



United States
General Accounting Office
Washington, D.C. 20548

Resources, Community, and
Economic Development Division

B-270919

February 29, 1996

The Honorable John R. Kasich
Chairman, Committee on the Budget
House of Representatives

Dear Mr. Chairman:

As requested, this report provides information on all federal research and development (R&D) laboratories operated by federal agencies or contractors. Specifically, you asked us to identify the name and location of each laboratory campus, its research field or mission, its estimated fiscal year 1995 operating budget, and the name and location of any satellite R&D facilities. We also asked federal agencies to identify any R&D laboratories that they have closed since the beginning of fiscal year 1996.

In summary, 17 federal departments and independent agencies identified 515 federal R&D laboratories that spent a total of \$26.6 billion of an estimated \$69.4 billion that federal agencies obligated for R&D in fiscal year 1995.¹ Each laboratory has a specific mission or R&D program designed to support the parent agency's overall mission. In fiscal year 1995, the operating budgets of (1) 361 laboratories were less than \$10 million, (2) 101 laboratories were at least \$10 million but less than \$100 million, and (3) 53 laboratories were at least \$100 million. In addition, 65 federal R&D laboratories have a total of 221 satellite facilities.

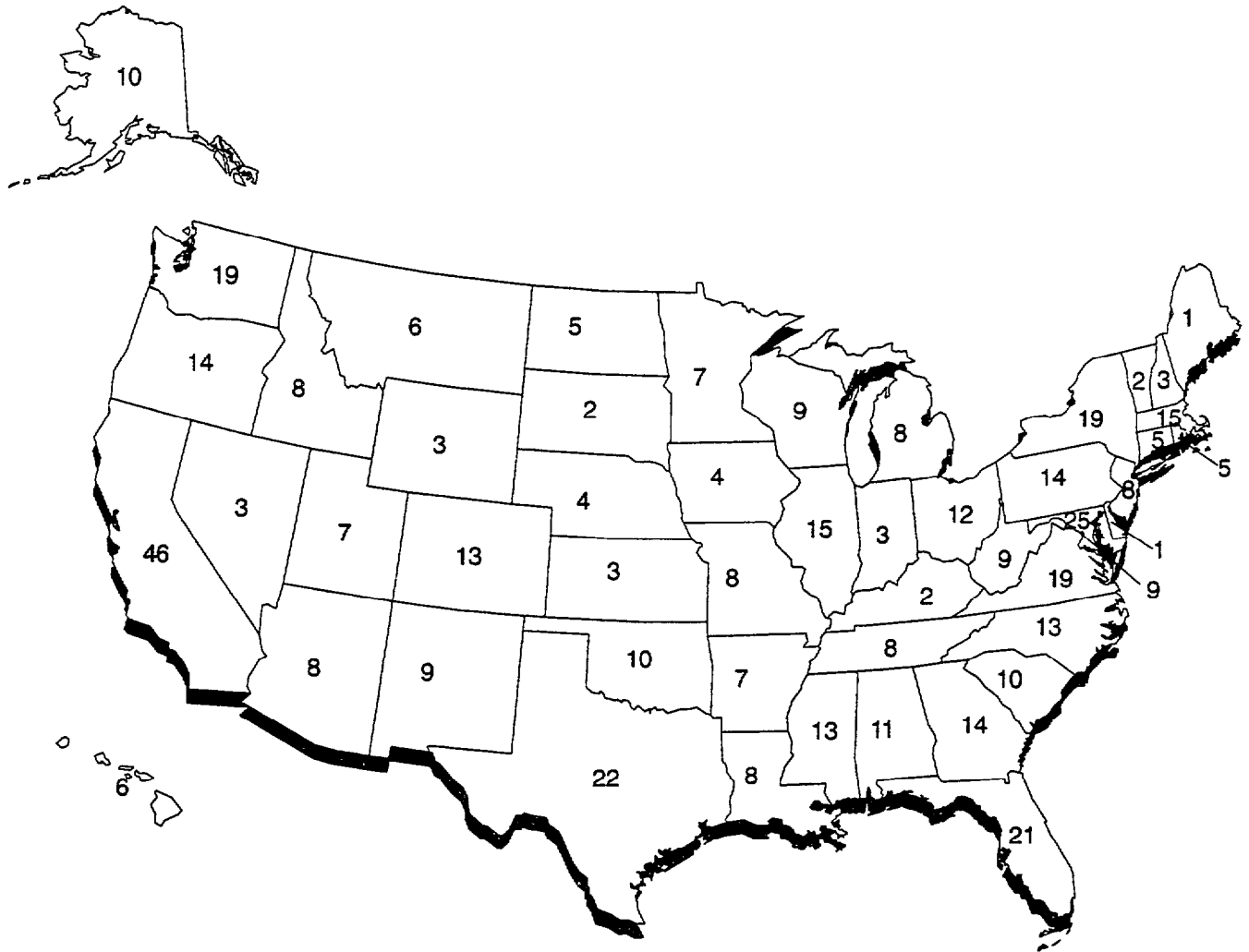
Overall, the Department of Agriculture's 185 R&D laboratories were the most reported by an agency. However, these laboratories were among the smallest in size, with a median operating budget of \$2.1 million in fiscal year 1995. Laboratories in the Departments of Defense, Energy, and Health and Human Services, and the National Aeronautics and Space Administration, accounted

¹Federal agencies also support R&D performed by businesses, universities, and other organizations, primarily through contracts and grants.

for \$23.4 billion, or 88 percent, of the funding for all federal R&D laboratories in fiscal year 1995.

While most of the laboratories are operated by federal agencies and employ federal scientists, 62 federal laboratories are operated by businesses or nonprofit organizations through a contract or cooperative agreement with a federal agency. As shown in figure 1, there is at least one federal R&D laboratory in each state; 46 laboratories in California is the most per state, while 1 laboratory in Delaware and Maine is the least per state. Since the beginning of fiscal year 1996, federal agencies have closed eight federal R&D laboratories.

Figure 1: Number of Federal R&D Laboratories in Each State



Note: Three Department of Agriculture laboratories and two Navy medical laboratories are located in foreign countries.

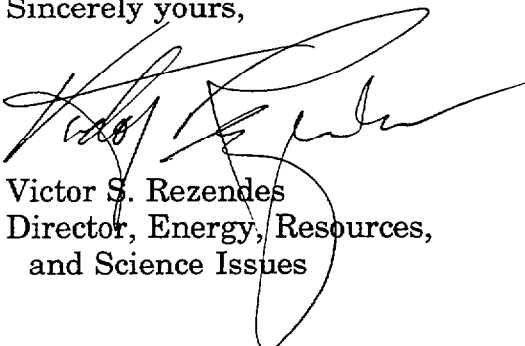
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Enclosure I shows federal agencies' funding for R&D in fiscal year 1995. Enclosure II presents summary data about the number and operating budgets of federal R&D laboratory campuses by federal agencies and geographic location and the type of federal R&D laboratory by agency. Enclosure III presents a complete listing of the federal R&D laboratories. Enclosure IV lists R&D laboratories with their associated satellite facilities. Enclosure V identifies federal R&D laboratories closed since the beginning of fiscal year 1996.

To identify all federal R&D laboratories, we contacted each of 22 federal departments and independent agencies that obligated at least \$10 million for R&D performed by government scientists in fiscal year 1995 or has at least one federally funded R&D center (FFRDC). Five agencies said that they do not have any R&D laboratories. The other 17 federal agencies provided the requested information for each of their R&D laboratories, to the extent information was readily available. We excluded federal laboratories whose purpose is to test or analyze samples for chemical, physical, or biological properties from this list of federal R&D laboratories because such testing is not considered R&D. We provided applicable sections of this report to officials at each of the 17 federal agencies. The officials agreed with the technical accuracy of the report relating to their agencies. (See enc. VI for more information about our objectives, scope, and methodology.)

We are sending copies of this report to the Director, Office of Management and Budget. We will also make copies available to others on request. Please contact me at (202) 512-3841 if you or your staff have any questions.

Sincerely yours,



Victor S. Rezendes
Director, Energy, Resources,
and Science Issues

ESTIMATED R&D OBLIGATIONS BY FEDERAL AGENCIES IN FISCAL YEAR 1995

Dollars in millions

Federal department or agency	Total R&D obligations
Department of Agriculture	\$ 1,396.9
Department of Commerce	1,212.4
Department of Defense	34,926.8
Department of Education	173.6
Department of Energy	6,370.4
Department of Health and Human Services	11,458.1
Department of Housing and Urban Development	40.5
Department of the Interior	630.7
Department of Justice	45.8
Department of Labor	65.6
Department of Transportation	692.2
Department of the Treasury	28.7
Department of Veterans Affairs	211.0
Agency for International Development	314.0
Environmental Protection Agency	610.7
National Aeronautics and Space Administration	8,584.9
National Science Foundation	2,219.0
Nuclear Regulatory Commission	112.3
Smithsonian Institution	106.0
Social Security Administration	23.0
Tennessee Valley Authority	112.8
U.S. International Trade Commission	12.5

Federal department or agency	Total R&D obligations
Other federal agencies	18.3
Total	\$69,366.2

Source: National Science Foundation.

SUMMARY TABLESTable II.1: Federal R&D Laboratory Campuses by Agency

Dollars in millions

Federal agency	Number of laboratory campuses	Fiscal Year 1995 operating budget
Department of Agriculture		
Agricultural Research Service	107	\$556.1
Forest Service	<u>78</u>	<u>177.3</u>
Subtotal	185	733.4
Department of Commerce		
National Institute of Standards and Technology	2	199.9
National Oceanic & Atmospheric Administration	<u>36</u>	<u>230.4</u>
Subtotal	38	430.3
Department of Defense ^a		
Department of the Air Force	11	1,823.9
Department of the Army	29	2,076.1
Department of the Navy	21	4,668.2
Other Defense agencies	<u>7</u>	<u>582.2</u>
Subtotal	68	9,150.4
Department of Education ^b	10	41.0
Department of Energy		
Defense Programs	3	3,203.3
Energy Research	16	2,670.6
Energy Efficiency & Renewable Energy	1	237.6
Environmental Management	3	904.0
Fossil Energy	6	445.7
Naval Reactors	2	585.0
Nonproliferation	1	5.0
Office of the Secretary of Energy	<u>1</u>	<u>29.5</u>
Subtotal	33	8,080.7

Federal agency	Number of laboratory campuses	Fiscal Year 1995 operating budget
Department of Health and Human Services		
Centers for Disease Control & Prevention	6	108.6
Food and Drug Administration ^c	3	40.2
National Institutes of Health	<u>10</u>	<u>1,222.6</u>
Subtotal	19	1,371.4
Department of the Interior		
Bureau of Reclamation	1	71.3
National Biological Service	16	105.1
U.S. Geological Survey	<u>3</u>	<u>371.0</u>
Subtotal	20	547.4
Department of Justice		
Drug Enforcement Administration	2	1.0
Department of Transportation		
Federal Aviation Administration	3	211.7
Federal Highway Administration	1	125.5
National Highway Traffic Safety Administration	1	0.8
Research & Special Programs Administration	<u>1</u>	<u>198.2</u>
Subtotal	6	536.2
Department of the Treasury		
Internal Revenue Service	1	1.5
Department of Veterans Affairs	102	270.0
Environmental Protection Agency		
Office of Research and Development	11	348.2
National Aeronautics and Space Administration (NASA) ^d		
Aeronautics	4	1,369.7
Mission to Planet Earth	1	646.5
Space Flight	4	2,032.8
Space Science	<u>1</u>	<u>783.7</u>
Subtotal	10	4,832.7
National Science Foundation	5	173.4
Nuclear Regulatory Commission	1	16.0

Federal agency	Number of laboratory campuses	Fiscal Year 1995 operating budget
Smithsonian Institution	2	17.5
Tennessee Valley Authority	2	27.3
Total	515	\$26,578.4

^aThe Department of Defense provided operating budget data for fiscal year 1994.

^bThe Department of Education provided fiscal year 1996 funding data.

^cThe Food and Drug Administration provided information only for its R&D activities, excluding activities associated with product testing that account for the predominant portion of its scientific and research funding.

^dOperating budgets for NASA's research centers were estimated using fiscal year 1994 funding data.

