

CLIMATE CHANGE SCIENCE PROGRAM BUDGET TABLES

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

- Department of Agriculture (USDA)
- Department of Commerce / National Oceanic and Atmospheric Administration (DOC/NOAA)
- Department of Defense (DOD)
- Department of Energy (DOE)
- Department of Health and Human Services (HHS)
- Department of the Interior / U.S. Geological Survey (DOI/USGS)
- 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:

- Table 1 shows the CCSP FY 2002-2005 budget by agency, with USGCRP and CCRI budgets listed separately and also combined in a single CCSP total.
- Table 2 shows the CCSP FY 2002-2005 scientific research budget by USGCRP research element.
- Table 3 shows the FY 2003-2005 budget for the Climate Change Research Initiative.
- Subsequent tables show, for each CCSP participating agency, the FY 2002-2005 budget for both USGCRP and CCRI activities.

**TABLE 1. CLIMATE CHANGE SCIENCE PROGRAM:
FY 2002-2005 BUDGET BY AGENCY**

[DISCRETIONARY BUDGET AUTHORITY IN \$M]

| Agency | FY 2002 | | FY 2003 | | FY 2004 Estimate | | FY 2005 Request | |
|--------------------------------------|--------------|----------|--------------|-----------|------------------|------------|-----------------|--------------|
| | USGCRP | CCRI | USGCRP | CCRI | USGCRP | CCRI | USGCRP | CCRI |
| USDA | 57 | 0 | 60 | 2 | 59 | 6 | 58 | 13 |
| DOC / NOAA | 101 | 0 | 99 | 18 | 89 | 35 | 78 | 64 |
| DOE | 117 | 0 | 112 | 3 | 104 | 26 | 105 | 25 |
| HHS | 56 | 0 | 61 | 0 | 63 | 0 | 65 | 0 |
| DOI / USGS | 28 | 0 | 28 | 0 | 29 | 0 | 29 | 0 |
| DOS | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| DOT | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 3 |
| USAID | 6 | 0 | 6 | 0 | 0 | 6 | 0 | 6 |
| EPA | 21 | 0 | 22 | 0 | 21 | 0 | 21 | 0 |
| NASA | 243 | 0 | 240 | 0 | 268 | 41 | 278 | 43 |
| NSF | 188 | 0 | 188 | 15 | 188 | 25 | 185 | 25 |
| SI | 6 | 0 | 6 | 0 | 6 | 0 | 6 | 0 |
| Scientific Research Total | 823 | 0 | 822 | 38 | 827 | 144 | 825 | 180 |
| NASA Space-Based Observations | 847 | 0 | 903 | 3 | 1,001 | 24 | 893 | 57 |
| CCSP Total | 1,670 | 0 | 1,725 | 41 | 1,828 | 168 | 1,996 | |
| President's Request | | | | | | | 1,718 | 237 |
| | | | | | | | | 1,955 |

Notes:

- 1) Starting in FY 2004, NASA is implementing full-cost practices to improve the cost-effectiveness of mission performance. NASA program budgets are now calculated in full-cost mode, meaning institutional activities such as personnel and facilities (which had been held in separate centralized accounts) are now included in each benefiting program's budget, thus reflecting the true cost of each program and enabling managers to make better economic decisions.
- 2) Because Department of Defense (DOD) research activities are conducted for defense-related missions, they are not included in the CCSP budget cross-cut. Related DOD research does contribute to CCSP goals, however.
- 3) 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.
- 4) Amounts are rounded to the nearest million.

O U R C H A N G I N G P L A N E T

TABLE 2. CLIMATE CHANGE SCIENCE PROGRAM: FY 2002-2005 SCIENTIFIC RESEARCH BUDGET BY USGCRP RESEARCH ELEMENT

[DISCRETIONARY BUDGET AUTHORITY IN \$M]

