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Joint Polar Satellite System (JPSS)

Program Implementation Document (PID)

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APPROVAL

Harry A. Cikanek — 25 JUL 2013 — Date
Director, NOAA Joint Polar Satellite System Office

CONCURRENCES

Mary E. Kicza — 9 July 2013 — Date
Assistant Administrator, NOAA National Environmental Satellite, Data, and Information Service (NESDIS)

Christopher J. Scolese — Date
Center Director, NASA Goddard Space Flight Center

Marcus A. Watkins — Date
Director, NASA Joint Agency Satellite Division

Preston M. Burch — Date
Program Manager, NASA Joint Polar Satellite System Program

APPROVAL

Harry M. Cikanek
Director, NOAA Joint Polar Satellite System Office

Date

CONCURRENCES

Mary E. Kicza
Assistant Administrator, NOAA National Environmental Satellite, Data, and Information Service (NESDIS)

Date

Christopher J. Scolese
Center Director, NASA Goddard Space Flight Center

17 July 2013
Date

Marcus A. Watkins
Director, NASA Joint Agency Satellite Division

7-1-2013
Date

Preston M. Burch
Program Manager, NASA Joint Polar Satellite System Program

7-1-2013
Date

Change Log

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Revision	Date	Sections Changed	Author
1.6	12/21/12	Incorporated changes from review of 1.5 draft and coordinated with updates to L1RD v1.5 and L1RD Supplement v2.4.	José Davis
1.7	1/24/13	Incorporated changes from review of 1.6 draft and coordinated with updates to L1RD Supplement v2.5	José Davis
1.8	1/29/13	Incorporated PCB comments to clarify operational roles and modify Table B-1.	José Davis
1.9	4/25/13	Changes necessitated by the FY2014 President's Budget	JPSS PSE

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1 INTRODUCTION

1.1 PURPOSE

This JPSS Program Implementation Document (PID) supplements the JPSS Level 1 Requirements Document (L1RD) by allocating requirements, cost, and schedule between NOAA's Satellite and Information Services (NESDIS) and the NASA JPSS Program. The PID will be used to develop the Program Commitment Agreement (PCA) between NOAA and NASA, and the Technical Task Agreements (TTAs) or Project Plans between the NOAA JPSS Office (NJO) and other NOAA organizations responsible for implementing elements of JPSS.

1.2 SCOPE

The scope of the PID includes the requirements in the JPSS Level 1 Requirements Document (L1RD, JPSS-REQ-1001)), the JPSS L1RD Supplement (JPSS-REQ-1002), and all JPSS agreements (including agreements the JPSS Program has been assigned responsibility by the NESDIS Assistant Administrator). At a minimum, the PID is reviewed on a yearly basis and approved by the JPSS Director at the JPSS Program Control Board (PCB).

1.3 BACKGROUND

The JPSS Program is a collaborative development and acquisition effort between NOAA and NASA. NOAA has the responsibility and authority for the development and operations of the total JPSS. This includes defining requirements, integrating user systems, integrating partner contributions, integrating NASA-developed products in the NOAA architecture, developing the science necessary to deliver measurement products, storing, delivering and archiving the satellite data, operating the space and ground segments, and representing the system to all entities internal and external to the government including international partners. NASA has delegated primary implementation of its JPSS responsibility to Goddard Space Flight Center which serves as the acquisition and systems engineering and integration center providing its people, procedures, experience, facilities, and institutional checks and balances to assure JPSS Program success. NOAA funds all JPSS activities and provides requirements and full reimbursement to NASA for executing their role. The NOAA JPSS Office and NASA JPSS Program Office are collocated at the Goddard Space Flight Center in Greenbelt, Maryland.

The JPSS Management Control Plan (JPSS-PLN-3107) documents the roles and responsibilities of each agency, the NOAA/NASA interface for JPSS management control, and documents the business processes, and organizational structure of the JPSS Program.

