



NOAA's Annual Guidance Memorandum for FY 2009-2013

A Presentation to the
NOAA Science Advisory Board

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Outline



- Purpose
- Issue
- Presentation of Briefing
- NOAA Coordination and Views
- Desired Outcome



Purpose



- Review the role of the Annual Guidance Memorandum (AGM) at NOAA
- Discuss major external environmental, programmatic and policy developments that may affect NOAA's corporate priorities
- Review NOAA's current AGM, covering FY 2008 – 2012
- Obtain SAB guidance and input for NOAA's FY 2009 – FY 2013 planning priorities



Issue



- To issue a focused AGM for FY 2009 – FY 2013 that fully considers stakeholder views, NOAA is seeking the SAB's input on:
 - External trends and developments during 2005 – 2006 that could have a significant effect on NOAA's programmatic priorities; and
 - Potential modifications to NOAA's current corporate priorities



What is the Annual Guidance Memorandum?



- The AGM:
 - Is the principle guidance document for NOAA's annual planning cycle
 - Reviews key trends and drivers affecting NOAA's strategic goals
 - Emphasizes NOAA-wide programmatic priorities
 - Provides a framework for Goal-level planning and programming



Contents of the FY 2009 – FY 2013 AGM



- The AGM should identify a limited number of high-level, high-impact, high visibility, NOAA-wide program priorities that require significant and sustained financial or managerial resources and effort
- Priority areas are selected on the basis of
 - Potential impact
 - Customer needs
 - High-leverage solutions that rely on NOAA's unique competencies



Soliciting Stakeholder Input for the AGM



- PPI is soliciting broad stakeholder input through the following channels:
 - Stakeholder and constituent interactions conducted by Goals, Line Offices and Councils
 - Direct stakeholder solicitation via email
 - Federal register request for input
 - Reviews of major conferences and Association meetings
 - Advisory committee input



AGM Development Path



- **AGM communicates the corporate priorities early in the planning phase**
- **Goals use the AGM and Program Operating Plans to prepare a strategic portfolio assessment**
- **Planning phase ends with a combined NEP/NEC briefing in August**



External Environmental, Programmatic and Policy Developments



- The context: NOAA's current requirements exceed available resources
- Illustrative list of key events impacting the FY -2009 planning priorities:
 - Increasing External Demands
 - Leadership Priorities
 - External Fiscal Environment



Increasing External Demands



- The 2005 hurricane season:
 - Inter-agency service delivery and coordination
 - Regional focus
 - Hurricane intensity forecasting
- Global Earth Observation System of Systems (GEOSS)
- Evolution of the Ocean Action Plan
- Climate information for decision-makers
- Partnerships for improved environmental observations and information services



Leadership Priorities



- Departmental:
 - Environmental Stewardship: promote productive ecosystems; climate science for improved decision-making; global leadership; environmental and marine infrastructure
 - Competitiveness and Innovation: the return on investment in R&D
 - Trade: maximize export performance
 - Intellectual Property Rights: quality and enforcement
 - Gulf of Mexico: market and regionally-driven approaches to rebuilding
 - China: U.S. export performance to China
 - Immigration
- NOAA Leadership Discussions:
 - GEOSS
 - “One NOAA” service delivery
 - Hazard-resilient communities and businesses
 - Continue implementation of President’s Management Agenda