| Agency | Atmospheric Composition | Climate Variability | Carbon Cycle | Water Cycle | Ecosystems | Land Use | Human Contributions | TOTAL |
|---|----------------------------|------------------------|-----------------|----------------|--------------|-------------|------------------------|--------------|
| FY 2005 USGCRP Research Elements | | | | | | | | |
| USDA | 20.1 | 0.0 | 11.7 | 6.7 | 17.4 | 2.3 | 0.0 | 58.2 |
| DOC / NOAA | 8.8 | 47.5 | 6.6 | 9.8 | 0.0 | 0.0 | 5.4 | 78.1 |
| DOE | 12.6 | 55.1 | 13.7 | 0.0 | 18.7 | 0.0 | 5.1 | 105.2 |
| HHS | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 65.3 | 65.3 |
| DOI / USGS | 0.0 | 10.4 | 5.4 | 4.6 | 5.5 | 3.1 | 0.0 | 29.0 |
| EPA | 7.4 | 0.0 | 0.0 | 0.0 | 7.8 | 0.0 | 5.5 | 20.7 |
| NASA | 53.3 | 66.2 | 51.2 | 63.2 | 28.9 | 15.5 | 0.0 | 278.3 |
| NSF | 16.2 | 86.5 | 24.3 | 12.3 | 28.7 | 0.0 | 17.2 | 185.2 |
| SI | 0.0 | 1.3 | 0.3 | 0.0 | 3.3 | 0.8 | 0.0 | 5.7 |
| FY 2005 Total | 118.4 | 267.0 | 113.2 | 96.6 | 110.3 | 21.7 | 98.5 | 825.7 |
| FY 2004 USGCRP Research Elements | | | | | | | | |
| USDA | 20.2 | 0.0 | 11.7 | 6.7 | 18.0 | 2.3 | 0.0 | 58.9 |
| DOC / NOAA | 9.6 | 52.4 | 6.8 | 10.2 | 0.0 | 0.0 | 9.5 | 88.5 |
| DOE | 12.5 | 54.3 | 13.5 | 0.0 | 18.6 | 0.0 | 5.2 | 104.1 |
| HHS | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 63.4 | 63.4 |
| DOI / USGS | 0.0 | 10.4 | 5.4 | 4.6 | 5.5 | 3.1 | 0.0 | 29.0 |
| EPA | 8.4 | 0.0 | 0.0 | 0.0 | 7.0 | 0.0 | 5.7 | 21.1 |
| NASA | 57.3 | 67.5 | 45.8 | 50.2 | 30.5 | 16.9 | 0.0 | 268.2 |
| NSF | 16.7 | 88.1 | 24.3 | 12.3 | 29.8 | 0.0 | 17.2 | 188.4 |
| SI | 0.0 | 1.3 | 0.3 | 0.0 | 3.3 | 0.8 | 0.0 | 5.7 |
| FY 2004 Total | 124.7 | 274.0 | 107.8 | 84.0 | 112.7 | 23.1 | 101.0 | 827.3 |
| FY 2003 USGCRP Research Elements | | | | | | | | |
| USDA | 20.2 | 0.0 | 13.4 | 6.5 | 18.2 | 1.4 | 0.0 | 59.7 |
| DOC / NOAA | 10.4 | 61.2 | 7.1 | 10.8 | 0.0 | 0.0 | 9.0 | 98.5 |
| DOE | 11.5 | 69.0 | 12.7 | 0.0 | 11.7 | 0.0 | 7.0 | 111.9 |
| HHS | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 61.2 | 61.2 |
| DOI / USGS | 0.0 | 10.1 | 4.4 | 4.6 | 5.5 | 3.1 | 0.0 | 27.7 |
| USAID | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 6.0 | 6.0 |
| EPA | 9.7 | 0.0 | 0.0 | 0.0 | 7.1 | 0.0 | 5.6 | 22.4 |
| NASA | 53.0 | 62.2 | 39.4 | 43.4 | 33.7 | 8.7 | 0.0 | 240.4 |
| NSF | 16.7 | 88.1 | 24.3 | 12.3 | 29.8 | 0.0 | 17.2 | 188.4 |
| SI | 0.0 | 1.3 | 0.3 | 0.0 | 3.3 | 0.8 | 0.0 | 5.7 |
| FY 2003 Total | 121.5 | 291.9 | 101.6 | 77.6 | 109.3 | 14.0 | 106.0 | 821.9 |
| FY 2002 USGCRP Research Elements | | | | | | | | |
| USDA | 19.9 | 0.0 | 13.1 | 6.1 | 16.5 | 1.0 | 0.4 | 57.0 |
| DOC / NOAA | 10.4 | 62.1 | 7.2 | 10.9 | 0.0 | 0.0 | 10.3 | 100.9 |
| DOE | 13.2 | 70.4 | 13.0 | 0.0 | 12.8 | 0.0 | 7.9 | 117.3 |
| HHS | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 55.7 | 55.7 |
| DOI / USGS | 0.0 | 10.1 | 4.0 | 5.3 | 5.5 | 3.1 | 0.0 | 28.0 |
| USAID | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 6.0 | 6.0 |
| EPA | 0.0 | 20.0 | 0.0 | 0.0 | 1.4 | 0.0 | 0.0 | 21.4 |
| NASA | 51.5 | 64.9 | 42.0 | 51.5 | 33.0 | 0.0 | 0.0 | 242.9 |
| NSF | 16.7 | 92.1 | 21.5 | 12.7 | 30.1 | 0.0 | 14.7 | 187.8 |
| SI | 0.0 | 1.3 | 0.3 | 0.0 | 3.3 | 0.8 | 0.0 | 5.7 |
| FY 2002 Total | 111.7 | 320.9 | 101.1 | 86.5 | 102.6 | 4.9 | 95.0 | 822.7 |

Notes: Minor differences between Tables 1 and 2 totals are due to rounding. Refer to Table 1 Notes for more detail.

