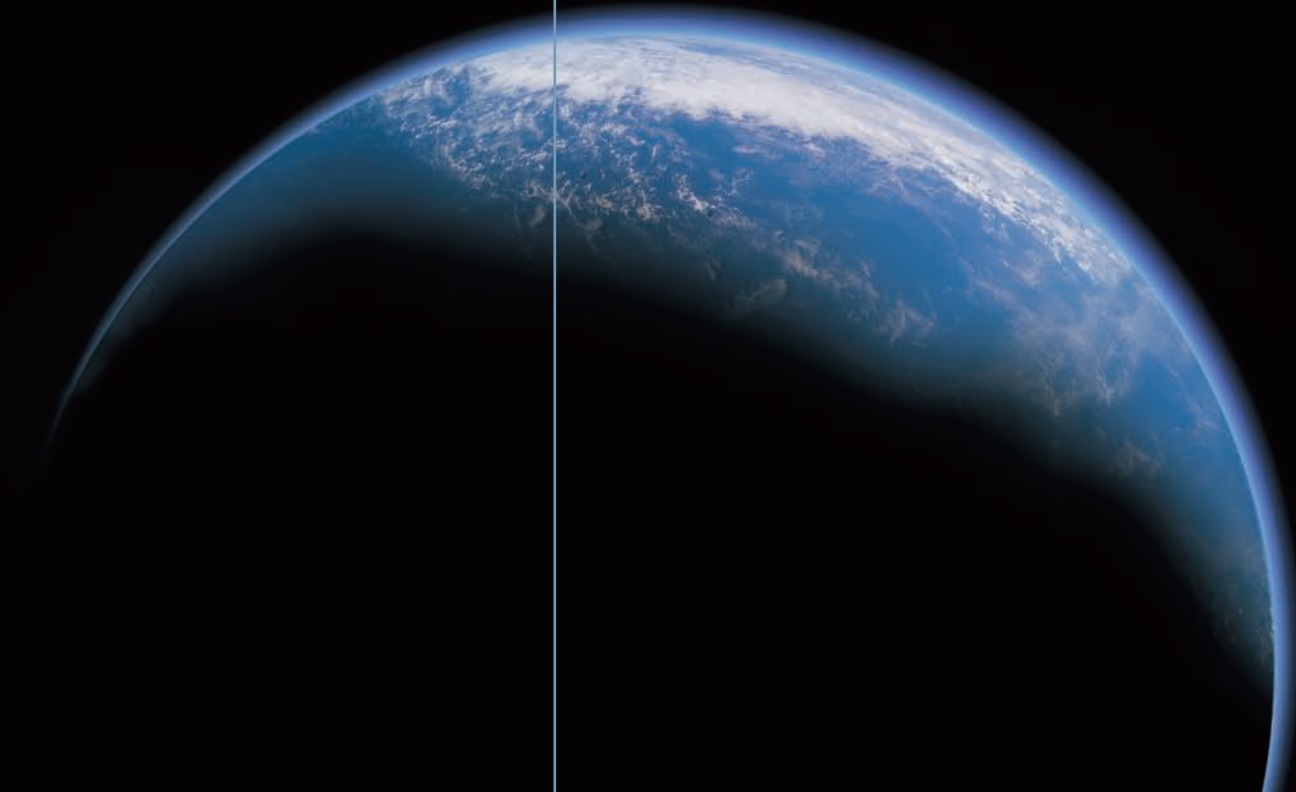


APPENDIX B
CLIMATE CHANGE SCIENCE PROGRAM
FY 2008 BUDGET TABLES



APPENDIX B

CLIMATE CHANGE SCIENCE PROGRAM FY 2008 BUDGET TABLES

The Climate Change Science Program (CCSP) integrates federally supported research on global change and climate change, as conducted by 13 U.S. Government departments and agencies:

- Department of Agriculture (USDA)
- Department of Commerce (DOC)
- Department of Defense (DOD)
- Department of Energy (DOE)
- Department of Health and Human Services (HHS)
- Department of the Interior (DOI)
- Department of State (DOS)
- Department of Transportation (DOT)
- Agency for International Development (USAID)
- Environmental Protection Agency (EPA)
- National Aeronautics and Space Administration (NASA)
- National Science Foundation (NSF)
- Smithsonian Institution (SI).

The CCSP incorporates and integrates the U.S. Global Change Research Program (USGCRP) with the Administration's U.S. Climate Change Research Initiative (CCRI). CCSP budget requests are coordinated through interagency research working groups and other mechanisms, but ultimate budget accountability resides with the participating departments and agencies. As a result of its interagency composition, activities of CCSP participating agencies are funded by Congress through nine of the 13 annual Appropriations bills.

The following tables summarize the CCSP budget:

- Tables 1 and 2 show the CCSP FY 2006-2008 budget aligned by CCSP goal.
- Table 3 shows the CCSP FY 2006-2008 budget by agency, with USGCRP and CCRI budgets listed separately and also combined in a single CCSP total.
- Table 4 shows the USGCRP FY 2006-2008 budget by CCSP research element.
- Table 5 shows the FY 2006-2008 CCRI budget.
- Subsequent tables show, for each CCSP participating agency, the FY 2006-2008 budget for both USGCRP and CCRI activities.