Responsibilities for development and operations are documented in the PCA and the TTAs or Project Plans. The PCA is an agreement between the NOAA JPSS Director and the NASA Joint Agency Satellite Division (JASD) that documents the program transition from Formulation to Implementation. The PCA is prepared by JASD and

documents NOAA's requirements that flow down to the NASA JPSS Program and Projects: L1RD and Supplement requirements, program objectives, management and technical approach and associated architecture, technical performance, schedule, time-phased cost plans, safety and risk factors, internal and external agreements, life-cycle reviews, and all attendant top-level program requirements.

The NJO will use TTAs or Project Plans to establish the annual requirements and corresponding scope of the NOAA elements funded by JPSS; i.e., between the NOAA JPSS Director, as the requester, and the providing organization (typically a NOAA/NESDIS Office or Center).

TTAs will be used by the NJO to establish the annual requirements and corresponding scope of the NOAA elements within the JPSS budget. The agreements will be between JPSS, as the requesting organization, and the providing organization. The TTA will serve to document the funding levels, task or project descriptions planned for the FY and out-years, list of critical milestones, identification of any specific deliverables, requirements for monthly reporting products and due dates, workforce levels covered by the funding (both civil service and contractor), and the 12-month plans for obligations and costing. The plans and TTAs will be reviewed and updated annually through the life of the funding requirements as managed by the NJO for JPSS. The agreements will be signed by the Directors, along with the appropriate budget office representatives, of both the requesting and providing organizations, certifying the allocated funds will be used only in the accomplishment of those specific JPSS tasks described at the funding level established.

Projects will develop and submit a project plan. The plan will define, at a high level, the scope of the project, the implementation approach, the environment within which the project operates, and the baseline commitments of the project. The project plan must be consistent with goals, objectives, and requirements for successfully developing the JPSS. The project plan will be updated and approved during the project life cycle in response to changes in requirements on the project or to the baseline commitments.

Reimbursable activities will be negotiated directly between the NJO and the organizations requesting the services.

1.4 JPSS SYSTEM DESCRIPTION

1.4.1 JPSS Space Segment

The JPSS Space Segment consists of the JPSS-1 & -2 satellites, and the Suomi-National Polar-orbiting Partnership (S-NPP) satellite. The instruments flown on these satellites are designed to provide the data necessary to produce the Environmental Data Records (EDRs) described in Section 5 of the L1RD Supplement.

1.4.2 JPSS Ground Segment

The JPSS Ground Segment is a shared ground infrastructure consisting of multiple subsystems that support a heterogeneous constellation of polar-orbiting satellites, both JPSS Missions and JPSS Supported Missions, through a comprehensive set of

services. These services provided by the JPSS Ground System include Enterprise Management and Ground Operations (EM&GO), Flight Operations (FO), Data Acquisition (DA), Data Routing (DR), Data Product Generation (DPG), Data Product Calibration and Validation (DP C/V), and Direct Readout Support (DRS). Traditional NOAA systems and facilities which in part, are included in the JPSS Ground Segment include elements of the Environmental Satellite Processing Center (ESPC) developed to support JPSS missions, the JPSS Data Exploitation system (JDE), and the Product Distribution and Access (PDA) system and the NOAA Satellite Operations Facility (NSOF). Section 2.5 of the L1RD Supplement captures "Reimbursable Services" which fall under the responsibility of the Ground Segment.

1.5 APPLICABLE DOCUMENTS

Applicable documents consist of documents that contain the requirements directly related to and necessary for the performance of the activities specified by this Program Implementation Document, and that will be allocated herein.

- JPSS-REQ-1001 JPSS Level-1 Requirements Document, v1.7
- JPSS-REQ-1002 JPSS Level-1 Requirements Document Supplement, v2.8

2 ALLOCATION OF RESPONSIBILITIES

The allocation of Level 1 requirements for the JPSS Program between the NASA JPSS Program and NESDIS Organizations is shown below.

Requirements verification will be the responsibility of the organization that is allocated the work. End-to-end verification of the JPSS will be the responsibility of the NOAA JPSS Office.

The allocations in this section are organized in the following manner. Each 2 digit heading denotes a specific activity that must be performed during the implementation/operation of the JPSS Program. Responsibility for each activity is "allocated" to a specific entity/organization. In the event that multiple organizations play a role in the implementation of the major activity, sub-activities are called out to further clarify responsibilities. Allocations for these sub-activities are developed in lower level documents. Next are listed the specific sections of the Level 1 documents (L1RD or L1RDS) whose requirements must be met for the subject activity.