FY 2004 and 2005 Budget Tables

TABLE 3. FY 2003-2005 BUDGET FOR THE CLIMATE CHANGE RESEARCH INITIATIVE (CCRI)

| Agency | Program Title | FY 2003 | FY 2004 Estimate | FY 2005 Request |
|--|--|------------|---------------------|--------------------|
| USDA | Agricultural Research Service (ARS) Carbon Cycle Research | 0.0 | 0.6 | 2.0 |
| | ARS Regional and Sectoral Impacts of Climate Change | 0.2 | 0.2 | 1.2 |
| | ARS Strengthening Basic Climate Change Technology Research | 0.0 | 0.5 | 1.6 |
| | ARS Technology for Measuring / Monitoring Gross and Net Emissions | 0.0 | 0.0 | 1.8 |
| | Forest Service Carbon Cycle Research | 0.0 | 3.3 | 3.6 |
| | Forest Service Carbon Management Research | 1.5 | 1.8 | 3.1 |
| U.S. Department of Agriculture CCRI Total | | 1.7 | 6.4 | 13.3 |
| DOC / | Aerosols Climate Interactions | 2.0 | 2.0 | 8.6 |
| NOAA | Carbon Cycle and Monitoring | 2.0 | 4.4 | 11.1 |
| | Climate Modeling Center | 5.0 | 8.4 | 8.9 |
| | Global Climate Atmospheric Observing System | 3.9 | 3.9 | 4.0 |
| | Climate Variability and Predictability | 0.0 | 6.6 | 6.7 |
| | Global Ocean Observing System | 4.0 | 9.1 | 20.5 |
| | Regional Integrated Sciences and Assessments | 1.0 | 1.0 | 1.0 |
| | Climate Data and Information | 0.0 | 0.0 | 3.4 |
| | Department of Commerce CCRI Total | | 17.9 | 35.4 |
| DOE | CCRI Climate Modeling | 0.0 | 19.7 | 19.4 |
| | CCRI Carbon Cycle | 3.1 | 2.9 | 2.9 |
| | CCRI Integrated Assessment | 0.0 | 2.9 | 3.0 |
| Department of Energy CCRI Total | | 3.1 | 25.5 | 25.3 |
| DOS | Intergovernmental Panel on Climate Change | 0.0 | 1.0 | 1.0 |
| Department of State CCRI Total | | 0.0 | 1.0 | 1.0 |
| DOT | Energy Efficiency and Climate Change Implications for Transportation | 0.0 | 4.0 | 3.0 |
| Department of Transportation CCRI Total | | 0.0 | 4.0 | 3.0 |

TABLE 3 (CONTINUED)

| Agency | Program Title | FY 2003 | FY 2004 Estimate | FY 2005 Request |
|---|---|-------------|------------------|-----------------|
| USAID | Famine Early Warning System Network (FEWS NET) | 0.0 | 6.0 | 6.0 |
| U.S. Agency for International Development CCRI Total | | 0.0 | 6.0 | 6.0 |
| NASA | Terrestrial and Marine Ecosystems | 0.0 | 3.6 | 3.6 |
| Science ^a | Land-Cover and Land-Use Change | 0.0 | 3.6 | 3.6 |
| | Carbon Cycle | 0.0 | 3.6 | 3.6 |
| | Water Cycle | 0.0 | 3.6 | 3.6 |
| | Climate Variability | 0.0 | 3.6 | 3.6 |
| | Atmospheric Composition | 0.0 | 3.6 | 3.6 |
| | Scientific Computing and Computational Technology | 0.0 | 4.8 | 4.0 |
| | Atmospheric Composition (Non-CO ₂ Forcing) | 0.0 | 8.5 | 9.7 |
| | Climate Variability (Polar Feedbacks) | 0.0 | 6.1 | 7.3 |
| NASA | Climate Variability (Net Primary Productivity Data Set) | 2.0 | 3.0 | 3.0 |
| Space | Carbon Cycle | 1.0 | 0.0 | 0.0 |
| | Atmospheric Composition | 0.0 | 12.2 | 54.1 |
| | Data System Development | 0.0 | 8.5 | 0.0 |
| National Aeronautics and Space Administration CCRI Total | | 3.0 | 64.7 | 99.7 |
| NSF | Black Carbon Measurement | 1.0 | 1.0 | 0.0 |
| | Carbon Fluxes and Cycle | 7.0 | 7.0 | 10.0 |
| | Human Dimensions of Climate Change | 5.0 | 5.0 | 5.0 |
| | Sensor Development | 2.0 | 2.0 | 0.0 |
| | Modeling | 0.0 | 10.0 | 10.0 |
| National Science Foundation CCRI Total | | 15.0 | 25.0 | 25.0 |
| Total Climate Change Research Initiative | | 40.7 | 168.0 | |
| President's Request | | | | 237.5 |

^a Starting in FY 2004, NASA is implementing full-cost practices to improve the cost-effectiveness of mission performance.