TABLE 1. FY 2006–2008 CLIMATE CHANGE SCIENCE PROGRAM BUDGET BY GOAL AND FOCUS AREA

Focus Area	Description (from <i>CCSP Strategic Plan</i>) ¹	Budgets (\$M) ²			Agencies
		FY 2006	FY 2007 Estimate	FY 2008 Request	
Goal 1 Improve knowledge of the Earth’s past and present climate and environment, including its natural variability, and improve understanding of the causes of observed variability and changes					
Focus 1.1	Better understand natural long-term cycles in climate [e.g., Pacific Decadal Variability (PDV), North Atlantic Oscillation (NAO)]	37.8	39.7	45.3	DOC, DOE, DOI, NASA, NSF
Focus 1.2	Improve and harness the capability to forecast El Niño-La Niña and other seasonal-to-interannual cycles of variability	38.5	37.9	38.1	DOC, DOE, DOI, NASA, NSF
Focus 1.3	Sharpen understanding of climate extremes through improved observations, analysis, and modeling, and determine whether any changes in their frequency or intensity lie outside the range of natural variability	38.9	36.9	37.4	DOC, DOE, DOI, NASA, NSF
Focus 1.4	Increase confidence in the understanding of how and why climate has changed	39.9	40.8	41.4	DOE, DOI, NASA, NSF, SI
Focus 1.5	Expand observations and data/information system capabilities	170.0	170.6	158.1	DOC, DOE, DOI, NASA, NSF, SI
GOAL 1 TOTAL		325.1	325.9	320.3	
Goal 2 Improve quantification of the forces bringing about changes in the Earth’s climate and related systems					
Focus 2.1	Reduce uncertainties about the sources and sinks of greenhouse gases, emissions of aerosols and their precursors, and their climate effects	100.3	96.3	101.8	DOC, DOE, DOT, NASA, NSF
Focus 2.2	Monitor the recovery of the ozone layer and improve the understanding of the interactions of climate change, ozone depletion, tropospheric pollution, and other atmospheric issues	32.0	29.7	28.4	USDA, DOE, NASA
Focus 2.3	Increase knowledge of the interactions among emissions, long-range atmospheric transport, and transformations of atmospheric pollutants, and their response to air quality management strategies	40.1	40.4	40.4	NASA, NSF

¹ See Chapter 2 of the *Strategic Plan for the U.S. Climate Change Science Program* for a detailed discussion.

² Any minor discrepancies within this table and between this table and others are due to rounding.

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TABLE 1 (CONTINUED)

Focus Area	Description (from <i>CCSP Strategic Plan</i>) ¹	Budgets (\$M) ²			Agencies
		FY 2006	FY 2007 Estimate	FY 2008 Request	
Goal 2 (continued)					
Focus 2.4	Develop information on the carbon cycle, land cover and use, and biological/ecological processes by helping to quantify net emissions of carbon dioxide, methane, and other greenhouse gases, thereby improving the evaluation of carbon sequestration strategies and alternative response options	130.2	127.0	128.4	USDA, DOC, DOE, DOI, NASA, NSF, SI
Focus 2.5	Improve capabilities to develop and apply emissions and related scenarios for conducting “if..., then...” analyses in cooperation with CCTP	3.0	3.0	3.0	DOE
GOAL 2 TOTAL		305.6	296.4	302.0	
Goal 3 Reduce uncertainty in projections of how the Earth’s climate and related systems may change in the future					
Focus 3.1	Improve characterization of the circulation of the atmosphere and oceans and their interactions through fluxes of energy and materials	43.1	42.2	42.4	DOC, DOE, NASA, NSF
Focus 3.2	Improve understanding of key “feedbacks” including changes in the amount and distribution of water vapor, extent of ice and the Earth’s reflectivity, cloud properties, and biological and ecological systems	80.1	75.4	75.6	DOE, DOI, NASA, NSF
Focus 3.3	Increase understanding of the conditions that could give rise to events such as rapid changes in ocean circulation due to changes in temperature and salinity gradients	6.4	6.2	6.1	NASA, NSF
Focus 3.4	Accelerate incorporation of improved knowledge of processes and feedbacks into climate models to reduce uncertainty in projections of climate sensitivity, changes in climate, and related conditions such as sea level	85.3	86.1	93.7	DOC, DOE, NASA, NSF
Focus 3.5	Improve national capacity to develop and apply climate models	38.9	35.5	44.8	DOC, DOE, NASA, NSF
GOAL 3 TOTAL		253.8	245.4	262.6	

TABLE 1 (CONTINUED)

