To:	ROB SWISHER, DIRECTOR, NOAA OCIO OPPA
Cc:	JOE KLIMAVICZ, NOAA CIO
From:	Sandra Yin
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This is a report on the 2006 Operational Analysis for NOAA. The purpose is to brief you prior to forwarding NOAA Operational Analysis (OA) reports to DOC. The 2006 OAs are due from NOAA to the DOC CIO on February 15, 2007.

Operational Analysis is required for IT investments classified as "Major" by OMB Circular-11 guidelines, for portions of work that is considered Steady State (SS), technology refresh, or operations and maintenance (O&M). OA focuses on an investment's operational state as of December 31, covering the past year. The analysis integrates program management and risk management, analyzing achievement and performance over the most recent calendar year. Project Managers submit OA reports annually each February to the Department of Commerce, via NOAA.

The report quality varies across submissions. All OAs have been submitted, with the exception of the Non-Core CBS Financial Management System (PCS) from NOAA OCIO. Six programs merit special mention for a job well done on the 2006 OA report: the NNDC and SARSAT in NESDIS; Geodetic Support and Nautical Charting in NOS; NWS AWIPS; and the OAR Scientific Computing Support.

This report includes these sections:
- The NOAA 2006 Operational Analysis Data Call Process
- List of NOAA 2006 IT Investments that require OA Reports
- Comparison and Assessment of NOAA 2006 OA Reports
- Recommendations

THE NOAA 2006 OPERATIONAL ANALYSIS DATA CALL PROCESS

NOAA has been writing OA annually for several years, per Department of Commerce data calls. The OA guidance from DOC did not change in 2006 from 2005. Karen Hogan issued the earlier memos to DOC operating units, and this year Barry West reiterated the same guidance. DOC recently upgraded their website to add more OA background info and organize its presentation. However, the list posted (online during the 2006 – January 2007 timeframe) on the DOC website, of NOAA IT investments in a Steady State life cycle phase, is not current and not correct.

NESDIS and NWS were asked in email on Nov. 29, 2006 to start to prepare the 2006 OA. NESDIS started their internal OA data call in early January. Other Line Offices were sent guidance on Jan. 17. Only NMFS and NOAA OCIO were asked to provide input to the consolidated IT Infrastructure OA.

Although the DOC OA guidance did not change, NOAA OCIO PPA issued new NOAA guidance for OA; reference: NISN-3.011 Operational Analysis.doc. The NOAA OA guidance added value in these ways:

- The NOAA guidance clarified the list of IT investments that require 2006 OA.
- An OA report *template* was included – to aid projects in writing their reports.
- An OA report *example* was included – the 2005 SARSAT OA as an example of a real report.
- A single NOAA guidance document file helps to clarify OA instructions, NOAA processes, and DOC criteria – all in a single reference source maintained under version control.
- The intended audience is able to refer to a single NOAA document, rather than data-mine email.
- A single NOAA guidance document file can be attached to email, can be reused annually, and can be posted online on an internet/intranet.

Line Office IT Liaisons and PMs called to discuss the guidance and their status. OAR discussed Scientific Computing with the CIO during an OAR IT Managers video teleconference, and invited NOAA OCIO for the discussion. OAR and NOS PMs said they felt the OAs are important – for internal PM processes and to get their story out to NOAA – and their active interest showed in the quality of their reports. We are considering a follow-up OA debriefing for IT Liaisons, where OAR might present their Scientific Computing OA.

PPA will post 2006 OA guidance and reports on the NOAA OCIO Website. We will highlight an excerpt from the Innovation Section of each OA, with the ability to download the full report in PDF format.

LIST OF NOAA 2006 IT INVESTMENTS THAT REQUIRE OA REPORTS

This list was derived from a report that queried the current eCPIC Exhibit 300 database for NOAA's Major Investments, where the Summary of Spending Table indicated O&M spending in FY 2006.

- NESDIS Comprehensive Large Array-data Stewardship System (CLASS)
- NESDIS Environmental Satellite Processing Center (ESPC)
- NESDIS GOES, Ground System (GS)
- NESDIS NOAA National Data Centers (NNDC)
- NESDIS POES, Ground System (GS)
- NESDIS Satellite Operations Control Center Command and Data Acquisition (SOCC/CDA)
- NESDIS Search and Rescue Satellite-Aided Tracking (SARSAT)
- NOAA OCIO Financial Management IT Operations (FMS)
- NOAA OCIO Grants On-line
- NOAA OCIO Non-Core CBS Financial Management System (PCS)
- NOAA OCIO R&D High Performance Computing System (HPCC)
- NOS Geodetic Support System
- NOS Nautical Charting System
- NOS PORTS & NWLON
- NWS Advanced Weather Interactive Processing System (AWIPS)
- NWS Dissemination Systems (NDS)
- NWS National Weather Service Telecommunication Gateway (NWSTG) System
- NWS NDBC Ocean Observing System of Systems (NOOSS)
- NWS Next Generation Weather Radar (NEXRAD) System Operations and Maintenance (O&M)
- NWS Office of Hydrologic Development (OHD)
- *NWS Profile Network (NPN)
- NWS Regions & Field
- NWS/NCEP Weather and Climate Computing Infrastructure Services (WCCIS)
- NWS/NCEP Weather and Climate Operational Supercomputer Systems Primary and Backup (WCOSS)
- OAR NOAA Scientific Computing Support (SC)