2.1 Satellite Development

Allocation: NASA JPSS Program

JPSS Level 1 Requirements Document (L1RD) Requirements

6.1.1.1 The JPSS-1 satellite shall be designed for a mission life of 7 years. [Priority 1]

6.1.1.5 JPSS-1 shall be Category 1 per NASA Procedural Requirements (NPR) 7120.5 and the risk classification shall be B per NPR 8706.4. [Priority 1]
6.1.1.6 The JPSS-1 satellite shall be launched on an expendable launch vehicle of risk category 2 or higher, per NASA Policy Directive (NPD) 8610.7. [Priority 1]
6.1.1.7 The JPSS-1 instrument payload shall include:

Advanced Technology Microwave Sounder (ATMS) [Priority 1]
Cross-track Infrared Sounder (CrIS) [Priority 1]
Visible Infrared Imaging Radiometer Suite (VIIRS) [Priority 1]
Ozone Mapper and Profiler Suite-Nadir (OMPS-N) [Priority 2]
Clouds and the Earth's Radiant Energy System (CERES) [Priority 2]

6.1.2.1 The JPSS-2 satellite shall be designed for a mission life of 7 years. [Priority 1]
6.1.2.5 JPSS-2 shall be Category 1 per NASA Procedural Requirements (NPR) 7120.5 and the risk classification shall be B per NPR 8706.4. [Priority 1]
6.1.2.6 The JPSS-2 satellite shall be launched on an expendable launch vehicle of risk category 2 or higher, per NASA Policy Directive (NPD) 8610.7. [Priority 1]
6.1.2.7 The JPSS-2 instrument payload shall include:

Advanced Technology Microwave Sounder (ATMS) [Priority 1]
Cross-track Infrared Sounder (CrIS) [Priority 1]
Visible Infrared Imaging Radiometer Suite (VIIRS) [Priority 1]
Ozone Mapper and Profiler Suite-Nadir (OMPS-N) [Priority 2]
OMPS-Limb (OMPS-L) [if provided by NASA[2]]
CERES Follow-on Instrument [if provided by NASA[2]]]

2 Physical configuration must be compatible with the S-NPP/JPSS-1 instruments and delivery compatible with the JPSS-2 integration schedule.

JPSS L1RD Supplement Requirements

7.2 Advanced Technology Microwave Sounder (ATMS)
7.3 Clouds and Earth Radiant Energy System (CERES)
7.4 Cross-Track Infrared Sounder (CrIS)
7.5 Ozone Mapping and Profiler Suite (OMPS-N)
7.6 Visible-Infrared Imager/Radiometer Suite (VIIRS)
7.1.1 Sensor Characterization and Monitoring
7.1.2 Instrument Long Term Stability

2.2 Reliability

Allocation:
NASA JPSS Program will develop the JPSS satellites and the JPSS Ground System, including IDPS data products identified in L1RDS Table 2.2 and will operate, maintain, and sustain the satellites and ground system through handovers defined in Table B-1. NOAA/OSD will develop those elements of the ESPC ground segment which support JPSS functionality, including data products identified in L1RDS Table 2.2 and sustain the system after handovers defined in Table B-1.

NOAA/OSPO will operate and maintain the satellites and ground segment after handovers defined in Table B-1.
NOAA/STAR will develop and maintain algorithms and execute calibration and validation for all products in L1RDS Table 2.2.

JPSS Level 1 Requirements Document (L1RD) Requirements

6.1.1.2 JPSS-1 shall have a probability of success of meeting the Key Performance Parameters of greater than or equal to 70% at 5 years [Priority 1]
6.1.2.2 JPSS-2 shall have a probability of success of meeting the Key Performance Parameters of greater than or equal to 70% at 5 years [Priority 1]

JPSS L1RD Supplement Requirements

Table 2.2 – Data Recipients and Allocated Latencies

2.3 Availability

Allocation:
NASA JPSS Program will develop the JPSS satellites and the JPSS Ground System, including IDPS data products identified in L1RDS Table 2.2 and will operate, maintain, and sustain the satellites and ground system through handovers defined in Table B-1.
NOAA/OSD will develop those elements of the ESPC ground segment which support JPSS functionality, including operations, and data products identified in L1RDS Table 2.2, and sustain the system after handovers defined in Table B-1.
NOAA/OSPO will operate and maintain the satellites and ground segment after handovers defined in Table B-1, to meet latency and availability requirements in L1RDS sections 3.1.2.2 and 3.1.2.3.