Focus Area	Description (from <i>CCSP Strategic Plan</i>) ¹	Budgets (\$M) ²			Agencies
		FY 2006	FY 2007 Estimate	FY 2008 Request	
Goal 4 Understand the sensitivity and adaptability of different natural and managed ecosystems and human systems to climate and related global changes					
Focus 4.1	Improve knowledge of the sensitivity of ecosystems and economic sectors to global climate variability and change	65.1	62.3	63.8	USDA, DOE, DOI, EPA, NASA, NSF, SI
Focus 4.2	Identify and provide scientific inputs for evaluating adaptation options, in cooperation with mission-oriented agencies and other resource managers	56.4	56.3	55.5	HHS, EPA, NSF
Focus 4.3	Improve understanding of how changes in ecosystems (including managed ecosystems such as croplands) and human infrastructure interact over long time periods	48.3	42.5	37.5	USDA, DOC, DOE, NASA, NSF, SI
GOAL 4 TOTAL		169.8	161.1	156.8	
Goal 5 Explore the uses and identify the limits of evolving knowledge to manage risks and opportunities related to climate variability and change					
Focus 5.1	Support informed public discussion of issues of particular importance to U.S. decisions by conducting research and providing scientific synthesis and assessment reports	70.6	60.0	61.6	USDA, DOE, DOI, DOT, EPA, NASA, NSF, SI
Focus 5.2	Support adaptive management and planning for resources and physical infrastructure sensitive to climate variability and change; build new partnerships with public and private sector entities that can benefit both research and decisionmaking	63.5	66.9	66.1	USDA, DOC, DOI, USAID, EPA, NASA, NSF
Focus 5.3	Support policymaking by conducting comparative analyses and evaluations of the socioeconomic and environmental consequences of response options	9.7	8.3	8.4	USDA, DOI, NASA, NSF, SI
GOAL 5 TOTAL		143.8	135.2	136.1	
CCSP PROGRAM TOTAL		1,198.0	1,164.0	1,177.8	

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**TABLE 2. FY 2006-2008 CLIMATE CHANGE SCIENCE PROGRAM
BUDGET BY GOAL AND PARTICIPATING AGENCY/DEPARTMENT**

[DISCRETIONARY BUDGET AUTHORITY IN \$M]

	Research											Res Subtotal	Obs ¹ Subtotal	TOTAL
	USDA	DOC	DOE	HHS	DOI	DOT	USAID	EPA	NASA	NSF	SI			
FY 2008 Request														
Goal 1	0.0	138.3	48.6	0.0	12.6	0.0	0.0	0.0	76.6	43.1	1.1	320.3	344.0	664.3
Goal 2	18.3	43.4	32.4	0.0	2.9	0.5	0.0	0.0	143.5	60.6	0.4	302.0	118.2	420.2
Goal 3	0.0	47.4	32.2	0.0	1.3	0.0	0.0	0.0	124.1	57.6	0.0	262.6	158.0	420.6
Goal 4	16.4	2.0	15.4	49.0	7.1	0.0	0.0	4.9	21.0	37.8	3.2	156.8	38.2	195.0
Goal 5	22.8	13.7	1.0	0.0	2.5	0.7	13.0	12.0	60.1	9.3	1.0	136.1	0.0	136.1
TOTAL	57.5	244.8	129.6	49.0	26.4	1.2	13.0	16.9	425.3	208.4	5.7	1,177.8	658.4	1,836.2
FY 2007 Estimate														
Goal 1	0.0	139.7	48.6	0.0	12.6	0.0	0.0	0.0	81.7	42.2	1.1	325.9	294.5	620.4
Goal 2	18.5	37.6	32.4	0.0	2.9	0.3	0.0	0.0	144.1	60.2	0.4	296.4	168.3	464.7
Goal 3	0.0	42.1	25.0	0.0	1.3	0.0	0.0	0.0	120.9	56.1	0.0	245.4	159.7	405.1
Goal 4	16.4	3.8	19.2	50.0	7.1	0.0	0.0	4.3	19.6	37.5	3.2	161.1	36.5	197.6
Goal 5	24.5	12.5	1.0	0.0	2.5	0.7	14.0	11.9	57.8	9.3	1.0	135.2	0.0	135.2
TOTAL	59.4	235.7	126.2	50.0	26.4	1.0	14.0	16.2	424.1	205.3	5.7	1,164.0	659.0	1,823.0
FY 2006														
Goal 1	0.0	141.1	48.3	0.0	12.6	0.0	0.0	0.8	81.6	39.6	1.1	325.1	196.1	521.2
Goal 2	18.4	38.0	32.4	0.0	2.8	0.3	0.0	0.0	156.0	57.3	0.4	305.6	130.1	435.7
Goal 3	0.0	43.2	25.6	0.0	2.1	0.0	0.0	0.0	129.3	53.6	0.0	253.8	136.0	389.8
Goal 4	17.1	4.5	22.9	50.0	6.9	0.0	0.0	6.5	21.6	37.1	3.2	169.8	30.7	200.5
Goal 5	25.6	8.2	1.0	0.0	2.4	0.6	13.0	11.3	71.4	9.3	1.0	143.8	0.0	143.8
TOTAL	61.0	235.0	130.2	50.0	26.8	0.9	13.0	18.6	459.9	196.9	5.7	1,198.0	492.9	1,690.9

¹NASA observing systems.

Note: Any minor discrepancies within this table and between this table and others are due to rounding.

**TABLE 3. CLIMATE CHANGE SCIENCE PROGRAM:
FY 2006-2008 BUDGET BY AGENCY**
[DISCRETIONARY BUDGET AUTHORITY IN \$M]

Agency	FY 2006			FY 2007 Estimate			FY 2008 Request		
	USGCRP	CCRI	CCSP	USGCRP	CCRI	CCSP	USGCRP	CCRI	CCSP
USDA	53	8	61	50	8	58	48	8	56
DOC ^{1,2}	201	34	235	190	46	236	199	46	245
DOE	102	28	130	103	24	127	106	24	130
HHS	50	0	50	50	0	50	49	0	49
DOI	27	0	27	26	0	26	27	0	27
DOT	0	1	1	1	0	1	0	1	1
USAID	0	13	13	0	14	14	0	13	13
EPA ³	19	0	19	16	0	16	17	0	17
NASA ^{4,5}	421	38	460	389	35	424	390	35	425
NSF	172	25	197	180	25	205	183	25	208
SI	6	0	6	6	0	6	6	0	6
Scientific Research Total	1,052	147	1,199	1,011	152	1,163	1,025	152	1,178
NASA Space-Based Observations	436	57	493	566	94	659	618	40	659
CCSP Total^{6,7}	1,487	203	1,691	1,576	246	1,822	1,644	193	1,836
President's Request									

