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Earth Science Data Systems (ESDS) Program, HQ SMD

Advancing Collaborative Connections for Earth System Science (ACCESS)
Documentation and Reporting Standards

Version 1.0

Headquarters
Washington, DC

National Aeronautics and
Space Administration

Advancing Collaborative Connections for Earth System Science (ACCESS)

Documentation and Reporting Standards

The Documentation and Reporting Standards document details the documentation and reporting requirements for NASA HQ's Earth Science Data Systems (ESDS) Program's Advancing Collaborative Connections for Earth System Science competitive program. The document may be tailored at the discretion of the Program Officer/Program Manager to reflect changes in requirements for future programs.

Change History Log

Revision	Effective Date	Description of Changes
1.0	8/17/18	Baseline document

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National Aeronautics and Space Administration Science Mission Directorate - Division of Earth Science

Advancing Collaborative Connections for Earth System Science (ACCESS)
<<YYYY>>

Documentation and Reporting Standards
(<<Month YYYY>>)

This document provides information about documentation and reporting requirements for NASA HQ's ESDS Program's Advancing Collaborative Connections for Earth System Science, <<ROSES-YYYY solicitation number>> ACCESS solicitation. In this document, the recipient is referred to as the primary investigator (PI).

Deliverables
1. Project Milestone Form
2. Quad Chart
3. Data Management Plan
4. Open Source Software Development Plan
5. Quarterly Progress Reports
6. Mid-Term Report
7. Final Report
8. Technical Reviews
9. Mid-Term Presentation
10. Final Presentation

Table 1: Reporting Schedule

Schedule	Deliverables
+ 3 months	1st Quarterly Report
+ 6 months	2nd Quarterly Report 1st Technical Review
+ 9 months	3rd Quarterly Report
+ 12 months	Mid-Term Report Mid-Term Presentation & 2nd Technical Review
+ 15 months	5th Quarterly Report
+ 18 months	6th Quarterly Report 3rd Technical Review
+ 21 months	7th Quarterly Report
+ 24 months	Final Report Final Presentation & Final Technical Review

Check the ESDIS library, http://esdisfmp01.gsfc.nasa.gov/esdis_lib/default.php, to verify that this is the correct version prior to use.

	Updated Data Management Plan Updated Open Source Software Development Plan

General Reporting Requirements
- PIs are responsible for uploading all progress reports to the Earthdata Wiki space established for all ACCESS projects. Reports will be submitted via the project's Reports page within the individual project's wiki space, for which a link will be provided prior to the project's official kick-off meeting with NASA HQ.
- Upload all reports as PDF files only.
- All information pertaining to progress reports and progress report submissions available on the Earthdata Wiki supersedes emails or reminders sent on behalf of NSSC.
- All submitted reports should include a cover page that clearly identifies the project. The cover page should include all of the following information:
    - Project Title
    - Proposal Number (i.e., project number)
    - Co-Operative Agreement Number
    - Name of PI(s)
    - Name of Institution(s)
    - Report Type (Quarterly, Mid-Term, or Final)
    - Submission Date (actual, not due date)
- The Narrative of the submitted report should contain information about the project. This information is specified below under "Content Instructions for Deliverables".

Content Instructions for Deliverables
1. **Project Milestone Chart** (submitted within one month of project initiation and updated as needed)
   - *Purpose*: Provides measurable milestones of project progress.
   - *Format*: A list of project milestones with anticipated completion dates (see example on Earthdata Wiki in the ACCESS <<YYYY>> wiki space <<link>>.
       - NOT TO EXCEED one (1) page
       - Must include the following mandatory milestones: release to limited audience (alpha or beta), public release of product, and open source release. Additional milestones are encouraged.
       - Milestones may be updated based on feedback from technical reviews

2. **Quad Chart** (submitted within one month of project initiation)
   - *Purpose*: Provides a brief description of project, anticipated outcomes, and major project milestones; used for internal NASA presentations.
   - *Format*: Single-slide PowerPoint presentation (see template on Earthdata Wiki in the ACCESS <<YYYY>> wiki space at <<link>>.
       - Use full sentences
       - Four sections:
           I. Objectives (include goals and project metrics)
           II. Approach (discuss project elements)
           III. Co-PIs/Collaborators (list names and affiliations)

IV.   Key Milestones (list major milestones and completion dates)

3. **Data Management Plan** (submitted within one month of project initiation)
   - *Purpose*: Addresses the management of data from Earth science missions from the time of collection to their entry into permanent archives.
   - *Format*: Provide a DMP adhering to the specifications described at <<link>> for all data products generated by the project.
   - The DMP shall be updated as needed during the project, and a final version shall be submitted at the conclusion of the project.

