

# Fact Sheet



National Aeronautics and  
Space Administration

**Langley Research Center**  
Hampton, Virginia 23681-2199

FS-2003-01-74-LaRC

## Economic Impact Summary for Fiscal Year 2002

NASA Langley Research Center is an important national resource serving inherent government functions such as safety, national defense, environmental study, and the air transportation system. The Center develops innovative aerospace technologies that not only contribute to the vitality of our Nation's aerospace program but also improve the quality of life for all Americans. The Center's influence extends beyond its technology contributions to U.S. industry, other governmental agencies, and universities to being a solid financial contributor to the local, state, and national economy. For fiscal year 2002, the total direct and indirect impact was over \$2.25 billion.

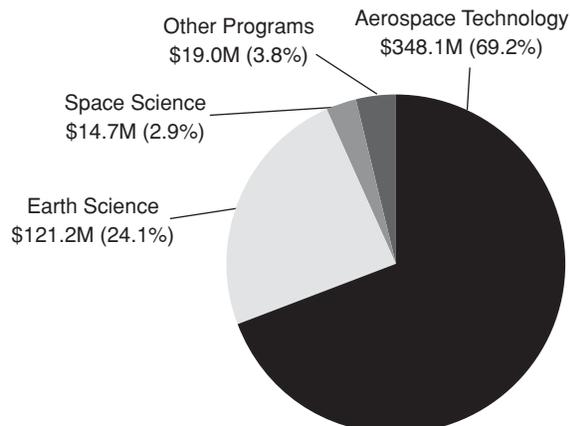
### Annual Budget

Fiscal year	NASA, \$M	Langley, \$M	
		<sup>1</sup> NASA Center Sources	<sup>2</sup> All Sources
1997	13,708.7	689.5	720.6
1998	13,638.0	686.0	712.8
1999	13,653.0	631.8	659.6
2000	13,600.0	606.0	630.5
2001	14,253.2	651.0	668.6
2002	14,901.7	720.2	751.0

<sup>1</sup>Includes Langley Research Center programs funded from other Centers.

<sup>2</sup>Includes Langley Research Center programs funded from NASA HQ, other NASA Centers, industry, and government.

### Fiscal Year 2002 Research and Development Spending



### Obligations by Economic Sector

National economy	\$M
Awards to—	
Businesses . . . . .	352.2
Nonprofit institutions . . . . .	41.4
Educational institutions . . . . .	69.8
Total to the Nation <sup>1</sup> . . . . .	463.4
<b>Virginia economy</b>	
Awards to—	
Businesses . . . . .	195.7
Nonprofit institutions . . . . .	25.2
Educational institutions . . . . .	15.0
Total to Virginia <sup>2</sup> . . . . .	235.9
<b>Hampton Roads economy</b>	
Awards to—	
Businesses . . . . .	167.9
Nonprofit institutions . . . . .	23.9
Educational institutions . . . . .	10.0
Total to Hampton Roads . . . . .	201.8

<sup>1</sup>Intragovernmental or outside of U.S. obligations not included.

<sup>2</sup>Intragovernmental obligations not included.

### Technology Transfer

Invention disclosures . . . . .	158
Patent applications . . . . .	21
Patents issued . . . . .	13
Licenses executed . . . . .	9
Space Act agreements . . . . .	21
Interagency agreements . . . . .	9
Annex work tasks	
Space Act agreements . . . . .	4
Interagency agreements . . . . .	6

## Civil Service Residential Distribution

Locality	Number of employees
York County	584
Hampton	487
Newport News	348
Poquoson	239
Williamsburg/James City County	164
Gloucester/Matthews	111
Norfolk	54
Virginia Beach	41
Chesapeake	42
Suffolk	38
Portsmouth	17
Other	178

## Civil Service Skill Mix

Skill	Number of employees
Scientific/Engineering	1,243
Administrative	384
Technical/Craft/Production	527
Clerical	149

## Civil Service Educational Mix

Education level	Number of employees
Doctoral	335
Master	586
Bachelor	624
Associate	356
Some college	252
High school diploma	149
Less than high school diploma	1

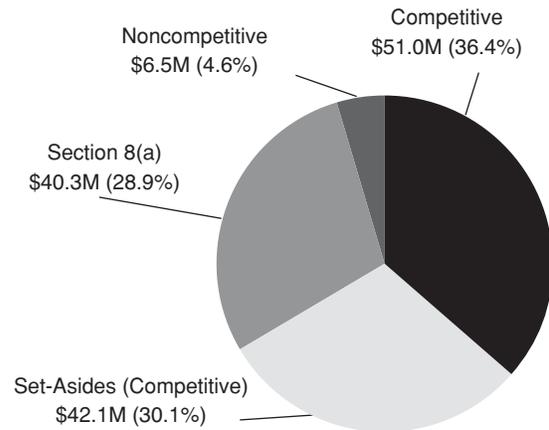
## Center Property Information

Area	808 acres <sup>1</sup>
Buildings	220
Original investment value	\$733,000,000
Current replacement value	\$4,153,000,000

<sup>1</sup>Includes 20 acres permitted by Langley Air Force Base.