JPSS Level 1 Requirements Document (L1RD) Requirements

6.1.1.3 Excluding on-orbit failures, JPSS-1 shall maintain an Operational Availability of greater than or equal to 98% over any 30 day period for the mission lifetime. [Priority 1]
6.1.1.11 On a 30-day basis, at least 99% of the data collected by operational sensors on the JPSS-1 satellite shall be delivered to the data processing system. [Priority 1]
6.1.2.3 Excluding on-orbit failures, JPSS-2 shall maintain an Operational Availability of greater than or equal to 98% over any 30 day period for the mission lifetime. [Priority 1]
6.1.2.12 On a 30-day basis, at least 99% of the data collected by operational sensors on the JPSS-2 satellite shall be delivered to the data processing system. [Priority 1]
6.2.1 The JPSS ground segment shall have an operational life through at least FY 2025. [Priority 1]
6.2.4 The JPSS shall produce and deliver one complete set of data products identified in Appendix A from all sensor science data acquired from the primary mission sensors to ESPC Registered Users. [Priorities specified in Appendix A, Table 1]
6.2.5 The JPSS shall produce and deliver additional products from all sensor science data acquired from secondary mission sensors to ESPC Registered Users. [Priority 3]

6.2.6 On a 30-day basis, data latency requirements, as specified in Appendix A, Table 1, shall be met at least 95% of the time for data collected by the primary operational sensors on the JPSS [Priority 1], Polar Free Flyer [Priority 2] and GCOM [Priority 2] satellites.
6.2.16 At a minimum the JPSS Alternate Processing Center shall produce the data products shown in Appendix A, Table 3 from all sensor science data acquired from the primary mission sensors and deliver them to ESPC Registered Users and CLASS. [Priorities specified in Appendix A, Table 1]
6.2.17 The JPSS shall acquire at least 99%, on a 30-day basis, of the TSIS Stored Mission Data from the Polar Free Flyer satellite and relay it to the PFF Service Delivery Point. [Priority 2]

JPSS L1RD Supplement Requirements

3.1.2.2 Latency
3.1.2.3 Availability
3.6 Intermediate Products (IPs)

2.4 Operations

Allocation:
NASA JPSS Program will develop and deliver the satellites to the operational orbit and will operate the satellites through the handovers defined in Table B-1.
NASA JPSS Program will provide sustaining engineering for the life of the satellites.
NOAA/OSPO will operate the system after handovers defined in Table B-1.

JPSS Level 1 Requirements Document (L1RD) Requirements

6.1.1.4 JPSS-1 shall be operated in a polar sun-synchronous orbit with the following characteristics: nominal altitude of 824 +/- 17 kilometers, ground track repeat accuracy of 20 km at the Equator with a repeat cycle less than 20 days, and nominal ascending equator crossing time of 1330 +/- 10 minutes. [Priority 1]
6.1.2.4 JPSS-2 shall be operated in a polar sun-synchronous orbit with the following characteristics: nominal altitude of 824 +/- 17 kilometers, ground track repeat accuracy of 20 km at the Equator with a repeat cycle less than 20 days, and nominal ascending equator crossing time of 1330 +/- 10 minutes. [Priority 1]
6.2.2 The JPSS shall command and control all S-NPP [Priority 1], JPSS [Priority 1], and Polar Free Flyer [Priority 2] missions.

JPSS L1RD Supplement Requirements

7.1.3 Calibration

2.5 Data Transmission

Allocation:
NASA JPSS Program will develop the JPSS satellites and the JPSS Ground System to provide data transmission and will operate, maintain, and sustain the system through handovers defined in Table B-1.
NOAA/NJO will secure agreements for operational use.
NOAA/OSD will provide the spectrum management function.
NOAA/OSPO will operate and maintain the satellites and ground segment after handovers defined in Table B-1.

