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**Office Work Instruction**

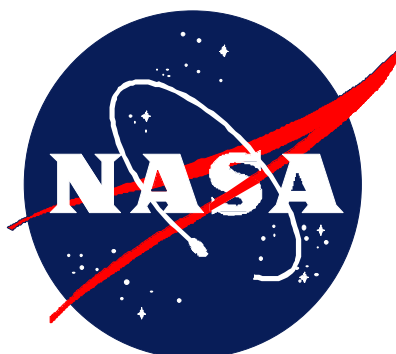
HQOWI 8310-Y005D

Effective Date: December 28, 2000

Responsible Office: YS/Research Division  
YO/Applications, Commercialization, and Education Division  
YF/Program Planning and Development Division

**Subject: Solicit and Select Science, Applications, Education, and  
Technology Investigations**

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**OFFICE WORK INSTRUCTION**

**SOLICIT AND SELECT SCIENCE,  
APPLICATIONS, EDUCATION, AND  
TECHNOLOGY INVESTIGATIONS**

**(Conforming to ISO 9001 Quality System Requirements)**

Original Signed By:

**Ghassem R. Asrar**

**Associate Administrator**

**Office of Earth Science**

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### DOCUMENT HISTORY LOG

Status (Baseline/ Revision/ Canceled)	Document Revision	Effective Date	Description
Baseline		12/2/98	
Revision	A	5/10/99	<p>Sections 1.0 and 2.0: Expanded the HQOWI to include technology investigations. Made minor edits. Expanded the scope to include renewing investigations.</p> <p>Section 4.0: Deleted references not called out in the procedure.</p> <p>Section 5.0: Added TBD to ACE Implementation Plan. Changed name of Flight Mission Plan to Approved Flight Mission Profile to be consistent with HQOWI 7120-Y003. Added two new technology inputs to Activity 3. Changed name of Activity 5's output to Peer Review Results and made it a Quality Record to be consistent with HQOWI 7120-Y012. Broke Activity 9 into the three distinct award paths. Added reference to HQOWI 7410-Y008. Changed Signed Procurement Package to Procurement Package. Added path to review, evaluate, and renew investigations.</p> <p>Section 6.0: Made several minor clarifications and accuracy corrections. Moved decision on solicitation instrument from Activity 1 to Activity 3. Expanded the HQOWI to include technology investigations. Added a step in Activity 3 for consultation with Codes G, H, and I. Added reference to HQOWI 5100-Y014, Obtain Approval for Release of Solicitation Instrument in Activity 4. In Activity 5, replaced text on peer review with reference to HQOWI 7040-Y012, Conduct Peer Review (incorporated additional information in Y012 as appropriate). Also made Peer Review Results a Quality Record to be consistent with HQOWI 7120-Y012. Moved the decision on funding instrument from Activity 1 to Activity 6. Used text from old Activity 9, Initiate Procurement Paperwork, to describe the three new award paths. Developed text for the new path to review, evaluate, and renew investigations. Added a reference to HQOWI 7410-Y008, Execute the ESE Budget, for details on providing field centers resources to make an award (new Activities 9 and 10).</p> <p>Section 7.0: Added NPG 1441.1 reference. Modified location and retention for Accept/Reject letters. Removed the following from the list of quality records: Selection Recommendation with Rationale &amp; Justification (Briefing) and Signed Procurement Package. Added Peer Review Results, Summary of Selection Results, and Resource Authority (NASA Form 506 White) to the list of quality records. Changed mappings from NPG Schedule 5, "Industry Relations and Procurement," to NPG Schedule 7, "Program Formulation Records."</p> <p>Appendix A: Added Appendix A, Solicitation and Funding Instruments.</p>
REVISION	B	10/14/99	<p>Section 6.0: <b>Activity 2</b>, deleted "pursuit by" and added "by the appropriate ESE division director (s)". <b>Activity 6</b>, added "interagency transfers" to 3<sup>rd</sup> paragraph. <b>Activity 8</b>, Added "Program Manager or the" to 1<sup>st</sup> paragraph. <b>Activity 9</b>, changed location of last bullet and put it in as the 6<sup>th</sup> bullet. <b>Activity 10</b>, deleted "actual procurement package" and added "procurement request which electronically commits the funding. They then send the package to procurement". <b>Activity 11</b>, in the 4<sup>th</sup> bullet, changed "or" for "and", deleted "either the Technical Evaluation and Selection Statement, the Justification for Acceptance of an Unsolicited Proposal, or Justification for Other Agency Performing Activity, whichever is appropriate" and added "the required statements and justification. The YB program analyst prepares the procurement package request form which is submitted</p>

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			electronically to the Headquarters Accounting Division, Code 155". Deleted "procurement package" and added "award document". <b>Activity 15</b> , Added "Program Manager or the" to the last sentence and changed "any" for "the". <b>Appendix A</b> , deleted the word "an" from the second paragraph.
REVISION	C	6/2/00	Changed "Business Management Division" to "Business Division" throughout the document. Revised Section 6.4, paragraph 4, to include new requirement to fax certification for release of solicitation to the GSFC Headquarters Acquisition Branch. Revised Section 6.7 to include new process of sending draft accept/reject letters to Code I for review and concurrence. Revised Section 7.0, Summary of Selection Results location to Support Contractor. Revised Section 6.7 to include advance notice for Codes P and L of selections. Section 6.3: added language concerning the importance of commercial data purchases. Changed "Administrative Team" to "Implementation Team" throughout the document. Changed "Earthworks database" to "SYS-EYFUS database" throughout the document.
REVISION	D	12/28/00	Changed Applications, Commercialization, and Education Division to Applications Division throughout the document; Revised last paragraph in section 6.4 in response to a Code Y internal corrective and preventive action; Deleted references to Jorge Scientific Corporation in section 7.0 as a result of the consolidated peer review contract.

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## PREFACE

The NASA Office Work Instruction (OWI) for Solicit and Select Science, Applications, and Education Investigations documents the tasks and activities in conformance with the International Organization for Standardization's (ISO) 9001 requirements for quality systems. The OWI supplements the *NASA Strategic Plan*, the *NASA Strategic Management Handbook*, and other higher level NASA directives, which form the basis for how NASA conducts business.

This OWI is not intended to duplicate or contradict any other NASA policy, procedures or guidelines, which currently exist. As such, the OWI will reference prevailing documents where a topic is addressed and existing coverage is deemed adequate. Additional information provided within is intended to supplement existing documentation regarding Headquarters (HQ) implementation of strategic and program/project management, as well as HQ conformance with the ISO 9001 Quality Management System (QMS) requirements.

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## 1.0 PURPOSE

This OWI provides instructions on what must be done to solicit and select NASA Earth science, application, education, and technology (SAET) investigations and activities. It describes the tasks that are performed for a typical solicitation. The OWI describes what is to be accomplished by the process, not how the work is to be performed. Solicitation initiators are expected to apply their experience, expertise, professional contacts, and knowledge in order to successfully process and recommend awards.

