REPORT TO CONGRESS

MAJOR PROGRAM ANNUAL REPORT ON NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION SATELLITES TO ACCOMPANY THE FY 2023 BUDGET REQUEST

Submitted pursuant to: 33 U.S.C. § 878a(c) and Public Law 117-103

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33 U.S.C. § 878, SPECIFICALLY 33 U.S.C. § 878a(c)(1), INCLUDED THE FOLLOWING LANGUAGE

Annually, at the same time as the President's annual budget submission to the Congress, the Under Secretary shall transmit to the appropriate congressional committees a report that includes the information required by this section for the satellite development program for which NOAA proposes to expend funds in the subsequent fiscal year. The report under this paragraph shall be known as the Major Program Annual Report.

This report is current as of March 2022 and organized into the following categories:

I. Programs that have submitted a Baseline Report.
II. New programs that have not yet submitted a Baseline Report.

THIS REPORT RESPONDS TO THE REQUEST AND SATISFIES THE REQUIREMENTS.

TABLE OF CONTENTS

I. EXECUTIVE SUMMARY

This is the Major Program Annual Report on National Oceanic and Atmospheric Administration (NOAA) satellites to accompany the Fiscal Year (FY) 2023 President's Budget request pursuant to the requirements of the Consolidated Appropriations Act, 2022 (Public Law (P.L.) 117-103) and 33 U.S.C. § 878a(c).

This report includes updates and overall information on the life cycle costs, schedule, and other technical data for NOAA's major satellite programs within NOAA's National Environmental Satellite, Data, and Information Services (NESDIS) that have submitted baseline reports to Congress.

- The Geostationary Operational Environmental Satellite-R Series Program delivered its Baseline Report to Congress on February 8, 2013.
- Polar Weather Satellites: The Joint Polar Satellite System (JPSS) program delivered its Determination of Readiness and Baseline Report to Congress on November 14, 2014.
- Polar Weather Satellites: The Polar Follow-On (PFO) program delivered its Determination of Readiness and Baseline Report to Congress on June 28, 2021.

This report also contains current status and information on life cycle costs, schedule, and other technical data for NOAA's satellite programs that have not yet submitted baseline reports to Congress – but have begun formal program initiation following the Department of Commerce Milestone 2.

- Space Weather Follow-On: The Space Weather Follow-On program is expected to submit its Baseline Report in FY 2022. It delivered its Determination of Readiness Report, pursuant to 33 U.S.C. § 878a(b), to Congress on June 16, 2020.

II. REPORT PURSUANT TO 33 U.S.C. § 878a(c)(3) FOR PROGRAMS THAT HAVE SUBMITTED A BASELINE REPORT

A. Geostationary Operational Environmental Satellite-R Series Program

The Geostationary Operational Environmental Satellite-R (GOES-R) Series Program delivered its Baseline Report to Congress on February 8, 2013.

Effective May 27, 2018, the responsible reporting official under 33 U.S.C. § 878a(c)(2)(E) is: Pam Sullivan, System Program Director for the GOES-R Series Program.

1. Life Cycle Cost

FY 2023 President's Budget

The FY 2023 President's Budget request continues support for operations and acquisitions in both the Procurement, Acquisition, and Construction and

Operations, Research, and Facilities accounts after the Operational Phase Transfers enacted in the Consolidated Appropriations Act, 2017 (P.L. 115-31).

Updated GOES-R Series Life Cycle Cost

On May 12, 2020, the acting Under Secretary of Commerce for Oceans and Atmosphere, in his capacity as the Milestone Decision Acquisition Authority for the GOES-R Series Program, approved a revised program life cycle cost (LCC) of $11,700 million, covering the period from FY 2001 through FY 2036. NOAA provided the GOES-R Series LCC update to Congress on June 19, 2020.