JPSS Level 1 Requirements Document (L1RD) Requirements

6.1.1.8 JPSS-1 shall provide Ka-band stored mission and telemetry data transmission from the satellite to the ground acquisition sites. [Priority 1]
6.1.1.9 JPSS-1 shall provide command, real-time and stored mission and telemetry data transmission to TDRSS. [Priority 1]
6.1.1.10 JPSS-1 shall provide a real-time X-band direct broadcast of instrument data to the direct readout community (i.e., High Rate Data (HRD)). [Priority 3]
6.1.2.8 JPSS-2 shall provide Ka-band stored mission and telemetry data transmission from the satellite to the ground acquisition sites. [Priority 1]
6.1.2.9 JPSS-2 shall provide command, real-time and stored mission and telemetry data transmission to TDRSS. [Priority 1]
6.1.2.10 JPSS-2 shall provide a real-time X-band direct broadcast of instrument data to the direct readout community (i.e., High Rate Data (HRD)). [Priority 3]
6.1.2.11 JPSS-2 shall provide a programmable real-time L-band direct broadcast of instrument data to the direct readout community (i.e. Low Rate Data (LRD))(TBC). [Priority 3]
6.2.10 JPSS shall deliver A-DCS housekeeping data from the Polar Free Flyer to the NOAA ESPC. [Priority 3]
6.2.11 JPSS shall deliver SARSAT housekeeping data from the Polar Free Flyer to the NOAA ESPC. [Priority 3]
6.2.18 JPSS shall deliver TSIS Stored Mission Data from the Polar Free Flyer to the PFF Service Delivery Point. [Priority 2]

JPSS L1RD Supplement Requirements

2.1 JPSS Communication Services (L1RDS 2256, 2257, 2258, 2531)
2.4 Direct Broadcast Support

JPSS L1RD Supplement Requirements

2.1 JPSS Communication Services (L1RDS 2257, 2258)

2.6 GCOM-W

Allocation:
NASA JPSS Program will develop, operate, maintain and sustain the JPSS Ground System to provide retrieval and relay of raw data from GCOM-W1 through handovers defined in Table B-1.
NOAA/OSD will develop those elements of the ESPC ground segment which support GCOM functionality, including data products identified in L1RDS Table 2.2, and sustain the system after handovers defined in Table B-1.
NOAA/OSPO will operate and maintain the ground segment after handovers defined in Table B-1.
NOAA/STAR will develop and maintain algorithms and execute calibration and validation for all products in L1RDS Table 2.2.

JPSS Level 1 Requirements Document (L1RD) Requirements

6.2.3 The JPSS shall acquire at least 99%, on a 30-day basis, of sensor science data from GCOM-W satellites and relay it to JAXA. [Priority 2]

JPSS L1RD Supplement Requirements

2.1 JPSS Communication Services (L1RDS 2258)
Table 2.2 – Data Recipients and Allocated Latencies

2.7 NASA SDS

Allocation:
NASA JPSS Program will develop, operate, maintain, and sustain the JPSS Ground System to provide S-NPP, JPSS-1, and JPSS-2 RDRs to the NASA Science Data Segment (SDS) through the handovers defined in Table B-1.
NOAA/OSD will define the service delivery point at NSOF
NOAA/OSPO will operate and maintain the ground segment after handovers defined in Table B-1.

JPSS Level 1 Requirements Document (L1RD) Requirements

6.2.8 The JPSS shall deliver all S-NPP and JPSS RDRs and associated metadata to the NASA Science Data Segment (SDS) service delivery point at the NSOF. [Priority 3]

JPSS L1RD Supplement Requirements

2.5 Reimbursable Services (L1RDS 2533)

2.8 CLASS Data

Allocation:

NASA JPSS Program will develop the JPSS Ground System to deliver all IDPS data products identified in L1RDS Table 2.2 to the CLASS interface at the primary and alternate processing sites, and will operate, maintain, and sustain the JPSS Ground System through handovers defined in Table B-1.
NOAA/OSD will develop those elements of the ESPC ground segment that support JPSS functionality to deliver all products identified in L1RDS Table 2.2 to the CLASS interface at the primary and alternate processing centers, and will sustain the system after handovers defined in Table B-1.
NOAA/OSPO will operate and maintain the CLASS interface after the handovers defined in Table B-1.
NOAA/NCDC will develop the capability to ingest all data products defined in L1RDS Table 2.2 into the permanent archive.