Table II.2: Federal R&D Laboratory Campuses by State

Dollars in millions

State	Number of laboratory campuses	Fiscal year 1995 operating budget
Alabama	11	\$992.3
Alaska	10	\$33.8
Arizona	8	\$125.2
Arkansas	7	\$32.1
California	46	\$4,119.6
Colorado	13	\$575.3
Connecticut	5	\$18.6
Delaware	1	\$1.0
Florida	21	\$848.6
Georgia	14	\$132.8
Hawaii	6	\$21.2
Idaho	8	\$816.9
Illinois	15	\$727.7
Indiana	3	\$11.3
Iowa	4	\$64.8
Kansas	3	\$6.8
Kentucky	2	\$2.6
Louisiana	8	\$39.8
Maine	1	\$0.4
Maryland	25	\$2,921.2

State	Number of laboratory campuses	Fiscal year 1995 operating budget
Massachusetts	15	\$1,005.3
Michigan	8	\$101.8
Minnesota	7	\$33.9
Mississippi	13	\$284.1
Missouri	8	\$71.4
Montana	6	\$21.0
Nebraska	4	\$19.9
Nevada	3	\$28.4
New Hampshire	3	\$31.4
New Jersey	8	\$592.1
New Mexico	9	\$2,692.5
New York	19	\$680.1
North Carolina	13	\$240.4
North Dakota	5	\$24.6
Ohio	12	\$705.2
Oklahoma	10	\$142.3
Oregon	14	\$83.3
Pennsylvania	14	\$578.7
Rhode Island	5	\$416.3
South Carolina	10	\$122.2
South Dakota	2	\$2.2
Tennessee	8	\$844.9
Texas	22	\$910.6
Utah	7	\$75.2
Vermont	2	\$3.8

State	Number of laboratory campuses	Fiscal year 1995 operating budget
Virginia	19	\$3,964.4
Washington	19	\$617.9
West Virginia	9	\$228.0
Wisconsin	9	\$42.0
Wyoming	3	\$4.7
Washington, D.C.	9	\$487.3
Puerto Rico	4	\$15.8
Foreign Countries ^a	5	\$14.0

^aThe Agricultural Research Service has R&D laboratories in Argentina, France, and Panama, and the Navy has medical research institutes in Egypt and Indonesia.

Table II.3: Type of Federal R&D Laboratory by Agency

Federal agency	Government-operated laboratory	FFRDC	Other ^a
Department of Agriculture	185	0	0
Department of Commerce	38	0	0
Department of Defense	52	10	6
Department of Education	0	0	10
Department of Energy	7	19	7
Department of Health and Human Services	18	1	0
Department of the Interior	20	0	0
Department of Justice	2	0	0
Department of Transportation	5	1	0
Department of the Treasury	0	1	0
Department of Veterans Affairs	102	0	0
Environmental Protection Agency	11	0	0
NASA	9	1	0
National Science Foundation	0	5	0
Nuclear Regulatory Commission	0	1	0
Smithsonian Institution	2	0	0
Tennessee Valley Authority	2	0	0
Total	453	39	23

^aIncludes laboratories operated by a business or nonprofit organization under a contract or cooperative agreement with a federal agency that have had a longstanding relationship with the agency but that are not certified as federally funded R&D centers (FFRDCs).

FEDERAL R&D LABORATORIES BY CAMPUS LOCATION

Dollars in millions

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF AGRICULTURE		
Agricultural Research Service^a		
Beltsville Agricultural Research Center Beltsville, MD	Human Nutrition	\$16.4
	Livestock and Poultry Sciences	21.9
	National Arboretum	6.5
	Natural Resources	15.0
	Plant Sciences	<u>35.1</u>
	Subtotal	<u>\$94.9</u>
North Atlantic Area		
Eastern Regional Research Center Wyndmoor, PA	Examine (1) engineering science; (2) food safety; (3) hides, lipids, and wool; (4) microbial food safety; (5) milk components; (6) plant and soil biophysics; and (7) plant science.	\$18.0
Human Nutrition Research Center on Aging Boston, MA	Examine the relationship of nutrition to the aging process throughout adult life and determine dietary needs of the elderly.	\$13.6
Plum Island Animal Disease Center Greenport, NY	Protect U.S. animal industries and exports against economic losses caused by foreign animal disease agents.	\$8.8
Beckley, WV	Develop improved soil and water management practices in Appalachia.	\$3.4
Frederick, MD	Assess foreign plant pathogens not yet established in the United States.	\$2.1
Geneva, NY	Acquire, maintain, characterize, and distribute plant genetic resources of selected crops, including apple, clover, grape, onion, tomato, and vegetable brassicas.	\$1.2

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF AGRICULTURE--Agricultural Research Service		
Ithaca, NY	Develop pest management strategies, examine the movement of nutrients and/or toxins through the soil-plant-animal/human food chain, and improve New England soil productivity and yield.	\$4.5
Kearneysville, WV	Improve deciduous fruit production, protection, harvesting, and sorting:	\$5.0
Newark, DE	Import, quarantine, test, ship, release, and establish exotic natural enemies of insect pests and investigate the interactions of pest and beneficial species.	\$1.0
Princess Anne, MD	Conduct microbiology research on the incidence and characteristics of human disease-causing bacteria in poultry production, processing, and distribution.	\$0.2
University Park, PA	Develop land, water, and plant management systems that ensure profitability and sustainability while maintaining water quality.	\$2.8
South Atlantic Area		
Richard B. Russell Agricultural Research Center Athens, GA	Conduct research on (1) animal physiology, (2) microbial products, (3) phytochemicals, (4) plant structure and composition, (5) poultry microbiological safety, (6) poultry processing and meat quality, (7) toxicology and mycotoxin research, and (8) sustainable agricultural production systems for the Southern Piedmont area.	\$15.0
Brooksville, FL	Characterize and evaluate tropically adapted breeds of cattle and examine factors affecting forage production and utilization by livestock.	\$0.7

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF AGRICULTURE--Agricultural Research Service		
Byron, GA	Develop improved (1) cultivars of peaches, plums, nectarines, and pecans; (2) yields and profitability; and (3) controls of arthropods, nematodes, and diseases.	\$2.4
Canal Point, FL	Conduct sugarcane crossing and variety development programs and entomological and pathological research on pests.	\$0.9
Charleston, SC	Improve genetic populations of vegetable crops that combine improved yield potentials and better resistance to pests.	\$2.6
Clemson, SC	Improve cotton quality and the instruments used to measure quality and eliminate the health effects of cotton dust on workers.	\$2.0
Dawson, GA	Improve the quality, cleaning, storing, and marketing of peanuts.	\$2.0
Florence, SC	Improve soil, water, and plant management in the Southeastern coastal plains.	\$2.0
Fort Lauderdale, FL	Develop biological, chemical, and ecological methods to control aquatic weeds.	\$0.8
Gainesville, FL	Examine the insect life cycle, to develop new pest control strategies, technologies to manage arthropods, and ways to increase plant productivity and yield.	\$9.8
Griffin, GA	Develop, maintain, evaluate for desirable genetic characteristics, screen for disease and insect resistance, and distribute an inventory of new plant seeds.	\$1.6
Mayaguez, Puerto Rico	Introduce, evaluate, select, multiply, preserve, and develop tropical crop germplasm and contribute to the development of agriculture in the tropics.	\$2.5

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF AGRICULTURE--Agricultural Research Service		
Miami, FL	Introduce, maintain, evaluate, and distribute subtropical and tropical plant germplasm. Improve quarantine treatments to destroy fruit flies.	\$1.7
Orlando, FL	Develop citrus germplasm and examine insect pests, postharvest problems, and control of citrus and vegetable diseases.	\$4.6
Raleigh, NC	Examine the effect of atmospheric pollutants on plant growth and ways to improve flavor and processing of food. Develop superior corn, cereal grains, and soybeans.	\$5.4
Tifton, GA	Examine (1) insect biology and population, (2) management of nematodes, weeds, diseases and insects, and (3) the Southeast watershed.	\$7.7
Winter Haven, FL	Improve the delivery of nutrients, flavor, textural quality, and storage stability in products from subtropical fruits and vegetables.	\$1.3
Mid-South Area		
Jamie Whitten Delta States Research Center Stoneville, MS	Conduct research on (1) Cotton ginning, (2) cotton physiology and genetics, (3) field crops mechanization, (4) southern insect management, (5) southern weed science, and (6) soybean production.	\$12.0
Southern Regional Research Center New Orleans, LA	Conduct research on postharvest processing, product enhancement, and safety and use of agricultural commodities produced in the southern United States.	\$18.4
Auburn, AL	Conduct veterinary research to improve catfish aquaculture and soil dynamics research to improve crop yields.	\$2.7

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF AGRICULTURE--Agricultural Research Service		
Baton Rouge, LA	Conduct research on (1) Africanized bees, (2) varroa and tracheal mite resistance, and (3) honey bee improvement.	\$1.9
McMinnville, TN	Evaluate ornamental tree and shrub germplasm and develop new and improved varieties.	\$0.4
Mississippi State, MS	Examine corn and cotton host plant resistance, integrated pest management, forage, crop simulation, and poultry.	\$6.2
Oxford, MS	Examine the processes of soil erosion, transport and deposition of sediment, and movement of chemicals on upland areas and in streams.	\$5.2
Poplarville, MS	Develop new and improved (1) cultural and management practices and (2) small fruit cultivars adapted to the Gulf Coast.	\$0.8
Midwest Area		
National Animal Disease Center Ames, IA	Assess selected diseases of economic importance to the U.S. livestock and poultry industries.	\$16.5
National Center for Agricultural Utilization Research Peoria, IL	Conduct postharvest research on (1) bioactive constituents, (2) biopolymers, (3) culture collection bank, (4) fermentation biochemistry, (5) food physical chemistry, (6) food quality and safety, (7) microbial properties, (8) mycotoxins, (9) new crops, (10) oil chemicals, (11) phytoproducts, (12) plant polymers, and (13) vegetable oil.	\$21.8
Ames/Ankeny, IA	Conduct research on field crops, plant introduction, corn insects, and soil tilth.	\$8.5

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF AGRICULTURE--Agricultural Research Service		
Columbia, MO	Examine animal physiology, biological control of insects, cropping systems and water quality, and plant genetics.	\$4.9
Columbus, OH	Develop improved water table management practices and plant flooding tolerance.	\$0.6
Coshocton, OH	Examine hydrology, surface runoff, groundwater quality, and erosion using various agricultural management practices.	\$0.9
East Lansing, MI	Conduct research on sugar beets and beans, fruit and vegetable harvesting, and avian disease and oncology.	\$3.8
Madison, WI	Examine plant disease resistance, cereal crops, vegetable crops, stored product insects, and forage for dairy animals.	\$5.3
Morris, MN	Develop cost-effective and sustainable soil conservation production systems for northern climates.	\$2.4
St. Paul, MN	Examine (1) rust resistance in wheat and oats; (2) soil properties and processes affected by conservation tillage; and (3) nitrogen fixation, forage quality, and plant-microbe interactions.	\$4.3
Urbana, IL	Conduct research on nitrogen metabolism in soybeans and corn, pest management systems, and the photosynthetic process.	\$3.6
West Lafayette, IN	Examine insect resistance of small grains and characteristics of weed species; the biochemistry of soybeans, sorghum, corn, and small grains used as animal feed; and soil conservation.	\$4.8

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF AGRICULTURE--Agricultural Research Service		
Wooster, OH	Improve (1) application technology to protect horticultural, landscape, and field crops; (2) corn and soybeans to reduce crop losses; and (3) soft wheat quality.	\$2.3
Northern Plains Area		
Roman L. Hruska U.S. Meat Animal Research Center Clay Center, NE	Develop scientific data and new technology to improve animal production and product quality of the U.S. beef, swine, and sheep industries.	\$12.3
Red River Valley Agricultural Research Center Fargo, ND	Conduct research in (1) biosciences, (2) northern crop sciences, and (3) hard spring and durum wheat quality.	\$10.4
Akron, CO	Develop integrated cropping systems and technologies for maximum utilization of soil and water resources.	\$1.2
Bozeman, MT	Develop (1) technology for biologically suppressing rangeland insect and weed pests and (2) new genetic approaches to improve cereal quality.	\$1.6
Brookings, SD	Develop sustainable production systems that enhance environmental quality with emphasis on crop and pest management.	\$1.5
Cheyenne, WY	Develop technology needed to ensure sustainable and productive rangeland ecosystems.	\$1.6
Fort Collins, CO	(1) Long-term preservation of plant germplasm and (2) Natural Resources Research Center	\$8.3
Grand Forks, ND	Determine the nutrient needs for humans and provide information about healthy food choices and a healthful food supply.	\$7.2

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF AGRICULTURE--Agricultural Research Service		
Laramie, WY	Examine arthropod transmitted viral diseases of domestic animals.	\$2.0
Lincoln, NE	Conduct research on plant physiology, genetics, and pathology; soil and water conservation; forage and range management; livestock waste management; and livestock insect control.	\$4.2
Logan, UT	Investigate poisonous plants, broaden the genetic base of rangeland and pasture plants, and develop non-Apis bee pollinators of major agricultural crops.	\$4.1
Mandan, ND	Develop economically sustainable and environmentally sound integrated crop and livestock management systems.	\$2.8
Manhattan, KS	Develop genetic approaches to solve insect and disease problems in wheat and alfalfa and a new wind erosion prediction system.	\$6.5
Miles City, MT	Develop ecologically and economically sustainable range animal management systems that meet consumers' needs.	\$1.8
Sidney, MT	Develop (1) conservation tillage-crop production systems to control erosion and aid efficient use of limited water supplies and (2) weed control technology.	\$0.7
Southern Plains Area		
Children's Nutrition Research Center Houston, TX	Define the dietary needs of pregnant and lactating women and children from conception through adolescence.	\$10.0
Beaumont, TX	Develop (1) broadly useful rice germplasm, including superior quality, short season varieties for the southern United States, and (2) rice disease and insect controls.	\$0.9