Notes:
¹ Starting in FY 2006, funding to NOAA's laboratories is included in the CCSP budget cross-cut. This is a result of the evolution of NOAA's role in CCSP.
² For FY 2008, NOAA made a decision to report activities for the NOAA climate strategic goal, as defined in the NOAA Strategic Plan (2005), to ensure consistent reporting and to provide the most accurate picture of its climate funding to date. The climate goal includes both research and operations funding under the following offices: Office of Oceanic and Atmospheric Research, National Marine Fisheries Service, the National Weather Service, and the National Environmental Satellite, Data, and Information Service.
³ Entries given in FY 2006 and FY 2007 for EPA are "enacted" budgetary amounts.
⁴ NASA funding levels presented in this table do not reflect full-cost accounting (Corporate General and Administrative and Institutional Investment funding has been removed).
⁵ NASA has revised the set of projects it counts as supporting CCSP goals. The funding levels presented here do not include the Ground Network and Research Range assets or Congressional interest items, but include activities not previously counted, such as the NPOESS Preparatory Project, portions (93%) of the Landsat Data Continuity Mission, and the Gravity Recovery and Climate Experiment, as well as portions of the High-End Computing and Scientific Computing projects.
⁶ Operational space-based, surface, and *in situ* observing systems and programs are not included in the CCSP budget cross-cut, but contribute to achieving CCSP goals. Because DOD research activities are conducted for defense-related missions, they are not included in the CCSP budget cross-cut; however, related DOD research contributes to CCSP goals.
⁷ Due to recent changes in CCSP/CCRI activities and priorities, additional ongoing activities in the Democracy, Conflict, and Humanitarian Assistance program are reported under CCSP and CCRI beginning in FY 2008.
* Any minor discrepancies within this table and between this table and others are due to rounding.

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**TABLE 4. CLIMATE CHANGE SCIENCE PROGRAM:
FY 2006–2008 USGCRP SCIENTIFIC RESEARCH BUDGET BY CCSP RESEARCH ELEMENT**
[DISCRETIONARY BUDGET AUTHORITY IN \$M]

Agency	Atmospheric Composition	Climate Variability	Carbon Cycle	Water Cycle	Ecosystems	Land Use	Human Contributions ¹	TOTAL
FY 2008 USGCRP Research Elements								
USDA	18.3	–	11.2	4.9	14.9	0.1	–	49.4
DOC	26.2	148.9	5.1	9.9	2.0	–	6.9	199.0
DOE	12.6	64.6	10.5	–	13.2	–	5.1	106.0
HHS	–	–	–	–	–	–	49.0	49.0
DOI	1.8	5.4	1.2	4.3	5.9	7.3	0.5	26.4
DOT	0.5	–	–	–	–	–	–	0.5
EPA	6.2	–	–	–	4.9	–	5.8	16.9
NASA	77.0	83.4	48.9	92.9	40.1	19.7	28.1	390.1
NSF	20.7	79.4	31.2	17.4	20.5	2.8	11.2	183.2
SI	–	1.3	0.3	–	3.3	0.8	–	5.7
TOTAL	163.3	383.0	108.4	129.4	104.8	30.7	106.6	1,026.2
FY 2007 USGCRP Research Elements								
USDA	19.6	–	10.2	5.3	15.0	1.3	–	51.4
DOC	21.0	146.5	4.9	9.5	1.5	–	6.6	190.0
DOE	12.6	57.2	10.5	–	17.0	–	5.1	102.4
HHS	–	–	–	–	–	–	50.0	50.0
DOI	1.8	5.4	1.2	4.3	5.9	7.3	0.5	26.4
DOT	0.3	–	–	–	–	–	–	0.3
EPA ²	5.9	–	–	–	4.3	–	6.0	16.2
NASA	79.9	80.6	46.2	93.9	39.7	20.3	28.4	389.0
NSF	20.7	78.4	30.2	16.4	20.5	2.8	11.2	180.2
SI	–	1.3	0.3	–	3.3	0.8	–	5.7
TOTAL	161.8	369.4	103.5	129.4	107.2	32.5	107.8	1,011.6
FY 2006 USGCRP Research Elements								
USDA	20.7	–	10.3	5.4	15.7	1.3	–	53.4
DOC	21.8	155.6	5.2	9.9	1.5	–	6.9	200.9
DOE	12.8	55.5	10.1	–	20.5	–	3.5	102.4
HHS	–	–	–	–	–	–	50.0	50.0
DOI	1.8	5.0	1.3	4.3	6.2	7.7	0.5	26.8
DOT	0.3	–	–	–	–	–	–	0.3
EPA ²	7.2	–	–	–	6.5	–	4.9	18.6
NASA	85.1	85.4	50.6	94.4	45.3	22.0	38.8	421.6
NSF	19.5	74.3	25.0	18.0	21.1	2.8	11.2	171.9
SI	–	1.3	0.3	–	3.3	0.8	–	5.7
TOTAL	169.2	377.1	102.8	132.0	120.1	34.6	115.8	1,051.6

¹ Prior to FY 2007, NASA linked the Applied Sciences and the Education and Outreach programs to USGCRP Focus Areas, but not to CCSP research elements; the current table identifies these programs as contributing to the CCSP Human Contributions and Responses element for the three fiscal years addressed.