In addition, OPPA delegated these two programs to provide NOAA's input to the DOC Consolidated IT Infrastructure OA. These two submissions will be merged into a single NOAA IT Infrastructure OA:

- NOAA OCIO IT Infrastructure
- NMFS IT Infrastructure

* Non-major, submitted optionally. Not in the original OA data call.

COMPARISON AND ASSESSMENT OF NOAA 2006 OA REPORTS

The idea to write this report was conceived as a way to describe and summarize the wide variety of OA reports. Table 1 is an OA checklist that lets you compare evaluation criteria across the reports.

Table 1 – OA Report Rating

Major IT Investment	DOC Criteria				NOAA Guidance				Other			
	Customer Results	Strategic & Business Results	Financial Performance	Innovation	Used NOAA template	LO CIO sent cover letter	NOAA Informed of LO OCIO Review	Table of Contents	Total Pages	Used internet hyperlinks	Used graphics	Good Showcase OA Example
NESDIS CLASS	Y	Y	Y	Y	Y	N	Y	Y	8	1	3	
NESDIS ESPC	Y	Y	Y	Y+	Y	N	Y	Y	13	2	3	
NESDIS GOES GS	Y	Y	Y	Y	Y	N	Y	Y	8	1	3	
NESDIS NNDC	Y+	Y+	Y	Y+	Y	N	Y	Y	17	11	8	Y+
NESDIS POES GS	Y	Y	Y	Y	Y	N	Y	Y	9	N	3	
NESDIS SOCC/CDA	Y	Y	Y	Y+	Y	N	Y	Y	9	1	3	
NESDIS SARSAT	Y	Y+	Y	Y+	Y	N	Y	Y	16	N	5	Y
NOAA OCIO FMS	Y	Y	Y	Y	Y	N	N	Y	16	1	5	
NOAA OCIO Grants OL	Y	Y	Y	Y	Y	N	N	N	10	N	3	
NOAA OCIO PCS	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
NOAA OCIO HPCC	Y+	Y	Y	Y	P	N	N	N	12	N	4	
NOS Geodetic Support	Y+	Y+	Y	Y+	Y	N	N	Y	50	~21	~22	Y+
NOS Nautical Charting	Y+	Y	Y	Y	Y	N	N	Y	13	3	3	Y
NOS PORTS & NWLON	Y	Y	Y	Y	Y	N	N	Y	18	N	5	
NWS AWIPS	Y	Y	Y	Y	N	N	N	N	10	N	6	Y
NWS NDS	P	P	P	P/N	N	N	N	N	2	N	1	
NWS NWSTG	Y	Y	Y	Y	N	N	N	N	4	N	1	
NWS NOOSS	P/N	Y	Y/P	Y/P	N	N	N	N	2	N	1	
NWS NEXRAD O&M	P	Y/P	Y	P	N	N	N	N	3	N	1	
NWS OHD	P	P	Y	Y	N	N	N	N	2	N	2	
*NWS Profiler Network	Y/P	Y	Y	P	N	N	N	N	3	N	1	
NWS Regions & Field	Y/P	Y/P	Y/P	Y/P	N	N	N	N	2	N	N	
NWS/NCEP WCCIS	Y	N	P	N	N	N	N	N	3	N	1	
NWS/NCEP WCOSS	Y	N	P	N	N	N	N	N	3	N	1	
OAR SC	Y+	Y+	Y+	Y+	Y	N	Y	Y	24	60	8	Y+
NOAA OCIO IT Infra.	P	Y	Y	P	Y	N	Y	Y	19		5	
NMFS IT Infra.	Y/P	Y	Y/P	Y	Y	Y	Y	Y	9	N	3	

Legend: Y = Yes; N = No; P = Partial; "+" = superlative; n/a = not available; * = non-major.

One investment, PCS, is still outstanding; and two OA, the NMFS and NOAA OCIO IT Infrastructure, are merged into a single OA report for NOAA IT Infrastructure.

The 2006 OA reports have a wide range of depth or detail. OA quality appears to increase with OA quantity. Four reports were two pages long; those OAs do not provide an in-depth analysis of operations in their short space. One report was 50 pages long; it provided a wealth of detail and examples on business and IT operations in 2006. An average of 10-15 pages seems to provide adequate OA coverage. For comments on the OAs, explaining the ratings given above in Table 1, please see the Table 2.