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF AGRICULTURE--Agricultural Research Service		
Booneville, AR	Develop technology for family farm production systems that will improve production efficiency and product quality.	\$1.9
Bushland, TX	Conduct research on (1) water management, (2) wind energy and soil management, and (3) bovine respiratory diseases.	\$2.3
College Station, TX	Examine toxicological, food safety, and insect problems for livestock and poultry industries and develop improved cotton crops and pecan cultivars and rootstocks.	\$9.3
Durant, OK	Evaluate the quality and quantity of runoff waters from agricultural watersheds.	\$2.3
El Reno, OK	Increase the efficient production of lean red meat from forages by improving the quality, amount, and distribution of forages.	\$1.6
Fayetteville, AR	Reduce the impact of poultry production problems in turkeys and broilers.	\$1.3
Kerrville, TX	Examine the biology and control of parasitic insects and ticks and mites that affect livestock.	\$2.6
Lane, OK	Develop integrated cultural practices for production of such alternative crops as fruits, vegetables, fiber (kenaf), and fish in the South Central region.	\$1.7
Las Cruces, NM	Conduct research on cotton ginning and range management.	\$1.7
Lubbock, TX	Examine (1) plant stress and water conservation, (2) wind erosion, and (3) cotton production and processing.	\$3.1
Pine Bluff, AR	Improve the efficiency of freshwater fish farming.	\$0.7

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF AGRICULTURE--Agricultural Research Service		
Stillwater, OK	Develop (1) ways to reduce stress reactions in cereal and other crops caused by disease, insects, and drought and (2) design criteria for hydraulic structures to control and manage land surface water.	\$2.3
Stuttgart, AR	Acquire, assess, and test enhanced rice germplasm for developing cultivars for the southern and western U.S. rice production regions.	\$0.8
Temple, TX	Develop technology for (1) maximizing forage and crop production, (2) controlling noneconomic brush and weeds, and (3) solving soil and water efficiency problems.	\$3.0
Weslaco, TX	Examine (1) biological control of pests, (2) conservation and production systems, (3) crop insects, (4) crop quality and fruit insects, (5) honey bees, (6) remote sensing.	\$8.0
Woodward, OK	Improve the integrated management of energy flow, nutrient cycling, and hydrologic dynamics in forage-animal production systems.	\$1.2
Pacific West Area		
Western Regional Research Center Albany, CA	Conduct research on (1) cereal product utilization, (2) crop improvement and utilization, (3) food safety, (4) plant protection, (5) process biotechnology, (6) process chemistry and engineering and (7) plant gene expression.	\$18.2
Aberdeen, ID	Evaluate, enhance, maintain, and acquire germplasm of potatoes, wheat, barley, oats, and other small grains.	\$2.0

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF AGRICULTURE--Agricultural Research Service		
Boise, ID	Assess the hydrologic processes and interactive influences of climate, soils, vegetation, topography, and management on rangeland watersheds.	\$1.8
Burns, OR	Improve high elevation desert rangelands through more effective management practices.	\$0.5
Corvallis, OR	Conduct research on horticultural crops and forage seed cropping systems and collect clonally propagated germplasm of small fruits, hops, and mint.	\$5.4
Davis, CA	Develop improved methods to control aquatic weeds, including improved herbicides and biological control agents.	\$1.7
Dubois, ID	Develop technology to increase efficiency of livestock production while ensuring future availability of resources.	\$2.0
Fresno, CA	Conduct research on (1) protecting fruits and vegetables from insects and maintaining their postharvest quality, (2) water management, and (3) landscape ecology of rangelands.	\$6.0
Hilo, HI	Examine the biology and ecology of tephritid fruit flies and other pests and develop control and eradication technologies.	\$8.8
Kimberly, ID	Develop new management practices for conserving resources, improving crop production and quality, reducing nitrate movement, improving irrigation, and evaluating nutrient and mineral cycling.	\$2.5

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF AGRICULTURE--Agricultural Research Service		
Pendleton, OR	Develop better practices, techniques, and equipment for crop production and soil and water conservation.	\$1.4
Phoenix, AZ	Improve western cotton production and management and methods for conserving water and protecting its quality.	\$7.5
Prosser, WA	Conduct research to improve and protect potato, alfalfa, bean, and pea crops.	\$2.4
Pullman, WA	Examine wheat genetics, plant germplasm, grain legume genetics, land management and water conservation, root disease, weed science, and methods for preventing or reducing losses from tick-borne diseases.	\$6.4
Riverside, CA	Assess salt-affected soil-plant-water systems to improve crop production and preserve and distribute clonal germplasm of citrus and dates.	\$3.8
Salinas, CA	Determine the biology of virus diseases of sugar beets and vegetables.	\$2.1
San Francisco, CA	Assess human nutritional requirements and develop survey methodologies to assess nutritional status, nutrient intake, and the impact of intervention programs.	\$4.5
Shafter, CA	Develop sustainable systems for producing cotton and other irrigated crops by integrating remotely sensed information with data and models.	\$1.0
Tucson, AZ	Develop (1) improved pollinator systems and (2) models to assess the condition of agricultural watersheds in the Southwest.	\$3.0

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF AGRICULTURE--Agricultural Research Service		
Wenatchee, WA	Develop new methods and technologies to identify, detect, manage, and control pre- and postharvest pathogens, diseases, and disorders of tree fruit.	\$1.4
Yakima, WA	Develop more effective means to control insect pests that affect deciduous tree fruit and vegetable crops.	\$3.9
International Locations		
Buenos Aires, Argentina	Search for and test biological agents in southern South America and ship them to the United States to control weed and insect pests.	\$0.4
Montpellier, France	Discover, assess, and introduce suitable natural enemies into the United States to abate insect pests and weeds.	\$1.8
Panama City, Panama	Eradicate screwworms from Central America and protect the area to the north from reinfestation.	\$0.9

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF AGRICULTURE		
Forest Service		
Forest Products Laboratory Madison, WI	Center for Forest Mycology Research Biodeterioration of wood Center for Wood Anatomy Research Wood adhesives Performance designed composites Wood surface chemistry Fiber product design criteria Chemistry and pulping Fiber processes and products Institute for Microbial and Biochemical Technology Engineering properties of wood Engineering design criteria Engineered wood products and structures Fire safety of wood products Wood processing and drying systems International forest products Modification of lignocellulosics for advanced materials and new uses Wood preservation Timber demand and technology assessment Subtotal	\$0.7 0.8 0.3 1.3 0.8 0.6 1.0 1.4 1.1 1.3 0.9 0.9 1.5 0.7 1.2 0.1 0.9 1.2 1.0 \$17.7
Northeastern Area		
Northeastern Forest Experiment Station Radnor, PA	Develop forest inventory and analysis and assess global change.	\$5.5
Northeastern Center for Forest Health Research Hamden, CT	Assess the ecology and management of hardwood insect pests; pathology and microbial control of insects; etiology, epidemiology, and physiology of host-pest interactions.	\$2.3

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF AGRICULTURE--Forest Service		
Forestry Sciences Orono, ME	Examine the ecology and management of northern conifer and associated ecosystems.	\$0.4
Forestry Sciences Amherst, MA	Evaluate wildlife communities and habitat relationships and Atlantic salmon restoration.	\$1.0
Wyman Forestry Sciences Laboratory Durham, NH	Assess tree response to injury and infection, ecology and management of northern hardwoods, New England forest dynamics, and forest growth modeling.	\$2.3
Forestry Sciences Syracuse, NY	Conduct research on the structure and function of urban forests.	\$0.9
Forestry Sciences Delaware, OH	Develop ecosystem response models and biologically based controls for insect pests and disease. Examine the impact of atmospheric deposition and global change.	\$2.6
Forestry Sciences Warren, PA	Develop silvicultural decision systems.	\$0.9
Aiken Forestry Sciences Laboratory ^b Burlington, VT	Examine the physiology of growth in trees; forest ecosystem management; human dimensions of tourism, fish, wildlife, and recreation.	\$1.8
Forestry Sciences Morgantown, WV	Examine (1) silviculture options for gypsy moth control and (2) integrated harvesting and forest management systems.	\$2.1
Timber and Watershed Laboratory Parsons, WV	Conduct research on sustainable forest ecosystems in central Appalachian forests.	\$1.8
Forestry Sciences Princeton, WV	Improve secondary hardwood processing, hardwood product markets, and the U.S. hardwood industry's competitiveness.	\$2.1

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF AGRICULTURE--Forest Service		
Southern Area		
Southern Research Station Asheville, NC	Conduct forest inventory and analysis.	\$3.6
G.W. Andrews Forestry Sciences Laboratory Auburn, AL	Conduct research on (1) longleaf pines and vegetation management and (2) biological and engineering systems and technologies for ecological management.	\$2.0
Forestry Sciences Huntsville, AL	Conduct biotechnology research on the southern pines and hardwoods.	\$0.5
Forestry Sciences Monticello, AR	Improve multi-resource management of naturally regenerated upland forests.	\$1.4
Forestry Sciences ^b Gainesville, FL	Improve the ecology, management, and protection of longleaf, slash, and sand pine ecosystems.	\$0.6
Forestry Sciences Athens, GA	Assess insects; diseases; relationships of tree roots and microbes, environmental stress, and forest health; timber utilization; and benefits of recreation and wilderness.	\$3.3
Southern Forest Fire Laboratory ^b Macon, GA	Assess ecology and genetics of southern pine ecosystems, meteorology and fire management, and forest environment.	\$1.8
Forestry Sciences New Orleans, LA	Examine legal, tax, and economic influences on forest resource management and forest ecosystem management.	\$1.9
Alexandria Forestry Center Pineville, LA	Examine the ecology and management of even-aged pine forests, the southern pine beetle, and forest resources utilization.	\$3.3
Forestry Sciences ^b Gulfport, MS	Conduct research on wood products insects.	c

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF AGRICULTURE--Forest Service		
Harrison Experimental Forest Saucier, MS	Examine the genetics and pathology of southern pine forest ecosystems.	\$2.5
Forestry Sciences Starkville, MS	Analyze forest tree seeds and mid-south forests.	\$3.1
Southern Hardwoods Laboratory Stoneville, MS	Assess (1) multiple-resource management and (2) insect and disease pests of hardwood and wetland forest ecosystems.	\$1.7
Forest Hydrology Laboratory ^b Oxford, MS	Examine the watershed ecosystem for the mid-south upper coastal plain and interior highlands.	\$1.5
Coweeta Hydrological Laboratory Franklin/Otto, NC	Evaluate watershed ecosystem responses to disturbances of southeastern forests.	\$1.0
Forestry Sciences Research Triangle Park, NC	Assess forest soil productivity, forest health, and the economics of forest protection and management.	\$4.4
Forestry Sciences ^b Raleigh, NC	Conduct research on forest tree genetics and the impacts of global change.	\$2.2
Southern Research Station Charleston, SC	Examine the ecology and management of forested wetland ecosystems of the South Atlantic coastal plain.	\$1.0
Southern Research Station Clemson, SC	Assess the silviculture and management of mixed pine-hardwood stands and endangered and threatened wildlife.	\$1.2
Southern Research Station Nacogdoches, TX	Improve integrated management of wildlife habitat and timber resources.	\$0.8
Southern Research Station Blacksburg, VA	Conduct research on trout productivity in southern Appalachian streams and primary hardwood processing and products.	\$0.9

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF AGRICULTURE--Forest Service		
North Central Area		
North Central Forest Experiment Station St. Paul, MN	Assess forest dynamics models, global change, wildlife and fish management, disease resistance and controls, forest analysis, and ecosystem management.	\$4.9
Forestry Sciences ^b Carbondale, IL	Examine the physiology, genetics, and processing of central U.S. hardwoods.	\$0.8
Forestry Sciences Chicago, IL	Conduct research on urban and high-use forest recreation.	\$0.9
Forestry Sciences East Lansing, MI	Evaluate wildland fires, tree-insect-natural enemy interactions, and forest management choices.	\$1.6
Forestry Sciences Houghton, MI	Develop engineering technology for managing forest ecosystems.	\$1.0
Forestry Sciences Grand Rapids, MN	Examine water quality management and silviculture in the northern lake States.	\$1.8
Forestry Sciences Columbia, MO	Examine silviculture and ecology of the upland central hardwood forests.	\$1.3
Forestry Sciences Jefferson City, MO	Evaluate site productivity of central hardwood forest ecosystems.	\$0.3
Forestry Sciences Madison, WI	Develop long-term strategies and techniques in forest genetics.	\$0.2
Forestry Sciences Rhineland, WI	Examine physiological mechanisms of growth, landscape ecology, and genetic and molecular bases for tree stress tolerances.	\$2.5
Rocky Mountain Area		
Rocky Mountain Forest and Range Experiment Station Fort Collins, CO	Multiresource inventory and management, sustaining fish and watersheds, effects of atmospheric change, global change, pest impact, and economics and optimization.	\$6.1