Update on the GOES-R Series Reserve Posture

The COVID-19 Pandemic resulted in significant cost and schedule impacts to the GOES-R Series Ground Segment Project. Access restrictions at NOAA operations facilities prevented the server replacement from being completed prior to the GOES-T launch in March 2022. The server replacement schedule was re-planned, requiring a 10-month contract extension and costing approximately $60 million. The contract extension was awarded in FY 2021, reducing reserves to approximately 5 percent of cost to go. In order to maintain schedule and minimize risks to the GOES-U launch, the FY 2023 President's Budget pulls forward $25 million and $28.5 million in FY 2023 and FY 2024, respectively. This increased the GOES-R contingency from 5 percent to 11 percent of cost to go, which is sufficient to finish the development portion of the program. At this time, NOAA plans to manage these impacts within the existing LCC.

	FY 2022 & Prior	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CTC	Total LCC
GOES-R	**9,780.6**	**334.9**	**334.9**	**158.4**	**132.4**	**130.7**	**828.2**	**11,700.1**
Development	**9,027.6**	**194.9**	**211.7**	**52.6**	-	-	-	**9,486.8**
Flight	5,724.7	172.4	168.1	39.3	-	-	-	6,104.5
Instruments	2,071.2	14.9	22.3	8.3	-	-	-	2,116.7
Spacecraft	2,005.1	33.0	2.8	-	-	-	-	2,040.9
Launch Services	741.4	73.0	37.0	-	-	-	-	851.4
Other	907.0	51.5	106.0	31.0	-	-	-	1,095.5
Ground	1,869.6	-	-	-	-	-	-	1,869.6
Program Support	1,433.3	22.5	43.6	13.3	-	-	-	1,512.7
Operations, Maintenance, Sustainment	**753.0**	**140.0**	**123.2**	**105.8**	**132.4**	**130.7**	**828.2**	**2,213.3**
Operations and Maintenance	203.4	33.9	33.9	33.9	33.9	33.9	305.1	678.0
Sustainment	549.6	106.1	89.3	71.9	98.5	96.8	523.1	1,535.3

1. Outyears are estimates. Spend Plan submissions will be based on current needs and requirements.
2. The 'FY 2022 & Prior' column accounts for the FY 2022 Enacted amounts as well as any reductions for deobligations.
3. Reserves are distributed among development and sustainment line items above. As of March 28, 2022, GOES-R Series reserves were $187.4 million / 11.0 percent of cost to go, including encumbrances and liens. The cost-to-go calculation excludes items for which no contingency is carried, such as firm fixed price contracts.

2. Schedule

There have been no changes to the launch schedule from the Major Satellite Report accompanying the FY 2021 President's Budget request.

Satellite	Launch Commitment Date Reported in Baseline Report February 8, 2013	Launch Commitment Date as of July 1, 2021
GOES-R	Second Quarter of FY 2016	Launched November 19, 2016
GOES-S	Third Quarter of FY 2017	Launched March 1, 2018
GOES-T	Third Quarter of FY 2019	Launched March 1, 2022
GOES-U	First Quarter of FY 2025	First Quarter of FY 2025

3. Technical Data

GOES-R Satellite: The GOES-R satellite was successfully launched on November 19, 2016, at 6:42 p.m. EST. Upon reaching geostationary orbit on November 29, 2016, the satellite was renamed GOES-16. On December 18, 2017, GOES-16 replaced GOES-13 as NOAA's operational GOES East satellite, taking up its location at 75 degrees west longitude. GOES-13 was transferred to the U.S. Space Force and moved to a position over the Indian Ocean for imagery coverage, where it is operated by NOAA for the U.S. Space Force as EWS-G1.

