



STATE R&D PROFILE

New Jersey



Table 1. Federal R&D to New Jersey by Agency and Performer, Fiscal Year 2000
(obligations in millions of dollars)

Performers	Agencies							TOTAL
	DOD	HHS	DOE	DOT	NSF	NASA	other	
Federal Labs	369	0	0	40	0	3	23	435
Industry	1,081	18	0	31	2	23	10	1,166
Univs. / Colleges	35	154	16	1	64	11	14	295
FFRDCs *	0	0	65	0	0	0	0	65
Nonprofits	3	16	0	0	0	0	1	21
State / Local Govts.	0	1	0	0	0	0	0	1
Total New Jersey	1,488	190	82	72	67	36	49	1,984
U.S. Total	33,010	18,577	6,872	479	2,930	9,714	4,169	75,751
NJ % of U.S.	4.5%	1.0%	1.2%	15.1%	2.3%	0.4%	1.2%	2.6%

Source: National Science Foundation, *Federal Funds for Research and Development Fiscal Years 2000, 2001, and 2002*, 2002.

R&D data are for the 10 largest R&D supporting agencies only.

* Federally Funded Research and Development Centers. Government-owned, contractor-operated laboratories.

R&D = conduct of R&D and R&D plant (facilities and capital equipment).

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This AAAS State R&D Profile is one of a series of reports on the state and regional impacts of federal R&D, produced in cooperation with the AAAS Center for Science, Technology, and Congress from data provided by the National Science Foundation Division of Science Resources Statistics. More information on these reports, summary tables on R&D in the states, current profiles of the other states, and full-color, full-size versions of these charts are all available in the "State and Regional Reports" section of the AAAS R&D Web site (<http://www.aaas.org/spp/rd>). These profiles will be updated annually as new data become available.

AAAS State R&D Profiles – New Jersey

- New Jersey received nearly \$2.0 billion in federal R&D in FY 2000, 2.6 percent of the national total, which gives it a ranking of 12th among the 50 states and the District of Columbia. The state is home to 8.4 million people, or 3.0 percent of the total U.S. population (9th in rank). Its gross state product in 2000 was \$363 billion (3.7 percent of the national gross domestic product and 8th among the 50 states and DC; see Facts and Rankings).

- New Jersey ranks 13th in federal R&D per capita at \$235 per person, nearly 90 percent of the national average of \$269.

- DOD is by far the largest federal supporter of R&D in New Jersey, sending \$1.5 billion to the state in FY 2000. HHS comes in a distant second at \$190 million; DOE and DOT come in third and fourth at \$82 million and \$72 million, respectively (see Table 1 and Chart 1).

- New Jersey is home to the Princeton Plasma Physics Laboratory (PPPL), a FFRDC sponsored by DOE and operated by Princeton University (see Table 1). PPPL's primary mission is fusion energy and plasma physics research; an associate mission is to provide high-quality education in fusion energy, plasma physics and related technologies. The lab received \$65 million in FY 2000.

- Universities and colleges received only 15 percent of federal R&D funding to New Jersey in FY 2000 (\$295 million; see Table 1 and Chart 2). Princeton University, Rutgers University and the University of Medicine and Dentistry of New Jersey received more than 90 percent of these federal R&D dollars.

- New Jersey's independent nonprofit research institutions received \$21 million in federal funds in FY 2000 (see Table 1 and Chart 2). Included among these is the Center for Molecular Medicine and Immunology, which ranked 40th among nonprofit research institutions nationwide in federal R&D support.

- Most federal funding at universities and colleges is provided by HHS, which directed \$116 million to New Jersey's higher education institutions (see Table 2 and Chart 3).

- With totals of \$92 million, \$91 million and \$90 million, respectively, Princeton University, Rutgers University and the University of Medicine and Dentistry of New Jersey ranked 57th, 58th, and 61st nationwide among colleges and universities in federal R&D support (see Table 2).

- Rutgers University ranked 43rd nationwide among colleges and universities in total R&D performed, the bulk of its funding comes from institutional sources (see Table 3).

- Total R&D performance in New Jersey was \$13.1 billion in 2000, the vast majority of which was industry funded, industry performed R&D (\$11.8 billion; see Table 4 and accompanying chart). New Jersey ranks fourth among the states in total R&D performed, behind only California, Michigan, and New York. Some notable industrial firms located in New Jersey that perform R&D include Lucent Technologies, AT&T, Merck, Colgate-Palmolive, and Sarnoff Corporation. The concentration of these firms' operations made R&D 3.62 percent of the state's total economy in 2000, well above the ratio of 2.66 percent for the nation's economy as a whole.