JPSS Level 1 Requirements Document (L1RD) Requirements

6.2.9 The JPSS shall deliver to CLASS, from all sensor science data acquired, the S-NPP, JPSS, and GCOM data products from Appendix A, Table 1 that are specified in the JPSS/NCDC Submission Agreement. [Priority 2]

JPSS L1RD Supplement Requirements

Table 2.2 – Data Recipients and Allocated Latencies

2.9 Long-Term Data Archival

Allocation:
NOAA/NJO will provide funding for upgrades required to ingest SNPP, GCOM and JPSS data streams.

JPSS Level 1 Requirements Document (L1RD) Requirements

6.2.12 The JPSS shall use the Comprehensive Large Array-data Stewardship System (CLASS) for long-term archive/storage. [Priority 2]
7.1 JPSS shall support hardware and software modifications to NOAA's CLASS archive to accommodate the archiving of data/data products from S-NPP, JPSS, and GCOM-W satellites.

2.10 Processing Sites

Allocation:
NASA JPSS Program will develop, operate, maintain, and sustain the JPSS Ground System through handovers defined in Table B-1.
NOAA/OSD will develop those elements of the ESPC ground segment that support JPSS functionality, and sustain the system after handovers defined in Table B-1.
NOAA/OSPO will operate and maintain the ground segment after handovers defined in Table B-1.

NOAA/NJO will provide funding for infrastructure modifications required to support JPSS per Table B-1.

JPSS Level 1 Requirements Document (L1RD) Requirements

6.2.14 The JPSS primary command and control and data processing site shall be located at the NOAA Satellite Operations Facility (NSOF) in Suitland, MD. [Priority 1]
6.2.15 The JPSS alternate command and control and data processing site shall be located at the Consolidated Backup (CBU) Facility in the Vertex Center in Fairmont, WV. [Priority 3]
7.3 JPSS shall support facility modifications to the NSOF and Vertex Center to accommodate the S-NPP, JPSS, Polar Free Flyer, and GCOM-W missions.

JPSS L1RD Supplement Requirements

2.3 Alternate Processing Center

2.11 DoD

Allocation:
NASA JPSS Program will develop the JPSS Ground System to make the data identified in L1RDS Table 2.2 available to the Navy, and will operate, maintain, and sustain the JPSS Ground System through handovers defined in Table B-1.
NOAA/OSD will develop those elements of the ESPC ground segment that support JPSS functionality to make the data identified in L1RDS Table 2.2 available to AFWA, and sustain the system after handovers defined in Table B-1.
NOAA/OSPO will operate and maintain the ground segment after handovers defined in Table B-1.
NOAA/NJO will support the discussions to define the DoD needs and NOAA capabilities. Any accommodations associated with the availability of data to the DoD will only be done on a reimbursable basis as part of an agreement between the specific agencies and NOAA. Data will be available per the schedule in Table B-1.

JPSS Level 1 Requirements Document (L1RD) Requirements

6.2.7 The JPSS shall make available, from all sensor science data acquired, the S-NPP, JPSS, and GCOM data products listed in Appendix A, Table 1, to the AFWA, FNMOC, and NAVOCEANO. [Priority 2]

JPSS L1RD Supplement Requirements

Table 2.2 – Data Recipients and Allocated Latencies
2.5 Reimbursable Services (L1RDS 2274, 2542)

2.12 ESPC

Allocation:
NOAA/NJO will fund upgrades for hardware, software, and license modifications to those elements of NOAA's ESPC which support JPSS functionality to accommodate the processing and distribution of data from S-NPP, JPSS-1, JPSS-2, Polar Free Flyer,, and GCOM-W constellation.