² Entries given in FY 2006 and FY 2007 for EPA are “enacted” budgetary amounts.

Note: Any minor discrepancies within this table and between this table and others are due to rounding.

**TABLE 5. FY 2006–2008 BUDGET
FOR THE CLIMATE CHANGE RESEARCH INITIATIVE (CCRI)**

Agency	Program Title	FY 2006	FY 2007 Estimate	FY 2008 Request
USDA	Carbon Cycle Research (ARS)	0.6	0.6	0.6
	Carbon Cycle Research (FS)	3.3	3.5	3.5
	Carbon Inventory and Analysis (FS)	1.1	1.1	1.1
	Carbon Management Research (FS)	1.6	1.9	1.9
	Regional and Sectoral Impacts of Climate Change (ARS)	1.0	0.9	0.9
U.S. Department of Agriculture CCRI Total		7.6	8.0	8.0
DOC	Competitive Research Program	34.1	45.7	45.8
Department of Commerce CCRI Total		34.1	45.7	45.8
DOE	Atmospheric Radiation Measurement Program	5.7	5.7	5.6
	CCRI Climate Modeling	14.3	12.2	12.2
	CCRI Carbon Cycle	3.1	2.9	2.9
	CCRI Integrated Assessment	4.8	3.0	3.0
Department of Energy CCRI Total		27.9	23.8	23.7
DOT	DOT-wide Climate Change Center	0.6	0.7	0.7
Department of Transportation CCRI Total		0.6	0.7	0.7
USAID	Famine Early Warning System Network (FEWS NET)	13.0	14.0	13.0
U.S. Agency for International Development CCRI Total		13.0	14.0	13.0
NASA	Atmospheric Composition	2.4	2.6	2.7
Science	Climate Variability	4.6	4.8	4.9
	Carbon Cycle	6.3	6.5	6.6
	Water Cycle	6.2	6.4	6.4
	Terrestrial and Marine Ecosystems	1.9	2.1	2.2
	Land-Cover/Land-Use Change	0.9	1.1	1.2
	Human Contributions and Responses ¹	16.1	11.6	11.4
NASA	Atmospheric Composition	28.3	46.8	20.1
Space	Climate Variability	28.3	46.8	20.1
National Aeronautics and Space Administration CCRI Total²		95.0	128.7	75.6
NSF	Carbon Fluxes and Cycle	10.0	10.0	10.0
	Human Dimensions of Climate Change	5.0	5.0	5.0
	Modeling Strategy	10.0	10.0	10.0
National Science Foundation CCRI Total		25.0	25.0	25.0
Total Climate Change Research Initiative³		203.2	245.9	
President's Request				191.8

¹ Prior to FY 2007, NASA linked the Applied Sciences and the Education and Outreach programs to USGCRP Focus Areas, but not to CCSP research elements; the current table identifies these programs as contributing to the CCSP Human Contributions and Responses element for the three fiscal years addressed.

² NASA has revised the set of projects it counts as supporting CCRI. The funding levels presented include activities that were previously not counted, including portions of the High-End Computing and Scientific Computing projects. The funding decrease from 2007 to 2008 is primarily due to the planned ramp-down of resources for the Glory mission, a major contributor to NASA CCRI funding, which is completing development in preparation for a December 2008 launch.

³ Activities in the Federal Aviation Administration – Research, Engineering, and Development account have been included under CCRI in past. Due to changes in CCSP/CCRI activities and priorities and changes within DOT, these activities are no longer considered part of CCRI.

Note: Any minor discrepancies within this table and between this table and others are due to rounding.

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U.S. DEPARTMENT OF AGRICULTURE

Program Title	FY 2006	FY 2007 Estimate	FY 2008 Request
USGCRP			
Global Carbon Cycle	10.3	10.2	11.2
Agricultural Research Service	2.6	2.4	1.8
Cooperative State Research, Education, and Extension Service	0.4	0.4	2.0
Economic Research Service	0.1	0.1	0.1
Forest Service	7.2	7.3	7.3
Water Cycle	5.4	5.3	4.9
Agricultural Research Service	4.0	3.8	3.4
Forest Service	1.4	1.5	1.5
Land-Use / Land-Cover Change	1.3	1.3	0.1
Cooperative State Research, Education, and Extension Service	1.3	1.3	0.1
Understanding Atmospheric Composition and Chemistry	18.3	17.2	15.9
Agricultural Research Service	18.3	17.2	15.9
Understanding Ecosystems Changes	15.5	14.9	14.5
Agricultural Research Service	11.8	11.1	10.4
Cooperative State Research, Education, and Extension Service	0.2	0.2	0.5
Forest Service	3.5	3.6	3.6
Support the UV-B Monitoring Network	2.4	2.4	2.4
Cooperative State Research, Education, and Extension Service	2.4	2.4	2.4
Other National Research Initiative	0.2	0.1	0.4
Cooperative State Research, Education, and Extension Service	0.2	0.1	0.4
USGCRP TOTAL	53.4	51.4	49.4
CCRI			
Carbon Cycle Research (ARS)	0.6	0.6	0.6
Carbon Cycle Research (FS)	3.3	3.5	3.5
Carbon Inventory and Analysis (FS)	1.1	1.1	1.1
Carbon Management Research (FS)	1.6	1.9	1.9
Regional and Sectoral Impacts of Climate Change (ARS)	1.0	0.9	0.9
CCRI TOTAL	7.6	8.0	8.0
Department of Agriculture Total President's Request	61.0	59.4	57.4



