Langley Research Center Economic Impact for Fiscal Year 2005

NASA Facts

NASA Langley contributes to the Agency's missions in aeronautics, science, exploration systems, and space operations. Langley is contributing to the crew exploration vehicle and supporting the Space Shuttle and the Space Station. Our science research is increasing knowledge of the atmosphere, and how human activities influence it, for a better understanding of global change. Langley's aeronautics research examines flight from subsonic to hypersonic speed ranges for all types of aircraft and spacecraft. Through partnerships we contribute to improving national security. The NASA Engineering and Safety Center is located at Langley and serves as an independent technical resource for the Agency. The Center's influence extends beyond technology contributions to U.S. industry, other government agencies, and universities to being a financial contributor to the local, state, and national economy. For fiscal year 2005, the total direct and indirect impact was over $2.06 billion. For past economic impact fact sheets see www.nasa.gov/centers/langley/news/factsheets/general_information.html.

Annual Budget

Fiscal Year	NASA	Langley	
		NASA Center Sources[1]	All Sources[2]
2002	$14,901.7M	$720.2M	$751.0M
2003	$15,000.0M	$823.3M	$864.3M
2004	$15,378.0M	$782.3M	$827.1M
2005	$16,070.4M	$699.0M	$728.0M

[1]Includes Langley Research Center programs funded from other Centers.
[2]Includes Langley Research Center programs funded from NASA HQ, other NASA Centers, industry, and government.

Research and Development Funding

Aeronautics	$355M	48.7%
Science	$109M	15.0%
Exploration	$104M	14.3%
Space Operations	$38M	5.2%
Cross Agency Programs	$11M	1.5%
External Business	$29M	4.0%
Institutional Support	$82M	11.3%
Total	$728M	

Local, State, and National Obligations

National Economy

Businesses	$383M
Nonprofit institutions	$50M
Educational institutions	$47M
Total to the Nation[1]	$480M

Virginia Economy

Businesses	$142.0M
Nonprofit institutions	$40.0M
Educational institutions	$10.3M
Total toVirginia[2]	$192.3M

Hampton Roads Economy

Businesses	$91.4M
Nonprofit institutions	$5.2M
Educational institutions	$36.3M
Total to Hampton Roads	$132.9M

[1]Intragovernmental and outside of U.S. obligations not included.
[2]Intragovernmental obligations not included.

Procurement Distribution[1]

Business firms	$382.7M	75.3%
Nonprofit organizations	$50.3M	9.9%
Educational institutions	$47.0M	9.3%
Intragovernmental	$27.3M	5.4%
Outside United States	$0.7M	0.1%
Total	$508.0M	

[1]Net value of obligations.

Distribution of Small Business Awards

Set Asides (Competitive)	$48.1M	40.9%
Section 8(a)	$29.9M	25.4%
Competitive	$28.4M	24.1%
Noncompetitive	$11.3M	9.6%
Total	$117.7M	

Technology Transfer

Invention disclosures	188
Patent applications	31
Patents issued	14
Licenses executed	7
Space Act agreements	35
Space Act annexes	16
Interagency agreements	21
Interagency agreements annexes	18

Center Property Information

Area	808 acres[1]
Buildings	228
Original investment value	$726,796,838
Current replacement value	$2,574,709,715

[1]Includes 20 acres permitted by Langley Air Force Base.

Civil Service Residential Distribution[1]

Locality	Number of Employees
Yorktown area	517
Hampton	404
Newport News	318
Poquoson	197
Williamsburg area	141
Gloucester	73
Norfolk	43
Chesapeake	35
Suffolk	34
Virginia Beach	31
Portsmouth	9
Other	111

[1]Full-time permanent employees as of October 2005.