GOES-S Satellite: The GOES-S satellite was successfully launched on March 1, 2018, at 5:02 p.m. EST. The satellite was renamed GOES-17 when it reached geostationary orbit on March 12, 2018. On February 12, 2019, GOES-17 replaced GOES-15 as NOAA's operational GOES West satellite, taking up its location at 137 degrees west longitude. GOES-15 continued tandem operations with GOES-17 (GOES West) throughout the calendar year 2019. In 2020, 2021, and early 2022 GOES-15 was temporarily taken out of on-orbit storage to provide additional tandem operations to supplement for data affected by the GOES-17 Advanced Baseline Imager (ABI) thermal anomaly. GOES-15 is currently in on-orbit storage.

GOES-T Satellite: The GOES-T satellite was successfully launched on March 1, 2022, at 4:38 p.m. EST. Upon reaching geostationary orbit on March 14, 2022, the satellite was renamed GOES-18. GOES-18 is currently undergoing on-orbit checkout. It is planned to replace GOES-17 as GOES West in early 2023.

GOES-U Satellite: Integration and test continues at Lockheed Martin in Littleton, Colorado. Six of the seven instruments have been mechanically integrated, with only the Goddard magnetometer instrument remaining. The magnetometer has completed testing and is preparing to ship. The Falcon 9 Heavy has been selected to launch GOES-U and the planned launch date is April 2024.

GOES-R Series Ground System Upgrade: The GOES-R Ground Segment Project made progress executing the IBM server replacement. Servers at the NOAA

Satellite Operations Facility were upgraded prior to the GOES-T launch. Post-launch, progress has continued with the server replacement at the Wallops Command and Data Acquisition Station in Wallops, Virginia, and the Consolidated Backup Facility in Fairmont, West Virginia. Despite COVID-19 induced challenges, the GOES-R Ground System has successfully supported GOES-16 and -17 operations as well as the GOES-T/-18 launch, orbit-raising, and post-launch test campaign.

B. Polar Weather Satellites – Joint Polar Satellite System

The Consolidated Appropriations Act, 2020 (P.L. 116-93), accepted the Administration's request in the FY 2020 President's Budget to merge the two major polar subactivities – the JPSS and PFO – into a new subactivity called Polar Weather Satellites (PWS). With PFO being the continuation of the JPSS Program of Record, merging these two subactivities ensures programmatic flexibility and minimizes risk in the developmental stages of the JPSS satellites. NOAA continues to track the different components of PWS per the approved LCC for JPSS and the approved LCC for PFO.

The JPSS Program delivered its combined Determination of Readiness and Baseline Report to the Congress on November 14, 2014.

Effective January 2022, the responsible reporting official under 33 U.S.C. § 878a(c)(2)(E) is Timothy J. Walsh, Acting JPSS Director.

1. Life Cycle Cost

As baselined in September 2014, the JPSS Program LCC is $11,322.1 million, and this total supports operations for the NOAA/NASA Suomi National Polar-orbiting Partnership (Suomi NPP), development and launch of the JPSS-1 and JPSS-2 spacecraft, development and operations of the common ground system, and operations for JPSS satellites through FY 2025. During the development of the Independent Cost Estimate (ICE) for PFO, which was concluded by the Department of Commerce (DOC) Office of Acquisition and Management in 2019, a projected underrun of approximately $134 million within the JPSS program was identified based on recent program execution performance. DOC and NOAA agreed that projected underrun would be reflected under Cost to Complete in future budget requests and would be reevaluated as conditions and circumstances warrant. Based on cost analyses conducted in FY 2022, the JPSS projected underrun has since been deemed necessary to incorporate back into the FY 2023 budget profile due to the JPSS-2 launch being delayed from March 2022 to September 2022 (see section II.B.2 below) as well as an increase in ground station operations and maintenance costs. Any future efficiencies will be managed by the program within the PWS subactivity and LCC to address out-year issues within JPSS and PFO.

The JPSS program has been able to manage all adverse cost impacts experienced due to COVID-19 within reserves.

