. This budget period denotes the time interval of the funded portion of this award during which the recipient is authorized to expend the funds awarded, including any funds carried forward pursuant to 2 CFR 200.308, Revision of budget and program plans.

Multiple Year Award

This is a multiple-year award contingent on the availability of funds, scientific progress of the project, and continued relevance to NASA programs. NASA anticipates continuing support at approximately the following levels:

Second year \$____, Anticipated funding date____.

Third year \$____, Anticipated funding date____.

(Periods may be added or omitted, as applicable)

D26. Incremental Funding

Incremental Funding

- (a) Only \$XXX of the amount indicated on the cover page of this award is available for payment and allotted to this award. NASA contemplates making additional allotments of funds during performance of this effort. It is anticipated that these funds will be obligated as appropriated funds become available without any action required by the recipient. The recipient will be given written notification by the NASA Grant Officer.
- (b) The recipient agrees to perform work up to the point at which the total amount paid or payable by the Government approximates but does not exceed the total amount actually allotted to this award. NASA is not obligated to reimburse the recipient for the expenditure of amounts in excess of the total funds allotted by NASA to this grant or cooperative agreement. The recipient is not authorized to continue performance beyond the amount allotted to this award.

Special Note - Balance is contingent on availability of funds. The remaining balance to fully fund this year is \$XXX.

D27. Cost Sharing

- (a) NASA and the recipient will share in providing the resources necessary to perform the award. NASA funding and non-cash contributions (personnel, equipment, facilities, etc.) and the dollar value of the recipient's cash and/or non-cash contribution will be on a percent recipient basis.
- (b) The funding and non-cash contributions by both parties are represented by the following dollar amounts:
Government Share: \$
Recipient Share: \$
Total Amount of this award including approved cost share or matching: \$
- (c) Criteria and procedures for allowable and allocable costs of cash and non-cash contributions shall be governed by 200.306, Cost Sharing or Matching. The applicable Federal cost principles are cited in 2 CFR 200 Subpart E.
- (d) The Recipient's share shall not be charged to the Government under this award or under any other contract or award.

D28. New Technology

- (a) Definitions.
Administrator, as used in this term and condition, means the Administrator of the National Aeronautics and Space Administration (NASA) or duly authorized representative.
The term "award," as used in this term and condition, means any actual or proposed

grant, cooperative agreement, understanding, or other arrangement, and includes any assignment, substitution of parties, subaward, or subcontract executed or entered into thereunder.

Made, as used in this term and condition, means conception or first actual reduction to practice; provided, that in the case of a variety of plant, the date of determination (as defined in section 41(d) of the Plant Variety Protection Act, 7 U.S.C. 2401(d)) must also occur during the period of performance.

Nonprofit organization, as used in this term and condition, 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 U.S.C. 501(c)) and exempt from taxation under section 501(a) of the Internal Revenue Code (26 U.S.C. 501(a)), or any domestic nonprofit scientific or educational organization qualified under a State nonprofit organization statute.

Practical application, as used in this term and condition, 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 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.

Reportable item, as used in this term and condition, means any invention, discovery, improvement, or innovation of the awardee, whether or not patentable or otherwise protectable under Title 35 of the United States Code, made in the performance of any work under any NASA award or in the performance of any work that is reimbursable under any term and condition in any NASA award providing for reimbursement of costs incurred before the effective date of the award. Reportable items include, but are not limited to, new processes, machines, manufactures, and compositions of matter, and improvements to, or new applications of, existing processes, machines, manufactures, and compositions of matter. Reportable items also include new computer programs, and improvements to, or new applications of, existing computer programs, whether or not copyrightable or otherwise protectable under Title 17 of the United States Code.

Small business firm, as used in this term and condition, means a domestic small business concern as defined at 15 U.S.C. 632 and implementing regulations (see 13 CFR 121.401*et seq.*) of the Administrator of the Small Business Administration.

Subject invention, as used in this term and condition, means any reportable item which is or may be patentable or otherwise protectable under Title 35 of the United States Code, or any novel variety of plant that is or may be protectable under the Plant Variety Protection Act (7 U.S.C. 2321*et seq.*).

(b) Allocation of principal rights.

(1) Presumption of title.

- (i) Any reportable item that the Administrator considers to be a subject invention shall be presumed to have been made in the manner specified

in paragraph (A) or (B) of section 20135(b)(1) of the National Aeronautics and Space Act of 1958 (51 U.S.C. 20135) (hereinafter called “the Act”), and that presumption shall be conclusive unless at the time of reporting the reportable item the recipient submits to the Grant Officer a written statement, containing supporting details, demonstrating that the reportable item was not made in the manner specified in paragraph (A) or (B) of section 20135(b)(1) of the Act.

- (ii) Regardless of whether title to a given subject invention would otherwise be subject to an advance waiver or is the subject of a petition for waiver, the recipient may nevertheless file the statement described in paragraph (b)(1)(i) of this term and condition. The Administrator will review the information furnished by the recipient in any such statement and any other available information relating to the circumstances surrounding the making of the subject invention and will notify the recipient whether the Administrator has determined that the subject invention was made in the manner specified in paragraph (A) or (B) of section 20135(b)(1) of the Act.

- (2) Property rights in subject inventions. Each subject invention for which the presumption of paragraph (b)(1)(i) of this term and condition is conclusive or for which there has been a determination that it was made in the manner specified in paragraph (A) or (B) of section 20135(b)(1) of the Act shall be the exclusive property of the United States as represented by NASA unless the Administrator waives all or any part of the rights of the United States, as provided in paragraph (b)(3) of this term and condition.

- (3) Waiver of rights.

- (i) Section 20135(g) of the Act provides for the promulgation of regulations by which the Administrator may waive the rights of the United States with respect to any invention or class of inventions made or that may be made under conditions specified in paragraph (A) or (B) of section 20135(b)(1) of the Act.
- (ii) As provided in 14 CFR part 1245, subpart 1, recipients may petition, either prior to execution of the award or within 30 days after execution of the award, for advance waiver of rights to any or all of the inventions that may be made under an award. If such a petition is not submitted, or if after submission it is denied, the recipient (or an employee inventor of the recipient) may petition for waiver of rights to an identified subject invention within eight months of first disclosure of the invention in accordance with paragraph (e)(2) of this term and condition, or within such longer period as may be authorized in accordance with 14 CFR 1245.105.

(c) Minimum rights reserved by the Government.

- (1) With respect to each subject invention for which a waiver of rights is applicable in accordance with 14 CFR part 1245, subpart 1, the Government

reserves -

- (i) An irrevocable, nonexclusive, nontransferable, royalty-free license for the practice of such invention throughout the world by or on behalf of the United States or any foreign government in accordance with any treaty or agreement with the United States; and
- (ii) Such other rights as stated in 14 CFR 1245.107.