- The flow of federal R&D funds to New Jersey has fluctuated greatly over the years because of the ups and downs in DOD's development contracts (see Chart 5). The state has received as much as \$3 billion in today's dollars annually from the federal government compared to \$2 billion or so in recent years. As a result, New Jersey's share of federal R&D has fluctuated around New Jersey's share of the U.S. population.

Click on the charts to view or download full-size color PDF versions of these charts.

**Table 2. Federal R&D to New Jersey Universities and Colleges,
Fiscal Year 2000**
(obligations in millions of dollars)

	HHS	NSF	DOD	DOE	NASA	USDA	other	TOTAL
U Medic & Dent NJ (57)	87	1	1	3	0	0	1	92
Rutgers U (58)	36	26	7	6	5	9	3	91
Princeton U (61)	28	33	14	9	4	0	3	90
NJ Inst of Tech	0	3	1	0	1	0	2	7
All Other	3	2	2	0	0	0	0	8
Total New Jersey	154	64	24	18	11	9	9	289
U.S. Total	10,533	2,475	1,832	696	872	564	557	17,529
NJ % of U.S.	1.5%	2.6%	1.3%	2.6%	1.2%	1.6%	1.6%	1.7%

Source: National Science Foundation, *Survey of Federal Science and Engineering Support to Universities, Colleges, and Nonprofit Institutions, Fiscal Year 2000*, 2002.

Figures may differ from other tables because of differing survey methods.

Figures in parentheses denote national rank among universities and colleges in federal R&D funds received.
R&D = conduct of R&D and R&D plant (facilities and capital equipment).

**Table 3. Total R&D Expenditures at New Jersey Universities and Colleges
by Source of Funds, Fiscal Year 2000**
(expenditures in millions of dollars)

	Federal	State/ Local	Industry	Institutional Funds	All Other	TOTAL R&D	Federal / Total R&D
Rutgers U (43)	80	26	9	86	25	225	35.4%
U Med & Dent NJ (76)	75	7	10	35	13	141	53.4%
Princeton U (81)	75	3	7	35	16	135	55.4%
NJ Inst of Tech(137)	17	8	1	2	19	48	36.3%
Stevens Inst Tech	9	2	3	2	0	16	55.3%
All Other	2	0	0	1	0	3	56.1%
Total New Jersey	257	46	30	160	74	568	45.4%
U.S. Total	17,493	2,204	2,178	5,924	2,262	30,062	58.2%
NJ % of U.S.	1.5%	2.1%	1.4%	2.7%	3.3%	1.9%	

Source: National Science Foundation, *Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 2000*, 2002.

These data differ significantly from the federal R&D data for the following reasons:

1/ data are from performer surveys rather than funding sources; 2/ data are in expenditures rather than obligations; and 3/ R&D in this survey does not include R&D facilities.

Figures in parentheses denote national rank among universities and colleges in total R&D performed.

Table 4. Total R&D (all funding sources) in New Jersey by Funding Source and Performer, 2000
(expenditures in millions of dollars)

Performers	Funding Sources					Total
	Federal Government	Industry	Univs./ Colleges	State / Local Government	Nonprofits	
Federal Labs	418	--	--	--	--	418
Industry	253	11,809	--	--	--	12,062
Universities / Colleges	257	30	160	46	74	568
FFRDCs*	65	--	--	--	--	65
Nonprofits	21	--	--	--	--	21
Total New Jersey	1,014	11,839	160	46	74	13,133
U.S. Total	66,208	182,622	6,210	2,257	7,320	264,617
NJ % of U.S.	1.5%	6.5%	2.6%	2.0%	1.0%	5.0%

Source: National Science Foundation, 2002.

* Federally Funded Research and Development Centers. Government-owned, contractor-operated laboratories. FFRDCs operated by universities/colleges and nonprofits only. Industry FFRDCs are included under industry.

Industry funding of nonprofit R&D is not included in state data, but is included in national totals.

Industry funding of industry R&D includes all non-federal funding of industry-performed R&D.

Nonprofit support for nonprofits is not included in state data, but is included in national totals.

Nonfederal support for FFRDCs and nonprofits are not included.