## 2.0 SCOPE AND APPLICABILITY

2.1 Scope. This work instruction describes procedures for the NASA Earth Science Enterprise (ESE) solicitation and selection of SAET investigations and activities. The process begins with the conceptualization of NASA solicitations. Example solicitation instruments include a NASA Research Announcement (NRA), an Announcement of Opportunity (AO), or a Cooperative Agreement Notice (CAN). The process includes the following:

- Conceptualizing, developing, and releasing solicitations;
- Receiving, evaluating, and selecting proposals to fund;
- Preparing procurement package inputs and distributing resource authority documents; and
- Monitoring the procurement process, evaluating the investigation's performance, and renewing, terminating, or certifying completion of the investigation.

Solicitation initiators from the Research Division (Code YS), the Applications Division (Code YO), and Program Planning and Development Division (Code YF) conduct this process regularly, with some solicitations being issued on an annual basis and others on a periodic or as needed basis. Unsolicited proposals may be submitted and evaluated at any time.

The solicitation initiator is usually a science, applications, education, or technology program manager, but could be a division director, deputy division director, or someone such as a discipline scientist who is not a program manager. The Research Opportunity Administrator as designated by the Business Division (Code YB) Director provides administrative support.

2.2 Applicability. This work instruction for Solicit and Select Science, Applications, Education, and Technology Investigations applies to the NASA Office of Earth Science (OES, Code Y) offices and divisions. The Associate Administrator for Earth Science is responsible for maintaining this document. The controlled version of this OWI is available on the World Wide Web (WWW) via the HQ ISO 9000 Document Library at <http://hqiso9000.hq.nasa.gov>. Any printed version of this OWI is uncontrolled (reference: HCP 1400.1, *Document and Data Control*). Proposed revisions will be accomplished by following HQOWI 1410-Y015, *Approve Quality Documents*.

## 3.0 DEFINITIONS

Appendix B of the *Earth Science Enterprise Management Handbook* provides ESE-specific terms and definitions.

## 4.0 REFERENCES

The following documents contain provisions that, through reference in this OWI or in policy or procedure

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documents, constitute the basis for the documented procedure:

NFS Part 1835	NASA FAR Supplement, Part 1835, Research and Development Contracting
NFS Part 1871	NASA FAR Supplement, Part 1871, MidRange Procurement Procedures
NFS Part 1872	NASA FAR Supplement, Part 1872, Acquisition of Investigations
HQOWI 7040-Y012	Conduct Peer Review
HQOWI 5100-Y014	Obtain Approval for Release of Solicitation Instrument

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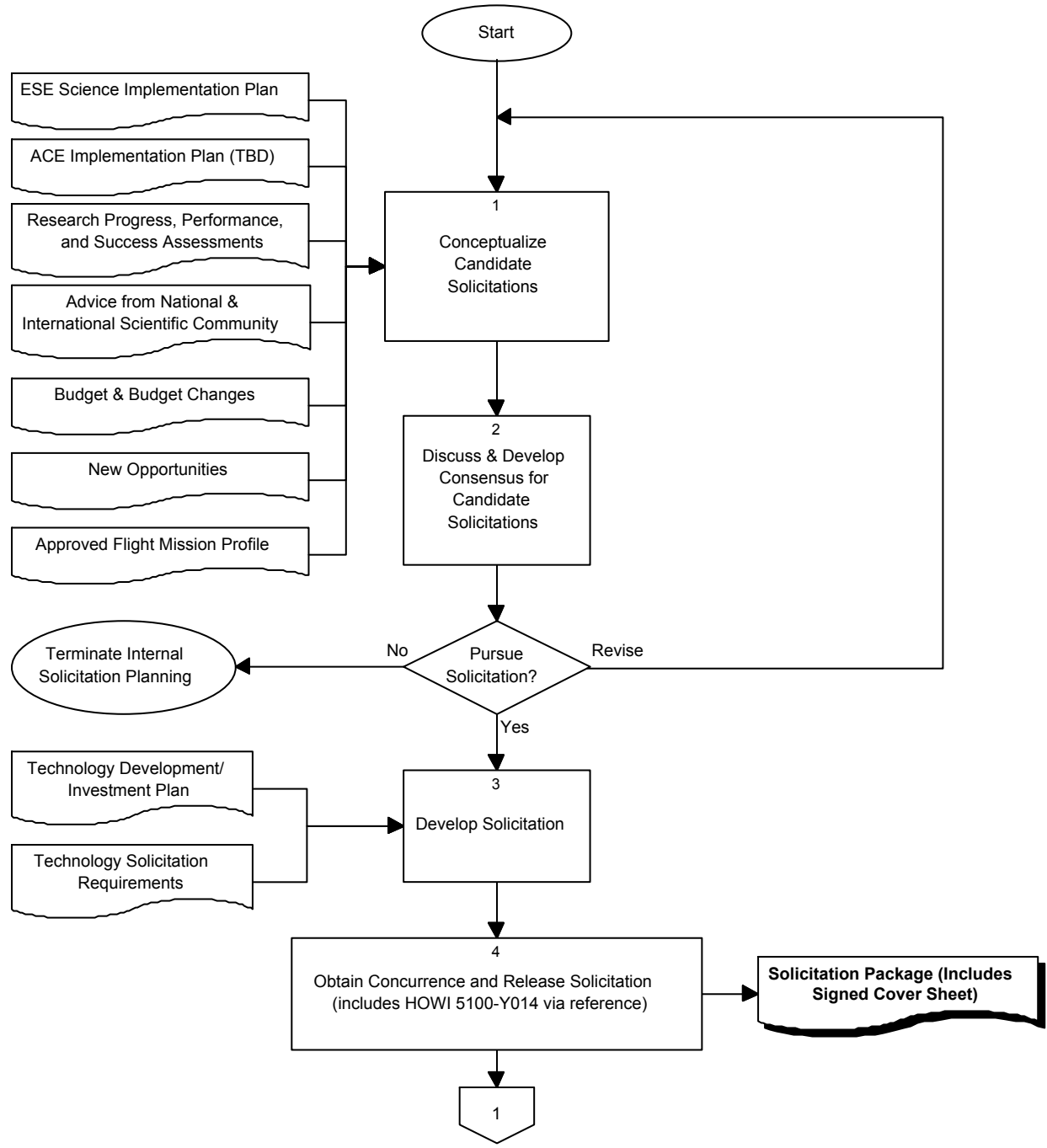
## 5.0 FLOWCHART

The following flowchart depicts the procedure described in Section 6. Outputs in boldface type represent the quality records listed in Section 7.