JPSS Level 1 Requirements Document (L1RD) Requirements

7.2 JPSS shall support hardware and software modifications to NOAA's ESPC to accommodate the processing and distribution of data from S-NPP, JPSS-1, JPSS-2, Polar Free Flyer, and GCOM-W constellation.

JPSS L1RD Supplement Requirements

Table 2.2 – Data Recipients and Allocated Latencies

2.1 JPSS Communication Services (L1RDS 2532, 2259, 2260)

2.13 Ops/Sustainment Funding

Allocation:
NOAA/NJO will fund operations and sustainment for S-NPP, JPSS-1, JPSS-2, Polar Free Flyer, the GCOM-W constellation and C3 service activities (e.g., Metop services at McMurdo).

JPSS Level 1 Requirements Document (L1RD) Requirements

7.4 JPSS shall support operations and sustainment for S-NPP, JPSS-1, JPSS-2, Polar Free Flyer, the GCOM-W constellation and C3 service activities (e.g., Metop services at McMurdo).

JPSS L1RD Supplement Requirements

2.5 Reimbursable Services (L1RDS 2273, 2275, 2276, 2277)

2.14 Direct Readout

Allocation:
NASA JPSS Program will develop Direct Readout community ground support and, operate, maintain, and sustain it through handover defined in Table B-1.
NOAA/OSD will sustain the system after handovers defined in Table B-1.
NOAA/OSPO will operate and maintain Direct Readout community ground support after handover defined in Table B-1.

JPSS Level 1 Requirements Document (L1RD) Requirements

6.2.13 JPSS shall provide the Direct Readout community with software, documentation, and periodic updates to enable civilian and military agencies to produce data products from JPSS, using their own hardware to receive the JPSS High Rate Data (HRD) and Low Rate Data (LRD) broadcasts. [Priority 3]

JPSS L1RD Supplement Requirements

2.4 Direct Broadcast Support

2.15 Data Products

Allocation:
NASA JPSS Program will develop the JPSS satellites and the JPSS Ground System, including IDPS data products identified in L1RDS Table 2.2 and will operate, maintain, and sustain the satellites and ground system through handovers defined in Table B-1.
NOAA/OSD will develop those elements of the ESPC ground segment that support JPSS functionality, including data products identified in L1RDS Table 2.2 and sustain the system after handovers defined in Table B-1.
NOAA/OSPO will operate and maintain the satellites and ground segment after handovers defined in Table B-1.
NOAA/STAR will develop and maintain algorithms and execute calibration and validation for all products in L1RDS Table 2.2.

JPSS L1RD Supplement Requirements

Table 2.2 – Data Recipients and Allocated Latencies
2.2 Data Product Users
3.2 EDR Performance Requirements
3.3 Degradation and Exclusion Conditions for EDRs, SDRs, and TDRs
3.4 System Stability Requirements
3.5 Data Quality Monitoring
4.0 JPSS Sensor Data Records (SDRs)
5.0 JPSS Environmental Data Records (EDRs)
6.0 JPSS Requirements for GCOM Sensors

APPENDIX A: BUDGET

Table A-1 details the budget allocations corresponding to the JPSS FY14 Program Budget as of the approval date of this document.

JPSS Budget Profile ($K)	Total	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
TOTAL	7,044,592	805,301	824,000	859,411	837,111	800,391	713,922	569,862	449,325	375,109	271,630	192,342	183,440	162,749
TOTAL NOAA	2,126,828	102,806	119,600	120,380	134,619	132,367	152,984	284,307	199,758	186,422	187,491	178,988	172,444	154,663
TOTAL NASA	4,917,764	702,495	704,400	739,031	702,492	668,024	560,938	285,555	249,567	188,687	84,139	13,354	10,996	8,086

Basis - JPSS 2013 POE 3.8b

TABLE A-1: JPSS BUDGET ALLOCATION

APPENDIX B: SCHEDULE

Table B-1 shows the JPSS Program major milestones as of the approval date of this document.

Table B-1 shows the JPSS Program major milestones.