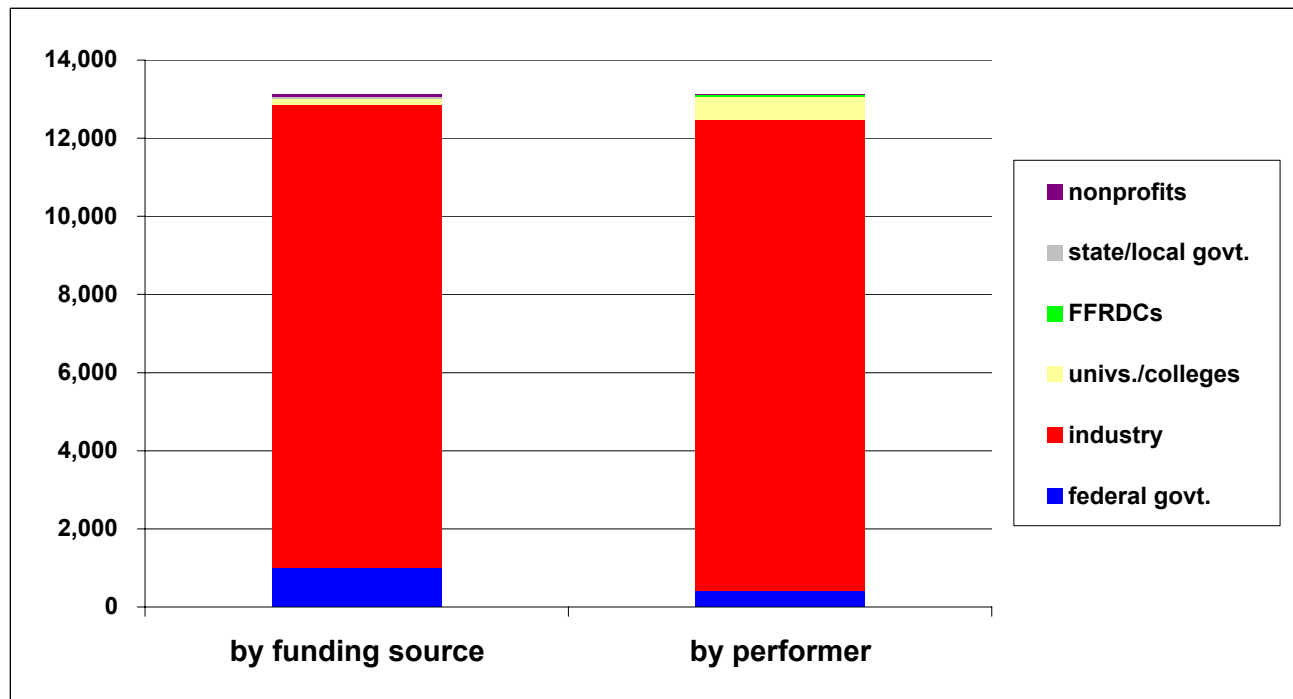
State and local government performance of R&D is not included.

Conduct of R&D only (R&D facilities and capital equipment excluded).

These data differ significantly from the federal R&D data for the following reasons:

1/ data are for calendar year 2000 rather than FY 2000; 2/ data are from performer surveys rather than funding sources; and 3/ data are in expenditures rather than obligations.

Chart. Total R&D in New Jersey by Funding Source and by Performer, 2000
expenditures in millions of dollars