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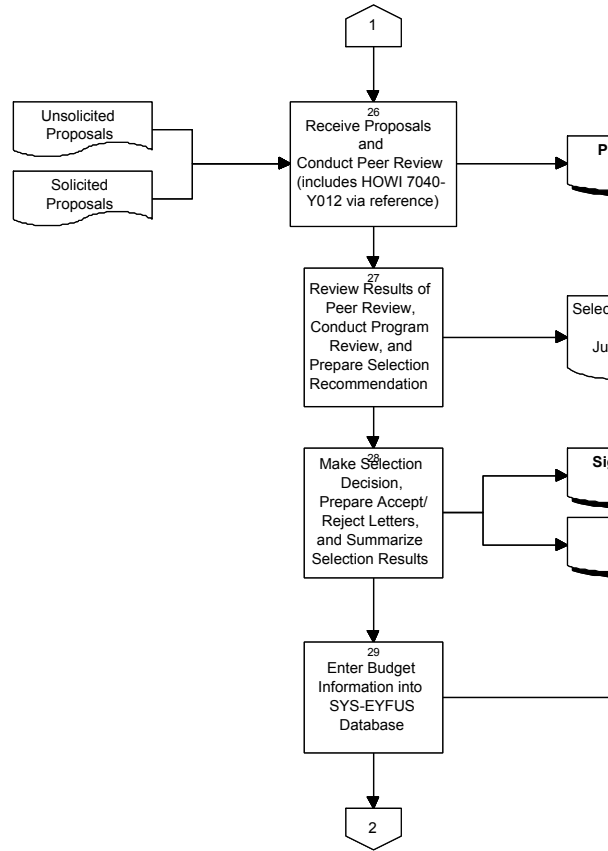
**Conceptualize, Develop, & Release Solicitation**



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## 5.0 FLOWCHART (Continued)

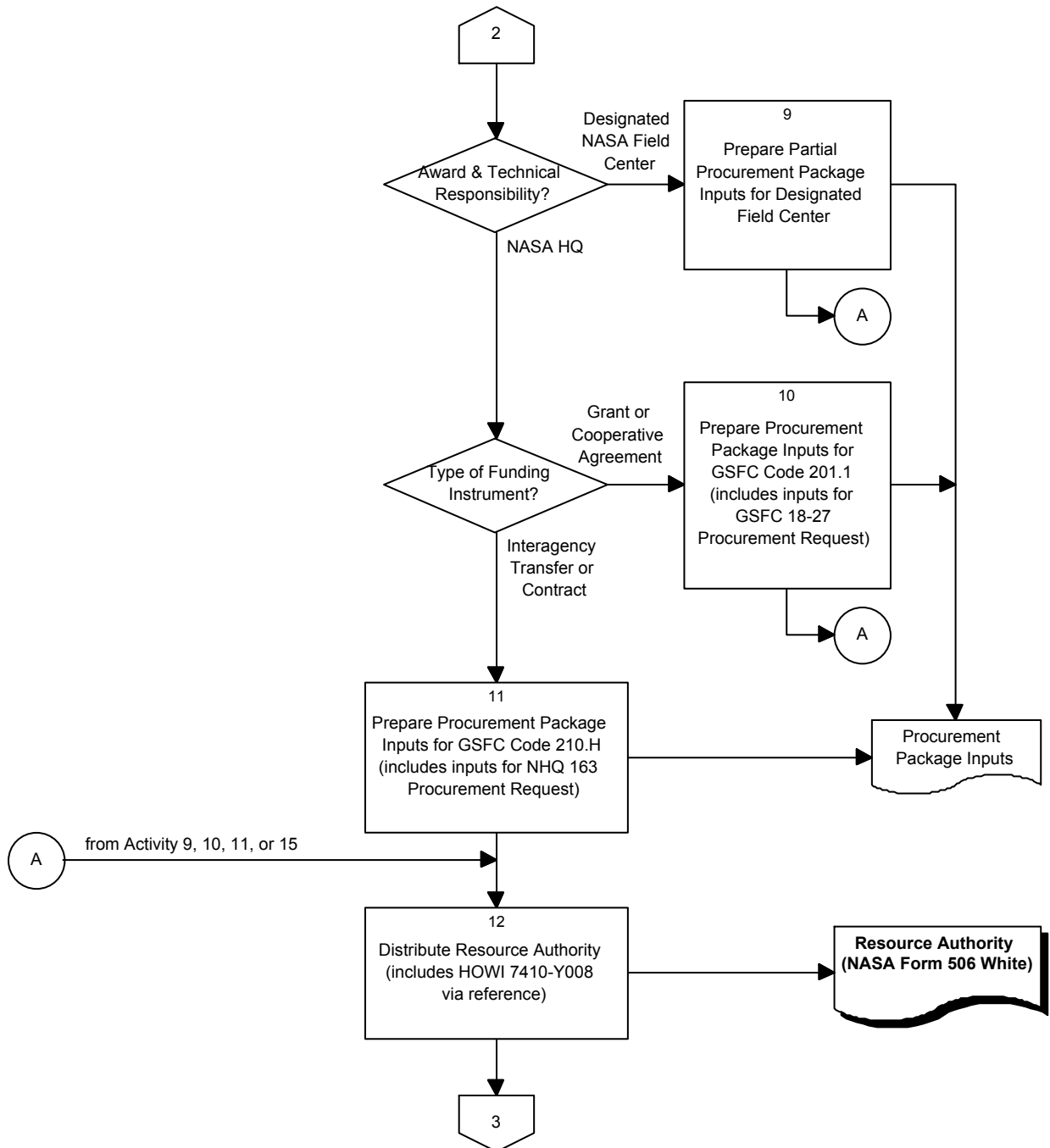
### Receive, Evaluate, & Select Proposals to Fund



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## 5.0 FLOWCHART (Continued)