- (2) Nothing contained in this paragraph (c) shall be considered to grant to the Government any rights with respect to any invention other than a subject invention.

(d) Minimum rights to the Recipient.

- (1) The recipient is hereby granted a revocable, nonexclusive, royalty-free license in each patent application filed in any country on a subject invention and any resulting patent in which the Government acquires title, unless the recipient fails to disclose the subject invention within the times specified in paragraph (e)(2) of this term and condition. The recipient's license extends to its domestic subsidiaries and affiliates, if any, within the corporate structure of which the recipient is a party and includes the right to grant sublicenses of the same scope to the extent the recipient was legally obligated to do so at the time the award was issued. The license is transferable only with the approval of the Administrator except when transferred to the successor of that part of the recipient's business to which the invention pertains.
- (2) The recipient's domestic license may be revoked or modified by the Administrator 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 37 CFR part 404, Licensing of Government Owned Inventions. This license will not be revoked in that field of use or the geographical areas in which the recipient 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 the discretion of the Administrator to the extent the recipient, 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, the recipient will be provided a written notice of the Administrator's intention to revoke or modify the license, and the recipient will be allowed 30 days (or such other time as may be authorized by the Administrator for good cause shown by the recipient) after the notice to show cause why the license should not be revoked or modified. The recipient has the right to appeal to the Administrator any decision concerning the revocation or modification of its license.

(e) Invention identification, disclosures, and reports.

- (1) The recipient shall establish and maintain active and effective procedures to assure that reportable items are promptly identified and disclosed to recipient personnel responsible for the administration of this New Technology term and condition within six months of conception and/or first actual reduction to practice, whichever occurs first in the performance of work under this award. These procedures shall include the maintenance of laboratory notebooks or equivalent records and other records as are reasonably necessary to document the conception and/or the first actual reduction to practice of the reportable items, and records that show that the procedures for identifying and disclosing reportable items are followed. Upon request, the recipient shall furnish the Grant Officer a description of such procedures for evaluation and for determination as to their effectiveness.
- (2) The recipient will disclose each reportable item to the New Technology Representative, with notice to the Grant Officer, within two months after the inventor discloses it in writing to recipient personnel responsible for the administration of this New Technology term and condition or, if earlier, within six months after the recipient becomes aware that a reportable item has been made, but in any event for subject inventions before any on sale, public use, or publication of such invention known to the recipient. The disclosure to the agency shall be in the form of a written report and shall identify the award under which the reportable item was made and the inventor(s) or innovator(s). It shall be sufficiently complete in technical detail to convey a clear understanding, to the extent known at the time of the disclosure, of the nature, purpose, operation, and physical, chemical, biological, or electrical characteristics of the reportable item. The disclosure shall also identify any publication, on sale, or public use of any subject invention and whether a manuscript describing such 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 the agency, the recipient will promptly notify the agency of the acceptance of any manuscript describing a subject invention for publication or of any on sale or public use planned by the recipient for such invention.
- (3) The recipient shall furnish the New Technology Representative, with notice to the Grants Officer, the following:
 - (i) Interim new technology summary reports every 12 months from the date of the award, listing reportable items during that period, and certifying that all reportable items have been disclosed (or that there are no such inventions) and that the procedures required by paragraph (e)(1) of this term and condition have been followed.
 - (ii) A final new technology summary report within 120 days after the end of the period of performance, listing all reportable items or certifying that there were no such reportable items, and listing all research subawardees/subcontractors at any tier containing a patent rights clause or certifying that there were no such subcontractors.

- (4) The recipient agrees, upon written request of the Patent Representative, to furnish additional technical and other information available to the recipient as is necessary for the preparation of a patent application on a subject invention and for the prosecution of the patent application, and to execute all papers necessary to file patent applications on subject inventions and to establish the Government's rights in the subject inventions.
- (5) The recipient agrees, subject to 5(a) below, the Government may duplicate and disclose subject invention disclosures and all other reports and papers furnished or required to be furnished pursuant to this term and condition.
 - (a) Publishing information concerning an invention before a patent application is filed on a subject invention may create a bar to a valid patent. To avoid this bar, agencies may withhold information from the public that discloses any invention in which the Government owns or may own a right, title, or interest (including a nonexclusive license) (see 35 U.S.C. 205 and 37 CFR part 401). Agencies may only withhold information concerning inventions for a reasonable time in order for a patent application to be filed. Once filed in any patent office, agencies are not required to release copies of any document that is a part of a patent application for those subject inventions.

(f) Examination of records relating to inventions.

- (1) The Grant Officer or any authorized representative shall, until 3 years after final payment under this award, have the right to examine any books (including laboratory notebooks), records, and documents of the recipient relating to the conception or first actual reduction to practice of inventions in the same field of technology as the work under this award to determine whether -
 - (i) Any such inventions are subject inventions;
 - (ii) The recipient has established and maintained the procedures required by paragraph (e)(1) of this term and condition; and
 - (iii) The recipient and its inventors have complied with the procedures.
- (2) If the New Technology Representative or Patent Representative learns of an unreported recipient invention, the recipient may be required to disclose the invention to the agency for a determination of ownership rights.
- (3) Any examination of records under this paragraph will be subject to appropriate conditions to protect the confidentiality of the information involved.

(h) Subawards/Subcontracts.

- (1) Unless otherwise authorized or directed by the Grant Officer, the recipient shall -
 - (i) Include the clause at NASA FAR Supplement (NFS) 1852.227-70, New

Technology, (suitably modified to identify the parties) in any subaward/subcontract hereunder (regardless of tier) with other than a small business firm or nonprofit organization for the performance of experimental, developmental, or research work; and