FY 2004 and 2005 Budget Tables

U.S. DEPARTMENT OF AGRICULTURE

| USDA | Program Title | FY 2002 | FY 2003 | FY 2004 Estimate | FY 2005 Request |
|--|--|-------------|-------------|---------------------------|-----------------|
| USGCRP | | | | | |
| Global Carbon Cycle | | 13.1 | 13.4 | 11.7 | 11.7 |
| ARS | Agricultural Research Service | 1.4 | 1.6 | 1.6 | 1.6 |
| CSREES | Coop. State Research, Education, and Extension Service | 1.5 | 1.7 | 2.8 | 2.8 |
| ERS | Economic Research Service | 0.2 | 0.2 | 0.1 | 0.1 |
| FS | Forest Service | 10.0 | 9.9 | 7.2 | 7.2 |
| Water Cycle | | 6.1 | 6.5 | 6.7 | 6.7 |
| ARS | Agricultural Research Service | 2.6 | 3.5 | 3.5 | 3.5 |
| CSREES | Coop. State Research, Education, and Extension Service | 1.5 | 1.0 | 1.8 | 1.8 |
| FS | Forest Service | 2.0 | 2.0 | 1.4 | 1.4 |
| Land-Use / Land-Cover Change | | 1.0 | 1.4 | 2.3 | 2.3 |
| CSREES | Coop. State Research, Education, and Extension Service | 1.0 | 1.4 | 2.3 | 2.3 |
| Understanding Atmospheric Composition and Chemistry | | 18.5 | 18.0 | 18.2 | 17.6 |
| ARS | Agricultural Research Service | 17.9 | 18.0 | 18.2 | 17.6 |
| CSREES | Coop. State Research, Education, and Extension Service | 0.6 | 0.0 | 0.0 | 0.0 |
| Understanding Ecosystems Changes | | 16.5 | 17.2 | 16.3 | 15.7 |
| ARS | Agricultural Research Service | 8.4 | 11.3 | 11.4 | 10.7 |
| CSREES | Coop. State Research, Education, and Extension Service | 3.0 | 0.8 | 1.4 | 1.4 |
| ERS | Economic Research Service | 0.2 | 0.2 | 0.0 | 0.0 |
| FS | Forest Service | 4.9 | 4.9 | 3.5 | 3.6 |
| Understanding the Human Dimensions of Global Change | | 0.4 | 0.0 | 0.0 | 0.0 |
| CSREES | Coop. State Research, Education, and Extension Service | 0.4 | 0.0 | 0.0 | 0.0 |
| Support the UV-B Monitoring Network | | 1.4 | 2.2 | 2.0 | 2.5 |
| CSREES | Coop. State Research, Education, and Extension Service | 1.4 | 2.2 | 2.0 | 2.5 |
| Other National Research Initiative | | 0.0 | 1.0 | 1.7 | 1.7 |
| CSREES | Coop. State Research, Education, and Extension Service | 0.0 | 1.0 | 1.7 | 1.7 |
| USGCRP Total | | 57.0 | 59.7 | 58.9 | 58.2 |
| CCRI | | | | | |
| ARS | Carbon Cycle Research | 0.0 | 0.0 | 0.6 | 2.0 |
| ARS | Regional and Sectoral Impacts of Climate Change | 0.0 | 0.2 | 0.2 | 1.2 |
| ARS | Strengthening Basic Climate Change Tech. Research | 0.0 | 0.0 | 0.5 | 1.6 |
| ARS | Tech. for Measuring / Monitoring Gross and Net Emissions | 0.0 | 0.0 | 0.0 | 1.8 |
| FS | Carbon Cycle Research | 0.0 | 0.0 | 3.3 | 3.6 |
| FS | Carbon Management Research | 0.0 | 1.5 | 1.8 | 3.1 |
| CCRI Total | | 0.0 | 1.7 | 6.4 | 13.3 |
| Department of Agriculture Total | | 57.0 | 61.4 | 65.3 | |
| President's Request | | | | | 71.5 |
| ARS | Agricultural Research Service | | ERS | Economic Research Service | |
| CSREES | Cooperative State Research, Education, and Extension Service | | FS | Forest Service | |