Mapping of Budget Request to Appropriations Legislation. In the interim Appropriations acts, Department of Agriculture CCSP activities are funded under Title I—Agricultural Programs, within the ARS, CSREES Research and Education Activities, and ERS accounts; and under Title II—Conservation Programs, within the NRCS Conservation Operations account. In the interim Appropriations acts, U.S. Department of Agriculture CCSP activities are funded in the USDA FS section under Title II—Related Agencies, within the FS Forest Research account.

DEPARTMENT OF COMMERCE

DOC	Program Title	FY 2006	FY 2007 Estimate	FY 2008 Request
USGCRP				
NOAA	Laboratories and Cooperative Institutes	45.8	42.6	42.7
NOAA	Competitive Research Program	70.6	70.6	86.5
NOAA	Climate Data and Information	2.4	4.4	8.2
NOAA	Climate Operations	0.4	0.9	0.9
NOAA	Climate Regimes and Ecosystem Productivity	1.5	1.5	2.0
NOAA	Operational Climate Programs	80.1	70.1	53.7
NIST	Measurements and Standards for the CCSP	0.0	0.0	5.0
USGCRP TOTAL		200.9	190.0	199.0
CCRI				
NOAA	Competitive Research Program	34.1	45.7	45.8
CCRI TOTAL		34.1	45.7	45.8
Department of Commerce Total		235.0	235.7	
President's Request				244.8

Notes:

- 1) Starting in FY 2006, funding to DOC/NOAA's Laboratories was included as part of DOC/NOAA CCSP activities. This is a result of the evolution of NOAA's role in CCSP.
- 2) DOC/NOAA previously reported its climate research activities under its Office of Oceanic and Atmospheric Research (OAR) line office and the National Marine Fisheries Service (NMFS) line office. For FY 2008, NOAA made a decision to report activities for the NOAA climate strategic goal, as defined in the NOAA Strategic Plan (2005), to ensure consistent reporting and provide the most accurate picture of its climate funding to date. The climate goal includes both research and operations funding under the following offices: OAR, NMFS, the National Weather Service, and the National Environmental Satellite, Data, and Information Service.
- 3) Past reports have erroneously presented all of DOC/NOAA's CCSP funding in the Operations, Research, and Facilities (ORF) account. Climate-related activities have been and continue to be funded in both the ORF account and the Procurement, Acquisition, and Construction (PAC) account.
- 4) In FY 2008, DOC includes funding for new measurement and standards-related activities that DOC/NIST will undertake to support CCSP.



Mapping of Budget Request to Appropriations Legislation. In Appropriations Committee reports, funding for National Oceanic and Atmospheric Administration CCSP activities is specified in the Laboratories and Cooperative Institutes, Competitive Research Programs, Climate Operations, and Climate Data and Information lines of the Oceanic and Atmospheric Research budget; in the Climate Regimes and Ecosystem Productivity line of the National Marine Fisheries Service budget; the Data Centers and Information Services line of the National Environmental Satellite, Data, and Information Service (NESDIS) budget; and the Local Warnings and Forecasts and Central Forecast Guidance lines of the National Weather Service (NWS) budget within NOAA's Operations, Research, and Facilities account. In addition, a portion of NOAA's climate funding is found within the Procurement, Acquisition, and Construction account for NESDIS and NWS. Funding for National Institute of Standards and Technology CCSP activities is specified in the Scientific and Technical Research and Services account.

Appendix B

DEPARTMENT OF ENERGY

Program Title	FY 2006	FY 2007 Estimate	FY 2008 Request
USGCRP			
Climate Change Modeling	12.7	13.0	20.3
Climate Forcing	67.6	69.2	69.3
Climate Change Response	22.1	20.2	16.4
USGCRP TOTAL	102.4	102.4	106.0
CCRI			
Atmospheric Radiation Measurement Program	5.7	5.7	5.6
Climate Modeling	14.3	12.2	12.2
Carbon Cycle	3.1	2.9	2.9
Integrated Assessment Research	4.8	3.0	3.0
CCRI TOTAL	27.9	23.8	23.7
Department of Energy Total President's Request	130.3	126.2	129.7



Mapping of Budget Request to Appropriations Legislation. In the Appropriations Committee reports, Department of Energy CCSP activities are funded under Title III—Department of Energy, within the Energy Supply, Research, and Development Activities account. Also in these Appropriations Committee reports, funding for Department of Energy CCSP activities is included as part of the appropriation for Biological and Environmental Research.