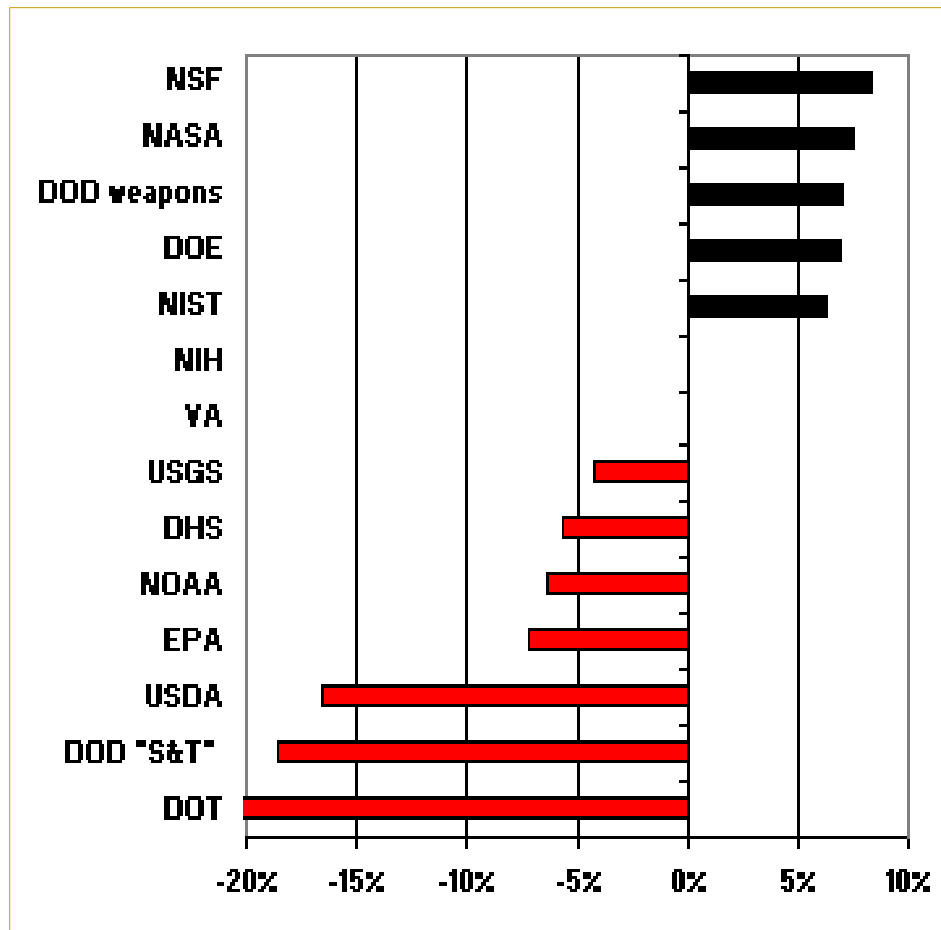
External Fiscal Environment



- Budget Outlook:
 - President expects a \$162 billion deficit by 2009, assuming:
 - Constant discretionary spending, except defense and homeland security from 2006 to 2010
 - No extra money for Iraq, Afghanistan or the war on terror
 - CBO expects a \$321 billion deficit by 2009, assuming:
 - All spending rises with inflation
 - Tax cuts expire as scheduled



External Fiscal Environment: Resources for Federal R&D Investments



Total R&D Growth FY 2006 – FY 2007

“The overall federal investment in R&D would increase to \$137 billion in 2007... just short of the 2.2% increase needed to keep pace with inflation...” “In a repeat of past budgets, the continuing Administration priorities of weapons development and space vehicles development would take up the entire increase and more, leaving declining funding for the remainder of the R&D portfolio.”

(American Association for the Advancement of Science)



External Fiscal Environment: The Appropriations Context for NOAA R&D



	FY 2005	FY 2006	FY 2007	Change FY 06-07	
	Actual	Estimate	Budget	Amount	Percent
NASA	10,197	11,394	12,245	851	7.50%
NSF	8,586	8,551	9,141	590	6.90%
NIST	446	424	451	27	6.40%
NOAA	646	617	578	-39	-6.30%



NOAA's Fiscal Outlook: Infrastructure Costs



- NOAA's mission is capital-intensive
 - Satellites
 - Fleet
 - Facilities
 - IT
- Re-capitalization requirements over the planning period affect internal flexibility to pursue programmatic priorities