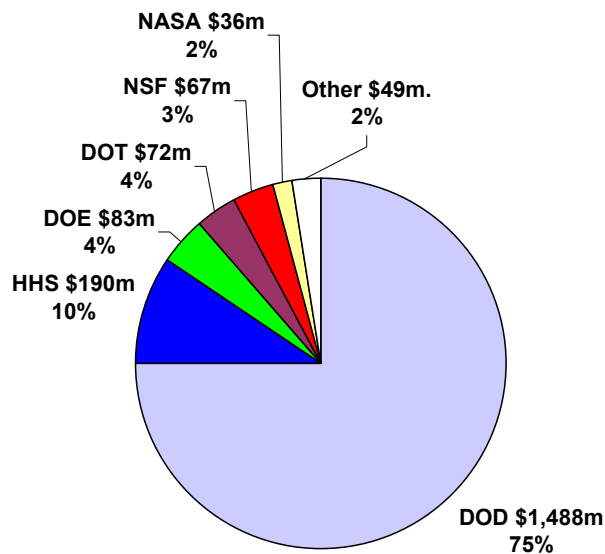
Facts and Rankings for New Jersey

	NJ		U.S.	NJ % of U.S.	Rank *
Total Federal R&D	1,984 million \$ ('00)		75,751	2.6%	12
Population	8.43 million ('00)		282.13	3.0%	9
Federal R&D Per Capita	\$ 235 ('00)		\$ 269	87.4%	13
Total Federal Expenditures	43,469 million \$ ('00)		1,637,170	2.7%	11
Federal R&D / Total Federal	4.6% ('00)		4.6%		13
Total R&D (all funds)	13,133 million \$ ('00)		264,616	5.0%	4
Total R&D Per Capita	\$ 1,558 ('00)		\$ 938	166.1%	9
Gross State Product (GSP)	363,089 million \$ ('00)		9,941,552	3.7%	8
GSP Per Capita	\$ 43,076 ('00)		\$ 35,238	122.2%	6
R&D Intensity (R&D / GSP)	3.62% ('00)		2.66%	136.1%	11

Source: Federal R&D: National Science Foundation, *Federal Funds for Research and Development: Fiscal Years 2000, 2001, and 2002* and other data, 2002; Population: U.S. Bureau of the Census; Federal Expenditures: U.S. Bureau of the Census, *Federal Expenditures by State for Fiscal Year 2000, 2001*; GSP: U.S. Department of Commerce, Bureau of Economic Analysis.

* - Rank among 50 states and District of Columbia.

Federal R&D to New Jersey by Agency
 FY 2000 (obligations in millions of dollars)
 Total: \$2.0 billion

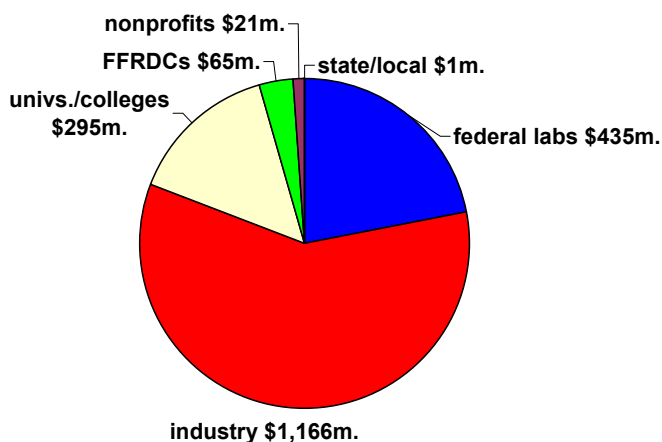


Source: National Science Foundation, Federal Funds for Research and Development, Fiscal Years 2000, 2001, and 2002, 2002.
 R&D = conduct of R&D and R&D plant.
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Chart 1.

Federal R&D to New Jersey by Performer
 FY 2000 (obligations in millions of dollars)
 Total: \$2.0 billion



Source: National Science Foundation, Federal Funds for Research and Development, Fiscal Years 2000, 2001, and 2002, 2002.
 R&D = conduct of R&D and R&D plant.
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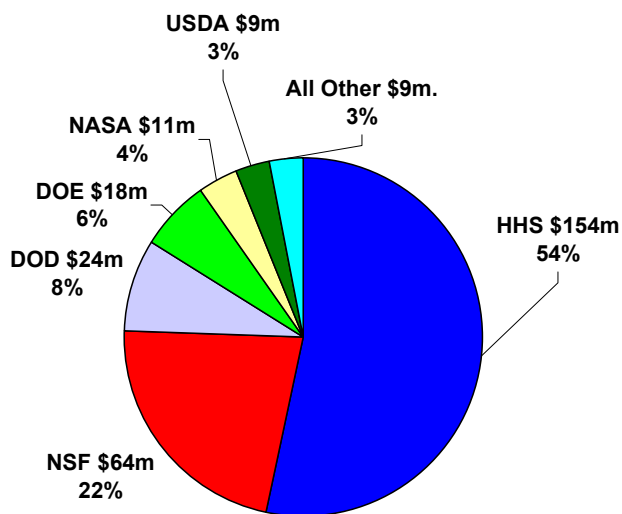


Chart 2.

Federal R&D to New Jersey Universities and Colleges

FY 2000 (obligations in millions of dollars)

Total: \$289 million



Source: National Science Foundation, *Federal Science and Engineering Support to Universities, Colleges, and Nonprofit Institutions, FY 2000, 2002.*

R&D = conduct of R&D and R&D plant.