DEPARTMENT OF HEALTH AND HUMAN SERVICES

HHS	Program Title	FY 2006	FY 2007 Estimate	FY 2008 Request
USGCRP				
NCI	Health Effects of UV Radiation	36.0	36.0	35.0
NIEHS	Human Health Effects of Exposure	13.0	13.0	13.0
NIAMS	Health Effects of UV Radiation	1.0	1.0	1.0
USGCRP TOTAL		50.0	50.0	49.0
Department of Health and Human Services Total President's Request		50.0	50.0	49.0



Mapping of Budget Request to Appropriations Legislation. In the Appropriations Committee reports, Department of Health and Human Services CCSP activities are funded under the National Institutes of Health section of Title II—Department of Health and Human Services.

DEPARTMENT OF THE INTERIOR

DOI	Program Title	FY 2006	FY 2007 Estimate	FY 2008 Request
USGCRP				
USGS	Earth Surface Dynamics	4.5	4.4	4.4
USGS	Global Change Hydrology (Hydroclimatology)	5.0	5.4	5.4
USGS	Land Characterization Research and Applications	5.6	5.4	5.4
USGS	Satellite Data Management and Dissemination	6.9	6.6	6.6
USGS	Terrestrial and Coastal Ecosystem Changes	0.3	0.3	0.3
USGS	Water Energy and Biogeochemical Budgets (WEBB)	4.5	4.3	4.3
USGCRP TOTAL		26.8	26.4	26.4
Department of the Interior Total President's Request		26.8	26.4	26.4



Mapping of Budget Request to Appropriations Legislation. In the Appropriations Committee reports, Department of the Interior CCSP activities are funded under Title I—Department of the Interior. Funding for U.S. Geological Survey CCSP programs is included within the USGS Survey, Investigations, and Research account.

Appendix B

DEPARTMENT OF TRANSPORTATION

Program Title	FY 2006	FY 2007 Estimate	FY 2008 Request
USGCRP			
Partnership for Air Transportation Noise and Emissions Reduction (PARTNER)	0.3	0.3	0.5
USGCRP TOTAL	0.3	0.3	0.5
CCRI			
DOT-wide Climate Change Center	0.6	0.7	0.7
CCRI TOTAL	0.6	0.7	0.7
Department of Transportation Total President's Request	0.9	1.0	1.2

Notes:

- 1) The 2006 and 2007 funding for Federal Highway Administration – Federal-Aid Highways was less than \$500,000.
- 2) The 2006 and 2007 funding for Federal Aviation Administration – Research, Engineering, and Development was less than \$500,000.
- 3) Federal Transit Administration - Research and University Research Centers is FTA's support for DOT's Center for Climate Change. This program has been provided funding in the past; however, it was not reported because funding has been less than \$500,000.
- 4) Activities in the Federal Aviation Administration – Research, Engineering, and Development account have been included under CCRI in past. Due to changes in CCSP/CCRI activities and priorities and changes within DOT, these activities are no longer considered part of CCRI.



Mapping of Budget Request to Appropriations Legislation. Since 2000, the Department's climate change research has been funded by contributions from eight of DOT's operating administrations and the Office of the Secretary.

U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT

Program Title	FY 2006	FY 2007 Estimate	FY 2008 Request
CCRI			
Famine Early Warning System Network (FEWS NET)	13.0	14.0	13.0
CCRI TOTAL	13.0	14.0	13.0
U.S. Agency for International Development Total	13.0	14.0	
President's Request			13.0



Mapping of Budget Request to Appropriations Legislation. In the Appropriations Committee reports, U.S. Agency for International Development CCSP activities are funded under Title II—Bilateral Economic Assistance: United States Agency for International Development.

ENVIRONMENTAL PROTECTION AGENCY

Program Title	FY 2006	FY 2007 Estimate	FY 2008 Request
USGCRP			
Air Quality Research and Assessment	7.2	5.9	6.2
Ecosystem Research and Assessment	6.1	4.0	4.4
Human Health Research and Assessment	0.2	1.5	1.6
Water Quality Research and Assessment	0.4	0.3	0.5
Research and Assessments of the Integrated Effects of Global Change	4.7	4.5	4.2
USGCRP TOTAL	18.6	16.2	16.9
Environmental Protection Agency Total	18.6	16.2	
President's Request			16.9

Note:

1) Entries given in FY 2006 and FY 2007 for EPA are “enacted” budgetary amounts.

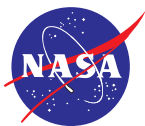


Mapping of Budget Request to Appropriations Legislation. In the Appropriations Committee reports, Environmental Protection Agency CCSP activities are funded under the EPA section of Title III—Independent Agencies, within the Science and Technology account. Appropriations Committee report language may specify more directly the funding for global change research.