- (ii) Include the FAR clause 52.227-11, as modified by the NASA FAR Supplement (NFS) 1852.227-11, "Patent Right-Retention by the Contractor (Short Form)" (suitably modified to identify the parties) in any subaward/subcontract hereunder (regardless of tier) with a small business firm or nonprofit organization for the performance of experimental, developmental, or research work.
- (2) In the event of a refusal by a prospective subrecipient to accept such a clause the recipient
- (i) Shall promptly submit a written notice to the Grant Officer setting forth the subrecipient's reasons for such refusal and other pertinent information that may expedite disposition of the matter; and
 - (ii) Shall not proceed with such subaward/subcontract without the written authorization of the Grant Officer.
- (3) The recipient shall promptly notify the Grant Officer in writing upon the award of any subaward/subcontract at any tier containing a patent rights clause by identifying the subrecipient, the applicable patent rights term and condition/clause, the work to be performed under the subrecipient and the dates of award and estimated completion. Upon request of the Grant Officer, the recipient shall furnish a copy of such subaward/subcontract, and, no more frequently than annually, a listing of the subawards/subcontracts that have been awarded.
- (4) The subrecipient will retain all rights provided for the recipient in paragraph (h)(1)(i) or (ii) of this term and condition, whichever is included in the subaward/subcontracts, and the recipient will not, as part of the consideration for awarding the subaward/subcontract, obtain rights in the subrecipients' subject inventions.
- (i) Preference for United States industry. Unless provided otherwise, no recipient that receives title to any subject invention and no assignee of any such recipient shall grant to any person the exclusive right to use or sell any subject invention in the United States unless such person agrees that any products embodying the subject invention will be manufactured substantially in the United States. However, in individual cases, the requirement may be waived by the Administrator upon a showing by the recipient or assignee that reasonable but unsuccessful efforts have been made to grant licenses on similar terms to potential licensees that would be likely to manufacture substantially in the United States or that under the circumstances domestic manufacture is not commercially feasible.

D29. Designation of New Technology Representative and Patent Representative

(The Grant Officer shall include this term and condition in all awards containing the term and condition “Patent Rights” in Appendix D10 or the term and condition “New Technology” in Appendix D28.)

Designation of New Technology Representative and Patent Representative

- (a) For purposes of administration of the term and condition entitled “New Technology,” or “Patent Rights” whichever is included, the following named representatives are hereby designated by the Grant Officer to administer such term and condition:
 - New Technology Representative
 - Patent Representative
- (b) Reports of reportable items, and disclosure of subject inventions, interim reports, final reports, utilization reports, and other reports required by the term and condition, as well as any correspondence with respect to such matters, should be directed to the New Technology Representative, with notification to the Grant Officer, unless transmitted in response to correspondence or request from the Patent Representative. Inquires or requests regarding disposition of rights, election of rights, or related matters should be directed to the Patent Representative. This term and condition shall be included in any subaward/subcontract hereunder requiring a “New Technology” term and condition or “Patent Rights - Retention by the Contractor (Short Form)” term and condition unless otherwise authorized or directed by the Grant Officer. The respective responsibilities and authorities of the above-named representatives are set forth in the NASA Grant and Cooperative Agreement Manual.

D30. Equipment and Other Property under Awards with For-profit Organizations

- (a) This award permits acquisition of special purpose equipment required for the conduct of research. Acquisition of special purpose equipment costing in excess of \$5,000 and not included in the approved proposal budget requires the prior approval of the Grant Officer unless the item is merely a different model of an item shown in the approved proposal budget.
- (b) Recipients may not purchase, as a direct cost to the award, items of general-purpose equipment, examples of which include but are not limited to office equipment and furnishings, air conditioning equipment, reproduction and printing equipment, motor vehicles, and automatic data processing equipment. If the recipient requests an exception, the recipient shall submit a written request for Grant Officer approval, prior to purchase by the recipient, stating why the recipient cannot charge the general-purpose equipment to indirect costs.
- (c) Under no circumstances shall award funds be used to acquire land or any interest therein, to acquire or construct facilities (as defined in FAR 45.301, Use and rental), or to procure passenger carrying vehicles.

- (d) The Government shall have title to equipment and other personal property acquired with Government funds. Such property shall be disposed of pursuant to FAR 45.603, Abandonment or destruction of personal property.
- (e) Title to Government furnished equipment (including equipment, title to which has been transferred to the Government prior to completion of the work) will remain with the Government.
- (f) The recipient shall establish and maintain property management standards for Government property and otherwise manage such property as set forth in FAR 45.5, Support Government Property Administration, and NFS 1845.5.
- (g) Recipients shall submit annually a NASA Form 1018, NASA Property in the Custody of Contractors, in accordance with the instructions on the form, the provisions of NFS 1845.71 and any supplemental instructions that NASA may issue for the current reporting period. The original NF 1018 shall be submitted to the Center Deputy Chief Financial Officer (Finance) with three copies sent concurrently to the Center Industrial Property Officer. The annual reporting period shall be from October 1 of each year through September 30 of the following year. The report shall be submitted in time to be received by October 15. Negative reports (*i.e.* no reportable property) are required. The information contained in the reports is entered into the NASA accounting system to reflect current asset values for agency financial statement purposes. Therefore, it is essential that required reports be received no later than October 15. A final report is required within 30 days after the end of the period of performance.
- (h) The requirements set forth in this term and condition supersedes award term and condition in D9, Equipment and Other Property.

D31. Listing of Reportable Equipment and Other Property

- (a) Title to Federally-owned property provided to the recipient remains vested in the Federal Government, and shall be managed in accordance with 200.312, Federally-owned and exempt property. The following items of Federally-owned property are being provided to the recipient for use in performance of the work under this award:
(List property or state “not applicable.”)
- (b) The following specific items of equipment acquired by the recipient have been identified by NASA for transfer of title to the Government when no longer required for performance under this award. This equipment will be managed in accordance with 200.313, Equipment, and shall be transferred to NASA or NASA's designee in accordance with the procedures set forth at 200.313(e):
(List property or state “not applicable.”)

D32. Invoices and Payments Under Awards with For-profit Organizations

Invoices and Payments Under Awards with For-profit Organizations

- (a) Invoices for payment of actual incurred costs shall be submitted by the recipient no

more frequently than on a ~~XX~~ basis.

- (b) Invoices shall be submitted by the recipient to the following offices:
 - (1) The original invoice shall be sent directly to the payment office designated on the award cover page.
 - (2) Copies of the invoice shall be sent to the NASA Technical Officer and NASA Grant Officer.
- (c) All invoices shall reference the award number.
- (d) The final invoice shall be marked “Final” and shall be submitted within 120 days of the end date of the period of performance.
- (e) The requirements set forth in this term and condition shall govern to the extent these requirements are inconsistent with the requirements in term and condition “Financial Management” in D8.

D33. Electronic Funds Transfer Payment Methods

- (a) Payments under this award will be made by the Government by electronic funds transfer through the Treasury Fedline Payment System (FEDLINE) or the Automated Clearing House (ACH), at the option of the Government. After award, but no later than 14 days before an invoice is submitted, the recipient shall designate a financial institution for receipt of electronic funds transfer payments and shall submit this designation to the Grant Officer or other Government official, as directed.
- (b) For payment through FEDLINE, the recipient shall provide the following information:
 - (1) Name, address, and telegraphic abbreviation of the financial institution receiving payment.
 - (2) The American Bankers Association 9-digit identifying number for wire transfers of the financing institution receiving payment if the institution has access to the Federal Reserve Communication System.
 - (3) Payee's account number at the financial institution where funds are to be transferred.
 - (4) If the financial institution does not have access to the Federal Reserve Communications System, name, address, and telegraphic abbreviation of the correspondent financial institution through which the financial institution receiving payment obtains wire transfer activity. Provide the telegraphic abbreviation and American Bankers Association identifying number for the correspondent institution.
- (c) For payment through ACH, the recipient shall provide the following information:
 - (1) Routing transit number of the financial institution receiving payment (same as American Bankers Association identifying number used for FEDLINE).