	FY 2022 & Prior	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CTC	Total LCC
JPSS/POR	**10,872.2**	**200.0**	**167.4**	**82.6**	-	-	-	**11,322.1**
Development	**6,729.7**	**118.6**	**45.3**	**8.1**	-	-	-	**6,901.5**
Flight	3,277.3	20.3	9.0	-	-	-	-	3,306.5
Instruments	1,792.7	5.3	3.1	-	-	-	-	1,801.0
Spacecraft	704.9	3.0	1.1	-	-	-	-	709.0
Launch Services	330.9	3.9	-	-	-	-	-	334.8
Other	448.8	8.1	4.8	-	-	-	-	461.7
Ground	2,992.4	69.0	27.3	5.8	-	-	-	3,094.4
Program Support	460.0	29.3	9.0	2.3	-	-	-	500.6
Operations, Maintenance, Sustainment	**4,142.5**	**81.4**	**122.1**	**74.5**	-	-	-	**4,420.6**
Operations and Maintenance	3,526.3	28.8	42.5	28.1	-	-	-	3,625.7
Sustainment	616.2	52.6	79.6	46.4	-	-	-	794.9

1. Operations and maintenance is funded from the PWS PPA prior to an operational phase transfer (OPT). The first OPT for JPSS occurred in FY 2020.
2. Outyears are estimates. Spend Plan submissions will be based on current needs and requirements. Future year funding is estimated at $425 million per year for PWS from FY 2023 – FY 2027.
3. The 'FY 2022 & Prior' column accounts for the FY 2022 Enacted amounts as well as any reductions for deobligations.
4. Reserves are distributed among development and sustainment line items above. As of March 28, 2022, JPSS/POR reserves were $15 million / 6.1 percent of cost to go, including encumbrances and liens. The cost-to-go calculation excludes items for which no contingency is carried, such as firm fixed price contracts.

2. Schedule

There have been no changes to the launch schedule from the Major Satellite Report accompanying the FY 2022 President's Budget request.

Satellite	Launch Commitment Date Reported in Baseline Report November 14, 2014	Launch Commitment Date as of February 1, 2020
Suomi NPP	N/A	Launched October 28, 2011
JPSS-1	Second Quarter of FY 2017	Launched November 18, 2017
JPSS-2	First Quarter of FY 2022	First Quarter of FY 2023

3. Technical Data

Suomi NPP Satellite: The Suomi NPP satellite was successfully launched on October 28, 2011, at 2:48 a.m. PDT. Suomi NPP is NOAA's secondary operational polar-orbiting satellite and operates in tandem with NOAA-20. Suomi NPP is currently operating beyond its design life, allowing NOAA to continue to use Suomi NPP to meet its operational data needs.

JPSS-1 Satellite: The JPSS-1 satellite was successfully launched on November 18, 2017, at 1:47 a.m. PST. Upon reaching its polar orbit, the satellite was named NOAA-20. The NOAA-20 spacecraft and operations were transferred from the

launch team to NOAA on March 7, 2018. NOAA-20 became operational on May 30, 2018, after completing on-orbit calibration and validation. On February 12, 2019, NOAA-20 was designated as NOAA's primary afternoon polar satellite. NOAA-20 and Suomi NPP circle the Earth in tandem with the two satellites being separated in time and space by 50 minutes.

JPSS-2 Satellite: JPSS-2 is being assembled by Northrop Grumman at their facility in Gilbert, Arizona. The Pre-Environmental Review for JPSS-2 was held in June 2021. JPSS-2 successfully completed satellite vibration, acoustics, separation and shock testing in November 2021. The fully integrated satellite began thermal vacuum testing on March 1, 2022. The JPSS-2 LCD is Q1 FY 2023, maintaining a 5-year cadence between JPSS launches.

JPSS Ground System Upgrade: Block 2.2 transitioned to operations in November 2020 and supports all on-orbit missions on a single string-per-nominal operational configuration.