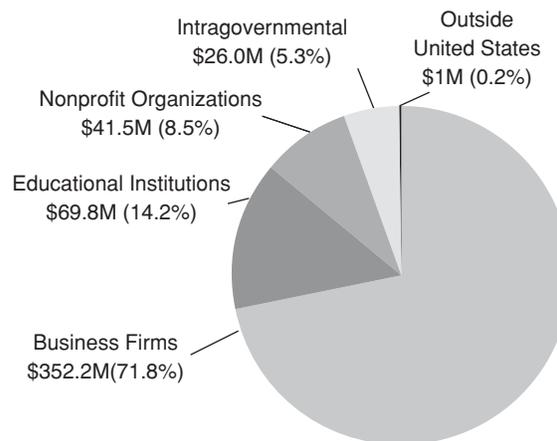
## Small Business Awards

### Net Value of Obligations

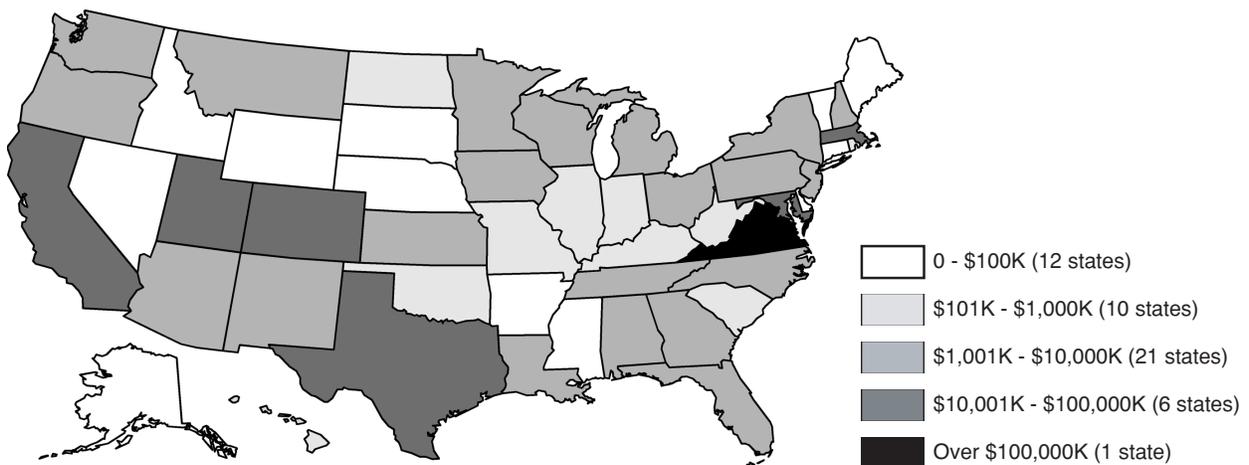


## Fiscal Year 2002 Procurements

### Net Value of Obligations



## Distribution Summary of Obligations



## Obligations per State

State	Dollars
Alabama	6,897,431
Alaska	251
Arizona	4,707,525
Arkansas	65,734
California	19,134,632
Colorado	23,707,124
Connecticut	533,789
Delaware	49,135
District of Columbia	5,057,053
Florida	5,530,327
Georgia	6,413,580
Hawaii	262,549
Idaho	76,683
Illinois	731,136
Indiana	561,599
Iowa	5,820,233
Kansas	1,241,034
Kentucky	405,302
Louisiana	1,579,129
Maine	0
Maryland	56,536,637
Massachusetts	17,028,720
Michigan	3,549,308
Minnesota	2,177,037
Mississippi	24,945
Missouri	905,943
Montana	1,641,372
Nebraska	31,665
Nevada	28,479
New Hampshire	1,572,664
New Jersey	5,103,302
New Mexico	2,451,614
New York	6,748,597
North Carolina	9,752,972
North Dakota	143,640
Ohio	3,371,345
Oklahoma	336,935
Oregon	1,070,161
Pennsylvania	5,709,168
Rhode Island	518,653
South Carolina	205,534
South Dakota	0
Tennessee	9,344,333
Texas	14,335,030
Utah	18,246,717
Vermont	9,017
Virginia	237,849,162
Washington	6,156,829
West Virginia	149,994
Wisconsin	1,721,831
Wyoming	19,999
Total	489,515,850