- (2) Number of the account to which funds are to be deposited.
- (3) Type of depositor account (“C” for checking, “S” for savings).
- (4) If the recipient is a new enrollee to the ACH system, a “Payment Information Form,” SF 3881, must be completed before payment can be processed.
- (d) In the event the recipient, during the performance of this award, elects to designate a different financial institution for the receipt of any payment made using electronic funds transfer procedures, notification of such change and the required information specified above must be received by the appropriate Government official 30 days prior to the date such change is to become effective.
- (e) The documents furnishing the information required in this term and condition must be dated and contain the signature, title, and telephone number of the recipient official authorized to provide it, as well as the recipient's name and award number.
- (f) Failure to properly designate a financial institution or to provide appropriate payee bank account information may delay payments of amounts otherwise properly due.
- (g) The requirements set forth in this term and condition shall govern to the extent these requirements are inconsistent with the requirements in term and condition “Financial Management”.

D34. Indirect Costs

Unless otherwise directed in 2 CFR part 200, if during the course of this award, the approved indirect cost rate is revised, changed or removed, that rate must be applied, as allowed, to the covered direct costs that are expended during the time frame of that rate agreement. Any corrections, either up or down, to the approved budget submitted with the awarded application must be reflected in the awardees' records of costs and should be audited as such.

D35. Access to Research Results

- (a) This award is subject to the requirements of the, “NASA Plan: Increasing Access to the Results of Scientific Research,” which covers public access to digital scientific data and peer-reviewed publications. For purposes of this term and condition, the following definitions apply:
 - (1) Awardee: Any recipient of a NASA grant or cooperative agreement, its investigators, and subrecipient (subaward or contract as defined in 2 CFR 200.1, Definitions) at any level.
 - (2) Final Peer-Reviewed Manuscript: The final text version of a peer-reviewed article disclosing the results of scientific research which is authored or co-authored by the Awardee or funded, in whole or in part, with funds from a NASA award, that includes all modifications from the publishing peer review process, and all graphics and supplemental material prepared by the awardee.
- (b) The recipient shall:

- (1) Comply with their approved Data Management Plan submitted with its proposal, and as modified upon agreement by the recipient and NASA from time to time during the course of the period of performance.
- (2) Ensure that any Final Peer-Reviewed Manuscript is submitted to the NASA-designated repository, currently the PubMed Central system at <http://www.ncbi.nlm.nih.gov/pmc/>. NASA's instructions for completing the submission process are available at <https://www.nasa.gov/open/researchaccess/pubspace>. Ensure that the Final Peer-Reviewed Manuscript is submitted to PubMed Central within one year of completion of the peer review process.
- (3) Ensure that any publisher's agreements entered into by an Awardee will allow for the Awardee to comply with these requirements including submission of Final Peer-Reviewed Manuscripts to the NASA-designated repository, as listed in paragraph (b)(2) of this term and condition, with sufficient rights to permit such repository to use such Final Peer-Reviewed Manuscript in its normal course, including rights to permit users to download XML and plain text formats.
- (4) Hereby represent and warrant that Awardee has secured for recipient the right to submit the Final Peer-Reviewed Manuscript to the NASA-designated repository for use as set forth herein.
- (5) Include in annual and final reports a list of Final Peer-Reviewed Manuscripts covered by this term and condition.

D36. Restrictions on the Use of the NASA Seal, Insignia, Logotype, Program Identifiers, or Flags

- (a) In accordance with 14 CFR §1221, the NASA Seal, NASA Insignia, NASA Logotype, NASA Program Identifiers, and the NASA Flags are protected and shall be used exclusively to represent NASA, its programs, projects, functions, activities, or elements.
- (b) The use of these devices by recipients shall be governed by the requirements and restrictions set forth at 14 CFR §§ 1221.109-113. Requests for use of these devices by recipients shall be subject to the prior written approval of the NASA Grant Officer in conjunction with the NASA Headquarters, Office of Communications.
- (c) The use of these devices by recipients for any purpose other than as authorized by NASA regulations shall be prohibited. Their misuse shall be subject to the penalties authorized by statute, as set forth in 14 CFR §1221.115 and shall be reported as provided in 14 CFR §1221.116.

D37. Prohibition on certain telecommunications and video surveillance services or equipment

- (a) Grant and cooperative agreement recipients and subrecipients are prohibited from obligating or expending grant funds to:
- (1) Procure or obtain,
 - (2) Extend or renew a contract to procure or obtain; or
 - (3) Enter into contract (or extend or renew contract) to procure or obtain equipment, services, or systems that use 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 Pub. L. 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.

Appendix E – Additional Terms and Conditions

The following contains the text of the terms and conditions referenced in paragraph 5 of Section 5.15 in the GCAM.

1. Cross-Waiver of Liability for International Space Station Activities

(This Term and Condition shall be included in grants when the effort to be performed may involve Protected Space Operations, as that term is defined in the provision, relating to the International Space Station. If a grant or cooperative agreement may involve a launch other than the International Space Station, the Grant Officer also shall insert the special Term and Condition entitled “Cross-Waiver of liability for Science or Space Exploration Activities unrelated to the International Space Station.”)

The cross-waivers will require the recipient to extend the cross-waiver terms and conditions to their subcontractors at any tier and related entities, ensuring those subcontractors and related entities also waive all claims against any entity or person defined in the provision for damages arising out of Protected Space Operations. This cross-waiver is intended to be broadly construed, and NASA extends it to its related entities as set forth in the provision. The language in the cross waiver is required by the international agreements NASA has with its international partners for the use of the Space Station.)

CROSS-WAIVER OF LIABILITY FOR INTERNATIONAL SPACE STATION ACTIVITIES (DEC 2014)

- (a) The Intergovernmental Agreement Among the Government of Canada, Governments of Member States of the European Space Agency, the Government of Japan, the Government of the Russian Federation, and the Government of the United States of America concerning Cooperation on the Civil International Space Station (IGA) for the International Space Station (ISS) contains a cross-waiver of liability provision to encourage participation in the exploration, exploitation, and use of outer space through the ISS. This cross-waiver of liability is to be broadly construed to achieve this objective.
- (b) As used in this provision, the term:
 - (1) “Agreement” refers to any NASA agreement, grant, cooperative agreement, or contract that contains the cross-waiver of liability provision authorized by 14 CFR Part 1266.102.
 - (2) "Damage" means:
 - (i) Bodily injury to, or other impairment of health of, or death of, any person;
 - (ii) Damage to, loss of, or loss of use of any property;
 - (iii) Loss of revenue or profits; or
 - (iv) Other direct, indirect, or consequential damage.