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF AGRICULTURE--Forest Service		
Southwest Forest Science Complex Flagstaff, AZ	Impact of natural ecological disturbances on conifers, sustainability southwestern terrestrial and riparian ecosystems	\$3.6
National Agroforestry Center Lincoln, NE	Improve stress- and pest-resistance of Great Plains tree species.	\$1.1
Forestry Sciences Albuquerque, NM	Southwestern grassland watersheds, Rio Grande basin ecosystem, cultural heritage.	\$1.6
Forestry Sciences Rapid City, SD	Conduct research on the northern and central Great Plains ecosystem.	\$0.7
Forestry Sciences Laramie, WY	Examine wildlife habitat relationships, fish, and watersheds.	\$1.1
Intermountain Area		
Intermountain Research Station Ogden, UT	Evaluate forest resources.	\$1.8
Forestry Sciences Boise, ID	Conduct research on conifer ecology, riparian-stream ecosystems, fish habitats, and soil and water management.	\$2.4
Forestry Sciences Moscow, ID	Conduct research on silviculture and genetics of conifers, forest management, root diseases and soil microbiology, and forest access technology.	\$3.3
Forestry Sciences Bozeman, MT	Examine silviculture of subalpine forest ecosystems.	\$1.4
Forestry Sciences Missoula, MT	Forest wildlife habitat and multiple-use economics	\$0.8
	Aldo Leopold Wilderness Research Center	0.8
	Intermountain Fire Sciences Laboratory	<u>3.3</u>
	Subtotal	<u>\$4.9</u>

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF AGRICULTURE--Forest Service		
Forestry Sciences Reno, NV	Conduct research on pinyon-juniper ecology.	\$ 0.5
Forestry Sciences Logan, UT	Evaluate disturbed lands reclamation, monitoring statistics, and the mountain pine beetle.	\$ 1.1
Shrub Sciences Provo, UT	Examine shrubland biology and restoration.	\$1.0
Pacific Northwest Area		
Pacific Northwest Research Station Portland, OR	Examine resource productivity, management approaches, ecological sciences, biological diversity, resource values, the environment, global change, forest health, wood products, and Blue Mountains Natural Resources Institute.	\$7.7
Forestry Sciences Anchorage, AK	Conduct research on ecological sciences, biological diversity, the environment, forest health, monitoring technology, and resource values.	\$1.5
Cordova Ranger District ^b Cordova, AK	Conduct research on ecological sciences.	\$0.1
Forestry Sciences ^b Fairbanks, AK	Assess resource productivity, ecological sciences, biological diversity, global change, forest health, and wood products.	\$1.3
Forestry Sciences Juneau, AK	Examine resource productivity, management approaches, ecological sciences, biological diversity, resource values, the environment, global change, wood products, resource decisions, and monitoring technology.	\$3.4

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF AGRICULTURE--Forest Service		
Bend Silvicultural Laboratory ^b Bend, OR	Conduct research on resource productivity, management approaches, forest health, and wood products.	\$0.7
Forestry Sciences Corvallis, OR	Assess resource productivity, management approaches, ecological sciences, biological diversity, resource values, the environment, global change, forest health, wood products, and resource decisions.	\$5.4
Forestry Sciences La Grande, OR	Assess resource productivity, management approaches, ecological sciences, biological diversity, resource values, the environment, global change, and forest health.	\$2.0
Forestry Sciences Olympia, WA	Assess resource productivity, management approaches, ecological sciences, biological diversity, and wood products.	\$2.8
Forestry Sciences Seattle, WA	Examine management approaches, ecological sciences, biological diversity, the environment, global change, forest health, wood products, resource decisions, and monitoring technology.	\$2.8
Forestry Sciences Wenatchee, WA	Conduct research on resource productivity, ecological sciences, biological diversity, global change, and forest health.	\$0.9
Upper Columbia River Basin Ecosystem Project ^b Walla Walla, WA	Assess the upper Columbia River basin region.	\$1.2
Pacific Southwest Area		
Pacific Southwest Forest and Range Experiment Station Albany, CA	Conduct research on forest genetics, watershed effects and inland fisheries, global climate, chemical ecology, forest insects, and Pacific Northwest Forest Plan.	\$5.5

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF AGRICULTURE--Forest Service		
Redwood Sciences Laboratory Arcata, CA	Assess timber management/wildlife interactions and management effects on hillslope processes, fisheries, and streams.	\$2.2
Forestry Sciences Fresno, CA	Evaluate montane ecosystems in the Sierra Nevada Mountains.	\$1.8
Redding Silviculture Laboratory Redding, CA	Examine silviculture of California conifers, management of competing vegetation, and ecosystem management.	\$2.5
Riverside Forest Fire Laboratory Riverside, CA	Assess ecology and fire effects in drought-prone ecosystems, fire meteorology, fire management, air pollution and global change, and wildlife recreation.	\$4.4
Western Center for Urban Forest Research Davis, CA	Conduct research on urban forestry.	\$0.4
Institute of Pacific Islands Forestry Honolulu, HI	Restore tropical island forests.	\$1.7
Caribbean Area		
International Institute of Tropical Forestry Rio Piedras, Puerto Rico	Improve tropical American forest management.	\$3.0

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF COMMERCE		
National Institute of Standards and Technology		
Gaithersburg, MD	Office of the Director Electronics and Electrical Engineering Laboratory Manufacturing Engineering Laboratory Chemical Science and Technology Laboratory Physics Laboratory Materials Science and Engineering Laboratory Building and Fire Research Laboratory Computer Systems Laboratory Computing and Applied Mathematics Laboratory Subtotal	\$0.8 14.2 24.2 29.8 19.7 34.9 18.7 20.8 <u>8.5</u> \$171.6
Boulder, CO	Electronics and Electrical Engineering Laboratory Chemical Science and Technology Laboratory Physics Laboratory Materials Science and Engineering Laboratory Computing and Applied Mathematics Laboratory Subtotal	\$13.8 3.0 7.5 3.3 <u>0.7</u> \$28.3
National Oceanic and Atmospheric Administration (NOAA)		
National Environmental Satellite, Data, and Information Service		
NOAA Science Center Camp Springs, MD	Satellite Applications Laboratory Satellite Research Laboratory	\$8.6

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF COMMERCE--NOAA		
National Marine Fisheries Service		
Northeast Region Science Center and Laboratory Woods Hole, MA	Population Dynamics/Assessments Population Biology Ecosystem Dynamics Fishery Statistics and Economics Protected Species	\$16.0
Gloucester, MA ^d	Protein Chemistry/Biotechnology Organic Containment Chemistry Quality and Safety Analysis	\$0.9
Narragansett, RI	Oceanic Ecosystem Dynamics Environmental Processes Fishery Ecology	\$3.4
Milford, CT	Genetics and Physiology Biochemistry and Immunology Bacteriology and Pathobiology Algology and Culture Methodology	\$2.4
Sandy Hook, NJ	Environmental Assessments Ecosystem Dynamics Chemical Processes	\$5.4
Oxford, MD	Shellfish Pathology Habitat Restoration Protected Species	\$0.5
National Systematics Laboratory Washington, D.C.	Taxonomy Biodiversity	\$0.6
Southeast Region Science Center and Laboratory Miami, FL	Population Dynamics/Assessments Population Biology Sea Turtle Ecology Protected Resources Fishery Statistics	\$10.1

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF COMMERCE--NOAA		
Beaufort, NC	Stock Assessments Population Biology Sea Turtle Ecology Estuarine and Coastal Ecology Environmental Assessments	\$6.4
Charleston, SC	Biotechnology Marine Forensics Protected Species Ecotoxicology Seafood Safety and Quality	\$8.3
Panama City, FL	Fishery Biology Fishery Ecology Protected Resources	\$1.3
Mississippi Laboratories Pascagoula and Bay St. Louis, MS	Fishery Independent Surveys Protected Resources Conservation Engineering Remote Sensing Oceanography	\$6.5
Galveston, TX	Population Dynamics/Assessments Population Biology Protected Resources Estuarine and Coastal Ecology Fishery Ecology	\$4.2
Southwest Region Science Center and Laboratory La Jolla, CA	Tuna – Dolphin Population Dynamics/Assessments Population Biology Protected Species Populations Antarctic Ecosystems Fishery Economics Fishery Oceanography Genetic Stock Identification International Whaling Commission	\$15.6

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF COMMERCE--NOAA		
Pacific Grove, CA	Ecosystem Modeling and Analysis Fishery Environmental Linkages Physical Oceanography	\$0.9
Tiburon, CA	Groundfish Physiology Ecology Population Dynamics/Assessments Population Biology Ecosystem Dynamics	\$1.9
Honolulu, HI	Protected Species Biology Insular Fishery Assessment Fishery Oceanography Economics of Hawaiian Fisheries	\$5.3
Northwest Region Science Center and Laboratory Seattle (Montlake), WA	Population Biology Salmon/Groundfish Stock Assessment and Enhancement Utilization Research Estuarine and Coastal Ecology Environmental/Habitat Conservation	\$12.7
Newport, OR	Population Dynamics/Assessments Bycatch Population Biology Environmental Processes	\$3.2
Point Adams, OR	Salmon Biology Habitat Ecology	\$2.1
Manchester, WA	Salmon Enhancement Stock Identification Endangered Species	\$2.3
Pasco, WA	Effects of Columbia River Dams on Salmonids Downstream Mortality, Migration Assessment Engineering/Fabrication to Improve Salmon Survival	\$3.6

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF COMMERCE--NOAA		
Mukilteo, WA	Pollution Assessments Toxicity Bioassays	\$0.4
Alaska Region Science Center and Laboratory Seattle (Sand Point), WA	Population Dynamics/Assessments Population Biology Fishery Independent Surveys Pathology Protected Species Conservation Engineering	\$18.3
Auke Bay, AK	Population Biology Salmon Stock Assessments Salmon Enhancement Fishery Ecology	\$7.8
Little Port Walter, AK	Salmon Enhancement	\$0.8
Kodiak, AK	Population Dynamics/Assessments Population Biology Utilization Research	\$1.4
Oceanic and Atmospheric Research		
Air Resources Laboratory Silver Spring, MD	Air quality and dispersion Emergency preparedness (nuclear, volcanoes, toxics, dense gases) Climate trends and variability	\$3.3
Atlantic Oceanographic and Meteorological Laboratory Miami, FL	Ocean heat transport and storage Surface currents in the Pacific Surface Current Study Role of tropospheric dimethyl sulfide in formation of cloud condensation nuclei Hurricane analysis and prediction Measurement of sea level and meteorological variables	\$7.3

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF COMMERCE--NOAA		
Boulder, CO	Aeronomy Laboratory	\$5.9
	Climate Diagnostics Center	\$0.7
	Climate Monitoring and Diagnostics Laboratory	\$4.2
	Environmental Technology Laboratory	\$4.5
	Forecast Systems Laboratory	\$8.2
	Space Environment Laboratory	\$5.1
Geophysical Fluid Dynamics Laboratory Princeton, NJ	Ocean Circulation Climate Dynamics Experimental Prediction Middle Atmosphere Dynamics and Chemistry Mesoscale Dynamics Radiation and Clouds Observational Studies Hurricane Dynamics	\$13.0
Great Lakes Environmental Research Laboratory Ann Arbor, MI	Sources, pathways, fates, and effects of toxicants in the Great Lakes Natural hazards (severe waves, storm surges, and ice) Ecosystems and their interactions Hydrology and water levels of the Great Lakes Regional effects related to global climate change	\$6.4
National Severe Storms Laboratory Norman, OK	Uses remote observations and "mesoscale" models (covering one to several states) to enhance forecast capabilities; refine algorithms and add new ones; better understand severe thunderstorm structures and processes; and enhance hazard predictions associated with microbursts, gust fronts, and wind shear.	\$5.7