The National Science Foundation, in partnership with NESDIS, transferred the communications capabilities for McMurdo Station from Black Island Earth Station to Ross Island Earth Station on March 14, 2022. The new station is using new hardware and is more accessible, reducing troubleshooting times to ensure continuity.

C. Polar Weather Satellites – Polar Follow-On

As stated in Section B above, the Consolidated Appropriations Act, 2020 (P.L. 116-93), accepted the FY 2020 President's Budget request to merge JPSS and PFO into the new PWS subactivity. As part of the merged PWS program, PFO extends the current JPSS program to FY 2038 to continue weather observations in the afternoon orbit beyond JPSS-2. PFO builds robustness into the weather satellite constellation with the acquisition of the PFO/JPSS-3 and PFO/JPSS-4 missions.

The PFO program delivered its Determination of Readiness and Baseline Report to the Congress on June 28, 2021.

Effective January 2022, the responsible reporting official under 33 U.S.C. § 878a(c)(2)(E) is Timothy J. Walsh, Acting JPSS Director.

1. Life Cycle Cost

On December 16, 2016, NOAA evaluated the schedule baseline for the LCC of the PFO program at $7,573 million through FY 2038, as reflected within the DOC Milestone 2/3 Decision Memorandum (Appendix C). As directed by this memorandum, NOAA has since updated the PFO LCC to incorporate efficiencies into the implementation of the program, and the greater clarity in the actual contracted costs for all major satellite hardware elements. This LCC includes the

JPSS-3 and -4 spacecraft, instruments, launch vehicle, operations for all on-orbit assets, maintenance, sustainment, and science from FY 2016 to FY 2038. The cost re-baseline also benefited from the ICE generated by the DOC Office of Acquisition Management, which was developed using a different methodology than the program's estimate. The new LCC of the PFO program documented in the updated DOC Milestones 2/3 Decision Memorandum on June 1, 2020 (Appendix D) is $6,838 million.

	FY 2022 & Prior	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CTC	Total LCC
PFO	**2,149.8**	**225.0**	**257.6**	**342.4**	**425.0**	**425.0**	**3,013.1**	**6,837.9**
Development	**1,948.8**	**219.2**	**248.1**	**328.7**	**353.6**	**353.6**	**2,405.2**	**5,857.5**
Flight	1,825.4	51.7	124.6	141.4	138.0	138.0	561.2	2,980.6
Instruments	1,462.7	26.7	30.0	37.9	26.9	25.5	-	1,609.7
Spacecraft	248.0	0.3	6.6	9.6	20.1	20.1	121.9	426.6
Launch Services	-	0.2	23.3	43.6	69.4	69.4	179.0	384.9
Other	114.7	24.5	64.7	50.3	21.6	23.0	260.3	559.4
Ground	75.1	139.4	109.4	114.9	168.7	168.7	1,568.4	2,344.7
Program Support	48.3	28.1	14.1	72.4	46.9	46.9	275.6	532.2
Operations, Maintenance, Sustainment	**201.0**	**5.8**	**9.5**	**13.7**	**71.4**	**71.4**	**607.9**	**980.4**
Operations and Maintenance	201.0	5.8	9.5	13.7	71.4	71.4	207.7	580.3
Sustainment		-	-	-	-	-	400.2	400.1

1. Operations and maintenance is funded from the PWS PPA prior to an OPT. The first OPT for JPSS occurred in FY 2020.
2. Outyears are estimates. Spend Plan submissions will be based on current needs and requirements. Future year funding is estimated at $425 million per year for PWS from FY 2023 – FY 2027.
3. The 'FY 2022 & Prior' column accounts for the FY 2022 Enacted amounts as well as any reductions for deobligations.
4. Reserves are distributed among development and sustainment line items above. As of March 28, 2022, PFO reserves were $260 million / 8.4 percent of cost to go, including encumbrances and liens. The cost-to-go calculation excludes items for which no contingency is carried, such as firm fixed price contracts.