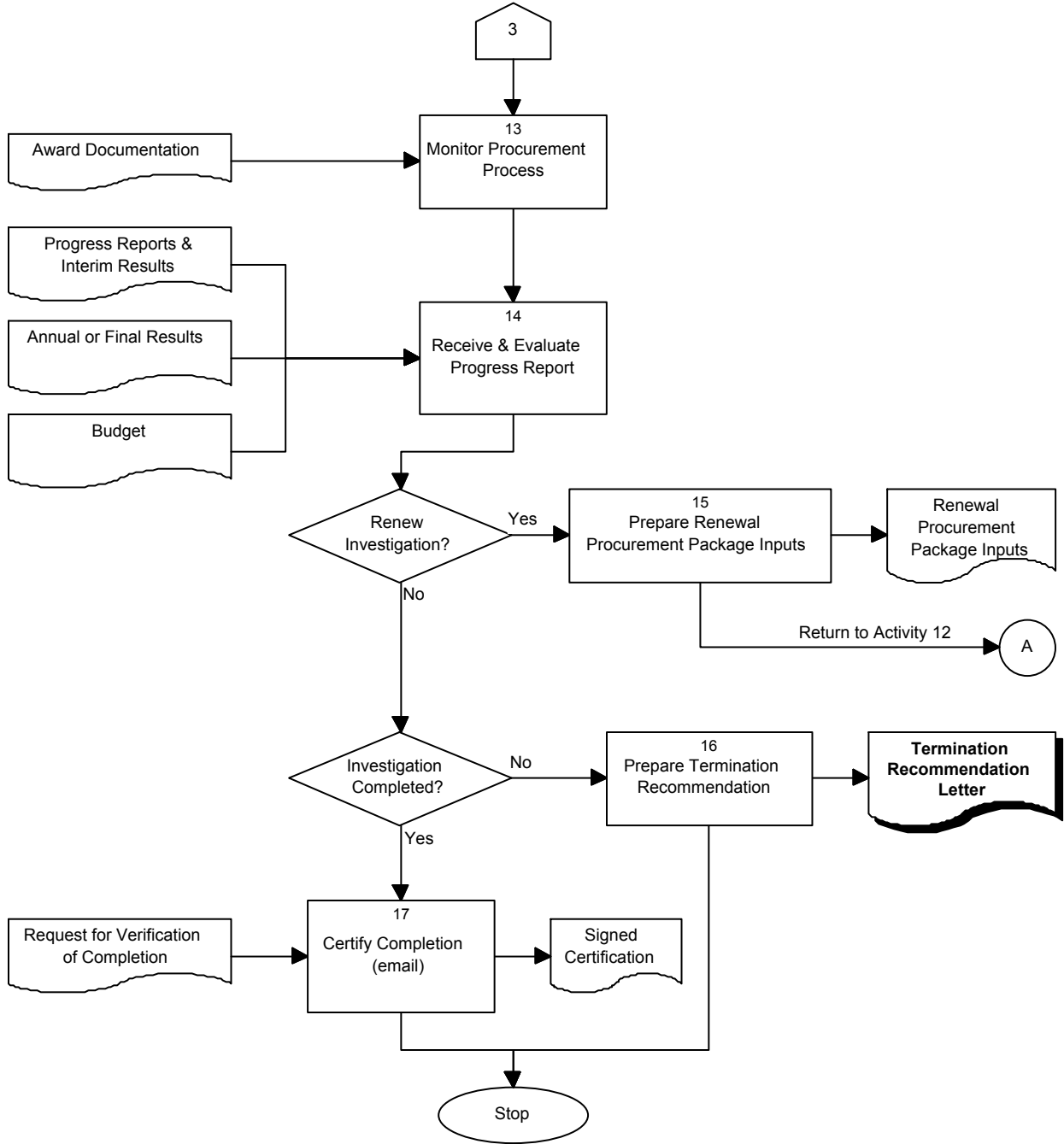
### Prepare Procurement Package Inputs & Distribute Resource Authority



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**5.0 FLOWCHART (Continued)**

**Monitor Procurement, Evaluate Investigation, & Renew, Terminate, or Certify Investigation**



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## 6.0 PROCEDURE

The following table describes the flowchart of Section 5.

### Actionee

### Action

Solicitation Initiator	1	<p><u>Conceptualize Candidate Solicitations.</u> Conceptualizing candidate solicitations is driven by the science questions, themes, priorities, strategies, and requirements documented in the <i>ESE Science Implementation Plan</i>, and the applications and education needs documented in the <i>ACE Implementation Plan</i>. Additionally, when formulating candidate solicitations, the solicitation initiator considers information obtained from existing investigations in the form of progress, success, and identified new opportunities. The solicitation initiator also obtains advice from a variety of advisory committees, including the Earth System Science and Applications Advisory Committee (ESSAAC), and relevant conferences and workshops. The solicitation initiator tempers the content, approach, and importance of planned solicitations by the realities of the budget (current, advocated, and formulated versions), budget changes, and other ESE priorities.</p> <p>As part of the effort to conceptualize a solicitation, the solicitation initiator develops preliminary definitions of each candidate solicitation. The solicitation initiator also may consider candidate solicitation and funding instruments, but those decisions are actually made in Activity 3 (Develop Solicitation) and Activity 7 (Make Selection Decision, Prepare Accept/Reject Letters, and Summarize Selection Results) respectively.</p> <p>Solicitations can be for independent investigation by a Principal Investigator, investigation as part of a larger SAET team, or investigation as part of a focused field campaign. If a solicitation is for an SAET team or a field campaign focused on a particular set of questions or needs, then a plan for that activity may be prepared at the discretion of the solicitation initiator. This plan may be called, for example, a Science Program Plan, an Experiment Plan, a Campaign Plan, or an Expedition Plan. It is often developed through a series of workshops involving the SAET community. The solicitation initiator often, but not always, is involved in its development. The plan usually is developed prior to or during this first activity, but it may be developed during later activities.</p>
Solicitation Initiator	2	<p><u>Discuss and Develop Consensus for Candidate Solicitations.</u> The solicitation initiator discusses the candidate solicitation(s) with his/her colleagues and the appropriate ESE division directors to determine which solicitations to pursue. The objective is to ensure that only important, feasible, and affordable solicitations are pursued in a timely manner.</p> <p>Some candidate solicitations will need to be revised or refined. These are recycled through Activity 1, Conceptualize Candidate Solicitations, and then reconsidered in their revised form.</p> <p>Candidate solicitations that are judged suitable for NASA by the appropriate ESE division director (s) move forward to Activity 3, Develop Solicitation. The criteria for candidate solicitations to move forward</p>

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include the following:

- Does the solicitation address requirements documented in the *Science Implementation Plan*, the *ACE Implementation Plan*, or the *Technology Development/Investment Plan*?
- Does the solicitation deal with problems that are tractable?
- Does the solicitation fit within the budget?
- Does it fit into NASA's overall plans?
- Is the problem well formulated?

Solicitation Initiator 3 Develop Solicitation. For candidate solicitations, the solicitation initiator begins development of a solicitation by establishing program relevant goals and objectives for the solicitation, defining the solicitation's scope, and setting sub-topic priorities. Desired results, SAET products, and deliverables (if appropriate) are identified, along with the proposal evaluation criteria. The solicitation is drafted and prepared for ESE coordination as determined appropriate by the solicitation initiator and ESE division director(s).

For solicitations of technology investigations, the conceptualization, coordination, and decision on what investigations to pursue are accomplished in HQOWI 7120-Y011, *Formulating ESE Technology Development*. Identification of which technology investigations to pursue are documented in the *Technology Development / Investment Plan* which is developed in HQOWI 7120-Y011. The specific technology solicitation requirements also are generated by the activities described in HQOWI 7120-Y011. These serve as inputs to this activity where the actual technology investigation solicitation is developed.

The technology solicitation initiator also produces a separate written evaluation plan. For other types of investigation solicitations, the evaluation plan is simply incorporated into the solicitation. As described in NFS 1872, the evaluation plan should include review guidelines, and cover the procedural flow, the evaluation schedule, and the recommended staffing for any subcommittee or contractor support.

The solicitation initiator may also consult with representatives from procurement (Code H) and legal (Code G) to decide what solicitation instrument to use. A solicitation instrument can be a NASA Research Announcement (NRA), an Announcement of Opportunity (AO), or a Cooperative Agreement Notice (CAN). Refer to Appendix A for more information on the various solicitation instruments available to the solicitation initiator.

NASA's Earth Science Enterprise has adopted commercial data purchases as a mainstream way of acquiring research-quality data as these commercial capabilities become available. NASA encourages the use of commercially-available data sets by Principal Investigators as long as they meet the scientific requirements and are cost-effective. All science Research Opportunities should include language encouraging proposers to find scientifically-acceptable and cost-effective

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commercially-available data sources for use in their investigation and to request funds to purchase this data as part of their proposal. When responding to a Research Opportunity, the proposer should identify the commercial data sources intended for use and the associated cost. Announcements of Opportunity should include language promoting the submission of alternative means of meeting the announcement's scientific objectives through the purchase of commercially-available data, which is scientifically acceptable and cost effective. If the investigation includes international considerations, the solicitation initiator may also consult with a representative from international affairs (Code I). The advice obtained from the Code I representative, as well as the Code G and H representatives helps shape the solicitation.