Table 2 – Comments on the OA Reports and Ratings

Topic	Comments
All NOAA & Line Offices	• Except for the NMFS CIO, no LO/SO sent their OA under CIO cover letter as requested by the NOAA guidance. • Except for OAR – and possibly NMFS – the impression is that PMs wrote the OAs independently without a large degree of cross-organization collaboration or input, and CIO involvement. • See Notes #1 (at bottom of table). • Most projects showed data from Exhibit 300s. See also Note #2. • OA should reference and reuse existing sources, rather than create analysis from scratch – such as from CasaNOSA or Exhibit 300.
All NESDIS	NESDIS has uniform and satisfactory quality across all its OA.
All NWS	• See Notes #1, 2, & 3 (at bottom of table). • NWS OA were too brief. Some OAs raised analytical points or operational constraints (e.g. funding cuts), but more detailed background info would be helpful. At an average report length of 2-3 pages, the OAs are not able to develop significant, in-depth qualitative or quantitative analysis. • The NWS OAs did not follow the NOAA-recommended template. • It appears the PM/OA authors did not read or follow the NOAA OA guidance.
• **NESDIS: NNDC and SARSAT,** • **NOS: Geodetic Support and Nautical Charting,** • **NWS AWIPS** • **OAR SC**	• Good explanation of business mission and IT program management. • Excellent coverage of OA criteria. • Interesting and fun reading! • Successful in business mission. • PMs worked with LO OCIO or NOAA OCIO to discuss OA. • Recommend the LO OCIO and PMs internally discuss their model for best practice, using these as examples. • These programs are good candidates for best practices in NOAA for OA. Would like (1 or more) to present OA at upcoming NOAA OCIO. • Wonderful maps and graphic images in Geodetic Support and SC.
NOAA OCIO PCS	Did not submit an OA as of this writing.
NOAA OCIO HPCC	Excellent discussion of Customer Results in 2006.
NWS NWSTG	See Note #4 (at bottom of table). Excellent overview, but would like to see more. Could serve as OA model for NWS if it included more analysis and data.
NWS Regions & Field	• The strategy and concepts introduced here are extremely important to NWS, if not to NOAA-wide, strategy. • This deserves more attention and visibility. What are the new or ongoing program management initiatives to implement these ideas? • Would like to see tie-in with ongoing program management plans, budget control & review boards, and other logistics to see these initiatives to fruition.

Topic	Comments
	• See Notes #2, 3 & 4 (at bottom of table).
OAR SC	Collaboration across OAR SC for this OA, results in an OA that's useful from OAR to DOC.
NOAA OCIO IT Infra.	OA reflects an "acquisition strategy", i.e. STRIPES, and not a business program.
NMFS IT Infra.	• See Note #1-4. • Good customer and control board explanations. • Since this represents the umbrella for bulk of NMFS activities, would like to see more detailed/granular performance measures – specific to the many more management programs in NMFS – and also more detailed data on financial performance.
Note #1	Would like to see future use (in 2007 OA) of more hyperlinks to network online information.
Note #2	Want use of more quantitative and tabular data, especially when able to associate with information in the Exhibit 300. Would like to see quantitative data presented as graphics, tables, or charts, if possible.
Note #3	Where "P" is assessed, the OA report generally did not describe the 2006 operations in enough meaningful or quantitative analysis, or did not mention data specific to achievements in 2006. Sometimes a section or topic was mentioned in the context of general program objectives, but not specific to 2006.
Note #4	Excellent ideas were introduced. Add more detail, tables, and charts would greatly improve the OA presentation.

RECOMMENDATIONS

Overall, a majority of the twenty-one OA reports meet guidance criteria and are ready to send to DOC. However, the NWS OA average borderline ratings, and I defer to your suggestions for next steps. Here are several follow-up recommendations:

1. As the comments suggest, it might be helpful to have a debriefing with LO IT Liaisons &or PMs to discuss the OAs.

2. The PMs have invested good effort into writing these reports, and the OA should be used for more than a data call to Department of Commerce. The OAs by NOS and OAR especially, but also NESDIS, are valuable tools to demonstrate annual performance and achievements to customers.

3. Where the NOAA guidance is not followed by LO/PMs, there are two options: (1) either the guidance should be changed to drop the criteria (i.e. using the OA template, or having CIO review); or (2) the guidance should better understood by LOs and enforced by NOAA OCIO.

4. Lessons learned and suggestions from LOs can be incorporated in the next year's (2008) guidance for 2007 OAs.

   a. Better IT Infrastructure OA reports will be possible only after NOAA initiates proactive strategies to manage and consolidate IT Infrastructure. Until then the IT Infrastructure OA reports will reflect the loosely federated IT Infrastructure, which is either an "acquisition strategy" or a strategy to support an Exhibit 300 data call.

   b. OAs files should be sent with Track Changes turned off, with all changes accepted. Preferably a read-only PDF file should be sent from LOs to NOAA, and to DOC.