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF COMMERCE--NOAA		
Pacific Marine Environmental Laboratory Seattle (Sand Point), WA	Conduct research on (1) complex physical and geophysical processes that determine the extent of human effect on the marine environment, (2) forcing functions and processes driving ocean circulation and the global climate system, and (3) environmental forecasting capabilities.	\$8.1
National Weather Service		
Silver Spring, MD	Hydrological Research Laboratory Integrated Systems Laboratory Techniques Development Laboratory Advanced Development and Demonstration Laboratory Subtotal	\$1.5 1.5 3.5 <u>0.6</u> \$7.1
DEPARTMENT OF DEFENSE^e		
Department of the Air Force		
Aerospace Corporation (FFRDC) Los Angeles, CA	Assist the Air Force in applying the resources of modern science and technology to achieve continuing advances in military space and space-related systems that are basic to national security.	\$335.0 ^f
Armstrong Laboratory San Antonio, TX	Aerospace Medicine Human Resources Occupational and Environmental Health Crew Systems Environics Subtotal	\$38.5
Arnold Engineering Development Center Arnold Air Station, TN	Test Operations Aerospace Flight Dynamics Propulsion Technology Subtotal	\$201.9

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF DEFENSE--Air Force		
Development Test Center Eglin Air Force Base (AFB), FL	46th Airbase Wing Staff 96th Airbase Wing Subtotal	\$227.5
Flight Test Center Edwards AFB, CA	95th Airbase Wing Staff 412th Airbase Wing Test, Support and Operations Groups Test Pilot School Subtotal	\$329.5
Lincoln Laboratory Lexington, MA FFRDC contractor: Massachusetts Institute of Technology	Conduct R&D on and demonstrate the feasibility of advanced systems concepts and technology and build necessary components for sponsors.	\$274.9 ^f
Phillips Laboratory Kirtland AFB, NM	Geophysics Space and Missile Technology Advanced Weapons and Survivability Propulsion Lasers and Imaging Space Experiments Subtotal	\$127.6
Project Air Force Santa Monica, CA FFRDC contractor: RAND Corporation	Conduct a continuous interrelated program of objective analysis on major crosscutting policy and management issues of enduring concern to the Air Force.	\$24.0 ^f
Rome Laboratory Griffiss AFB, NY	Command, Control, and Communications Intelligence and Reconnaissance Surveillance and Photonics Electromagnetics and Reliability Subtotal	\$77.7

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF DEFENSE--Air Force		
Wright Laboratory Wright-Patterson AFB, OH	Materials Manufacturing Technology Avionics Flight Dynamics Solid State Electronics Aero Propulsion and Power Armament Subtotal	\$156.1
46th Test Group Holloman AFB, NM	586th Flight Test Squadron Radar Target Scatter Division 746th Test Squadron (formerly Guidance Test) Plans and Resources 846th Test Squadron (formerly Test Track) Comm-Computer Systems Subtotal	\$31.3
Department of the Army		
Aberdeen Proving Ground, MD ^h	Combat Systems Test Activity Edgewood Research, Development, and Engineering Center Materiel Systems Analysis Activity Medical Research Institute of Chemical Defense Subtotal	\$53.2 105.3 28.9 <u>20.4</u> \$207.8
Aeromedical Research Laboratory Fort Rucker, AL	Aircrew Health and Performance Aircrew Protection Research Support Subtotal	\$9.2
Armament Research, Development, and Engineering Center Picatinny Arsenal, NJ	Fire Support Armaments Center Engineering Support Battlefield Automation and Technical Data Close Combat Armaments Center Armament Engineering Product Assurance and Test Subtotal	\$202.9

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF DEFENSE--Army		
Army Research Laboratory Adelphi, MD	Sensors, Signatures, Signal, and Information Processing Human Research and Engineering Materials Battlefield Environments Electronics and Power Sources Survivability/Lethality Analysis Vehicle Propulsion Weapons Technology Vehicle Structures Advanced Computational and Information Sciences Subtotal	\$252.7
Army Space and Strategic Defense Command Arlington, VA	Sensors Engineering and Systems Targets, Test and Evaluation Weapons US Army Kwajalein Atoll/Kwajalein Missile Range Advanced Technology High Energy Laser Systems Test Facility Subtotal	\$32.1
Arroyo Center Santa Monica, CA FFRDC contractor: RAND Corporation	Force development and technology Manpower and training Military logistics Strategy and doctrine	\$20.1 ^f
Aviation Research, Development, and Engineering Center St. Louis, MO	Aeroflight Dynamics Advanced Systems Business Management Test and Evaluation Management Material Safety Aviation Applied Technology Engineering Life Cycle Software Engineering Subtotal	\$53.2

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF DEFENSE--Army		
Aviation Technical Test Center Fort Rucker, AL	Flight Systems Test Technical Test Support and Logistics Airworthiness Qualification Test Directorate (Edwards AFB) Subtotal	\$18.9
Cold Regions Research and Engineering Laboratory Hanover, NH	Research Experimental Engineering Subtotal	\$28.6
Cold Regions Test Center Fort Greely, AK	Test Management Test Operations Technical Support Subtotal	\$8.8
Communications-Electronics Research, Development, and Engineering Center Fort Monmouth, NJ	Systems Program Office for Digitization Advanced Systems Test and Evaluation Command and Control and Systems Integration Night Vision and Electronic Sensors Software Engineering Space & Terrestrial Communications Intelligence & Electronic Warfare Subtotal	\$123.8
Construction Engineering Research Laboratories Champaign, IL	Infrastructure Laboratory Environmental Sustainment Laboratory Technical Assistance Center Subtotal	\$38.0

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF DEFENSE--Army		
Dugway Proving Ground Dugway, UT	West Desert Test Center Chemical Laboratory Life Sciences Test Support Test Management Test Operations Program Analysis Meteorological Subtotal	\$47.4
Electronic Proving Ground Fort Huachuca, AZ	Material Test Electro-Magnetics Engineering Effects Communications Command and Control Intelligence/Electronic Warfare Subtotal	\$22.8
Engineer Waterways Experiment Station Vicksburg, MS	Hydraulics Laboratory Geotechnical Laboratory Structures Laboratory Instrumentation Services Environmental Laboratory Coastal Engineering Research Center Information Technology Laboratory Subtotal	\$203.9
Georgia Tech Research Institute Atlanta, GA Contract with Georgia Technical Institute	Investigates computer technology, modeling, and simulation; electronic warfare; radar; transportation; law enforcement; medical technology; acoustics; antennas and electromagnetics; electro-optics; manufacturing technology; and information technology.	\$10.2 ^e

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF DEFENSE--Army		
Institute of Surgical Research Fort Sam Houston, TX	Laboratory Pathology Comparative Medicine Microbiology Biochemistry Surgical Study Bioengineering Clinical Subtotal	\$16.1
Medical Research Institute of Infectious Diseases Fort Detrick, MD	Applied Research Virology Pathology Medical Bacteriology Veterinary Medicine Toxinology Subtotal	\$36.2
Missile Research, Development and Engineering Center Redstone Arsenal, AL	Structures System Engineering and Production Software Engineering Missile Guidance Systems Simulation and Development Weapons Sciences Propulsion Subtotal	\$92.1

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF DEFENSE--Army		
Simulation, Training, and Instrumentation Command Orlando, FL	Program Manager: Trade Program Manager: Instrumentation, Targets, and Threat Simulation Program Manager: Combined Arms Tactical Trainer Program Manager: Distributed Interactive Simulation Research and Engineering Logistics Acquisition Management System Integration and Assistance Resources Management Subtotal	\$43.4
Tank Automotive Research, Development and Engineering Center Warren, MI	Executive Committee Technology Transfer Business Group Research Business Group Development Business Group Operations Business Group Engineering Business Group Subtotal	\$75.8
Topographic Engineering Center Alexandria, VA	Digital Concepts and Analysis Center Terrain Analysis Center Topographic Systems Laboratory Simulation and Visualization Laboratory Information Services Center Geographic Information Laboratory Force Development Systems Laboratory Remote Sensing Laboratory Digital Products Center Subtotal	\$29.2

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF DEFENSE--Army		
Walter Reed Army Institute of Research Washington, D.C.	Biochemistry Biometrics Communicable Disease and Immunology Experimental Therapeutics Instrumentation Preventative Medicine Neuropsychiatry Pathology Surgery Veterinary Medicine Retrovirology Medicine Medical Audio Visual Services Subtotal	\$94.8
White Sands Missile Range, NM	Direct Test Support Plans and Quality Assurance Instrumentation Development Army Material Test and Evaluation National Range Operations Nuclear Effects Subtotal	\$164.7
Yuma Proving Ground Yuma, AZ	Materiel Directorate Test Range Support Directorate Subtotal	\$52.4
Department of the Navy		
Applied Physics Laboratory Laurel, MD Contract with the Johns Hopkins University	Conducts R&D on missiles; radar; sonar; space; undersea warfare; command, control and communication; anti-air warfare; strike warfare; information warfare; complex combat systems; and the characteristics and limitations unique to the operating environment of Defense systems.	\$289.3

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF DEFENSE--Navy		
Applied Physics Laboratory Seattle, WA Contract with the University of Washington	Conduct research emphasizing Navy applications of ocean science, ocean acoustics, and ocean engineering and play a major role in teaching and graduate education in mission areas.	\$23.4
Applied Research Laboratory State College, PA Contract with Pennsylvania State University	Examine undersea warfare emphasizing guidance and control of undersea systems, propulsion technology, advanced thermal propulsion concepts, hydrodynamics and hydroacoustics, manufacturing and materials technology, and communications.	\$62.3
Applied Research Laboratories Austin, TX Contract with the University of Texas	Conduct research in the areas of acoustics, electromagnetics, and computer science.	\$37.2
Center for Naval Analyses (FFRDC) Alexandria, VA	Provide an independent, authoritative source of applied research and analysis focused on major present and future needs and issues of the Navy and Marine Corps.	\$46.6 ^f
Naval Aerospace Medical Research Laboratory Pensacola, FL	Research Department Operational Medicine Environmental Physiology Aviation Selection Bioengineering Acceleration Aviation Performance Sensory Sciences Subtotal	\$5.6

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF DEFENSE--Navy		
Naval Air Warfare Center Arlington, VA	Aircraft Training Systems Weapons Subtotal	\$1,397.9
Naval Biodynamics Lab New Orleans, LA	Research Biomedical Support Technology Subtotal	\$2.8
Navy Clothing and Textile Research Facility Natick, MA	Dress Clothing Protective Clothing Systems Evaluation and Engineering Technical and Logistical Management Subtotal	\$3.2
Naval Command, Control, and Ocean Surveillance Center San Diego, CA	Research, Development, Test & Evaluation In-Service Engineering West In-Service Engineering East Subtotal	\$501.7
Naval Dental Research Institute Great Lakes, IL	Scientific Investigations Clinical Investigations Subtotal	\$1.4
Naval Facilities Engineering Services Center Port Hueneme, CA	Ocean Facilities Shore Facilities Amphibious and Expeditionary Environmental Energy and Utilities Subtotal	\$85.6
Naval Health Research Center San Diego, CA	Human Performance Medical Information Systems and Operations Research Health Sciences and Epidemiology Subtotal	\$4.8

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF DEFENSE--Navy		
Naval Medical Research Institute Bethesda, MD	Technical Services Diving and Environmental Physiology Immunobiology Bone Marrow Research Infectious Diseases Diving Research Support Toxicology Detachment (Wright-Patterson AFB, OH) Subtotal	\$21.9
Naval Medical Research Institute #2 Jakarta, Indonesia	Immunology Parasitology Medical Research Retroviral Studies Microbiology Malaria Tropical Medicine Entomology HIV Enterics Threat Assessment Rapid Diagnostics Virology Subtotal	\$4.5
Naval Medical Research Institute #3 Cairo, Egypt	Basic/Laboratory Science Applied/Field Science Subtotal	\$6.4
Navy Personnel Research and Development Center San Diego, CA	Manpower Systems Personnel Systems Training Research Organizational Systems Subtotal	\$16.0

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF DEFENSE--Navy		
Naval Research Laboratory Washington, D.C.	General Science and Technology Warfare Systems and Sensors Research Materials Science and Components Technology Naval Center for Space Technology Ocean and Atmospheric Science and Technology Subtotal	\$360.0
Naval Submarine Medical Research Laboratory Groton, CT	Vision Submarine Systems Biomedical Sciences Subtotal	\$3.6
Naval Surface Warfare Center Arlington, VA	Crane, IN Carderock, MD Dahlgren, VA Indian Head, MD Port Hueneme, CA Subtotal	\$1,396.3
Naval Undersea Warfare Center Newport, RI	Newport, RI, Division Keyport, WA, Division Subtotal	\$397.7
Advanced Research Projects Agency		
Software Engineering Institute Pittsburgh, PA FFRDC contractor: Carnegie Mellon University	Improve the quality of operational software in software-intensive systems.	\$28.7 ^f