JPSS Program Major Milestones

SNPP Ops Transition to OSPO	Feb-13
JPSS-1 Ops Transition to OSPO	JPSS-1 Launch+90 days
Ground System Sustainment Handover to NESDIS	JPSS-1 Launch + 1 year
Ground System Maintenance Handover to OSPO	JPSS-1 Launch + 1 year
GCOM-W1 Operational Readiness	Oct-13
JPSS-2 Ops Transition to OSPO	JPSS-2 Launch+90 days
Alternate Processing Site (CBU) Online	May-15

TABLE B-1: JPSS PROGRAM MAJOR MILESTONES

TABLE B-1: JPSS PROGRAM MAJOR MILESTONES

APPENDIX C: ACRONYMS

A-DCS	Advanced Data Collection System
AFWA	Air Force Weather Agency
AK	Alaska
AMSR	Advanced Microwave Scanning Radiometer
APMC	Agency-level Program Management Council
ATMS	Advanced Technology Microwave Sounder
C3	Command, Control and communications
CCB	Configuration Control Board
CERES	Clouds and the Earth's Radiant Energy System
CDR	Climate Data Record
CORL	Consolidated Observing Requirements List
CLASS	Comprehensive Large Array-Data Stewardship System
CrIS	Cross-track Infrared Sounder
CrIMSS	Cross-track Infrared and Microwave Sounder Suite
DMSP	Defense Meteorological Satellite Program
DOC	U.S. Department of Commerce
DoD	Department of Defense
DUS/O	Deputy Under Secretary of Commerce for Oceans and Atmosphere for Operations
EDR	Environmental Data Record
EOS	NASA Earth Observing System
EPS-SG	European Polar System - Second Generation
ESPC	Environmental Satellite Processing Center
EUMETSAT	European Organisation for the Exploitation of Meteorological Satellites
FNMOC	Fleet Numerical Meteorology and Oceanography Center
FF	Free Flyer satellite
FT	Field Terminal
GCOM	Global Change Observation Mission
GCOM-W	GCOM-Water
GPS	Global Positioning System
GSFC	Goddard Space Flight Center
HRD	High Rate Data
HSPD	Homeland Security Presidential Directive
JAXA	Japanese Aerospace Exploration Agency
JPSS	Joint Polar Satellite System
KPP	Key Performance Parameter
L1RD	Level 1 Requirements Document
LEO	Low-Earth orbiting or orbit
LORWG	Low earth-Orbiting Requirements Working Group
LRD	Low Rate Data
LST	Local Solar Time
LTAN	Local Time Ascending Node
MCP	Management Control Plan
MGS	McMurdo Ground Station
Metop	EUMETSAT Meteorological Operational satellites
MOU	Memorandum of Understanding
NAO	NOAA Administrative Order

NASA	National Aeronautics and Space Administration
NAVO	Naval Oceanographic Office
NESDIS	National Environmental Satellite, Data, and Information Service
NIST	National Institute of Standards and Technology
NJO	NOAA JPSS Office
NOAA	National Oceanic and Atmospheric Administration
NOSC	NOAA Observing Systems Council
NPOESS	National Polar-orbiting Operational Environmental Satellite System
NPD	NASA Policy Directive
NPP	National Polar-orbiting Partnership
NPR	NASA Procedural Requirement
NSA	National Security Agency
NSOF	NOAA Satellite Operations Facility
NSPD	National Security Presidential Directive
NWS	National Weather Service
OMPS	Ozone Mapping and Profiler Suite
PCA	Program Commitment Agreement
PFF	Polar Free Flyer Satellite
PID	Program Implementation Document
PMC	Program Management Council
POES	NOAA Polar-orbiting Operational Environmental Satellites
RDR	Raw Data Record
SARSAT	Search and Rescue Satellite Aided Tracking
SDR	Sensor Data Record
SDS	Science Data Segment
SN	NASA Space Network
S-NPP	Suomi NPP
SS	Space System
STAR	NOAA's Center for Satellite Applications and Research
TDR	Temperature Data Record
TDRSS	Tracking and Data Relay Satellite System
TSIS	Total and Spectral Solar Irradiance Sensor
TTA	Technical Task Agreement
USAF	United States Air Force
VIIRS	Visible Infrared Imager/ Radiometer Suite
WSF	Weather Satellite Follow-on
xDR	Data Record