Solicitation Initiator  
 Research Opportunity Administrator  
 ESE Division Directors  
 Support Contractor  
 Designated Procuring Organization

4. Obtain Concurrence and Release Solicitation. NASA procurement policy requires completion of a formal concurrence process before a solicitation can be publicly released. HQOWI 5100-Y014, *Obtain Approval for Release of Solicitation Instrument*, provides details on ESE's implementation of the solicitation concurrence and release procedure. Refer to it for specifics. The following paragraphs in this activity summarize the procedures from the perspective of soliciting an investigation.

The solicitation initiator, with the assistance of the Code YB Research Opportunity Administrator, is responsible for shepherding the solicitation through this process. A concurrence cover page is prepared and attached to the solicitation. This package is then distributed to the individuals and offices indicated on the cover page in the order listed. Some concurrences may be obtained in parallel using duplicate packages, but others must be obtained in series. It is usual to obtain all but the final Code Y concurrences before seeking concurrences from Codes I, H, and G. At a minimum, the concurring individuals should include the solicitation initiator and the appropriate ESE division director(s). Once concurrence has been obtained to release the solicitation, the solicitation initiator forwards the solicitation to the Research Opportunity Administrator who logs the solicitation, completes the solicitation package, assigns a solicitation number, and sends the package to the ESE AA for release approval and signature.

Once the solicitation package is approved for release, the Research Opportunity Administrator sends an electronic copy of the solicitation package to a support contractor for conversion to various formats and generation of hard copies for internal and external distribution. The conversions are verified by both the Research Opportunity Administrator and the solicitation initiator before they are released. Refer to HQOWI 5100-Y014 for instructions on verifying format conversions.

At this time, the solicitation initiator and the Research Opportunity Administrator also work together to prepare a Commerce Business Daily (CBD) synopsis for posting in the CBD and on the ESE Home Page. The CBD synopsis is sent through electronic mail to the GSFC Headquarters Acquisition Branch (GSFC Code 210.H), Grants Administration Office. The GSFC Headquarters Acquisition Branch posts the synopsis in the

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CBD 15 days prior to release of the solicitation. A signed copy of NPG 7120.5 Certification for Release of Solicitation is faxed to GSFC Headquarters Acquisition Branch and the original is kept with the Solicitation Package by the Research Opportunity Administrator. Again, refer to HQOWI 5100-Y014 for instructions on preparing and releasing the CBD synopsis.

Once the CBD synopsis is released, a support contractor posts the synopsis on the ESE Home Page to alert potential proposers of the pending release. The contractor also provides electronic notification to potential proposers and contacts the solicitation initiator to determine an appropriate distribution list for this notification. To construct the distribution list, the solicitation initiator will select categories of interest from the ESE mailing list maintained by the support contractor.

On the release date, a support contractor posts the solicitation in full on the ESE Home Page.

Solicitation Initiator      5      Receive Proposals and Conduct Peer Review. The ESE conducts peer reviews to evaluate proposals. The ESE peer review procedure includes receiving and logging proposals, identifying reviewers, determining the type of review (e.g., mail review and/or panel review), conducting mail and panel reviews, and documenting the results. HQOWI 7040-Y012, *Conduct Peer Review*, documents the NASA Earth Science Enterprise (ESE) procedure for conducting peer reviews.

Support Contractor

Peer Reviewers

Solicitation Initiator      6      Review Results of Peer Review, Conduct Program Review, and Prepare Selection Recommendation. The solicitation initiator reviews the peer review panel's findings for consistency and completeness of documentation. This review is conducted to ensure there is consistency in the level of evaluation across the proposals. If consistency is lacking in the solicitation initiator's judgement, then the reviewers are asked to elaborate on their evaluations or the solicitation initiator asks for additional reviews from other peer reviewers.

The solicitation initiator also conducts an internal programmatic review to identify any logistical, implementation, cost, or management concerns, and/or partnering arrangements. Additionally, the solicitation initiator assesses the balance amongst the competitive proposals relative to the science themes; applications, education, or technology needs; and ESE strategies formulated during ESE strategic planning processes and specific to the solicitation.

The solicitation initiator may also consult with procurement and legal representatives (Codes H and G respectively) to identify preferred funding instrument(s). Generally, AOs result in contracts. Under certain circumstances, another funding instrument may be used but this is not typical. NRAs can result in any funding instrument, such as grants, contracts, interagency transfers, or cooperative agreements. CANs result in cooperative agreements only. Refer to Appendix A for more information on the various funding instruments available.

Based on these reviews and available resources, the solicitation initiator prepares a recommendation, with supporting justifications, as to which



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proposals should be selected for award. This recommendation may include options. The recommendation and supporting justification are usually packaged for a presentation to the NASA selecting official for his or her selection decision.

Solicitation Initiator      7      Make Selection Decision, Prepare Accept/Reject Letters, and Summarize Selection Results. The solicitation initiator presents his or her recommendation, possibly with options or issues to be resolved, to the NASA selecting official. The NASA selecting official is identified by title in the solicitation and is usually the Research, Applications, or Program Planning and Development Division Director, as appropriate. Occasionally the selecting official is the ESE Associate Administrator, an SAET program manager, or other Code Y official. The solicitation initiator usually presents his or her recommendation as to funding instrument, implementing field center, and any other special factors with regard to the awards process at this time.

Selecting Official

The selecting official reviews the recommendation, considers the options, helps resolve issues, and ultimately approves, in part or in full, the selection recommendation.

If the selecting official rejects the solicitation initiator's recommendation, the recommendation and justification are refined. When the recommendations are accepted, the solicitation initiator prepares accept and reject letters that officially notify successful and unsuccessful proposers and announce the selecting official's decisions. As the letters are being prepared, the solicitation initiator notifies representatives from public affairs (Code P) and legislative affairs (Code L) about their impending release. Code I will review for concurrence all draft accept/reject letters involving proposals from foreign entities and proposals from U.S. entities that include foreign participation. The selecting official signs these letters. Prior to their transmission to proposers, the selection results are made known to Codes P and L. The solicitation initiator is responsible for coordinating with the Associate Administrator, the Office of Public Affairs (Code P), the Office of Legislative Affairs (Code L), and the Office of External Relations (Code I) to insure that:

- 1) the letters are concurred on by Code I
- 2) Code L notifies appropriate Congressional personnel prior to public announcement
- 3) Code I has the opportunity to notify appropriate international partners prior to public announcement
- 4) The AA has the opportunity to personally contact successful proposers or their institutional leadership prior to public announcement or release of the letters

The solicitation initiator summarizes the selection results, typically in the form of a list of accepted and rejected proposals and a re-packaging of the selection recommendation presentation, including the summary of results from the peer review and a summary of the program review. This

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information is used in Activity 9, 10, or 11 to prepare the Technical Evaluation and Selection Statement or Justification for Acceptance of an Unsolicited Proposal required as part of the Procurement Package to request an award. It is also used as a source of information to answer any questions concerning the rejected proposals or the reasons for the overall selection.