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF DEFENSE		
Ballistic Missile Defense Organization		
Space Dynamics Laboratory Logan, UT Contract with Utah State University	Conduct R&D on (1) electro-optical sensors, (2) sensor performance in site surveillance and tracking, and (3) fusing technology; disseminate research results; and enhance university educational programs.	\$15.3
Defense Nuclear Agency		
Armed Forces Radiobiology Research Institute Bethesda, MD	Behavioral Sciences Experimental Hematology Radiation Biophysics Physiology Radiation Biochemistry Military Requirements and Applications Subtotal	\$14.9
Office of the Secretary of Defense		
Institute for Defense Analysis (FFRDC) Alexandria, VA	Studies and Analyses/Operational Test and Evaluation Center Command, Control, Communications, and Intelligence Subtotal	\$68.4 <u>32.6</u> \$101.0 ^f
Logistics Management Institute (FFRDC) McLean, VA	Provide independent, objective, and high-quality research, studies, and analyses across the spectrum of logistics and acquisition issues.	\$29.0 ^f
National Defense Research Institute Santa Monica, CA FFRDC contractor: RAND Corporation	International policy and defense strategy Forces and resources policy Technology and acquisition policy Research integration	\$19.4 ^f

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF DEFENSE--Office of the Secretary of Defense		
C3I Federal Contract Research Center Bedford, MA FFRDC contractor: MITRE Corporation	Provide command, control, communications, computers, and intelligence general system engineering; engineering support; and systems integration support to Defense users.	\$374.0 ^f
DEPARTMENT OF EDUCATION¹		
Office of Educational Research and Improvement (OERI)		
Northeast and Islands Laboratory at Brown Providence, RI Contract with Brown University	Work with Northeast states, Puerto Rico, and the Virgin Islands for knowledge-based school improvement that helps create equal access to high-quality learning environments for all students and helps all students meet high standards for learning.	\$4.9
Mid-Atlantic Laboratory for Student Success Philadelphia, PA Contract with Temple University	Work with Mid-Atlantic Region states to revitalize and reform education in an effort to effect significant improvements in the learning of students at all levels.	\$4.2
Appalachia Educational Laboratory (Contract) Charleston, WV	Work with Appalachia Region states to discover, develop, evaluate, and disseminate innovative services, products, and practices that improve teaching and learning by working with educators, researchers, policymakers, business leaders, families, students, and others.	\$3.3
Southeastern Regional Vision for Education Greensboro, NC Contract with the University of North Carolina at Greensboro	Work with Southeastern Region states to improve educational opportunities for learners.	\$4.5

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF EDUCATION--OERI		
North Central Regional Educational Laboratory (Contract) Oak Brook, IL	Work with North Central Region states to apply R&D to strengthen and support schools and communities in systematic change so that all students achieve standards of educational excellence.	\$5.3
Southwest Educational Development Laboratory (Contract) Austin, TX	Work with Southwest Region states to find, share, and sustain effective solutions for the most urgent problems facing educational systems, practitioners, and decisionmakers with emphasis on ensuring educational quality for children and youth who live in poverty; are Hispanic, African American, or other minorities; or have mental or physical exceptionalities.	\$4.4
Mid-Continent Regional Educational Laboratory (Contract) Aurora, CO	Work with Mid-Continent Region states, improve the quality of educational policy and practice through the application of the best available knowledge from research, development, and practice.	\$3.4
WestEd (Contract) San Francisco, CA	Work with West Region states to develop the tools, processes, and materials that policy makers and practitioners need to better put the pieces of reform together and scale up successful practice in ways that will ensure improved teaching and learning.	\$4.4
Northwest Regional Educational Laboratory (Contract) Portland, OR	Work with Northwest Region states to improve educational results for children, youth, and adults by providing R&D assistance in delivering equitable, high-quality educational programs.	\$4.2

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF EDUCATION--OERI		
Pacific Region Educational Laboratory (Contract) Honolulu, HI	Work with Pacific Region states, territories, and former territories to assist education, government, community agencies, and other groups to maintain cultural literacy and improve the quality of life by helping to strengthen educational programs and processes for children, youth, and adults.	\$2.4
DEPARTMENT OF ENERGY^j		
Defense Programs		
Lawrence Livermore National Laboratory Livermore, CA FFRDC contractor: University of California	Defense Programs Energy Research Nonproliferation and National Security Environmental Management Nuclear Energy Other Energy Programs Work for Others Subtotal	\$352.3 77.3 77.3 60.1 8.6 120.3 <u>163.3</u> \$859.2
Los Alamos National Laboratory Los Alamos, NM FFRDC contractor: University of California	Defense Programs Energy Efficiency and Renewable Energy Environmental Restoration and Waste Management Energy Research Nuclear Energy Nonproliferation and National Security Civilian Radioactive Waste Management Other Energy Programs Work for Others: Energy Work for Others: Non-Energy Subtotal	\$388.1 12.2 208.8 90.7 17.3 85.6 20.4 15.3 46.9 <u>133.5</u> \$1,018.8

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF ENERGY--Defense Programs		
Sandia National Laboratories Albuquerque, NM FFRDC contractor: Lockheed Martin Company	Defense Programs Environmental Management Nonproliferation and National Security Energy Efficiency and Renewable Energy Energy Research Civilian Radioactive Waste Management Fossil Energy Nuclear Energy Other Energy Programs Work for Others: Defense Work for Others: Other Non-Energy Subtotal	\$596.4 145.8 92.8 66.3 39.8 13.2 13.2 13.2 39.8 225.3 <u>79.5</u> \$1,325.3
Energy Research		
Ames Laboratory Ames, IA FFRDC contractor: Iowa State University	Energy Research Environmental Management Fossil Energy Other Energy Programs Work for Others Subtotal	\$20.9 6.7 0.6 1.3 <u>2.6</u> \$32.1
Argonne National Laboratory Argonne, IL FFRDC contractor: University of Chicago	Energy Research Nuclear Energy Environmental Management Energy Efficiency and Renewable Energy Nonproliferation and National Security Other Energy Programs Work for Others Subtotal	\$160.7 104.0 66.2 18.9 9.5 37.8 <u>75.6</u> \$472.7
Bates Linear Accelerator Center Middleton, MA Cooperative Agreement with the Massachusetts Institute of Technology	Energy Research	\$12.6

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF ENERGY--Energy Research		
Brookhaven National Laboratory Upton, NY FFRDC contractor: Associated Universities, Inc.	Energy Research Environmental Management Defense Programs Other Energy Programs Work for Others Subtotal	\$187.8 24.2 12.1 15.2 <u>63.6</u> \$302.9
Continuous Electron Beam Accelerator Facility Newport News, VA FFRDC contractor: Southeastern Universities Research Association	Energy Research Other Energy Programs Subtotal	\$58.5 <u>0.7</u> \$59.2
Environmental Measurements Laboratory New York, NY	Energy Research Environmental Management Nonproliferation and National Security Work for Others Subtotal	\$5.2 3.7 0.3 <u>1.3</u> \$10.5
Fermi National Accelerator Laboratory Batavia, IL FFRDC contractor: Universities Research, Inc.	Energy Research Other Energy Programs and Work for Others Subtotal	\$162.7 <u>1.6</u> \$164.3

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF ENERGY--Energy Research		
Inhalation Toxicology Research Institute Albuquerque, NM FFRDC contractor: Lovelace Biomedical and Environmental Research Institute	Energy Research Environmental Management Defense Programs Other Energy Programs Work for Others Subtotal	\$7.3 4.2 2.1 1.4 <u>2.4</u> <u>\$17.4</u>
Laboratory of Structural Biology and Molecular Medicine Los Angeles, CA Cooperative Agreement with the University of California--Los Angeles	Energy Research	\$7.4
Lawrence Berkeley National Laboratory Berkeley, CA FFRDC contractor: University of California	Energy Research Energy Efficiency and Renewable Energy Environmental Management Civilian Radioactive Waste Management Other Energy Programs Work for Others Subtotal	\$126.9 22.3 13.4 2.2 17.8 <u>40.1</u> <u>\$222.7</u>
Notre Dame Radiation Laboratory Notre Dame, IN Contract with the University of Notre Dame	Energy Research Work for Others Subtotal	\$3.6 <u>0.1</u> <u>\$3.7</u>

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF ENERGY--Energy Research		
Oak Ridge Institute of Science and Education Oak Ridge, TN FFRDC contractor: Oak Ridge Associated Universities, Inc.	Energy Research Office of Education and Technical Information Environment, Safety and Health Environmental Management Defense Programs Nonproliferation and National Security Nuclear Energy Civilian Radioactive Waste Management Other Energy Programs and Work for Others Subtotal	\$14.6 7.3 12.2 4.1 4.1 3.2 2.4 0.8 <u>32.5</u> \$81.2
Oak Ridge National Laboratory Oak Ridge, TN FFRDC contractor: Lockheed Martin Energy Systems, Inc.	Energy Research Environmental Management Energy Efficiency and Renewable Energy Nuclear Energy Defense Programs Environment, Safety and Health Fossil Other Energy Programs Work for Others Subtotal	\$174.5 109.0 76.3 16.4 10.9 10.9 10.9 38.2 <u>98.1</u> \$545.2
Pacific Northwest Laboratory Richland, WA FFRDC contractor: Battelle Memorial Institute	Energy Research Environmental Management Nuclear Energy Energy Efficiency and Renewable Energy Nonproliferation and National Security Environmental Safety and Health Other Energy Programs Work for Others Subtotal	\$61.0 203.2 76.2 25.4 30.5 15.2 35.5 <u>61.0</u> \$508.0

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF ENERGY--Energy Research		
Princeton Plasma Physics Laboratory Princeton, NJ FFRDC contractor: Princeton University	Energy Research Environmental Management Other Energy Programs and Work for Others Subtotal	\$100.6 4.8 <u>1.1</u> \$ <u>106.5</u>
Stanford Linear Accelerator Center, Menlo Park, CA FFRDC contractor: Stanford University	Energy Research Environmental Management Other Energy Programs Subtotal	\$118.0 3.7 <u>2.5</u> \$ <u>124.2</u>
Energy Efficiency and Renewable Energy		
National Renewable Energy Laboratory Golden, CO FFRDC contractor: Midwest Research Institute	Energy Efficiency and Renewable Energy Energy Research Other Energy Programs Work for Others Subtotal	\$228.1 4.7 2.4 <u>2.4</u> \$ <u>237.6</u>
Environmental Management		
Idaho National Engineering Laboratory Idaho Falls, ID FFRDC contractor: Lockheed Martin Idaho Technologies Company	Environmental Management Nuclear Energy Energy Efficiency Energy Research Defense Programs Other Energy Programs Nuclear Regulatory Commission Work for Others Subtotal	\$537.3 72.2 32.1 16.0 16.0 32.1 24.1 <u>72.2</u> \$ <u>802.0</u>

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF ENERGY--Environmental Management		
Savannah River Ecology Laboratory Aiken, SC Contractor: University of Georgia	Defense Programs Energy Research Waste Management Work for Others Subtotal	\$11.1 0.1 0.6 <u>0.2</u> \$12.0
Savannah River Technology Center Aiken, SC FFRDC contractor: Westinghouse Savannah River	Environmental Management Defense Programs Nonproliferation and National Security Work for Others Subtotal	\$49.6 32.4 3.0 <u>5.0</u> \$90.0
Fossil Energy		
Albany Research Center ^k Albany, OR	Health and Safety Mineral and Materials Science Environmental Technology Subtotal	\$0.1 7.5 <u>0.8</u> \$8.4
Morgantown Energy Technology Center Morgantown, WV	Advanced Coal Power Systems Natural Gas Systems Fuel Cells Systems Clean Coal Technologies Environmental Management Management and Site Operations Miscellaneous Subtotal	\$201.7
National Institute for Petroleum and Energy Research ^l Bartlesville, OK Cooperative Agreement with BDM-Oklahoma, Inc.	Field Demonstration Projects Extraction and Production Exploration, Drilling and Risk Management Reservoir Characterization Processing and Upgrading Analysis and Planning Environmental Research Technology Transfer Subtotal	\$103.4 ^m

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF ENERGY--Fossil Energy		
Pittsburgh Energy Technology Center Pittsburgh, PA	Clean Coal Technology Advanced Clean Efficient Power Systems Advanced Clean Fuels Environmental Restoration and Management Other Fossil Work for Others Subtotal	\$99.1
Pittsburgh Research Center ^k Pittsburgh, PA	Health and Safety Mineral and Materials Science Environmental Technology Subtotal	\$21.0 0.1 <u>4.8</u> \$25.9
Spokane Research Center ^k Spokane, WA	Health and Safety Environmental Technology Subtotal	\$4.5 <u>2.7</u> \$7.2
Nuclear Energy/Naval Reactors		
Bettis Atomic Power Laboratory West Mifflin, PA Contractor: Westinghouse Electric Corporation	Naval nuclear propulsion.	\$325.0
Knolls Atomic Power Laboratory Schenectady, NY Contractor: Lockheed Martin-KAPL, Inc.	Naval nuclear propulsion.	\$260.0