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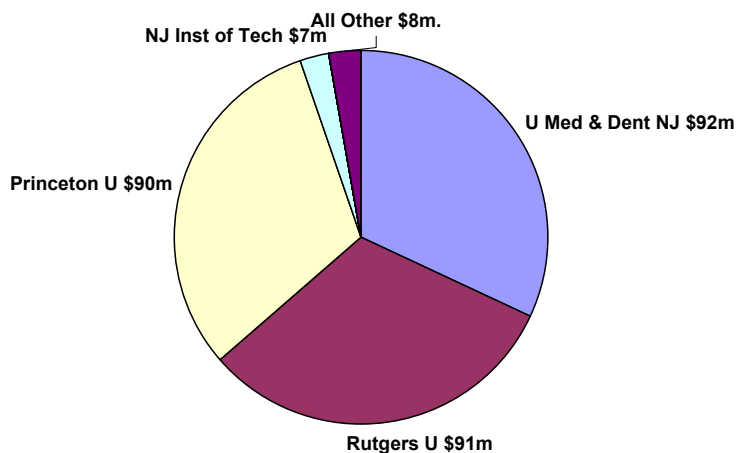


Chart 3.

Federal R&D to New Jersey Universities and Colleges

FY 2000 (obligations in millions of dollars)

Total: \$289 million



Source: National Science Foundation, *Federal Science and Engineering Support to Universities, Colleges, and Nonprofit Institutions, FY 2000, 2002.*

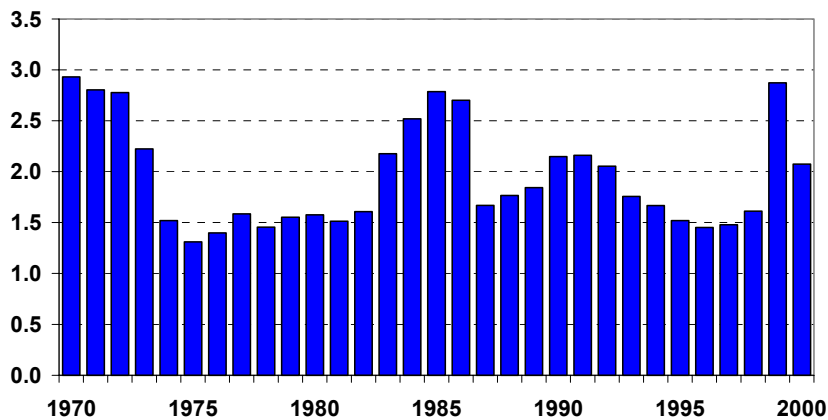
R&D = conduct of R&D and R&D plant.

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Chart 4.

Federal R&D to New Jersey, FY 1970-2000
(billions of constant FY 2002 dollars)

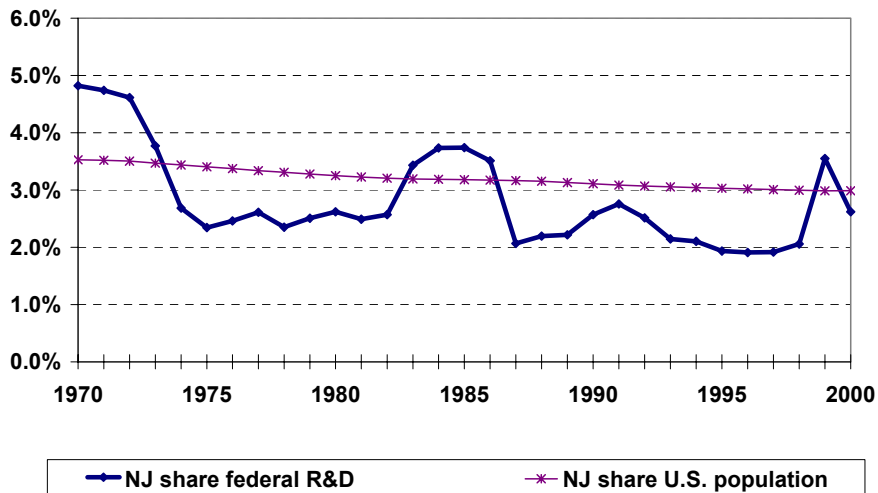


Source: National Science Foundation, Federal Funds for Research and Development Historical Tables, 2002.
R&D = conduct of R&D and R&D plan
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Chart 5.

New Jersey share of federal R&D, FY 1970-2000
(percent of total federal R&D)



Source: National Science Foundation, Federal Funds for Research and Development Historical Tables, 2002.
R&D = conduct of R&D and R&D plant.
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Chart 6.