Code YB  
Implementation Team Leader  
Solicitation Initiator

8 Enter Budget Information into SYS-EYFUS Database. Based on the final selection decisions documented in the accept/reject letters, the Program Manager enters the data into the ESE System for Codes E, Y, F, U, and S (also known as SYS-EYFUS) database as coordinated with the YB Implementation Team Leader. Often, recommended budgets will differ from those requested in the proposal, and the solicitation initiator will have to negotiate budget changes with the successful proposer. This happens immediately after the selection has been announced, but could occur earlier, during preparation and finalization of the selection recommendation in Activities 6 and 7. Once the budget data are entered into the database, the funding becomes available to apply to the actual awards to be made by the designated procuring organization.

The solicitation initiator then initiates the procurement process. The particular initiation tasks depend upon the type of funding instrument, and upon the organization that will hold technical responsibility for the award.

Solicitation Initiator

9 Prepare Partial Procurement Package Inputs for Designated Field Center. If technical responsibility for the award is to be delegated to a NASA center and the award is to be a Grant, Cooperative Agreement, Interagency Transfer, or Contract, then the solicitation initiator contacts the NASA center and arranges for appropriate support and identification of a responsible individual. This step may have been taken during Activity 1, Conceptualize Candidate Solicitations, or at any time thereafter up to this stage.

The procurement actions desired are communicated to the responsible individual at the center as procurement package inputs. These inputs include the following:

- The list of accepted proposals,
- Agreed-upon budget profiles for each proposal,
- The original proposals,
- Copies of the award letters,
- A Summary of Selection Results,
- Justification for Other Agency Performing Activity (when the award is to be an Interagency Transfer), and
- The Technical Evaluation and Selection Statement, or
- Justification for Acceptance of an Unsolicited Proposal,

The solicitation initiator sends the procurement package inputs to the designated field center. These inputs enable the designated field center

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to prepare the procurement package and make an award.

Solicitation initiators keep copies of the procurement package inputs until they receive award documentation that signals the end of Activity 13, Monitor Procurement Process.

Solicitation Initiator      10      Prepare Procurement Package Inputs for GFSC Code 201.1. If technical responsibility for the award is to remain at NASA HQ and the award is to be a Grant or Cooperative Agreement, then the solicitation initiator prepares procurement package inputs to be given to the Goddard Space Flight Center (GSFC) Grants Administration Office (GSFC Code 201.1). The solicitation initiator's inputs include the following:

Code YB  
Implementation Team  
Leader  
OPR Division Director

- Information needed to complete Procurement Request Form, GSFC 18-27,
- The original proposal and a copy of the award letter,
- A Statement of Cooperative Interactions (if necessary), and
- The Technical Evaluation and Selection Statement or
- Justification for Acceptance of an Unsolicited Proposal.

The solicitation initiator provides these inputs to the Code YB Implementation Team Leader. The Implementation Team Leader obtains the signature of the division director for the Office of Primary Responsibility (OPR) on either the Technical Evaluation and Selection Statement or the Justification for Acceptance of an Unsolicited Proposal, whichever is appropriate. The Implementation Team Leader then forwards the procurement package inputs on to the GSFC Grants Administration Office (GSFC Code 201.1). The GSFC Grants Administration Office uses the procurement package inputs to produce the procurement request which electronically commits the funding. They then send the package to procurement.

Solicitation initiators keep copies of the procurement package inputs until they receive award documentation that signals the end of Activity 13, Monitor Procurement Process.

Solicitation Initiator      11      Prepare Procurement Package Inputs for GFSC Code 210.H. If technical responsibility for the award is to remain at NASA HQ and the award is to be an Interagency Transfer or a Contract, then the solicitation initiator and Code YB implementation team prepare procurement package inputs to be given to the GSFC Headquarters Acquisition Branch (GSFC Code 210.H). The solicitation initiator's inputs include the following:

Code YB  
Implementation Team  
Leader  
OPR Division Director

- Information needed to complete Procurement Request Form, NHQ 163,
- Original proposal and a copy of the award letter,
- Statement of Work (if necessary), and
- Justification for Other Agency Performing Activity (if necessary), and

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- Technical Evaluation and Selection Statement, or
- Justification for Acceptance of an Unsolicited Proposal.

The solicitation initiator provides these inputs to the Code YB Implementation Team Leader. The Implementation Team Leader obtains the signature of the division director for the OPR on the required statements and justifications. The YB program analyst prepares the procurement package request form which is submitted electronically to the Headquarters Accounting Division, Code 155. The Implementation Team Leader then forwards the procurement package inputs on to the GSFC Headquarters Acquisition Branch (GSFC Code 210.H). The GSFC Headquarters Acquisition Branch uses the procurement package inputs to produce the actual award document.

Solicitation initiators keep copies of the procurement package inputs until they receive award documentation that signals the end of Activity 13, Monitor Procurement Process.

Code YB <u>Implementation Team Leader</u>	12	<p><u>Distribute Resource Authority.</u> The Business Division (Code YB) distributes the resources authority (NASA Form 506 White) to the appropriate field center via a NASA funding document, Form 506 White. Funding to be distributed for research and applications tasks must be specified within the SYS-EYFUS database. The appropriate procurement office uses this information to initiate a procurement request and make an award. The Form 506 White enables the supporting procurement organization to go forward and release a procurement package, and ultimately fund an investigation.</p> <p>In the context of this work instruction, the appropriate procurement office could be at a designated field center, the GSFC Grants Administration Office (GSFC Code 201.1), or the GSFC Headquarters Acquisition Branch (GSFC Code 210.H). Refer to HQOWI 7410-Y008, <i>Execute the ESE Budget</i>, for additional information.</p>
Solicitation Initiator Code YB <u>Implementation Team Leader</u>	13	<p><u>Monitor Procurement Process.</u> If the technical oversight responsibility for the award is to remain at NASA Headquarters, then the solicitation initiator monitors the procurement process to ensure the award is completed. The process for each year of the award ends with receipt of the award documentation from the procurement office and when the Code YB Implementation Team Leader makes any necessary budget adjustments in the SYS-EYFUS Database.</p>
Science, Applications, Education, or Technology Program Manager	14	<p><u>Receive and Evaluate Progress Report.</u> ESE program managers are responsible for overseeing ESE funded investigations. Many important reasons exist for this responsibility. They include monitoring to identify and leverage new opportunities based on emerging results, and ensuring that sound use is being made of ESE's resources. From the perspective of soliciting and selecting investigations, ESE program managers oversee ESE funded investigations for the purpose of making renewal decisions.</p> <p>Program managers receive and review various progress reports and reports of interim results. They also receive annual or final results which can take the form of an annual report, journal article, or a final report.</p>

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Based on these inputs, the ESE program manager determines if the investigation is completed or if renewal is warranted.