O U R C H A N G I N G P L A N E T



Mapping of Budget Request to Appropriations Legislation. In the Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Bill, 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 Interior and Related Agencies Appropriations Bill, 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 / NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

| DOC | Program Title | FY 2002 | FY 2003 | FY 2004 Estimate | FY 2005 Request |
|-------------------------------------|---|--------------|--------------|------------------|-----------------|
| USGCRP | | | | | |
| NOAA | Atmospheric Composition and Climate Program | 7.9 | 7.9 | 7.1 | 6.9 |
| NOAA | Climate and Societal Interactions | 8.5 | 7.3 | 6.9 | 3.6 |
| NOAA | Climate Change Data, Detection, and Assessments | 7.6 | 7.4 | 7.0 | 5.5 |
| NOAA | Climate Dynamics and Experimental Prediction | 18.8 | 19.1 | 18.2 | 17.6 |
| NOAA | Climate Variability and Predictability | 15.7 | 15.5 | 7.8 | 5.6 |
| NOAA | Global Carbon Cycle | 4.9 | 4.8 | 4.5 | 4.3 |
| NOAA | PACS/GAPP | 10.9 | 10.8 | 10.2 | 9.8 |
| NOAA | Climate Observations and Services | 26.6 | 25.7 | 26.8 | 24.8 |
| USGCRP Total | | 100.9 | 98.5 | 88.5 | 78.1 |
| CCRI | | | | | |
| NOAA | Aerosols Climate Interactions | 0.0 | 2.0 | 2.0 | 8.6 |
| NOAA | Carbon Cycle and Monitoring | 0.0 | 2.0 | 4.4 | 11.1 |
| NOAA | Climate Modeling Center | 0.0 | 5.0 | 7.9 | 8.9 |
| NOAA | Global Climate Atmospheric Observing System | 0.0 | 3.9 | 3.9 | 4.0 |
| NOAA | Climate Variability and Predictability | 0.0 | 0.0 | 6.6 | 6.7 |
| NOAA | Global Ocean Observing System | 0.0 | 4.0 | 9.1 | 20.5 |
| NOAA | Regional Integrated Sciences and Assessments | 0.0 | 1.0 | 1.0 | 1.0 |
| NOAA | Climate Data and Information | 0.0 | 0.0 | 0.0 | 3.4 |
| CCRI Total | | 0.0 | 17.9 | 34.9 | 64.2 |
| Department of Commerce Total | | 100.9 | 116.4 | 123.4 | |
| President's Request | | | | | 142.3 |

NOAA National Oceanic and Atmospheric Administration



Mapping of Budget Request to Appropriations Legislation. In the Departments of Commerce, Justice, and State, the Judiciary, and Related Agencies Appropriations Bill, NOAA activities are funded under Title II–Department of Commerce and Related Agencies, within the NOAA Operations, Research, and Facilities account. In Appropriations Committee reports, funding for NOAA CCSP activities is specified in the Climate and Global Change Program and Climate Observations and Services components of the Oceanic and Atmospheric Research budget.

FY 2004 and 2005 Budget Tables

DEPARTMENT OF ENERGY

| DOE | Program Title | FY 2002 | FY 2003 | FY 2004 Estimate | FY 2005 Request |
|-----------------------------------|--|--------------|--------------|------------------|-----------------|
| USGCRP | | | | | |
| BER | Climate and Hydrology | 70.4 | 68.9 | 54.3 | 55.1 |
| BER | Atmospheric Chemistry and Carbon Cycle | 26.2 | 24.3 | 26.0 | 26.3 |
| BER | Ecosystem Processes | 12.8 | 11.7 | 18.6 | 18.7 |
| BER | Human Interactions | 7.9 | 7.0 | 5.2 | 5.1 |
| USGCRP Total | | 117.3 | 111.9 | 104.1 | 105.2 |
| CCRI | | | | | |
| BER | CCRI Climate Modeling | 0.0 | 0.0 | 19.7 | 19.4 |
| BER | CCRI Carbon Cycle | 0.0 | 3.1 | 2.9 | 2.9 |
| BER | CCRI Integrated Assessment | 0.0 | 0.0 | 2.9 | 3.0 |
| CCRI Total | | 0.0 | 3.1 | 25.5 | 25.3 |
| Department of Energy Total | | 117.3 | 115.0 | 129.6 | |
| President's Request | | | | | 130.5 |

BER Biological and Environmental Research



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

O U R C H A N G I N G P L A N E T

DEPARTMENT OF HEALTH AND HUMAN SERVICES /
NATIONAL INSTITUTES OF HEALTH

| HHS | Program Title | FY 2002 | FY 2003 | FY 2004 Estimate | FY 2005 Request |
|--|---|-------------|-------------|------------------|-----------------|
| USGCRP | | | | | |
| NCI | Health Effects of UV Radiation | 32.0 | 35.1 | 36.5 | 37.6 |
| NEI | Health Effects of UV Radiation | 13.6 | 11.4 | 11.7 | 12.0 |
| NIEHS | Health Effects of UV Radiation and CFC Chemical Replacements | 9.7 | 13.5 | 14.0 | 14.4 |
| NIAMS | Health Effects of UV Radiation | 0.4 | 1.2 | 1.2 | 1.3 |
| USGCRP Total | | 55.7 | 61.2 | 63.4 | 65.3 |
| CCRI | | | | | |
| | None Reported | 0.0 | 0.0 | 0.0 | 0.0 |
| CCRI Total | | 0.0 | 0.0 | 0.0 | 0.0 |
| Department of Health and Human Services Total | | 55.7 | 61.2 | 63.4 | |
| President's Request | | | | | 65.3 |

NCI National Cancer Institute
NIAMS National Institute of Arthritis and Musculoskeletal
and Skin Diseases

NIEHS National Institute of Environmental Health Sciences
NEI National Eye Institute



Mapping of Budget Request to Appropriations Legislation. In the Departments of Labor, Health and Human Services, and Education and Related Agencies Appropriations Bill, 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.