Civil Service Skill Mix[1]

Skill	Number of Employees
Scientific/Engineering	1080
Administrative	358
Technician	380
Clerical	95

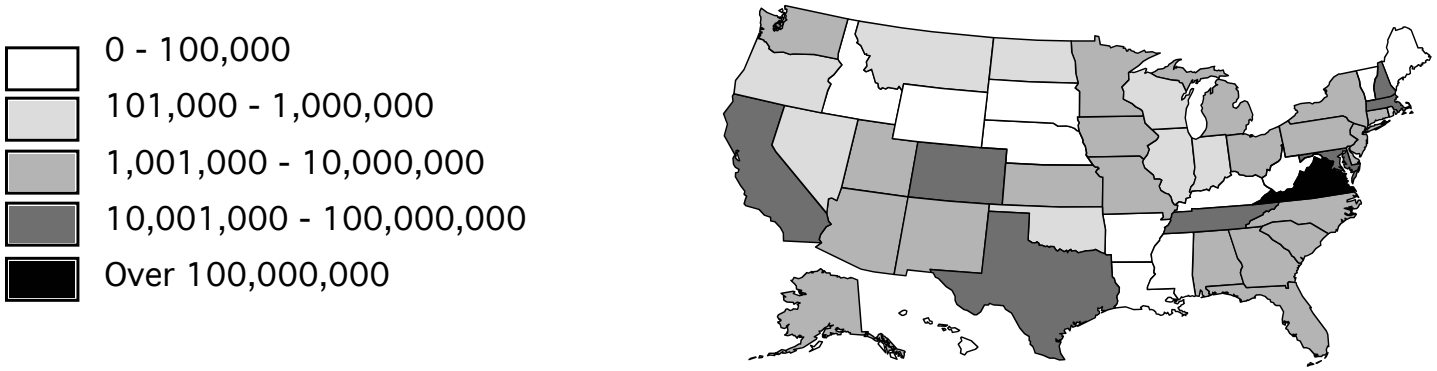
[1]Full-time permanent employees as of October 2005.

Civil Service Educational Mix[1]

Education	Number of Employees
Doctoral	319
Master	515
Bachelor	517
Associate	286
Some college	189
High school diploma	83
Some high school	4

[1]Full-time permanent employees as of October 2005.

Total Obligations by State



Obligations per State

Alabama	$1,713,567
Alaska	$2,195,071
Arizona	$5,264,339
Arkansas	0
California	$39,752,834
Colorado	$10,434,659
Connecticut	$5,968,039
Delaware	$2,600,322
District of Columbia	$5,972,391
Florida	$3,485,365
Georgia	$8,184,385
Hawaii	$49,799
Idaho	$23,362
Illinois	$792,812
Indiana	$414,619
Iowa	$1,274,538
Kansas	$1,919,577
Kentucky	$70,220
Louisiana	0
Maine	$45,149
Maryland	$56,610,288
Massachusetts	$12,799,260
Michigan	$1,257,656
Minnesota	$1,031,348
Mississippi	$95,000
Missouri	$1,091,498
Montana	$418,734
Nebraska	$25,000
Nevada	$472,575
New Hampshire	$10,469,571
New Jersey	$7,250,290
New Mexico	$2,580,710
New York	$6,832,548
North Carolina	$5,311,888
North Dakota	$198,653
Ohio	$5,836,128
Oklahoma	$349,131
Oregon	$648,380
Pennsylvania	$2,513,933
Rhode Island	$171,938
South Carolina	$3,961,815
South Dakota	0
Tennessee	$78,525,674
Texas	$17,787,191
Utah	$2,206,297
Vermont	$23,556
Virginia	$193,555,538
Washington	$4,225,840
West Virginia	0
Wisconsin	$808,277
Wyoming	$80,000
Total	$507,299,765