(3) "Launch Vehicle" means an object, or any part thereof, intended for launch, launched from Earth, or returning to Earth which carries payloads or persons, or both.

(4) "Partner State" includes each Contracting Party for which the IGA has entered into force, pursuant to Article 25 of the IGA or pursuant to any successor agreement. A Partner State includes its Cooperating Agency. It also includes any entity specified in the Memorandum of Understanding (MOU) between NASA and the Government of Japan's Cooperating Agency in the implementation of that MOU.

(5) "Party" means a party to an Agreement involving activities in connection with the ISS, including a party that is the prime recipient under this grant/cooperative agreement.

(6) "Payload" means all property to be flown or used on or in a Launch Vehicle or the ISS.

(7) "Protected Space Operations" means all Launch or Transfer Vehicle activities, ISS activities, and Payload activities on Earth, in outer space, or in transit between Earth and outer space in implementation of the IGA, MOUs concluded pursuant to the IGA, implementing agreements, and contracts to perform work in support of NASA's obligations under these Agreements. It includes, but is not limited to:

(i) Research, design, development, test, manufacture, assembly, integration, operation, or use of Launch or Transfer Vehicles, the ISS, Payloads, or instruments, as well as related support equipment and facilities and services; and

(ii) All activities related to ground support, test, training, simulation, or guidance and control equipment and related facilities or services. "Protected Space Operations" also includes all activities related to evolution of the ISS, as provided for in Article 14 of the IGA. "Protected Space Operations" excludes activities on Earth which are conducted on return from the ISS to develop further a Payload's product or process for use other than for ISS-related activities in implementation of the IGA.

(8) "Related Entity" means:

(i) A contractor, recipient or subcontractor of a Party or a Partner State at any tier;

(ii) A user or customer of a Party or a Partner State at any tier; or

(iii) A contractor or subcontractor of a user or customer of a Party or a Partner State at any tier. The terms "recipient," "contractor," and "subcontractor" include suppliers of any kind.

(9) "Transfer Vehicle" means any vehicle that operates in space and transfers Payloads or persons or both between two different space objects, between two different locations on the same space object, or between a space object and the surface of a celestial body. A "Transfer Vehicle" also includes a vehicle that departs from and returns to the same location on a space object.

(c)(1) The Recipient agrees to a cross-waiver of liability pursuant to which it waives all claims against any of the entities or persons listed in paragraphs (c)(1)(i) through (c)(1)(iv) of this provision based on Damage arising out of Protected Space Operations. This cross-waiver shall apply only if the person, entity, or property causing the Damage is involved in Protected Space Operations and the person, entity, or property damaged is damaged by virtue of its involvement in Protected Space Operations. The cross-waiver shall apply to any claims for Damage, whatever the legal basis for such claims, against:

(i) A Party as defined in (B) (5) above;

(ii) A Partner State including the United States of America;

(iii) A Related Entity of any entity identified in paragraph (c) (1) (i) or (c) (1) (ii) of this provision; or

(iv) The employees of any of the entities identified in paragraphs (c) (1) (i) through (c) (1) (iii) of this provision.

- (2) In addition, the Recipient shall, by contract or otherwise, extend the cross-waiver of liability set forth in paragraph (c)(1) of this provision to its Related Entities at any tier by requiring them, by contract or otherwise, to:
 - (i) Waive all claims against the entities or persons identified in paragraphs (c) (1) (i) through (c) (1) (iv) of this provision; and
 - (ii) Require that their Related Entities waive all claims against the entities or persons identified in paragraphs (c) (1) (i) through (c)(1)(iv) of this provision.
- (3) For avoidance of doubt, this cross-waiver of liability includes a cross-waiver of claims arising from the Convention on International Liability for Damage Caused by Space Objects, which entered into force on September 1, 1972, where the person, entity, or property causing the Damage is involved in Protected Space Operations and the person, entity, or property damaged is damaged by virtue of its involvement in Protected Space Operations.
- (4) Notwithstanding the other conditions of this provision, this cross-waiver of liability shall not be applicable to:
 - (i) Claims between a Recipient and its own Related Entities;
 - (ii) Claims made by a natural person, his/her estate, survivors or subrogees (except when a subrogee is a Party to an Agreement or is otherwise bound by the terms of this cross-waiver) for bodily injury to, or other impairment of health of, or death of, such person;
 - (iii) Claims for Damage caused by willful misconduct;
 - (iv) Intellectual property claims; or
 - (v) Claims for Damage resulting from a failure of the Recipient to extend the cross-waiver of liability to its Related Entities, pursuant to paragraph (c)(2) of this provision.
- (5) Nothing in this provision shall be construed to create the basis for a claim or suit where none would otherwise exist.
- (6) This cross-waiver shall not be applicable when 51 U.S.C. 50101 et seq. is applicable.
- (7) This cross-waiver shall not apply to or affect the rights and obligations arising from any other Term and Condition or provision of this grant/cooperative agreement.

(End of Provision)

2. Cross-Waiver of Liability for Science or Space Exploration Activities Unrelated to the International Space Station.

(This Term and Condition shall be included in NOFOs and award terms and conditions when the effort may involve a launch unrelated to the International Space Station. If a grant or cooperative agreement may involve the International Space Station, the Grant Officer also shall insert the special Term and Condition entitled "Cross-Waiver of liability for International Space Station Activities.")

The cross-waivers will require the recipient to extend the cross-waiver terms and conditions to their subcontractors at any tier and related entities, ensuring those subcontractors and related entities also waive all claims against any entity or person defined in the provision for damages arising out of Protected Space Operations. This cross-waiver is intended to be broadly construed, and NASA extends it to its related entities as set forth in the provision. The language in the cross waiver is required by the international agreements NASA has with its international partners for the exploration of space.)