Principal investigators seeking renewals document this in their progress report. If the program manager believes renewal is warranted, he or she determines if resources exist in the budget to continue the investigation. If resources exist, the program manager prepares inputs for a renewal procurement package (see Activity 15).

If resources are not available or the investigation does not warrant further funding, the program manager supports the responsible procurement office's close-out process (see Activities 16 and 17).

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|---|----|---|
| Science, Applications, Education, or Technology Program Manager | 15 | <p><u>Prepare Renewal Procurement Package Inputs.</u> If renewal is appropriate for a grant or cooperative agreement, the ESE program manager prepares inputs for a renewal procurement package. These inputs include the investigation's progress report, a renewal memorandum, and any recommended budget changes with justifications. If a renewal is appropriate for a contract or interagency transfer, inputs for a full procurement package are prepared (see Activity 11). No renewal memorandum is required, but the principal investigator's progress report is included. The Program Manager or the Code YB Implementation Team Leader makes the necessary budget adjustments in the SYS-EYFUS Database.</p> |
| Science, Applications, Education, or Technology Program Manager | 16 | <p><u>Prepare Termination Recommendation.</u> If the investigation is being terminated, then the ESE program manager must prepare a termination recommendation letter that informs both the procurement office and the investigator that the investigation is to be terminated.</p>   |
| Science, Applications, Education, or Technology Program Manager | 17 | <p><u>Certify Completion.</u> In the case where the investigation is completed, the ESE program manager responds to a procurement office request to verify that the work has been completed satisfactorily and there are no outstanding matters. This interaction is completed through an electronic mail exchange between the program manager and the closeout specialist in the responsible procurement office.</p>   |

## 7.0 QUALITY RECORDS

RECORD IDENTIFICATION	OWNER	LOCATION	MEDIA Electronic or Hardcopy	SCHEDULE AND ITEM NUMBERS*	RETENTION / DISPOSITION
Solicitation Package (Includes Signed Concurrence Cover Sheet)  (See HQOWI 5100-Y014, <i>Obtain Approval for Release of Solicitation Instrument</i> ).	Research Opportunity Administrator	Kept by Research Opportunity Administrator	Hardcopy	Schedule 7, Item 8, "NASA Research Announcement."	Transfer all files to the responsible division / project 2 years after award. Records will be incorporated into the official project file, or grant/contract file.

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RECORD IDENTIFICATION	OWNER	LOCATION	MEDIA Electronic or Hardcopy	SCHEDULE AND ITEM NUMBERS*	RETENTION / DISPOSITION
Peer Review Results (See HQOWI 7040-Y012, <i>Conduct Peer Review</i> ).	Solicitation Initiator	Support Contractor	Hardcopy	Schedule 7, Item 9, "R&D Peer Review and Evaluations," paragraph B.2.	Retire to FRC when 1 year old. Destroy when 5 years old.
Signed Accept/Reject Letters	Solicitation Initiator	Support Contractor	Hardcopy	Schedule 7, Item 9, "R&D Peer Review and Evaluations," paragraph B.2.	Retire to FRC when 1 year old. Destroy when 5 years old.
Summary of Selection Results	Solicitation Initiator	Support Contractor	Hardcopy	Schedule 7, Item 9, "R&D Peer Review and Evaluations," paragraph B.2.	Retire to FRC when 1 year old. Destroy when 5 years old.
SYS-EYFUS Database	Solicitation Initiator	Support Contractor	Electronic	Schedule 7, Item 22, "Program/ Project Operating Plan (POP).	Destroy when 5 years old.
Resource Authority (NASA Form 506 White) (See HQOWI 7410-Y008, <i>Execute the Budget</i> ).	Resources Team Lead	Business Division	Hardcopy	Schedule 7, Item 21, "Budget and Programming Resources / Apportionment Files," paragraph D.1.	Destroy 2 years after the close of the fiscal year.
Termination Recommendation Letter	Program Manager	Research, Applications, or Program Planning and Development Division as appropriate	Hardcopy	Schedule 7, Item 9, "R&D Peer Review and Evaluations," paragraph B.1.	File documentation with the related case file (grant or contract); destroy accordingly.

\* Quality Records are retained in accordance with the referenced schedule and item numbers from NPG 1441.1, *NASA Records Retention Schedules*.

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## APPENDIX A. SOLICITATION AND FUNDING INSTRUMENTS

The primary factor used in determining the proper solicitation and funding instruments is the nature of the work to be done. The level of NASA involvement, the specificity and definitiveness of the requirements, the desire (or not) for a midrange procurement, the complexity of the effort, and the type of research all affect what instruments should be used.

The profit status of the funded entity is not a primary factor. For example, a funded entity that operates on a not-for-profit basis may receive funding through a contract and is not limited to receiving grants or cooperative agreements. Similarly, a profit-making firm may receive funding through grants, cooperative agreements or contracts.

The following references provide details on making these decisions, however, consultation with representatives from procurement (Code H) and legal (Code G) is essential:

- NFS Part 1835 NASA FAR Supplement, Part 1835, Research and Development Contracting
- NFS Part 1871 NASA FAR Supplement, Part 1871, MidRange Procurement Procedures
- NFS Part 1872 NASA FAR Supplement, Part 1872, Acquisition of Investigations
- NPG 5800.1 Grant and Cooperative Agreement Handbook
- NMI 8310.1 Maintaining Continuity and Stability in NASA-Funded University Projects
- NMI 8320.1 Basic Policy for NASA University Relationships

### A.1 Determine Proper Solicitation Instrument

ESE typically uses four kinds of solicitation instruments:

- NASA Research Announcements (NRAs),
- Cooperative Agreement Notices (CANS),
- Announcements of Opportunity (AOs) and
- Requests for Proposals (RFPs).

Although RFPs are not normally used to acquire research at NASA and not done at NASA Headquarters, a brief discussion of RFPs is included since they are applicable to very specific missions direct to industry and to commercial data purchases.

A fifth kind of solicitation instrument can be used if a MidRange procurement process<sup>1</sup> is expected to be

<sup>1</sup> The MidRange procurement process is a pilot test of new procurement procedures authorized by the Office of Federal Procurement Policy. NASA Federal Acquisition Regulation (FAR) Supplement (NFS) 1871, MidRange Procurement Procedures, describes the criteria and conditions in which an enterprise might elect to follow the MidRange procurement procedures. In general, a MidRange procurement is for supplies, including commercial items, and services. NFS 1871 describes dollar thresholds, but also suggests several ways to exceed the dollar thresholds. MidRange procurement procedures typically are intended for acquisitions from small business concerns. Again, however, NFS 1871 provides for conditions when the MidRange procurement procedures may be used on an unrestricted basis.

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followed. In these cases, a Request for Offer (RFO) is used as the solicitation instrument.

Note: Selection of a solicitation instrument does not necessarily dictate the resulting funding instrument. Generally, AOs result in contracts. Under certain circumstances, another funding instrument may be used, but this is not typical. NRAs can result in any award instrument (grant, contract, or cooperative agreement). CANs result only cooperative agreements and RFOs result in contracts.

A brief discussion of each type of solicitation instrument is provided below to assist the reader in determining the most suitable instrument. Refer to the referenced documents for more details and consult with representatives from procurement (Code H) and legal (Code G).