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF ENERGY		
Nonproliferation and National Security		
New Brunswick Laboratory Argonne, IL	Nonproliferation and National Security Environmental Management Nuclear Energy Other Energy Programs Nuclear Regulatory Commission Certification of Nuclear Reference Materials sales Subtotal	\$4.2 0.2 0.1 0.3 0.1 <u>0.1</u> \$ <u>5.0</u>
Office of the Secretary of Energy		
Energy Technology Engineering Center ¹ Canoga Park, CA FFRDC Contractor: Rockwell International Corporation	Energy-Related Engineering Development and Testing Environmental Management Other Energy Programs Work for Others Subtotal	\$1.4 9.3 10.5 <u>8.3</u> \$ <u>29.5</u>
DEPARTMENT OF HEALTH AND HUMAN SERVICES		
Centers for Disease Control and Prevention (CDC)		
National Center for Environmental Health Atlanta, GA	Environmental Health Laboratory Sciences Clinical Biochemistry Molecular Biology Toxicology Special Activities Nutritional Biochemistry Subtotal	\$1.3 2.6 1.8 4.3 2.6 <u>0.4</u> \$ <u>13.0</u>
National Center for Infectious Diseases Clifton Road Atlanta, GA	Bacterial and Mycotic Diseases Viral and Rickettsial Diseases Hospital Infections Program HIV, STD, TB Research Laboratories Scientific Resources Program Subtotal	\$7.3 23.2 2.1 11.6 <u>5.2</u> \$ <u>49.4</u>

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF HEALTH AND HUMAN SERVICES--CDC		
National Center for Infectious Diseases Chamblee, Buford Highway Atlanta, GA	Parasitic Diseases	\$4.4
National Center for Infectious Diseases Fort Collins, CO	Vector-Borne Infectious Diseases	\$7.6
National Center for Infectious Diseases Anchorage, AK	Arctic Investigations	\$0.5
National Institute for Occupational Safety and Health Cincinnati, OH	Endomedical and Behavioral Science Physical Sciences and Engineering Respiratory Diseases Studies Safety Research Health Effects Laboratory Subtotal	\$8.7 7.6 1.4 2.0 <u>14.0</u> <u>\$33.7</u>
Food and Drug Administration (FDA)^a		
Center for Biologics Evaluation and Research (NIH main campus) Bethesda, MD	Ensure the safety, potency, and effectiveness of biological products for the prevention, diagnosis, and treatment of disease.	\$16.7
Center for Food Safety and Applied Nutrition Washington, D.C.	Examine new foods and food ingredients, the effects of advanced food processing and packaging technologies, and methods to measure and reduce hazards to shellfish.	\$1.5
National Center for Toxicological Research Jefferson, AR	Define biological mechanisms of action underlying the toxicity of products that FDA regulates to understand critical biological events in the expression of toxicity and develop methods to improve assessment of human exposure, susceptibility, and risk.	\$22.0

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF HEALTH AND HUMAN SERVICES		
National Institutes of Health		
Main Campus Bethesda, MD	National Cancer Institute National Heart, Lung and Blood Institute National Institute of Dental Research National Institute of Diabetes and Digestive and Kidney Diseases National Institute of Neurological Disorders and Stroke National Institute of Allergy and Infectious Diseases National Institute of General Medical Sciences National Institute of Child Health and Human Development National Eye Institute National Institute on Aging National Institute of Arthritis and Musculoskeletal and Skin Diseases National Institute on Deafness and Other Communication Disorders National Institute of Mental Health National Institute on Alcohol Abuse and Alcoholism National Institute of Nursing Research National Center for Human Genome Research Subtotal	\$311.3 98.9 32.6 80.6 74.3 115.6 0.8 71.9 29.6 6.6 18.7 11.2 77.6 20.7 0.7 <u>39.8</u> \$990.9
Addiction Research Center and Gerontology Research Center Baltimore, MD	National Institute on Drug Abuse National Institute on Aging National Institute of General Medical Sciences National Institute of Nursing Research National Center for Human Genome Research Subtotal	\$24.5 31.7 0.1 0.2 <u>0.1</u> \$56.6

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF HEALTH AND HUMAN SERVICES--NIH		
Georgetown University Washington, D.C.	National Institute of Child Health and Human Development	\$1.0
Kowakini Medical Center Honolulu, Hawaii	National Institute of Nursing Research	\$0.3
National Institute of Environmental Health Sciences Research Triangle Park, NC	Environmental health sciences	\$71.7
NCI Frederick Cancer R&D Center Frederick, MD FFRDC contractors: Program Resources, Inc.; Advanced BioScience Laboratories, Inc.; Harlan Sprague Dawley, Inc.; Data Management Services, Inc.	National Cancer Institute National Institute of Neurological Disorders and Stroke National Institute of Allergy and Infectious Diseases National Institute of General Medical Sciences National Institute of Arthritis and Musculoskeletal and Skin Diseases Subtotal	\$61.7 1.3 5.3 0.1 <u>0.2</u> \$68.6
NIH Animal Center Poolesville, MD	National Institute of Neurological Disorders and Stroke National Institute of Child Health and Human Development National Eye Institute National Institute of Mental Health Subtotal	\$0.2 2.8 0.5 <u>1.7</u> \$5.2
Phoenix Epidemiology and Clinical Research Branch Phoenix, AZ	National Institute of Diabetes and Digestive and Kidney Diseases	\$3.9

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF HEALTH AND HUMAN SERVICES--NIH		
Rocky Mountain Laboratories Hamilton, MT	National Institute of Allergy and Infectious Diseases	\$10.6
St. Elizabeth's Hospital Washington, D.C.	National Institute of Mental Health	\$13.8
DEPARTMENT OF THE INTERIOR		
Bureau of Reclamation		
Technical Service Center Denver, CO	Conduct research associated with the design, construction, and operation of reclamation projects.	\$71.3
National Biological Service		
Patuxent Environmental Science Center Laurel, MD	Examine environmental contaminants, migratory birds, wetlands ecology, endangered species, nonindigenous species, and urban ecology in the eastern United States.	\$13.0
Leetown Science Center Kearneysville, WV	Integrate laboratory and field studies on important aquatic ecosystems in the eastern United States.	\$8.3
Great Lakes Science Center Ann Arbor, MI	Provide scientific information for restoring, managing, and protecting living resources and their habitats in the Great Lakes Basin.	\$6.8
Upper Mississippi Science Center Lacrosse, WI	Produce, integrate, and transfer data needed for ecosystem-level management of fish and wildlife resources with emphasis on the Upper Mississippi River Basin.	\$4.3
Environmental Management Technical Center Onalaska, WI	Provide decision makers with information to maintain the Upper Mississippi River System as a viable large river ecosystem given its multiple-use character.	\$0.5

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF THE INTERIOR--National Biological Service		
National Wildlife Health Center Madison, WI	Provide information, technical assistance, and research on national and international wildlife health issues.	\$4.2
Southeastern Biological Science Center Gainesville, FL	Provide expertise in fish culture, stream ecology, and non-native fishes; work with partners to address urgent needs in the south Florida ecosystem and the Caribbean Basin.	\$8.4
Southern Science Center Lafayette, LA	Provide national leadership in biological R&D related to protecting, restoring, and managing natural resources with emphasis on fish, wildlife, and wetlands in the South.	\$9.7
Midcontinental Ecological Science Center Fort Collins, CO	Improve the understanding and management of biological systems from species to ecosystems in the interior western United States.	\$15.4
Midwest Science Center Columbia, MO	Provide leadership for determining existing and potential effects of toxic materials and other stressors on aquatic ecosystems.	\$5.8
Northern Prairie Science Center Jamestown, ND	Conduct R&D on the ecological requirements of wildlife populations of interior grasslands and prairie wetlands.	\$4.0
Forest and Rangeland Ecosystem Science Center Corvallis, OR	Conduct R&D on (1) managing Northwest forests, (2) assessing rangeland quality and wildlife habitat relationships, and (3) analyzing and modeling ecosystems.	\$6.2
Northwest Biological Science Center Seattle, WA	Examine (1) Pacific salmon and related species and (2) biology and ecology of riverine and aquatic ecosystems.	\$3.0
Alaska Science Center Anchorage, AK	Conduct field and laboratory research on fish and wildlife resources in Alaskan habitats and other circumpolar ecosystems.	\$8.2

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF THE INTERIOR--National Biological Service		
California Science Center Davis, CA	Work with partners to ensure the availability of scientific information and technologies needed to manage California's diverse ecological resources.	\$4.6
Pacific Islands Science Center Volcanoes National Park, HI	Provide research, baseline information, and technical assistance relating to the indigenous biological resources found throughout Hawaii and Pacific island nations under U.S. jurisdiction.	\$2.7
U.S. Geological Survey		
Eastern Region Reston, VA	All three laboratories conduct research into photogrammetry, digital cartography, and geographic information systems; mineral and land resources, geologic hazards assessments, geologic evaluation of marine and coastal lands; hydraulics, hydrology, geochemistry, and related fields to support water resources investigations.	\$203.6
Central Region Denver, CO		\$62.6
Western Region Menlo Park, CA		\$104.8
DEPARTMENT OF JUSTICE		
Drug Enforcement Administration		
Special Testing and Research Laboratory McLean, VA	Conduct research related to the analysis of controlled substances.	\$0.2
Investigative Technology Section Lorton, VA	Provide technical investigative and communications support for drug investigations.	\$0.8

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF TRANSPORTATION		
Federal Aviation Administration		
Center for Advanced Aviation System Development McLean, VA FFRDC contractor: MITRE Corporation	Conduct a continuing program of National Airspace System research, development, and engineering.	\$64.4
Civil Aeromedical Institute Oklahoma City, OK	Human Factors and Aeromedical Research	\$9.7
Technical Center Atlantic City, NJ	Assessment and Infrastructure Capacity and Air Traffic Management Technology Communications, Navigation and Surveillance Airport Technology Aircraft Safety Technology System Security Technology Human Factors/Aviation Medicine Innovative/Cooperative Research Subtotal	\$5.8 14.9 10.5 8.6 50.1 35.5 6.5 5.7 <u>\$137.6</u>
Federal Highway Administration		
Turner – Fairbank Highway Research Center McLean, VA	Safety Pavement and Long-Term Pavement Performance Structures Intelligent Transportation Systems Automated Highway Advanced Research National Highway Institute Operating Expenses Subtotal	\$13.7 32.2 15.4 31.4 9.0 2.8 6.4 14.6 <u>\$125.5</u>

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF TRANSPORTATION		
National Highway Traffic Safety Administration		
Vehicle Research and Test Center East Liberty, OH	Conduct research on automotive safety.	\$0.8
Research and Special Programs Administration		
John A. Volpe National Transportation Systems Center Cambridge, MA	Plans and Programs	\$11.1
	Transportation Strategic Planning and Analysis	38.1
	Research and Analysis	21.9
	Operations Engineering and Assessment	57.3
	Information Systems	37.2
	Systems Engineering	<u>32.4</u>
	Subtotal	<u>\$198.2</u>
DEPARTMENT OF THE TREASURY		
Internal Revenue Service (IRS)		
Information Technology Research Laboratory Lanham, MD FFRDC contractor: IIT Research Institute	Provide IRS' Tax Systems Modernization executives with decision support to reduce program risks by demonstrating applicability of new technologies to IRS goals; verifying appropriateness of architectures, designs and components; and facilitating effective technology transfer.	\$1.5
DEPARTMENT OF VETERANS AFFAIRS		
Veterans Health Administration (VHA)°		
Birmingham, AL	The purpose of VHA research is to contribute to (1) improved medical care for veterans and (2) the nation's knowledge about disease and disability. VHA research falls within broad areas of biomedicine, health services, and rehabilitation.	\$2.4
Tuskegee, AL		\$0.1
Tucson, AZ		\$1.6
Little Rock, AR		\$4.0
Fresno, CA		\$0.2
Loma Linda, CA		\$1.3

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF VETERANS AFFAIRS--VHA		
Long Beach, CA	The purpose of VHA research is to contribute to (1) improved medical care for veterans and (2) the nation's knowledge about disease and disability. VHA research falls within broad areas of biomedicine, health services, and rehabilitation.	\$2.9
Los Angeles (outpatient clinic), CA		\$0.5
Palo Alto, CA		\$10.9
Pleasant Hill, CA		\$1.5
San Diego, CA		\$8.6
San Francisco, CA		\$8.8
Sepulveda, CA		\$5.5
West Los Angeles, CA		\$8.1
Denver, CO		\$5.2
Newington, CT		\$0.9
West Haven, CT		\$9.4
Washington, D.C.		\$2.6
Bay Pines, FL		\$0.5
Gainesville, FL		\$2.5
Miami, FL		\$3.8
Tampa, FL		\$1.0
Augusta, GA		\$1.9
Decatur, GA		\$4.2
Boise, ID		\$0.9
Chicago (Lakeside), IL		\$3.2
Chicago (West Side), IL	\$1.6	
Danville, IL	\$0.1	
Hines, IL	\$8.8	