4. **Open Source Software Development Plan** (submitted within one month of project initiation)
   - *Purpose*: Details project compliance with NASA's Earth Science Data Systems' Open Source Software Policy.
   - *Format*: Describe project compliance with NASA's Earth Science Data Systems' Open Source Software Policy along with a plan to ensure project work is made available to the public as Open Source Software. Additional information about requirements can be found on the Earthdata Wiki at https://wiki.earthdata.nasa.gov/x/kYe0Bg.
   - The Open Source Software Development Plan shall be updated as needed during the project, and a final version shall be submitted at the conclusion of the project.

5. **Progress Reports** (submitted every three (3) months, "Quarterly Report")
   - *Purpose*: Serve as a measure of achievement on the project and disclose any issues that may need to be resolved.
   - Assigned via "Tasks" in personal project spaces in the Earthdata Wiki.
   - *Format*:
     - *Cover Page*, which should include all of the following:
       - Project Title
       - Proposal Number (i.e., project number)
       - Co-Operative Agreement Number
       - Name of PI(s)
       - Name of Institution(s)
       - Report Type (Quarterly, Mid-Term, or Final)
       - Submission Date (actual, not due date)
     - *Narrative*
       - Should NOT EXCEED three (3) pages
       - Report should be written in narrative structure using full sentences; bulleted lists will not be acceptable as the only form of content in the report
       - Report Sections:
         - Technical Status
           - Assess your accomplishments for the preceding months according to initial project milestones, both quantitatively and qualitatively (where applicable).

Include technical accomplishments, technology development results, and results of tests and/or demonstrations.

- Schedule Status
  - Provide a *table* addressing each of the initial and updated project milestones. The table should address:
    - Project Progress: Provide the status of major tasks and any variance from the planned versus the actual schedule, including tasks completed, tasks in progress, tasks expected to be completed later than planned, and tasks that are delayed—beginning with rationale for each delayed task along with recovery plans, as appropriate.
    - Delays and set-backs: What are some obstacles that you have run into? How did/do you solve them? Were any corrective actions taken or planned? Will any unforeseen issues or circumstances prevent you from completing the project?
    - Future Plans: What are your plans for the next quarter? Present in the table as a list of milestones with anticipated completion dates.

6. **Mid-Term Progress Report** (mid-term evaluation, replaces Quarterly Report #4 at 12-month mark)
   - *Purpose*: Serve as a measure of achievement on the project and disclose any issues that may need to be resolved.
   - Assigned via "Tasks" in personal project spaces in the Earthdata Wiki.
   - *Format*:
     - ***Cover Page,*** which should include all of the following:
       - Project Title
       - Proposal Number (i.e., project number)
       - Co-Operative Agreement Number
       - Name of PI(s)
       - Name of Institution(s)
       - Report Type (Quarterly, Annual, or Final)
       - Submission Date (actual, not due date)
     - ***Narrative***
       - Should NOT EXCEED five (5) pages
       - Report should be written in narrative structure using full sentences; bulleted lists will not be acceptable as the only form of content in the report
       - Report Sections:
         - Technical Status

- o *Audiences*: Who are the audiences for this project? How did/will the project affect these audiences? Include any and all data on audiences if applicable (i.e., increase in visitor flow, memberships, etc.).
- o *Milestones*: Describe the project's major milestones and discuss current progress towards meeting milestones. Provide the status of major tasks and any variance from the planned versus the actual schedule, including tasks completed, tasks in progress, tasks expected to be completed later than planned, and tasks that are delayed—beginning with rationale for each delayed task along with recovery plans, as appropriate.
- o *Accomplishments*: Assess accomplishments according to milestones both quantitatively and qualitatively (where applicable). Include technical accomplishments, technology development results, and results of tests and/or demonstrations. If milestones were not met, explain the necessary steps required to complete the project and if you will complete it.
- o *Collaborations:* Were any new collaborative partnerships formed or strengthened?
- o *Publications and Presentations:* Describe efforts, if any, made to publicize the results of the project.
- Schedule Status
  - o *Milestone status*:
    - Present milestone status as a table, addressing each project milestone.
  - o *Schedule narrative*:
    - Project status: Are you on schedule or behind schedule? Why? Has the project shifted or changed in any way (good or bad)? Do you predict that anything will alter the project?
    - Delays and set-backs: What are some obstacles that you have run into? How did/do you solve them? Were any corrective actions taken or planned? If milestones were not met, explain the necessary steps required to complete the project and if you will complete it? Will any unforeseen issues or circumstances prevent you from completing the project?
    - Future Plans: What are your plans for moving forward?
    - Work Plan for Year 2: Briefly outline a work plan for the 2nd year of the project.
- References (as needed)