FY 2004 and 2005 Budget Tables

DEPARTMENT OF THE INTERIOR / U.S. GEOLOGICAL SURVEY

| DOI | Program Title | FY 2002 | FY 2003 | FY 2004 Estimate | FY 2005 Request |
|---|------------------------|-------------|-------------|---------------------|--------------------|
| USGCRP | | | | | |
| USGS | Global Change Research | 28.0 | 27.7 | 29.0 | 29.0 |
| USGCRP Total | | 28.0 | 27.7 | 29.0 | 29.0 |
| CCRI | | | | | |
| | None Reported | 0.0 | 0.0 | 0.0 | 0.0 |
| CCRI Total | | 0.0 | 0.0 | 0.0 | 0.0 |
| Department of the Interior Total President's Request | | 28.0 | 27.7 | 29.0 | 29.0 |

USGS U.S. Geological Survey



Mapping of Budget Request to Appropriations Legislation. In the Interior and Related Agencies Appropriations Bill, 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.

DEPARTMENT OF STATE

| Program Title | FY 2002 | FY 2003 | FY 2004 Estimate | FY 2005 Request |
|--|------------|------------|---------------------|--------------------|
| USGCRP | | | | |
| None Reported | 0.0 | 0.0 | 0.0 | 0.0 |
| USGCRP Total | 0.0 | 0.0 | 0.0 | 0.0 |
| CCRI | | | | |
| Intergovernmental Panel on Climate Change | 0.0 | 0.0 | 1.0 | 1.0 |
| CCRI Total | 0.0 | 0.0 | 1.0 | 1.0 |
| Department of State Total President's Request | 0.0 | 0.0 | 1.0 | 1.0 |



Mapping of Budget Request to Appropriations Legislation. In the Foreign Operations, Export Financing, and Related Programs Appropriations Bill, Department of State CCSP activities are funded under Title IV—International Organizations and Programs account.

O U R C H A N G I N G P L A N E T

DEPARTMENT OF TRANSPORTATION

| Program Title | FY 2002 | FY 2003 | FY 2004 Estimate | FY 2005 Request |
|--|------------|------------|------------------|-----------------|
| USGCRP | | | | |
| None Reported | 0.0 | 0.0 | 0.0 | 0.0 |
| USGCRP Total | 0.0 | 0.0 | 0.0 | 0.0 |
| CCRI | | | | |
| Energy Efficiency and Climate Change Implications for Transportation | 0.0 | 0.0 | 4.0 | 3.0 |
| CCRI Total | 0.0 | 0.0 | 4.0 | 3.0 |
| Department of Transportation Total President's Request | 0.0 | 0.0 | 4.0 | 3.0 |



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 2002 | FY 2003 | FY 2004 Estimate | FY 2005 Request |
|--|------------|------------|------------------|-----------------|
| USGCRP | | | | |
| None Reported | 6.0 | 6.0 | 0.0 | 0.0 |
| USGCRP Total | 6.0 | 6.0 | 0.0 | 0.0 |
| CCRI | | | | |
| Famine Early Warning System Network (FEWS NET) | 0.0 | 0.0 | 6.0 | 6.0 |
| CCRI Total | 0.0 | 0.0 | 6.0 | 6.0 |
| U.S. Agency for International Development Total President's Request | 6.0 | 6.0 | 6.0 | 6.0 |



Mapping of Budget Request to Appropriations Legislation. In the Foreign Operations, Export Financing, and Related Programs Appropriations Bill, U.S. Agency for International Development CCSP activities are funded under Title II—Bilateral Economic Assistance: United States Agency for International Development.

FY 2004 and 2005 Budget Tables

ENVIRONMENTAL PROTECTION AGENCY

| Program Title | FY 2002 | FY 2003 | FY 2004 Estimate | FY 2005 Request |
|---|-------------|-------------|------------------|-----------------|
| USGCRP | | | | |
| Air Quality Research and Assessment | 0.0 | 7.9 | 7.0 | 7.4 |
| Ecosystem Research and Assessment | 0.0 | 7.0 | 6.5 | 7.3 |
| Human Health Research and Assessment | 0.0 | 0.2 | 0.3 | 0.2 |
| Water Quality Research and Assessment | 0.0 | 0.5 | 0.5 | 0.5 |
| UV Monitoring Network | 0.0 | 1.4 | 1.4 | 0.0 |
| Research and Assessments of the Integrated Effects of Global Change | 0.0 | 5.4 | 5.4 | 5.3 |
| Assessment of Consequences of Climate Variability and Change | 20.0 | 0.0 | 0.0 | 0.0 |
| Changes in Ecosystems | 1.4 | 0.0 | 0.0 | 0.0 |
| USGCRP Total | 21.4 | 22.4 | 21.1 | 20.7 |
| CCRI | | | | |
| None Reported | 0.0 | 0.0 | 0.0 | 0.0 |
| CCRI Total | 0.0 | 0.0 | 0.0 | 0.0 |
| Environmental Protection Agency Total | 21.4 | 22.4 | 21.1 | |
| President's Request | | | | 20.7 |