CROSS-WAIVER OF LIABILITY FOR SCIENCE OR SPACE EXPLORATION ACTIVITIES
UNRELATED TO THE INTERNATIONAL SPACE STATION
(DEC 2014)

- (a) The purpose of this provision is to extend a cross-waiver of liability for activities conducted under Agreements involving Science or Space Exploration activities, unrelated to the International Space Station (ISS), but which involve a launch. This cross-waiver of liability shall be broadly construed to achieve the objective of furthering participation in space exploration, use, and investment.
- (b) As used in this provision, the term:
- (1) "Agreement" refers to any NASA agreement, grant, cooperative agreement, or contract that contains the cross-waiver of liability provision authorized in 14 CFR 1266.104.
 - (2) "Damage" means:
 - (v) Bodily injury to, or other impairment of health of, or death of, any person;
 - (vi) Damage to, loss of, or loss of use of any property;
 - (vii) Loss of revenue or profits; or
 - (viii) Other direct, indirect, or consequential damage;
 - (3) "Launch Vehicle" means an object, or any part thereof, intended for launch, launched from Earth, or returning to Earth which carries Payloads or persons, or both.
 - (4) "Party" means a party to an Agreement for Science or Space Exploration activities, unrelated to the ISS, but which involve a launch, including a party that is the prime recipient under this grant/cooperative agreement.
 - (5) "Payload" means all property to be flown or used on or in a Launch Vehicle.
 - (6) "Protected Space Operations" means all Launch or Transfer Vehicle activities and Payload activities on Earth, in outer space, or in transit between Earth and outer space in implementation of an Agreement for Science or Space Exploration activities, unrelated to the ISS, but which involve a launch. Protected Space Operations begins at the signature of the Agreement and ends when all activities done in implementation of the Agreement are completed. It includes, but is not limited to:
 - (ix) Research, design, development, test, manufacture, assembly, integration, operation, or use of Launch or Transfer Vehicles, Payloads, or instruments, as well as related support equipment and facilities and services; and
 - (x) All activities related to ground support, test, training, simulation, or guidance and control equipment, and related facilities or services.Protected Space Operations excludes activities on Earth which are conducted on return from space to develop further a Payload's product or process other than for the activities within the scope of an Agreement.
 - (7) "Related entity" means:
 - (xi) A contractor, recipient or subcontractor of a Party at any tier;
 - (xii) A user or customer of a party at any tier; or
 - (xiii) A contractor or subcontractor of a user or customer of a Party at any tier.

The terms "recipient," "contractor" and "subcontractor" include suppliers of any kind.

- (c) Cross-waiver of liability:
- (8) The Recipient agrees to a waiver of liability pursuant to which it waives all claims against any of the entities or persons listed in paragraphs (c)(1)(i) through (c)(1)(iv) of this Term and Condition based on Damage arising out of Protected Space Operations. This cross-waiver shall apply only if the person, entity, or property causing the Damage is involved in Protected Space Operations and the person, entity, or property damaged is damaged by virtue of its involvement in Protected Space Operations. The waiver shall apply to any claims for

Damage, whatever the legal basis for such claims, against:

- (xiv) A Party;
 - (xv) A Party to another Agreement that includes flight on the same Launch Vehicle;
 - (xvi) A Related Entity of any of the entities identified in (c)(1)(i) or (c)(1)(ii) of this provision; or
 - (xvii) The employees of any of the entities identified in (c)(1)(i) through (c)(1)(iii) of this provision.
- (9) The Recipient agrees to extend the cross-waiver of liability as set forth in paragraph (c)(1) of this provision to its own Related Entities at all tiers by requiring them, by contract or otherwise, to:
- (xviii) Waive all claims against the entities or persons identified in paragraphs (c)(1)(i) through (c)(1)(iv) of this provision; and
 - (xix) Require that their Related Entities waive all claims against the entities or persons identified in paragraph (c)(1)(i) through (c)(1)(iv) of this provision.
- (10) For avoidance of doubt, this cross-waiver includes a cross-waiver of claims arising from the Convention on International Liability for Damage Caused by Space Objects, which entered into force on September 1, 1972, where the person, entity, or property causing the Damage is involved in Protected Space Operations and the person, entity, or property damaged is damaged by virtue of its involvement in Protected Space Operations.
- (11) Notwithstanding the other conditions of this provision, this cross-waiver of liability shall not be applicable to:
- (xx) Claims between the Recipient and its own Related Entities;
 - (xxi) Claims made by a natural person, his/her estate, survivors, or subrogees (except when a subrogee is a Party to an Agreement or is otherwise bound by the terms of this cross-waiver) for bodily injury to, or other impairment of health, or death of such person;
 - (xxii) Claims for Damage caused by willful misconduct;
 - (xxiii) Intellectual property claims; or
 - (xxiv) Claims for damages resulting from failure of the Recipient to extend the cross-waiver of liability to its related entities, pursuant to paragraph (c)(2) of this provision.
- (12) Nothing in this provision shall be construed to create the basis for a claim or suit where none would otherwise exist.
- (13) This cross-waiver shall not be applicable when 51 U.S.C. 50101 et seq. is applicable.
- (14) This cross-waiver shall not apply to or affect the rights and obligations arising from any other Term and Condition or provision of this grant/cooperative agreement.

(End of Provision)

3. Personal Identity Verification of Recipient Personnel.

(This provision shall be included in awards when access is needed to the NASA Center and/or NASA information systems for greater than 180 days.)

PERSONAL IDENTITY VERIFICATION OF RECIPIENT PERSONNEL (DEC 2014)

(a) The Recipient shall comply with agency personal identity verification procedures identified in the contract that implement Homeland Security Presidential Directive-12 (HSPD-12), Office of

Management and Budget (OMB) guidance M-05-24 and Federal Information Processing Standards Publication (FIPS PUB) Number 201.

(b) The Recipient shall account for all forms of Government-provided identification issued to the Recipient employees in connection with performance under this contract. The Recipient shall return such identification to the issuing agency at the earliest of any of the following, unless otherwise determined by the Government:

- (1) When no longer needed for grant performance.
- (2) Upon completion of the Recipient's employee's employment.
- (3) Upon grant completion or termination.

(c) The Grant Officer may delay final payment under a grant if the Recipient fails to comply with these requirements.

(d) The Recipient shall insert the substance of this clause, including this paragraph (d), in all subcontracts or subagreements when their employees are required to have routine physical access to a Federally-controlled facility and/or routine access to a Federally-controlled information system. It shall be the responsibility of the Recipient to return such identification to the issuing agency in accordance with the terms set forth in paragraph (b) of this section, unless otherwise approved in writing by the Grant Officer.

(End of Provision)

4. Micro-purchase Threshold.

(This Term and Condition shall be included in all grants and cooperative agreement awards issued to states, local governments, Indian tribes, Institutions of Higher Education, or nonprofit organizations.)

MICRO-PURCHASE THRESHOLD

Micro-purchase Threshold. The non-Federal entity must use one of the methods of procurement as prescribed in 2 CFR 200.320, Methods of procurement to be followed. As defined in 2 CFR 200.1, Definitions, the micro-purchase threshold for acquisitions of supplies or services made under grant and cooperative agreement awards is —

- (i) \$10,000; or
- (ii) As defined by FAR 2.101 Definitions, or
- (iii) Such higher threshold as determined appropriate and in accordance with 2 CFR 200.320 (a)(1)(iv) and (a)(1)(v).