2. Schedule

There have been no changes to the launch schedule from the Determination of Readiness and Baseline Report.

Satellite	Launch Commitment Date Reported in Baseline Report June 28, 2021
PFO / JPSS-3	Q1 FY 2028
PFO / JPSS-4	Q1 FY 2033

3. Technical Data

JPSS-3 and JPSS-4 Satellites: The PFO program is developing PFO/JPSS-3 and PFO/JPSS-4 instruments and spacecraft buses as copies of the JPSS-2 satellite. This takes advantage of JPSS-2 development experiences to reduce overall cost and risk to PFO. NOAA has employed a "build ahead and store" strategy for PFO. The strategy calls for procuring and building instruments as a block-buy to reduce schedule, cost, and risks. The instruments will be integrated with the satellite and fully tested to be available for launch earlier than the scheduled date

if required due to a launch or on-orbit failure. This approach was recommended by an independent review team, as well as the National Academies of Sciences.[1] The JPSS-3 instruments will be integrated onto the JPSS-3 spacecraft in the fall/winter of CY 2022/CY 2023. The JPSS-4 instruments are in the final integration and test and will be delivered in late CY 2022/early CY 2023.

III. REPORT FOR NEW PROGRAMS THAT HAVE NOT YET SUBMITTED A BASELINE REPORT PURSUANT TO 33 U.S.C. § 878a(c)(2)

A. Space Weather Follow-On

NOAA's Space Weather Follow-On (SWFO) program was established to provide continuity of space weather observations beyond the current generation of missions, including the Deep Space Climate Observatory and the NASA/European Space Agency (ESA) Solar and Heliospheric Observatory. Observations required to produce space weather watches and warnings include imagery of coronal mass ejections and measurements of solar wind plasma. These operational space-based observation and measurement capabilities for coronal imaging and upstream solar wind measurements are used by the NOAA National Weather Service's Space Weather Prediction Center to create watches and warnings for space weather events, in particular geomagnetic storms, that affect the Earth. Requirements for these measurements derive from the NOAA Space Weather Mission Service Area Observational User Requirements Document baselined by the NOAA Observing System Council in November 2017.

1. Life Cycle Cost

SWFO successfully completed DOC Milestone 2/3 on October 31, 2019, and the DOC Milestone Decision Memorandum was signed by the Deputy Secretary for Commerce on November 19, 2019. The SWFO Report of Readiness was sent to Congress on June 15, 2020. NOAA is preparing the SWFO Baseline Report following successful completion of Key Decision Point-C, including the overall SWFO LCC pursuant to the requirements of 33 U.S.C. § 878a(c)(2). NOAA expects to submit the SWFO Baseline Report by the end of CY 2022.

2. Schedule

SWFO is developing a compact coronagraph to take advantage of an accommodation opportunity on GOES-U in 2024 and a spacecraft and instruments to take advantage of a rideshare launch with the NASA Interstellar Mapping and Acceleration Probe (IMAP) to the Lagrange-1 Point in 2025.

The SWFO master schedule will be included in the Baseline Report pursuant to the requirements of 33 U.S.C. § 878a(c)(2)(C).

[1] National Research Council 1997. Continuity of NOAA Satellites. Washington, DC: The National Academies Press. https://doi.org/10.17226/5588.

3. Technical Data

Geostationary Mission: The compact coronagraph instrument that will be flown on GOES-U has been completed, despite challenges due to COVID-19, and delivered to the GOES-R Series Program in time to meet GOES-U development schedule. Currently, the planned launch date for GOES-U is April 2024.

L1 Mission: To date, all the major space segment and ground segment contracts have been awarded. The SWFO Program is being developed to take advantage of a rideshare opportunity with the launch of NASA's IMAP mission. NOAA and NASA's Science Mission Directorate formalized a partnership and developed a joint program management structure to oversee the SWFO program acquisitions.