Appendix B

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Program Title	FY 2006	FY 2007 Estimate	FY 2008 Request
USGCRP			
Atmospheric Composition	85.1	79.9	77.0
Climate Variability	85.4	80.6	83.4
Carbon Cycle	50.6	46.2	48.9
Water Cycle	94.4	93.9	92.9
Ecosystems	45.3	39.7	40.1
Land-Cover / Land-Use Change	22.0	20.3	19.7
Human Contributions and Responses	38.8	28.4	28.1
USGCRP Scientific Research Sub-Total	421.6	389.0	390.1
Atmospheric Composition	51.6	48.9	50.7
Climate Variability	137.3	183.9	168.8
Carbon Cycle	84.0	141.3	119.3
Water Cycle	96.5	106.8	174.5
Ecosystems	36.1	41.4	47.4
Land-Cover / Land-Use Change	30.3	43.0	57.7
USGCRP Space-Based Observations Sub-Total	435.8	565.3	618.4
USGCRP TOTAL	857.4	954.3	1,008.5
CCRI			
Atmospheric Composition	2.4	2.6	2.7
Climate Variability	4.6	4.8	4.9
Carbon Cycle	6.3	6.5	6.6
Water Cycle	6.2	6.4	6.4
Ecosystems	1.9	2.1	2.2
Land-Cover / Land-Use Change	0.9	1.1	1.2
Human Contributions and Responses	16.1	11.6	11.4
CCRI Scientific Research Sub-Total	38.4	35.1	35.4
Atmospheric Composition	28.3	46.8	20.1
Climate Variability	28.3	46.8	20.1
CCRI Space-Based Observations Sub-Total	56.6	93.6	40.2
CCRI TOTAL	95.0	128.7	75.6
National Aeronautics and Space Administration Total	952.4	1,083.0	
President's Request			1,084.1



Mapping of Budget Request to Appropriations Legislation. In the Appropriations Committee reports, National Aeronautics and Space Administration CCSP activities are funded under NASA Earth science and technology programs within Title III—Independent Agencies, as part of the Science, Aeronautics, and Technology account.



NASA Notes:

- 1) NASA has revised the set of programs and projects it counts as supporting CCSP goals. Beginning in FY 2006, the funding levels presented do not include the Ground Network and Research Range assets or Congressional interest items but do include activities not previously counted such as the NPOESS Preparatory Project, portions (33%) of the Landsat Data Continuity Mission (LDCM), and the Gravity Recovery and Climate Experiment (GRACE), as well as portions of the High-End Computing and Scientific Computing projects.
- 2) NASA has also revised the set of projects it counts as supporting CCRI. The funding levels presented include activities that were previously not counted, including portions of the High-End Computing and Scientific Computing projects. The funding decrease from 2007 to 2008 is primarily due to the planned ramp-down of resources for the Glory mission, a major contributor to NASA CCRI funding, which is completing development in preparation for a December 2008 launch.
- 3) Prior to FY 2007, NASA linked the Applied Sciences and the Education and Outreach programs to USGCRP Focus Areas, but not to CCSP research elements; the current table identifies these programs as contributing to the CCSP Human Contributions and Responses element for the three fiscal years addressed.

NATIONAL SCIENCE FOUNDATION

Program Title	FY 2006	FY 2007 Estimate	FY 2008 Request
USGCRP			
Atmospheric Composition	19.5	20.7	20.7
Climate Variability and Change	74.3	78.4	79.4
Carbon Cycle	25.0	30.2	31.2
Water Cycle	18.0	16.4	17.4
Terrestrial and Marine Ecosystems	21.1	20.5	20.5
Land Use / Land Cover	2.8	2.8	2.8
Human Dimensions of Climate Change	11.2	11.2	11.2
USGCRP TOTAL	171.9	180.2	183.2
CCRI			
Carbon Fluxes and Cycle	10.0	10.0	10.0
Human Dimensions of Climate Change	5.0	5.0	5.0
Modeling Strategy	10.0	10.0	10.0
CCRI TOTAL	25.0	25.0	25.0
National Science Foundation Total	196.9	205.2	
President's Request			208.2



Mapping of Budget Request to Appropriations Legislation. In the Appropriations Committee reports, National Science Foundation CCSP activities are supported under the NSF section of Title III—Independent Agencies within the NSF Research and Related Expenses account.

Appendix B

SMITHSONIAN INSTITUTION

SI	Program Title	FY 2006	FY 2007 Estimate	FY 2008 Request
USGCRP				
NMNH	Archaeobiology Program (Human Ecology History)	0.3	0.3	0.3
NMNH	Paleoecological Effects of Climate Change, including Evolution of Terrestrial Ecosystems	0.9	0.9	0.9
NMNH	Global Volcanism Program	0.2	0.2	0.2
NMNH	Human Origins Program (Human Ecological History)	0.3	0.3	0.3
NMNH	Nile Delta Subsidence / Sea-Level Rise	0.2	0.2	0.2
NMNH	Tropical Biodiversity Program	0.6	0.6	0.6
SERC	Ecological Effects of Ultraviolet Radiation	0.2	0.2	0.2
SERC	Effects of Increasing Atmospheric CO ₂ on Ecosystems	0.3	0.3	0.3
STRI	Temperate and Tropical Forest Canopy Biology	0.4	0.4	0.4
STRI	Tropical Forest Science	0.9	0.9	0.9
STRI	Biodynamics of Forest Fragments	0.1	0.1	0.1
STRI	Tropical Agroforestry	0.2	0.2	0.2
NZP	Migratory Birds	0.3	0.3	0.3
NZP	Predicting Species Responses	0.7	0.7	0.7
MAB	Monitoring and Assessment of Biodiversity (MAB) Program	0.1	0.1	0.1
USGCRP TOTAL		5.7	5.7	5.7
Smithsonian Institution Total		5.7	5.7	
President's Request				5.7



Mapping of Budget Request to Appropriations Legislation. In the Appropriations Committee reports, Smithsonian Institution CCSP activities are funded in the Smithsonian section of Title II—Related Agencies, within the Salaries and Expenses account. Appropriations Committee reports specify funding for a Sciences line item component of this account, which includes CCSP programs.

NOTES