Top Obligations to Educational and Nonprofit Institutions

National Institute of Aerospace Associates[1]	$25,994,617
National Consortium for Aviation Mobility[1]	$7,138,974
City of Hampton[1]	$3,968,968
Princeton University	$3,926,000
College of Charleston	$3,718,999
Texas Engineering Experiment Station	$3,398,003
Research Triangle Institute[1]	$2,962,167
Morgan State University	$2,956,000
Institute for Advanced Learning and Research	$2,860,000
Old Dominion University Research Foundation[1]	$2,310,860
Hampton University	$2,129,187
Utah State University	$2,061,080
University of South Carolina	$1,973,287
Syracuse University	$1,943,000
University of Connecticut	$1,868,797
Wichita State University	$1,790,000
Virginia Air and Space Center[1]	$1,605,724
The Aerospace Corporation[1]	$1,558,508
Georgia Tech Research Corporation[1]	$1,270,000
Iowa State University	$992,000

[1]Nonprofit institution

Top Obligations to Business Contractors

Sverdrup Technology	$63,138,606
Science Applications Intl. Corp.	$54,582,553
Swales Aerospace	$30,515,766
Raytheon STX Corp.	$26,899,879
Lockheed Martin Government Services	$17,230,531
Micro Craft Inc.	$15,284,121
Dominion Virginia Power	$13,398,387
Tessada and Associates	$12,256,511
CSC Applied Technologies	$11,300,897
Boeing Company	$8,280,392
Analytical Mechanics Associates	$6,887,848
Unisys Corp.	$6,448,089
Ball Aerospace and Technology	$5,833,448
ASRC Aerospace Corp.	$5,605,545
Aurora Flight Sciences Corp.	$4,067,672
Mainthia Technologies	$3,543,043
Praxair Inc.	$3,417,715
Lockheed Martin Corp.	$3,225,526
GASL Inc.	$3,157,496
Virginia Natural Gas Inc.	$2,515,600
Analytical Services & Materials Inc.	$2,363,523
Wyle Laboratories	$2,220,261
ILC Dover Inc.	$2,096,229
Impact Management Services Inc.	$1,946,114
Science and Technology Corp.	$1,463,101

Economic Impact Analysis for Fiscal Year 2005[1]

Economic impact studies measure both direct and indirect effects of an important economic organization on an area's economy, taking into account economic relationships within that particular region. Impact analysis measures the organizational distribution of both inputs and outputs as both dollars and employment "ripple" through the area, in turn generating additional expenditures and employment. The direct impact refers to an agency's initial spending on goods and services, its various sources of income, and employment levels. The indirect impact is the measurement of the multiplied effect of the additional expenditures and jobs over a specified time period.

NASA Langley is a very large economic generator in the local area. Its direct impact can thus best be analyzed by evaluating its employment level, payroll budget, contract and grant spending, research and development, construction, and other expenditures. Its indirect impact is calculated using traditional input/output multipliers for various categories of activity. The total impact of NASA Langley is therefore the sum of both effects on the local area in terms of total output, earnings, employment and general economic activity, and growth.

As the table below indicates, NASA Langley's direct outlay of $632,222,500 in fiscal year 2005 therefore injects additional increases in economic output and productivity in the region of $1,432,094,600 for a total impact of approximately $2,064,317,100.

Output Spending Impact for Fiscal Year 2005

Category	Direct spending[2]	Indirect impact
Engineering and business services	$263,731.5K	$588,121.2K
Payroll	$231,823.0K	$547,102.3K
Construction, new, repair, and maintenance	$46,119.5K	$105,152.5K
Colleges, universities, and schools	$42,858.3K	$91,288.2K
Equipment	$15,190.5K	$34,178.6K
Utilities	$16,561.0K	$31,465.9K
Transportation (travel)	$7,619.4K	$17,677.0K
Health services	$164.7K	$392.0K
Miscellaneous services	$8,154.6K	$16,716.9K
Total	$632,222.5K	$1,432,094.6K
Total impact	$2,064,317.1K	

[1]Prepared for NASA Langley Research Center by Dr. Marshall Booker, professor emeritus, Christopher Newport University, Newport News, VA.

[2]Funds from research partners included.

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