(End of Provision)

5. Reporting Requirements Regarding Findings of Harassment, Sexual Harassment, Other Forms of Harassment, or Sexual Assault.

(This Term and Condition shall be included in all new research awards and amendments to existing research awards.)

REPORTING REQUIREMENTS REGARDING SEXUAL HARASSMENT, OTHER FORMS OF HARASSMENT, OR SEXUAL ASSAULT

(April 2020)

- (a) The Principal Investigator (PI) and any Co-Investigator(s) (Co-I) identified on a NASA 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 recipient's institution, on-line, or at locales such as field sites, facilities, or conferences/workshops. Above all, NASA wishes to assure the safety, integrity, and excellence of the programs and activities it funds.
- (b) For purposes of this term and condition, the following definitions apply:
1. *Administrative Leave/ Administrative Action:* Any temporary/ interim suspension or permanent removal of the PI or Co-I, or any administrative action imposed on the PI or Co-I by the recipient 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.
 2. *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-I, or a conviction of a sexual offense in a criminal court of law.
 3. *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.
 4. *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.
- (c) *The recipient is required to report to NASA:* (1) Any finding/determination regarding the PI or any Co-I¹ that demonstrates a violation of the recipient's policies or codes of conduct, relating to sexual harassment, other forms of harassment, or sexual assault; and/or (2) if the PI or any Co-I is placed on administrative leave or if any administrative action has been imposed on the PI or any Co-I by the recipient relating to any finding/determination or an investigation of an alleged violation of the

¹ If a Co-I is affiliated with a subrecipient organization, the AOR of the subrecipient must provide the requisite information directly to NASA and to the recipient. The subrecipient must act in accordance with Title 2 of the Code of Federal Regulations, Section 200.331, Requirements for Pass-Through Entities.

recipient's policies or codes of conduct, statutes, regulations, or executive orders relating to sexual harassment, other forms of harassment, or sexual assault.² Such reporting must be submitted by the Authorized Organizational Representative (AOR) to NASA's Office of Diversity and Equal Opportunity at <https://missionstem.nasa.gov/term-condition-institutional-harassment-discr.html> within 10 business days from the date of the finding/determination, or the date of the placement of a PI or Co-I by the recipient on administrative leave or the imposition of an administrative action.³

(d) Recipient agrees to insert the substance of this term and condition in any subaward/subcontract involving a co-investigator. Recipient will be responsible for ensuring that all reports, including those related to co-investigators, comply with this term and condition.

(e) Each report must include the following information:

- NASA Award Number;
- Name of PI or Co-I being reported;⁴

Type of Report: Select one of the following:

- Finding/Determination that the reported individual has been found to have violated the recipient's 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 recipient of the reported individual on administrative leave or the imposition of any administrative action on the PI or any Co-I by the recipient relating to any finding/determination, or an investigation of an alleged violation of the recipient's policies or codes of conduct, statutes, regulations, or executive orders relating to sexual harassment, other forms of harassment, or sexual assault.

The recipient must also provide:

- A description of the finding/ determination and action(s) taken, if any; *and/or*
- The reason(s) for, and conditions of placement of the PI or any Co-I on administrative action or administrative leave.

The recipient, at any time, may propose a substitute investigator if it determines the PI or any Co-I may not be able to carry out the funded project or activity and/or abide by the award terms and conditions.

² Recipient findings/determinations and placement of a PI or Co-I 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.

³ Such report 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-I was carrying out award activities.

⁴ Only the identification of the PI or Co-I is required. Personally identifiable information regarding any complainants or other individuals involved in the matter must not be included in the report. In the rare circumstance that information regarding a PI or Co-I is subject to the Family Educational and Privacy Act, 20 U.S.C. § 1232g and its implementing regulations, 35 C.F.R. Part 99, the recipient shall comply with those requirements.

In reviewing the report, NASA will consider, at a minimum, the following factors:

- a. The safety and security of personnel supported by the NASA award;
 - b. The overall impact to the NASA-funded activity;
 - c. The continued advancement of taxpayer-funded investments in science and scientists; and
 - d. Whether the recipient has taken appropriate action(s) to ensure the continuity of science and that continued progress under the funded project can be made.
- (f) Upon receipt and review of the information provided in the report, NASA will consult with the AOR, or designee. Based on the results of this review and consultation, the Agency may, if necessary and in accordance with 2 CFR 200.338, assert its programmatic stewardship responsibilities and oversight authority to initiate the substitution or removal of the PI or any Co-I, 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 a NASA award must likewise remain in full compliance with the recipient's 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 recipient 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.

Other personnel supported by a NASA 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.

(End of Provision)

Appendix F – Required Publications and Reports
 IN ACCORDANCE WITH 2 CFR 200, 2 CFR 1800, and the GCAM

Reports are valuable to ensure that NASA grant and cooperative agreement programs are efficient and effective. The recipients must keep such records and submit timely, complete, and accurate reports to the responsible NASA official or designee.

The recipient shall submit the publications and reports indicated below:

ACRONYMS

- AGO = ADMINISTRATIVE GRANT OFFICER
- IPO = INDUSTRIAL PROPERTY OFFICER
- NTR = NEW TECHNOLOGY REPRESENTATIVE
- CC = CLOSEOUT CONTRACTOR
- PO = PATENT COUNSEL OFFICE
- FMO = FINANCIAL MANAGEMENT OFFICE
- TO = TECHNICAL OFFICER
- GO = NASA GRANT OFFICER
- UAO = UNIVERSITY AFFAIRS OFFICER
- HHS/PMS = HEALTH AND HUMAN SERVICES PAYMENT MANAGEMENT SYSTEM
- STIPO = SCIENTIFIC & TECHNICAL INFORMATION PROGRAM OFFICE

| REPORTS | REPORT DUE/FREQUENCY | DISTRIBUTION |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| Quarterly Federal Financial Reports (SF-425) <i>(Required for all Grants and Cooperative Agreements except awards where invoicing is required per the terms and conditions of award)</i> | Within 30 days following the end of each quarter of the Federal fiscal year. <i>(Ref. GCAM – Appendix D8)</i> | HHS/PMS |
| Annual Inventory Report of Federally-owned Property in Custody of the Recipient <i>(Required for all Grants and Cooperative Agreements, except when a for-profit organization.)</i> | No later than October 15 of each year. NOTE: Negative reports are not required. <i>(Ref. GCAM – Appendix D9)</i> | FMO, IPO |
| Performance Reports <i>(Required for all Grants and Cooperative Agreements; unless period of performance is less than</i> | Annually, 60 days prior to the anniversary date of the grant/cooperative agreement (except final year). <i>(Ref. GCAM – Appendix D3)</i> | TO, GO, NTR |

| | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| <i>one year.)</i> | | |
| Disclosure of Subject Inventions/Reportable Items (New Technology Report (NTR)) <i>(Required for all Grants and Cooperative Agreements except for those issued solely to support education programs)</i> | Within 2 months after inventor discloses it to recipient. <i>(Ref. GCAM- Appendix D10, Appendix D28 and Appendix D29)</i> <i>eNTR</i> <i>(http://invention.nasa.gov)</i> | PO, TO, GO, NTR |
| Election of Title to a Subject Invention <i>(Required for all Grants and Cooperative Agreements)</i> | Within 2 years of disclosure of a subject invention being elected, except in any case where publication, on sale or public use of the subject invention being elected has initiated the one-year statutory period wherein valid patent protection can still be obtained in the United States, at least 60 days prior to the end of the statutory period. <i>(Ref. GCAM - Appendix D10 and Appendix D28)</i> | PO, TO, GO |
| Interim New Technology Summary Report (NTSR) <i>(Required for all Grants and Cooperative Agreements except for those issued solely to support education programs)</i> | Every 12 months from the date of the grant/cooperative agreement. (Note: Negative reports are required.) <i>(Ref. GCAM –Appendix D10, Appendix D28 and Appendix D29)</i> <i>eNTR</i> <i>(http://invention.nasa.gov)</i> | GO, NTR |
| Notification of Decision to Forego Patent Protection <i>(Required for all Grants and Cooperative Agreements)</i> | As applicable, not less than 30 days before the expiration of the response period required by the relevant patent office. <i>(Ref. GCAM – Appendix D10 and Appendix D28)</i> | PO, TO, GO |
| Utilization of Subject Invention/Reportable Items <i>(Required for all Grants and Cooperative Agreements except for those issued solely to support education programs)</i> | Every 12 months from the date a subject invention is elected. Note: Negative reports are required. <i>(Ref. GCAM – Appendix D10 and Appendix D28)</i> | PO, TO, GO |

| | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| Annual NASA Form 1018 Property in the Custody of Contractors <i>(Required for all Grants and Cooperative Agreements with for-profit organizations)</i> | Due not later than October 15 of each year. Note: Negative reports are required. <i>(Ref. GCAM – Appendix D30)</i> | FMO, IPO |
| FINAL REPORTS | REPORT DUE | RECIPIENT |
| Final New Technology Summary Report (NTSR) <i>(Required for all Grants and Cooperative Agreements except for those issued solely to support education programs)</i> | Within 120 days after the expiration date of the grant/cooperative agreement. (Note: Negative reports are required.) <i>(Ref. GCAM Appendix D10, Appendix D28 and Appendix D29) eNTR</i> <i>(http://invention.nasa.gov)</i> | PO, GO, NTR |
| Properly Certified Final Federal Financial Report, SF-425 <i>(Required for all Grants and Cooperative Agreements)</i> | Within 120 days after the expiration date of the grant/cooperative agreement. <i>(Ref. GCAM – Appendix D8)</i> | FMO, GO |
| Final Performance Report (e.g., Summary of Research, Education Activity Report, etc.) <i>(Required for all Grants and Cooperative Agreements)</i> | Within 120 days after the expiration date of the grant/cooperative agreement. <i>(Ref. GCAM – Appendix D3) For research related training program grants, the summary of research report is completed by the Student.</i> | TO, GO, NTR, STIPO |
| Final Inventory Report of Federally-owned Property <i>(Required for all Grants and Cooperative Agreements, except those issued solely for education programs and grants and cooperative agreements with for-profit organizations)</i> | Within 120 days after the expiration date of the grant/cooperative agreement. <i>(Ref. GCAM – Appendix D9)</i> | CC, IPO, GO |
| Final NASA Form 1018 NASA Property in the Custody of Contractors <i>(Required for Grants and Cooperative Agreements with for-profit organizations)</i> | Within 120 days after the expiration of the grant or cooperative agreement. <i>(Ref. GCAM – Appendix D30)</i> | FMO, IPO |

Appendix G – Examples of Costs Categories from 2 CFR 200 Subpart E

1. Direct Labor (salaries, wages, and fringe benefits): List number and titles of personnel, amounts of time to be devoted to the grant, and rates of pay.
2. Other Direct Costs:
 - a. Subcontracts: Describe the work to be subcontracted, estimated amount, recipient (if known), and the reason for subcontracting.
 - b. Consultants: Identify consultants to be used, why they are necessary, the time they will spend on the project, and rates of pay.
 - c. Equipment: List separately. Explain the need for items costing more than \$5,000, unless a lower threshold has been established by the applicant's institution for classifying such purchases as equipment. Describe the basis for estimated cost. General purpose equipment is not allowable as a direct cost unless specifically approved by the Grant Officer. Grant award constitutes approval for any equipment provided and was requested in the original proposal. Requests by grant recipients for the acquisition of equipment shall be supported by written documentation setting forth the description, purpose, and acquisition value of the equipment.
 - d. Supplies: For items below the threshold established for equipment, provide the general categories of needed supplies, the method of acquisition and the estimated cost.
 - e. Travel: Describe the purpose of the proposed travel in relation to the grant and provide the basis of the estimate, including information on destination and number of travelers where known.
 - f. Other: Identify and support all other direct costs not covered by 2a through 2e. Provide an itemized list explaining the need for each item and the basis for the estimate.
3. Facilities and Administrative (F&A) Costs: Identify F&A cost rate(s) and base(s) as approved by the cognizant Federal agency, including the effective period of the rate. Provide the name, address, and telephone number of the Federal agency official having cognizance. If unapproved rates are used, explain why, and include the computational basis for the F&A expense pool and corresponding allocation base for each rate.
4. Other Applicable Costs: Provide description, detail, and necessity for each item.
5. Subtotal-Estimated Costs: Provide the sum of items 1 through 4.
6. Less Proposed Cost Sharing (if any): Provide the amount proposed. If cost sharing is based on specific cost items, identify each item and amount in an attachment.
7. Carryover Funds (if any): Provide the dollar amount of any funds that are expected to be available for carryover from the prior budget period. Identify how the funds will be used if they are not used to reduce the budget. NASA officials will decide whether to use all or part of the anticipated carryover to reduce the budget. Not applicable to 2nd-year and subsequent-year budgets submitted for the award of a multiple year grant.
8. Total Estimated Costs: Provide the total after subtracting items 6 and 7 from item 5.