**NASA Research Announcements (NRAs):** An NRA is used to announce research interests in support of NASA's program and provides for the submission of competitive project ideas, conceived by the offerors, or one or more program areas of interest. The research requirement is not sufficiently defined to specify an end product or service. An NRA may result in the award of a grant, cooperative agreement or contract. If NASA selects a proposal under which NASA is required to be involved in the performance of the research, a cooperative agreement may be awarded. Although only independent efforts may be contemplated by the NRA, a competitive idea may be received in which NASA finds that government participation is desirable, and a cooperative agreement could be awarded. It is also possible that a proposal could be received in which the proposer is only willing to accept a procurement contract. If the selecting official determines that the research to be done is meritorious and deserving of funding, then a contract can be awarded. In that case, specific reports, data, due dates, etc., are defined, consistent with the NRA, and made part of the procurement contract.

**Announcements of Opportunity (AOs):** AOs are used to solicit and acquire science investigations in a broad area of interest to NASA. Although AOs are used to implement research, they differ significantly from NRAs in that they contemplate only the award of contracts, and contracts stipulate that scientific research is performed and delivered to NASA for NASA purposes. NRAs may result in the award of a grant, cooperative agreement or contract. AOs are further distinguished from NRAs in that they are traditionally based on a particular space flight mission, instrument or launch opportunity. While a contract resulting from an AO may include requirements for hardware procurement or development, the hardware itself is ancillary to the research. An AO may stipulate that, as a part of the investigation, data must be acquired or purchased. In this case, although the contractor will purchase data, the data is ancillary to the overall research purpose and the primary deliverable is the completed research or scientific investigation.

**Cooperative Agreement Notices (CANs):** CANs are used when NASA anticipates that the research can be done most effectively through a collaborative relationship between NASA and the recipient. If a funding instrument other than a Cooperative Agreement is anticipated, a CAN is probably not the correct solicitation instrument. However, it is possible for a grant to be awarded resulting from a CAN. For example, an institution or firm could provide a proposal in response to the CAN with an approach that did not call for the participation of NASA, and yet the NASA peer review and selection process may determine that this alternate funding approach is in the best interest of the Government. Finally, if the Government anticipates the delivery of a product or service in fulfillment of a NASA mission or operating requirement, a CAN is not the appropriate solicitation instrument. This is because, by definition, a CAN envisions the award of a Cooperative Agreement, and Cooperative Agreements are not used to provide supplies and services to NASA.

**Request for Proposals (RFPs):** RFPs are used to solicit supplies and services to fulfill a NASA requirement and the resultant funding instrument is a contract. RFPs can be tailored to fit specific needs and are very flexible in what they may dictate as specifications, work statements and terms and conditions. Although there is no statutory reason to prevent NASA from using RFPs to acquire research, they are not normally used. Since an RFP should contain well-defined requirements, this solicitation



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instrument usually does not support the kind of leading edge investigations and research NASA funds. RFPs are an effective way to solicit the purchase of data, but in that case, a contract is awarded for the data deliverable itself, not the conduct of a science investigation. A subset of the RFP is an RFO or Request for Offer. The RFO is a streamlined solicitation instrument (used under what is termed a MidRange procurement) which leads to the award of a contract. The RFO is a much shorter document than an RFP and the solicitation and award of the contract under an RFO can be accomplished by a small team in a much shorter time compared to an RFP. RFOs may be used when the anticipated basic value and aggregate value including options does not exceed \$2M and \$10M, respectively. There are other rules that apply and the Contracting Officer can provide advice on the use of RFOs.

After considering the above information, the solicitation initiator must consult with a NASA Contracting Officer or procurement representative as well as a NASA attorney regarding the determination of the proper solicitation and funding instrument to be used.

## A.2 Determine Proper Funding Instrument

ESE normally uses three kinds of funding instruments to fund research:

- Grants,
- Cooperative Agreements, and
- Contracts.

Within a research area, multiple funding instruments may be selected or exist simultaneously to implement the various parts or phases of the research area. For example, a research area could have certain research being conducted under grants while other research is pursued using a contract. This point is made only to remind the reader that requirements can be implemented using various funding instruments and it is not necessary that all requirements of a research area be implemented on one type or single funding instrument.

**Grants:** Grants are financial assistance instruments to enable the recipient to do research in the area desired as proposed to NASA. A grant accomplishes a public purpose of support or stimulation as opposed to acquiring the results of the research to meet a specific NASA mission or operating requirement. The grant is performed autonomously by the recipient (i.e., grantee) with no substantial involvement between NASA and the recipient. Only technical reports are produced and no formal deliverable is provided to NASA, nor is there any inspection or acceptance required for information produced or submitted at the completion of the grant. However, NASA normally would receive licenses to use any products resulting from performance of the grant without having to pay royalties.

**Cooperative Agreements:** Cooperative agreements are enormously varied in form and their chief purpose must be to support or stimulate a public purpose. They must involve the transfer of a thing of value, usually money, to the recipient. Unlike grants, cooperative agreements must include substantial NASA involvement in the performance of the effort. The nature of the NASA involvement may be primarily through the contribution of expertise and human resources or through the contribution of facilities or equipment or both. The recipient and NASA are responsible for abiding to the terms of the cooperative agreement. However, either the Government or the recipient may unilaterally terminate the agreement and cease activity after giving appropriate notice (usually 60 days) to the other party. The recipient is responsible for the programmatic direction and conduct of the cooperative agreement and its autonomy is limited only to the degree defined by the NASA involvement. Regardless of NASA involvement, the overall programmatic responsibility and decision-making authority lies with the recipient.

As mentioned before, a cooperative agreement accomplishes a public purpose of support or stimulation

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as opposed to acquiring the results of the research to meet a specific NASA mission or operating requirement. Another aspect of cooperative agreements is their application to commercial firms. Cooperative agreements can be awarded to commercial firms to: (1) support research and development, (2) provide technology transfer from the Government to the recipient and (3) develop a capability among U.S. firms to potentially enhance U.S. competitiveness.

**Contracts:** Contracts are funding instruments that reflect a mutually binding legal relationship obligating the seller to furnish supplies or services in exchange for funds from NASA. Contracts are used to procure goods and services for NASA. Use of a contract provides NASA with many rights that are not normally obtained in grants and cooperative agreements. A contract is the required funding instrument when the effort is used to fulfill a NASA mission or operating requirement. A contract requires a delivery of an end item or services, according to specifications (detailed, essential physical characteristic, performance or functional), and which passes inspection and acceptance criteria required for satisfactory completion or delivery.

Funding of university projects requires consideration of continuity issues. As stated in NMI 8320.1, *Basic Policy for NASA University Relationships*, academic efforts of a continuing nature should be supported by suitable long-term funding arrangements, providing continuity through timely renewal, step-funding, multiple-year awards, or simplified renewal requirements; normally, however, incremental funding should be avoided. NMI 8310.1, *Maintaining Continuity and Stability in NASA-Funded University Projects*, sets forth the policies, procedures, and techniques pertinent to maintaining continuity and stability in university projects.