Review of FY 2008 – FY 2012 AGM Priorities



Core Function	PRIORITIES FOR FY 2008 – 2012
Observation systems, data, and models	Globally integrated oceanic and atmospheric observations and data management Ocean and Earth system modeling Capable and reliable observations infrastructure
Information services, forecasts and predictions	Science-based climate information services Water information services Forecast accuracy for high-impact weather Information services for aviation, marine, and surface transportation systems
Ocean and coastal ecosystem management	Collaborative, science-based approaches to ecosystem management Environmental information on oceans and human health Climate variability and ecosystem predictions
Environmental literacy	Formal education in the environmental sciences Life-long learning in environmental sciences, resource management, and stewardship
Breakthrough organizational performance	Improve service delivery excellence and value to customers Strategic use of information technology Modernized, safe, high quality facilities Strategic workforce management



NOAA Coordination & Views



- External Views:
 - Initial SAB views and input today
 - Submit additional / follow up comments to PPI by Friday March 31, 2006
- What are NOAA's views on the subject?
 - Line Office / Goal Team lead Workshop: March 28, 2006
 - Council chairs / co-chairs: February – March 2006
 - Internal Review: April 2006
 - NEP/NEC: April / May 2006



Desired Outcome



- Obtain SAB views on key external trends and potential issues for the NOAA Annual Guidance Memorandum, FY 2009 – FY 2013
- Questions to consider include:
 - Given existing requirements gaps and escalating demands, are there compelling reasons for NOAA to substantially modify its current strategic priorities?
 - Given external fiscal constraints, how can NOAA align its strategic priorities with external drivers in ways that improve stakeholder understanding and support?



Backup Slides



Backup Slides



Overview of AGM Themes: FY 2006 – FY 2008



FY 2008 – 2012 AGM	FY 2007 – 2011 AGM	FY 2006 – 2010 AGM
Observation systems, data, and models	Pulse of the Planet: Integrate Global Observations	Pulse of the Planet: Integrate Global Observations
	Advancing NOAA's Modeling Capability	[identified within "enablers"]
Information services, forecasts, and predictions	Increase Climate Information, Services, and Products	Expand Climate Services
	Provide Critical Information for Water Resources	Improve Water Resource Information
	Support U.S. Transportation Systems	Facilitate Intermodal Transportation
Ocean and coastal ecosystem management	Leadership for the Oceans (ecosystem-based management)	Advance toward an Ecosystem Orientation
Environmental literacy	Enhance Environmental Literacy	[identified within "approaches"]
Breakthrough organizational performance	Deliver Effective, Efficient Decision-Support Information	Sustain Important National NOAA Programs (forecasts & warnings, weather & air quality, R&D)
	<i>Enablers:</i> Skills and capabilities of NOAA's workforce; improve administrative programs; maintain and provide necessary platforms; improve critical infrastructure and services; advance use of technology	<i>Enablers:</i> Environmental modeling; data management; technology; human capital; facilities; platforms; administrative services



Observation Systems, Data, and Models



Priorities	Products / capabilities by 2012
<p>Globally integrated oceanic and atmospheric observations and data management</p>	<ul style="list-style-type: none"> • Operationally integrated NOAA observing systems based on a common architecture and nested within other national and global Earth observation systems • Priority gaps in ocean observing systems have been closed, and a fully functional Integrated Ocean Observing System has been established • Multi-mission geospatial data collected through integrated ocean and coastal mapping • Integrated data assimilation and management: archived, interoperable, accessible, and readily usable observations and data products
<p>Ocean and Earth system modeling</p>	<ul style="list-style-type: none"> • Expanded operational capacity through an Earth Systems Modeling Framework • New data assimilation methods that support expanded observational system capabilities • Operational ocean and coastal modeling capabilities that support all NOAA programs • New analytical and predictive capabilities for ecosystem parameters and air and water quality
<p>Capable and reliable observations infrastructure</p>	<ul style="list-style-type: none"> • Long-term satellite and fleet upgrades deployed • Multi-disciplinary, multi-sensor ocean data collection • Improved productivity of data collection platforms