The ESA has offered to contribute an X-ray flux monitor for integration by NASA to the SWFO-L1 spacecraft and an agreement between NOAA and ESA is being developed for this collaboration. The X-ray flux monitor would be an enhancement to the SWFO-L1 mission, but its inclusion is not a criterion for launch. If the X-ray flux monitor schedule does not match the SWFO-L1 need date, the instrument will not be included.

To accommodate schedule changes due to COVID-19, the launch readiness date of IMAP was moved from October 1, 2024, to February 1, 2025. Because SWFO-L1 is a rideshare with the IMAP mission, the SWFO-L1 launch readiness date is also delayed by 4 months. The SWFO Program estimates COVID-19-related costs of around $30 million for extension of contracts associated with this delay. At this time, NOAA plans to manage these impacts within the existing LCC. These estimates are subject to change given current uncertainties from the pandemic.

APPENDIX A: LIST OF ACRONYMS

ABI	Advanced Baseline Imager
CDR	Critical Design Review
CME	Coronal Mass Ejections
DOC	Department of Commerce
DSCOVR	Deep Space Climate Observatory
ESA	European Space Agency
FY	Fiscal Year
GLM	Geostationary Lightning Mapper
GOES	Geostationary Operational Environmental Satellite
IMAP	Interstellar Mapping and Acceleration Probe
IR	Infrared
JPSS	Joint Polar Satellite System
L1	Earth-Sun LaGrange Point 1
LCC	Life Cycle Cost
LCD	Launch Commitment Date
LHP	Loop Heat Pipe
NASA	National Aeronautics and Space Administration
NOAA	National Oceanic and Atmospheric Administration
NRL	U.S. Naval Research Laboratory
OPT	Operational Phase Transfer
ORF	Operational Research and Facilities
PAC	Procurement, Acquisition, and Construction
PDR	Preliminary Design Review
PFO	Polar Follow-On
POR	Program of Record
PWS	Polar Weather Satellites
SOHO	Solar and Heliospheric Observatory
Suomi NPP	Suomi National Polar Partnership
SWFO	Space Weather Follow-On
SWIS	Solar Wind Instrument Suite
TRL	Technology Readiness Level
U.S.C.	United States Code

APPENDIX B: LEGISLATIVE MANDATE

Title 33. Navigation and Navigable Waters
Chapter 17, National Oceanic and Atmospheric Administration
Subchapter 1. General Provisions
§ 878a. Contract for development of a major program; costs; Major Program Annual Report for satellite development program

(a) For purposes of this section—

(1) the term 'Under Secretary' means Under Secretary of Commerce for Oceans and Atmosphere;
(2) the term 'appropriate congressional committees' means—
(A) the Committee on Appropriations and the Committee on Commerce, Science, and Transportation of the Senate; and
(B) the Committee on Appropriations and the Committee on Science, Space and Technology of the House of Representatives;
(3) the term 'satellite' means the satellites proposed to be acquired for the National Oceanic and Atmospheric Administration (NOAA);
(4) the term 'development' means the phase of a program following the formulation phase and beginning with the approval to proceed to implementation, as defined in NOAA Administrative Order 216-108, Department of Commerce Administrative Order 208-3, and NASA's Procedural Requirements 7120.5c, dated March 22, 2005;
(5) the term 'development cost' means the total of all costs, including construction of facilities and civil servant costs, from the period beginning with the approval to proceed to implementation through the achievement of operational readiness, without regard to funding source or management control, for the life of the program;
(6) the term 'life-cycle cost' means the total of the direct, indirect, recurring, and nonrecurring costs, including the construction of facilities and civil servant costs, and other related expenses incurred or estimated to be incurred in the design, development, verification, production, operation, maintenance, support, and retirement of a program over its planned lifespan, without regard to funding source or management control;
(7) the term 'major program' means an activity approved to proceed to implementation that has an estimated life-cycle cost of more than $250 million; and
(8) the term 'baseline' means the program as set following contract award and preliminary design review of the space and ground systems.