Mapping of Budget Request to Appropriations Legislation. In the Departments of Veterans Affairs and Housing and Urban Development, and Independent Agencies Appropriations Bill, 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.

O U R C H A N G I N G P L A N E T

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

| Program Title | FY 2002 | FY 2003 | FY 2004 Estimate | FY 2005 Request |
|--|----------------|----------------|------------------|-----------------|
| USGCRP | | | | |
| Carbon Cycle | 42.0 | 39.4 | 45.8 | 51.2 |
| Ecosystems | 33.0 | 33.7 | 30.5 | 28.9 |
| Water Cycle | 51.5 | 43.4 | 50.2 | 63.2 |
| Climate Variability | 64.9 | 62.2 | 67.5 | 66.2 |
| Atmospheric Composition | 51.5 | 53.0 | 57.3 | 53.3 |
| Land-Cover and Land-Use Change | 0.0 | 8.7 | 16.9 | 15.5 |
| USGCRP Global Change Science Program Total | 242.9 | 240.4 | 268.2 | 278.3 |
| Carbon Cycle | 114.9 | 139.5 | 148.4 | 191.6 |
| Ecosystems | 92.5 | 92.6 | 108.4 | 95.6 |
| Water Cycle | 235.7 | 240.2 | 236.8 | 194.0 |
| Climate Variability | 211.7 | 213.6 | 208.3 | 227.0 |
| Atmospheric Composition | 192.5 | 200.3 | 178.8 | 90.5 |
| Land-Cover and Land-Use Change | 0.0 | 16.9 | 120.2 | 94.4 |
| USGCRP Global Change Observation Program Total | 847.3 | 903.1 | 1000.9 | 893.1 |
| USGCRP Global Change Research Program Total | 1,090.2 | 1,143.5 | 1,269.1 | 1,171.4 |
| CCRI | | | | |
| Terrestrial and Marine Ecosystems | 0.0 | 0.0 | 3.6 | 3.6 |
| Land-Cover and Land-Use Change | 0.0 | 0.0 | 3.6 | 3.6 |
| Carbon Cycle | 0.0 | 0.0 | 3.6 | 3.6 |
| Water Cycle | 0.0 | 0.0 | 3.6 | 3.6 |
| Climate Variability | 0.0 | 0.0 | 3.6 | 3.6 |
| Atmospheric Composition | 0.0 | 0.0 | 3.6 | 3.6 |
| Scientific Computing and Computational Technology | 0.0 | 0.0 | 4.8 | 4.0 |
| Atmospheric Composition (Non-CO ₂ Forcing) | 0.0 | 0.0 | 8.5 | 9.7 |
| Climate Variability (Polar Feedbacks) | 0.0 | 0.0 | 6.1 | 7.3 |
| CCRI Global Change Science Program | 0.0 | 0.0 | 41.0 | 42.6 |
| Climate Variability (Net Primary Productivity Data Set) | 0.0 | 2.0 | 3.0 | 3.0 |
| Carbon Cycle | 0.0 | 1.0 | 0.0 | 0.0 |
| Atmospheric Composition | 0.0 | 0.0 | 12.2 | 54.1 |
| Data System Development | 0.0 | 0.0 | 8.5 | 0.0 |
| CCRI Global Change Observation Program Total | 0.0 | 3.0 | 23.7 | 57.1 |
| CCRI Total | 0.0 | 3.0 | 64.7 | 99.7 |
| National Aeronautics and Space Administration Total | 1,090.2 | 1,146.5 | 1,333.8 | |
| President's Request | | | | 1,271.1 |

FY 2004 and 2005 Budget Tables



Starting in FY 2004, NASA is implementing full-cost practices to improve the cost effectiveness of mission performance. NASA program budgets are now calculated in full-cost mode, meaning institutional activities such as personnel and facilities (which had been held in separate centralized accounts) are now included in each benefiting program's budget, thus reflecting the true cost of each program and enabling managers to make better economic decisions.

Mapping of Budget Request to Appropriations Legislation. In the Departments of Veterans Affairs and Housing and Urban Development, and Independent Agencies Appropriations Bill, National Aeronautics and Space Administration CCSP activities are funded under the NASA section of Title III—Independent Agencies, as part of the Science, Aeronautics, and Technology account. Within this account, Appropriations Committee reports specify funding for the Earth Science program.