Information Services, Forecasts and Predictions



Priorities	Products / capabilities by 2012
Science-based climate Information services	<ul style="list-style-type: none"> • Improved intra-seasonal to inter-annual predictions • New information products for climate extremes, coastal ocean climatologies, climate normals, precipitation frequency estimates, and assessments of climate forcing agents and substitutes for ozone-depleting substances • Decision support services for drought, health, agriculture, and urban / coastal management
Water information services	<ul style="list-style-type: none"> • New hydrologic forecasting information services for drought and water management • Observations expanded to regional watersheds, covering coasts, rivers, and upland areas • New analytical tools and predictive capabilities that link forecast models of water resources, hydrology, weather events, climate, and oceans • Hydrological forecasting capabilities that support NOAA's priorities for environmental information on oceans and human health
Forecast accuracy for high-impact weather	<ul style="list-style-type: none"> • Accelerated research and optimization of observing strategies yield improvements in the accuracy of one-day to two-week high-impact weather forecasts • Accurate 48-hour hurricane intensity forecasts
Information services for aviation, marine, and surface transportation systems	<ul style="list-style-type: none"> • Increased lead-time prediction of low ceiling and visibility at airports • Increased 48 hour forecast accuracy of high seas marine warnings • Expanded geographic coverage of real-time, integrated marine navigation products and services • Increased operational availability of weather information for surface transportation systems



Ocean and Coastal Ecosystem Management



Priorities	Products / capabilities by 2012
Collaborative, science-based approaches to ecosystem management	<ul style="list-style-type: none"> • Region-specific collaborative approaches to ecosystem-based management that are generating specific, measurable improvements in ecosystem health and productivity • Integrated assessments and forecasts of ecosystem health and productivity, including socioeconomic impacts • Harmonized legal-regulatory approaches to coastal and marine resource management • Regulatory structure and robust scientific and technical support for marine aquaculture
Environmental information on oceans and human health	<ul style="list-style-type: none"> • Prediction, monitoring, and multi-region warning systems for harmful algal blooms and hypoxia • Ecological monitoring, forecasting and environmental modeling for human health risk characterization
Climate variability and ecosystem predictions	<ul style="list-style-type: none"> • Improved monitoring and forecasting of ecosystem conditions based on climate observations and models • Improved understanding of climate change and climate predictability at decadal time scales, with impacts on marine ecosystems



Environmental Literacy



Priorities	Products / capabilities by 2012
<p>Formal education in the environmental sciences</p>	<ul style="list-style-type: none"> • Widespread use of high quality, multi-disciplinary curricula and learning tools that broadly leverage NOAA's scientific and technical expertise • Increased number of students receiving formal education in the environmental sciences
<p>Life-long learning in environmental sciences, resource management, and stewardship</p>	<ul style="list-style-type: none"> • Improved public awareness of and responsiveness to major oceanic and atmospheric events • Improved public stewardship of environmental resources • Improved information for resource managers to use in decision-making



Breakthrough Organizational Performance



Priorities	Products / capabilities by 2012
<p>Improve service delivery excellence and value to customers</p>	<ul style="list-style-type: none"> • Accelerated transition of research capabilities to new or improved operational products and services • New service delivery models deployed that provide higher quality, higher value, fully integrated information services, forecasts, and predictions
<p>Strategic use of information technology</p>	<ul style="list-style-type: none"> • A single, secure NOAA enterprise network that integrates data and information across physical and disciplinary boundaries and time scales, adequate to support GEOSS and NOAA's national mission imperatives • A comprehensive Management Information System for corporate NOAA
<p>Modernized, safe, high quality facilities</p>	<ul style="list-style-type: none"> • Modernized, consolidated facilities portfolio, leveraged in collaboration with partners • NOAA regional facilities
<p>Strategic workforce management</p>	<ul style="list-style-type: none"> • A more flexible, diverse, and mobile workforce with minimal skill gaps • Ability to rapidly reconfigure or acquire new skills as technologies and program needs change