7. **Final Report** (replaces final Quarterly Report; official closing)
   - *Purpose*: Summarizes project progress and accomplishments.
   - Assigned via "Tasks" in personal project spaces in the Earthdata Wiki.
   - If the project is granted a no cost extension, the Final Report shall be submitted as originally scheduled (i.e., 24 months after project initiation). An additional, updated Final Report shall be submitted at the end of the no cost extension period.
   - *Format*:
     - ○ ***Cover Page***, which should include all of the following:
       - ▪ Project Title
       - ▪ Proposal Number (i.e., project number)
       - ▪ Co-Operative Agreement Number
       - ▪ Name of PI(s)
       - ▪ Name of Institution(s)
       - ▪ Report Type (Quarterly, Annual, or Final)
       - ▪ Submission Date (actual, not due date)
     - ○ ***Narrative***
       - ▪ Should NOT EXCEED five (5) pages
       - ▪ Report should be written in narrative structure using full sentences; bulleted lists will not be acceptable as the only form of content in the report
       - ▪ Report Sections:
         - Technical Status
           - ○ *Audiences and/or Users*: Who are the audiences for this project? How did/will the project affect these audiences? Include any and all data on audiences if applicable (i.e., increase in visitor flow, memberships, etc.).
           - ○ *Milestones*: Describe the project's major milestones. Provide reasoning behind changes or omissions. Was performance affected by any changes? If milestones were not met, explain why. Include technical accomplishments, technology development results, and results of tests and/or demonstrations.
           - ○ *Accomplishments*: Summarize both quantitatively and qualitatively. Compare accomplishments to milestones. If milestones were not met, explain the necessary steps required to complete the project and if you will complete it.
           - ○ *Collaborations*: Were any new collaborative partnerships formed or strengthened?
           - ○ *Publications and Presentations*: Describe efforts, if any, made to publicize the results of the project.
           - ○ *Product Status*: Describe any products that resulted from the project or during the course of the project and any future publication or distribution plans resulting from it. Provide references/links.

- o *Project Continuation*: Will the project continue after the co-op period? Provide an estimate of the amount of time remaining to complete the project.
  - o *Long Term Influence/Significance*: What kinds of influence or significance will result from the project? Did this project help attract additional funding for a spin-off project?
  - o *Evaluation*: Discuss weaknesses and strengths of the project. When discussing weaknesses, include how problems/issues were handled/solved. If applicable, discuss the public's response to the project: likes and dislikes; feedback; statistical summaries; etc.
  - References (as needed)
- o ***Table of Deliverables***
  Using the table template below, include a record of deliverables. For "Complete" deliverables, include any and all information and/or references in the Results/Artifacts column. For "Incomplete" and "Partial" deliverables, include the reason and/or justification for lack of completion in the last column. This table should appear on a separate page directly after the project narrative and does not count towards the narrative page limit.

Deliverable	Completion Status (Complete/Incomplete/Partial)	Results/Artifact	Reason/Justification for "Incomplete" or "Partial" status

8. **Technical Review** (Held every six (6) months)
   - *Purpose*: Provide an opportunity for PIs to discuss technical aspects of the project with representatives from NASA's Earth Science Data and Information Systems (ESDIS) Project and the ACCESS Program Manager. Feedback will be provided and milestones will be revised as needed.
   - No more than one (1) hour long.
   - Will take place at the following milestones: 6-month, 12-month, 18-month, and 24-month.
   - *Format*:
     - o Teleconference with PDF/PPTX/Google Slides
     - o For 6-month and 12-month Technical Review:
       - I. Project overview
       - II. Reference Slide
         - Source code location
         - Task/bug repository information
         - Data/software management plan location

- Open Source Software Development Plan Location
III. Summary of Accomplishments (since last check-in)
IV. Schedule and Milestone Review/Updates
V. High-Level Issues (since last check-in)
VI. Risks Walkthrough/Disposition and Mitigation Strategies (at 6-,12-, and 18-month only)
VII. Recent publications/presentations of work or related work
VIII. New opportunities on horizon (if applicable)
IX. Relationship to other projects and efforts
X. Updates on ESDSWG activities
- 18-month Technical Review:
  - Same as above
  - Discuss suitability/plans for NASA integration
- 24-month Technical Review:
  - Same as above
  - Project closeout activities/future plans
  - Status of NASA integration progress (if any)

9. **Mid-Term Presentation** (12 months after project initiation, combined with 2nd Technical Review)
   - *Purpose*: Provide an opportunity for PIs to discuss project milestones, completions, and details with Program Executive and Program Manager.
   - *Format*:
     - Typically held via teleconference
     - No more than one (1) hour long
     - Covers content in Mid-Term Report
     - Provides opportunity to demonstrate products, if available

10. **Final Presentation** (at close of project; combined with final Technical Review)
    - *Purpose*: Provide an opportunity for PIs to discuss project milestones, completions, and details with Program Executive and Program Manager and discuss plans for project continuation or integration.
    - If the project is granted a no cost extension, the final presentation shall be submitted as originally scheduled (i.e., 24 months after project initiation).
    - *Format*:
      - Typically held via teleconference
      - No more than one and one-half (1.5) hours long
      - Covers content in Final Report
      - Provides opportunity to demonstrate products