(b)(1) NOAA shall not enter into a contract for development of a major program, unless the Under Secretary determines that—
(A) the technical, cost, and schedule risks of the program are clearly identified and the program has developed a plan to manage those risks;

(B) the technologies required for the program have been demonstrated in a relevant laboratory or test environment;
(C) the program complies with all relevant policies, regulations, and directives of NOAA and the Department of Commerce;
(D) the program has demonstrated a high likelihood of accomplishing its intended goals; and
(E) the acquisition of satellites for use in the program represents a good value to accomplishing NOAA's mission.

(2) The Under Secretary shall transmit a report describing the basis for the determination required under paragraph (1) to the appropriate congressional committees at least 30 days before entering into a contract for development under a major program.

(3) The Under Secretary may not delegate the determination requirement under this subsection, except in cases in which the Under Secretary has a conflict of interest.

(c)(1) Annually, at the same time as the President's annual budget submission to the Congress, the Under Secretary shall transmit to the appropriate congressional committees a report that includes the information required by this section for the satellite development program for which NOAA proposes to expend funds in the subsequent fiscal year. The report under this paragraph shall be known as the Major Program Annual Report.

(2) The first Major Program Annual Report for NOAA's satellite development program shall include a Baseline Report that shall, at a minimum, include—

(A) the purposes of the program and key technical characteristics necessary to fulfill those purposes;
(B) an estimate of the life-cycle cost for the program, with a detailed breakout of the development cost, program reserves, and an estimate of the annual costs until development is completed;
(C) the schedule for development, including key program milestones;
(D) the plan for mitigating technical, cost, and schedule risks identified in accordance with subsection (b)(1)(A); and
(E) the name of the person responsible for making notifications under subsection (d), who shall be an individual whose primary responsibility is overseeing the program.

(3) For the major program for which a Baseline Report has been submitted, subsequent Major Program Annual Reports shall describe any changes to the information that had been provided in the Baseline Report, and the reasons for those changes.

(d)(1) The individual identified under subsection (c)(2)(E) shall immediately notify the Under Secretary any time that individual has reasonable cause to believe that, for the major program for which he or she is responsible, the

development cost of the program has exceeded the estimate provided in the Baseline Report of the program by 20 percent or more.

(2) Not later than 30 days after the notification required under paragraph (1), the individual identified under subsection (c)(2)(E) shall transmit to the Under Secretary a written notification explaining the reasons for the change in the cost of the program for which notification was provided under paragraph (1).

(3) Not later than 15 days after the Under Secretary receives a written notification under paragraph (2), the Under Secretary shall transmit the notification to the appropriate congressional committees.

(e) Not later than 30 days after receiving a written notification under subsection (d)(2), the Under Secretary shall determine whether the development cost of the program has exceeded the estimate provided in the Baseline Report of the program by 20 percent or more. If the determination is affirmative, the Under Secretary shall—

(1) transmit to the appropriate congressional committees, not later than 15 days after making the determination, a report that includes—

(A) a description of the increase in cost and a detailed explanation for the increase;

(B) a description of actions taken or proposed to be taken in response to the cost increase; and

(C) a description of any impacts the cost increase, or the actions described under subparagraph (B), will have on any other program within NOAA; and

(2) if the Under Secretary intends to continue with the program, promptly initiate an analysis of the program, which shall include, at a minimum—

(A) the projected cost and schedule for completing the program if current requirements of the program are not modified;

(B) the projected cost and the schedule for completing the program after instituting the actions described under paragraph (1)(B); and

(C) a description of, and the projected cost and schedule for, a broad range of alternatives to the program.

(f) NOAA shall complete an analysis initiated under paragraph (e)(2) not later than 6 months after the Under Secretary makes a determination under subsection (e). The Under Secretary shall transmit the analysis to the appropriate congressional committees not later than 30 days after its completion.