## Top Obligations to Educational and Nonprofit Institutions

Institutions	Dollars
Utah State University	17,878,276
Research Triangle Institute <sup>1</sup>	6,500,664
Hampton University	5,687,698
Universities Space Research <sup>1</sup>	5,542,053
National Consortium for Aviation. Mobility <sup>1</sup>	4,715,400
Old Dominion University Research Foundation <sup>1</sup>	3,889,367
City of Hampton <sup>1</sup>	2,895,998
Georgia Tech Research Corporation <sup>1</sup>	2,869,241
Aerospace Corporation <sup>1</sup>	2,821,027
Harvard University	2,469,955
Iowa State University	2,154,762
Embry Riddle Aeronautica <sup>1</sup>	2,143,603
Virginia Air and Space Center <sup>1</sup>	2,059,611
George Mason University	2,035,666
Wayne State University	1,900,000
Norfolk State University	1,897,734
Texas A & M University	1,689,425
Princeton University	1,625,000
Georgia Tech Applied Research <sup>1</sup>	1,620,989
Tulane University	1,500,000

<sup>1</sup>Nonprofit institution

## Top Obligations to Business Contractors

Business	Dollars
Science Application Intl. Corp.	37,986,156
Swales and Associates	28,443,464
Raytheon and Associates	22,845,653
Johnson Controls	20,583,247
Ball Aerospace	19,331,843
ACS Government Solutions	15,788,635
Dominion Virginia Power	12,511,234
Wyle Laboratories	9,664,410
GMR	8,993,505
Unisys Corp	8,248,652
ASRC Aerospace	7,847,662
Micro Craft	6,237,924
Dyncorp Technical Services	6,196,492
Tessada and Associates	6,138,842
Boeing Co.	5,994,181
Sverdrup Technology	5,374,787
Diversified Technology	3,875,425
NCI Information Systems	3,478,175
Analytical Mechanics	3,377,972
Rockwell Collins	2,865,045
Hernandez Engineering	2,755,431
Honeywell Inc.	2,653,193
Lockheed Martin	2,530,672
Planners Collaborative	2,462,485
GASL Inc.	2,410,680

## Economic Impact Study and Analysis for Fiscal Year 2002<sup>1</sup>

Economic impact studies measure direct and indirect effects on an area's economy. Direct impact refers to an agency's spending on goods and services, its various sources of income, and employment level. Indirect impact is the effect of the agency's spending and employment level on other sectors of the economy through the multiplied impact of spending and job creation. The indirect impact is an estimate of the impact of various businesses and industries that depend on the respending of income and other expenditures generated by an organization. NASA Langley is a very large economic generator. Its direct impact can therefore best be

analyzed by evaluating its employment level, payroll budget, contract and grant spending, and research and development. The total economic impact is the combined effect of both direct and indirect effects on the local area in terms of total output, earnings, employment, and general economic growth.

As the table indicates, NASA Langley's total direct outlay of \$733,277,000 increases economic output in the region by a total of \$1,518,873,000 for a combined impact of over \$2.25 billion.

### Output Spending Impact for Fiscal Year 2002

Category	Direct spending, \$K <sup>2</sup>	Indirect impact, \$K
Engineering and business services	241,736	502,811
Household (payroll)	219,685	386,646
Construction, new, repair, and maintenance	50,428	118,506
Colleges, universities, and schools	75,478	165,297
Utilities	12,355	23,598
Fabricated metal products	12,193	25,849
Transportation (travel)	9,609	25,176
Health services	915	2,205
Communication	4,756	9,417
Machinery, nonelectrical	1,446	3,441
Instruments and related products	5,763	12,967
Electronic and electric equipment	9,621	23,860
ADP equipment and services	42,368	105,073
Miscellaneous services	46,925	114,028
Total	733,277	1,518,873
Total impact		2,252,150

<sup>1</sup>Prepared for NASA Langley by Dr. Marshall Booker, Christopher Newport University, Newport News, VA.

<sup>2</sup>Funds from research partners included.