O U R C H A N G I N G P L A N E T

NATIONAL SCIENCE FOUNDATION

| Program Title | FY 2002 | FY 2003 | FY 2004 Estimate | FY 2005 Request |
|--|--------------|--------------|------------------|-----------------|
| USGCRP | | | | |
| Atmospheric Composition | 16.7 | 16.7 | 16.7 | 16.2 |
| Carbon Cycle | 21.5 | 24.3 | 24.3 | 24.3 |
| Climate Variability and Change | 92.1 | 88.1 | 88.1 | 86.5 |
| Human Dimensions of Climate Change | 14.7 | 17.2 | 17.2 | 17.2 |
| Terrestrial and Marine Ecosystems | 30.1 | 29.8 | 29.8 | 28.7 |
| Water Cycle | 12.7 | 12.3 | 12.3 | 12.3 |
| USGCRP Total | 187.8 | 188.4 | 188.4 | 185.2 |
| CCRI | | | | |
| Black Carbon Measurement | 0.0 | 1.0 | 1.0 | 0.0 |
| Carbon Fluxes and Cycle | 0.0 | 7.0 | 7.0 | 10.0 |
| Human Dimensions of Climate Change | 0.0 | 5.0 | 5.0 | 5.0 |
| Sensor Development | 0.0 | 2.0 | 2.0 | 0.0 |
| Modeling | 0.0 | 0.0 | 10.0 | 10.0 |
| CCRI Total | 0.0 | 15.0 | 25.0 | 25.0 |
| National Science Foundation Total | 187.8 | 203.4 | 213.4 | |
| President's Request | | | | 210.2 |



Mapping of Budget Request to Appropriations Legislation. In the Departments of Veterans Affairs and Housing and Urban Development, and Independent Agencies Appropriations Bill, National Science Foundation CCSP activities are supported under the NSF section of Title III—Independent Agencies within the NSF Research and Related Expenses account.

FY 2004 and 2005 Budget Tables

SMITHSONIAN INSTITUTION

| SI | Program Title | FY 2002 | FY 2003 | FY 2004 Estimate | FY 2005 Request |
|--------------------------------------|---|------------|------------|---------------------|--------------------|
| USGCRP | | | | | |
| NMNH | Archaeobiology Program (Human Ecology History) | 0.3 | 0.3 | 0.3 | 0.3 |
| NMNH | Paleoecological Effects of Climate Change, including Evolution of Terrestrial Ecosystems | 0.9 | 0.9 | 0.9 | 0.9 |
| NMNH | Global Volcanism Program | 0.2 | 0.2 | 0.2 | 0.2 |
| NMNH | Human Origins Program (Human Ecological History) | 0.3 | 0.3 | 0.3 | 0.3 |
| NMNH | Nile Delta Subsidence/Sea-Level Rise | 0.2 | 0.2 | 0.2 | 0.2 |
| NMNH | Tropical Biodiversity Program | 0.6 | 0.6 | 0.6 | 0.6 |
| SERC | Ecological Effects of Ultraviolet Radiation | 0.2 | 0.2 | 0.2 | 0.2 |
| SERC | Effects of Increasing Atmospheric CO ₂ on Ecosystems | 0.3 | 0.3 | 0.3 | 0.3 |
| STRI | Temperate and Tropical Forest Canopy Biology | 0.4 | 0.4 | 0.4 | 0.4 |
| STRI | Tropical Forest Science | 0.9 | 0.9 | 0.9 | 0.9 |
| STRI | Biodynamics of Forest Fragments | 0.1 | 0.1 | 0.1 | 0.1 |
| STRI | Tropical Agroforestry | 0.2 | 0.2 | 0.2 | 0.2 |
| NZP | Migratory Birds | 0.3 | 0.3 | 0.3 | 0.3 |
| NZP | Predicting Species Responses | 0.7 | 0.7 | 0.7 | 0.7 |
| MAB | Monitoring and Assessment of Biodiversity Program | 0.1 | 0.1 | 0.1 | 0.1 |
| USGCRP Total | | 5.7 | 5.7 | 5.7 | 5.7 |
| CCRI | | | | | |
| | None Reported | 0.0 | 0.0 | 0.0 | 0.0 |
| CCRI Total | | 0.0 | 0.0 | 0.0 | 0.0 |
| Smithsonian Institution Total | | 5.7 | 5.7 | 5.7 | |
| President's Request | | | | | 5.7 |

MAB Monitoring and Assessment of Biodiversity
 NMNH National Museum of Natural History
 NZP National Zoological Park

STRI Smithsonian Tropical Research Institute
 SERC Smithsonian Environmental Research Center



Mapping of Budget Request to Appropriations Legislation. In the Interior and Related Agencies Appropriations Bill, 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.