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF VETERANS AFFAIRS--VHA		
North Chicago, IL	The purpose of VHA research is to contribute to (1) improved medical care for veterans and (2) the nation's knowledge about disease and disability. VHA research falls within broad areas of biomedicine, health services, and rehabilitation.	\$0.2
Indianapolis, IN		\$2.8
Iowa City, IA		\$7.7
Leavenworth, KS		\$0.1
Wichita, KS		\$0.2
Lexington, KY		\$1.3
Louisville, KY		\$1.3
New Orleans, LA		\$1.6
Shreveport, LA		\$0.2
Baltimore, MD		\$4.7
Perry Point, MD		\$3.9
Bedford, MA		\$3.4
Boston, MA		\$8.3
Boston (outpatient clinic), MA		\$2.7
Brockton, MA		\$4.9
Allen Park, MI		\$1.2
Ann Arbor, MI		\$5.2
Minneapolis, MN		\$4.5
St. Cloud, MN		\$0.1
Jackson, MS		\$0.8
Columbia, MO	\$1.5	
Kansas City, MO	\$2.3	
St. Louis, MO	\$2.1	

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF VETERANS AFFAIRS--VHA		
Omaha, NE	The purpose of VHA research is to contribute to (1) improved medical care for veterans and (2) the nation's knowledge about disease and disability. VHA research falls within broad areas of biomedicine, health services, and rehabilitation.	\$2.3
Reno, NV		\$0.6
Manchester, NH		\$0.5
East Orange, NJ		\$2.3
Lyons, NJ		\$0.6
Albuquerque, NM		\$4.1
Albany, NY		\$1.1
Batavia, NY		\$0.1
Bath, NY		\$0.1
Bronx, NY		\$2.4
Brooklyn, NY		\$1.2
Buffalo, NY		\$1.7
Castle Point, NY		\$0.2
Montrose, NY		\$0.2
New York, NY		\$3.1
Northport, NY		\$2.2
Syracuse, NY		\$1.3
Asheville, NC		\$0.1
Durham, NC		\$7.7
Salisbury, NC		\$0.2
Fargo, ND		\$0.2
Cincinnati, OH		\$1.4
Cleveland, OH		\$6.7
Dayton, OH	\$0.6	

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF VETERANS AFFAIRS--VHA		
Oklahoma City, OK	The purpose of VHA research is to contribute to (1) improved medical care for veterans and (2) the nation's knowledge about disease and disability. VHA research falls within broad areas of biomedicine, health services, and rehabilitation.	\$1.6
Portland, OR		\$6.7
Coatesville, PA		\$0.1
Philadelphia, PA		\$2.7
Pittsburgh (Highland Drive), PA		\$1.1
Pittsburgh, (University Drive), PA		\$2.4
Providence, RI		\$0.5
Charleston, SC		\$2.1
Columbia, SC		\$1.0
Memphis, TN		\$3.1
Mountain Home, TN		\$0.3
Nashville, TN		\$5.4
Amarillo, TX		\$0.2
Dallas, TX		\$3.8
Houston, TX		\$4.9
San Antonio, TX		\$3.6
Waco, TX		\$0.1
Salt Lake City, UT		\$4.5
White River Junction, VT		\$2.0
Richmond, VA		\$1.8
Salem, VA	\$0.1	
Seattle, WA	\$9.1	

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
DEPARTMENT OF VETERANS AFFAIRS--VHA		
Madison, WI	The purpose of VHA research is to contribute to (1) improved medical care for veterans and (2) the nation's knowledge about disease and disability. VHA research falls within broad areas of biomedicine, health services, and rehabilitation.	\$3.0
Milwaukee, WI		\$4.3
Huntington, WV		\$0.3
San Juan, Puerto Rico		\$0.4
ENVIRONMENTAL PROTECTION AGENCY (EPA)		
Office of Research and Development (ORD)		
National Center for Environmental Assessment		
Washington, D.C.	Immediate Office of the Director	\$3.7
Center Headquarters	Focal point for pesticides, toxics, and Superfund issues with special emphasis on ecological and exposure assessment, cancer risk issues, and developmental toxicity and reproductive issues.	\$6.6
Martin L. King Drive Cincinnati, OH ^P	Focal point for water and waste issues with special emphasis on chemical mixtures and microbial risks.	\$5.2
Research Triangle Park (Highway 54 and Alexander Drive), NC ^P	Focal point for air issues with special emphasis on pulmonary toxicology and lead.	\$5.2

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
ENVIRONMENTAL PROTECTION AGENCY--ORD		
National Health and Environmental Effects Research Laboratory		
Research Triangle Park (Highway 54 and Alexander Drive), NC ^P Laboratory Headquarters	Immediate Office of the Director	\$20.9
	Reproductive Toxicology Division: Examine the effects of environmental pollutants on reproduction and development.	\$4.9
	Experimental Toxicology Division: Improve the understanding of human health risks associated with environmental pollution.	\$6.1
	Environmental Carcinogenesis Division: Examine mutagenesis, carcinogenesis, and related areas in cellular toxicology.	\$4.9
	Neurotoxicology Division: Provide the basis to enable the prediction of whether or not an environmental agent will produce neurotoxicity in humans.	\$4.9
Atlantic Ecology Division Narragansett, RI	Develop and evaluate theory, methods, and data to better understand and quantify the environmental effects of anthropogenic stressors on the coastal waters and watersheds of the Atlantic seaboard.	\$9.8
Human Studies Division Chapel Hill, NC	Conduct clinical and epidemiological investigations to improve the understanding of human health risks associated with environmental pollution.	\$9.8
Gulf Ecology Division Gulf Breeze, FL	Examine the physical, chemical, and biological dynamics of coastal wetlands and estuaries, including estuarine assessment and remediation research.	\$16.0
Mid-Continent Ecology Division Duluth, MN	Develop methods with known certainty for predicting and assessing the effects of polluting activities on freshwater ecological resources.	\$15.9

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
ENVIRONMENTAL PROTECTION AGENCY--ORD		
Western Ecology Division Corvallis, OR	Conduct research on (1) terrestrial and watershed ecology and (2) multimedia ecological effects assessment for pollutants and other environmentally harmful factors.	\$29.4
National Risk Management Research Laboratory		
Martin L. King Drive Cincinnati, OH ^P Laboratory Headquarters	Immediate Office of the Director	\$0.9
	Water Supply and Water Resources Division: Provide technology necessary to help prepare the primary and secondary regulations for drinking water.	\$6.4
	Land Remediation and Pollution Control Division: Examine (1) ways to dispose of municipal and hazardous wastes on land and (2) thermal devices to destroy or detoxify wastes.	\$39.2
	Sustainable Technology Division: Examine pollution generated by industrial and municipal sources, bioremediation, recycle or reuse of contaminants, and pollution prevention.	\$5.5
	Technology Transfer and Support Division: Develop, demonstrate, and test technology to prevent, control, and abate multimedia pollutant sources.	\$4.5
Research Triangle Park (Highway 54 and Alexander Drive), NC ^P	Air Pollution Prevention and Control Division: Develop and assess technologies for reducing and preventing the deleterious effects of air pollution.	\$21.9
Subsurface Protection and Remediation Division Ada, OK	Determine the fate and transport of pollutants in the soil and subsurface environment.	\$12.8

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
ENVIRONMENTAL PROTECTION AGENCY--ORD		
National Exposure Research Laboratory		
Research Triangle Park (Highway 54 and Alexander Drive), NC ^P Laboratory Headquarters	Immediate Office of the Director	\$3.4
	Atmospheric Modeling Division: Conduct research on predictive models for assessing changes in air quality and pollutant exposures.	\$18.2
	Atmospheric Processes Research Division: Describe the chemical and physical processes that affect air pollutants from emission until they result in exposure.	\$9.1
	Air Exposure Research Division: Examine exposure and exposure assessment techniques to model exposure to atmospheric pollutants.	\$9.1
	Air Measurements Research Division: Develop, improve, validate, and ensure the quality of methods to measure air pollutants.	\$14.8
Martin L. King Drive Cincinnati, OH ^P	Human Exposure Research Division: Conduct research to measure, characterize, and predict the exposure of humans to chemical and microbial hazards.	\$9.1
	Ecological Exposure Research Division: Develop diagnostic tools for identifying environmental stressors and their sources and quantify their intensity in aquatic and terrestrial ecosystems.	\$6.8
Characterization Research Division Las Vegas, NV	Use multi-media and multi-pathway approach to develop information and technology to reduce uncertainty in the agency's exposure assessments.	\$27.3

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
ENVIRONMENTAL PROTECTION AGENCY--ORD		
Ecosystems Research Division Athens, GA	Examine organic and inorganic chemicals, greenhouse gas biogeochemical cycles, and land use perturbations that create direct and indirect exposures to humans and ecosystems.	\$15.9
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)^q		
Aeronautics		
Ames Research Center Moffett Field, CA	Aeronautical Research and Technology	\$286.9
	Life and Microgravity Sciences	60.5
	Mission to Planet Earth	26.9
	Space Science	42.2
	Advanced Concepts and Technology	9.2
	Space Shuttle	1.9
	Space Safety, Reliability and Quality Assurance	3.1
	Mission Communication Services	0.6
	Academic Programs	1.7
	Installation operation, travel, and other Subtotal	<u>89.2</u> \$522.3
Dryden Flight Research Center Edwards, CA		r
Langley Research Center Hampton, VA	Aeronautical Research and Technology	\$251.3
	International Space Station	0.6
	Life and Microgravity Sciences	2.3
	Mission to Planet Earth	45.9
	Advanced Concepts and Technology	33.4
	Space Shuttle	0.1
	Space Safety, Reliability and Quality Assurance	2.7
	Academic Programs	1.8
	Installation operation, travel, and other	<u>87.6</u>
	Subtotal	<u>\$425.5</u>

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
NASA--Aeronautics		
Lewis Research Center Cleveland, OH	Aeronautical Research and Technology	\$192.2
	International Space Station	2.2
	Life and Microgravity Sciences	96.6
	Advanced Concepts and Technology	43.4
	Space Shuttle	0.1
	Space Safety, Reliability and Quality Assurance	3.7
	Academic Programs	2.2
	Installation operation, travel, and other	<u>81.5</u>
	Subtotal	<u>\$421.9</u>
Mission to Planet Earth		
Goddard Space Flight Center Greenbelt, MD	Aeronautical Research and Technology	\$9.6
	Life and Microgravity Sciences	0.4
	Mission to Planet Earth	80.8
	Space Science	422.9
	Space Shuttle	0.7
	Space Safety, Reliability and Quality Assurance	5.0
	Mission Communications Services	12.8
	Academic Programs	2.5
	Installation operation, travel, and other	<u>111.8</u>
Subtotal	<u>\$646.5</u>	
Space Flight		
Lyndon B. Johnson Space Center Houston, TX	Aeronautical Research and Technology	\$0.2
	International Space Station	161.9
	Life and Microgravity Sciences	69.7
	Mission to Planet Earth	0.4
	Space Science	6.7
	Advanced Concepts and Technology	38.7
	Space Shuttle	231.2
	Space Safety, Reliability and Quality Assurance	3.2
	Academic Programs	2.3
Installation operation, travel, and other	<u>135.8</u>	
Subtotal	<u>\$650.2</u>	

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
NASA--Space Flight		
John F. Kennedy Space Center Kennedy Space Center, FL	International Space Station Life and Microgravity Sciences Mission to Planet Earth Space Shuttle Space Safety, Reliability and Quality Assurance Academic Programs Installation operation, travel, and other Subtotal	\$82.1 28.4 0.1 261.4 1.3 1.9 <u>125.7</u> \$500.8
George C. Marshall Space Flight Center Huntsville, AL	International Space Station Life and Microgravity Sciences Mission to Planet Earth Advanced Concepts and Technology Space Shuttle Space Safety, Reliability and Quality Assurance Academic Programs Installation operation, travel, and other Subtotal	\$194.8 78.9 31.7 30.4 404.1 0.1 0.8 <u>100.0</u> \$840.9
John C. Stennis Space Center Bay St. Louis, MS	Aeronautical Research and Technology Life and Microgravity Sciences Mission to Planet Earth Advanced Concepts and Technology Space Shuttle Space Safety, Reliability and Quality Assurance Academic Programs Installation operation, travel, and other Subtotal	\$1.5 0.1 0.5 4.0 8.1 0.8 1.6 <u>24.4</u> \$40.9

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
NASA--Space Science		
Jet Propulsion Laboratory Pasadena, CA	Aeronautical Research and Technology Life and Microgravity Sciences Mission to Planet Earth Space Science	\$4.8 20.6 167.2 525.4
FFRDC contractor: California Institute of Technology	Advanced Concepts and Technology Space Safety, Reliability and Quality Assurance Academic Programs Mission Communications Services Subtotal	50.7 3.1 3.3 8.6 <u>\$783.7</u>
NATIONAL SCIENCE FOUNDATION		
Critical Technologies Institute Washington, D.C. FFRDC contractor: RAND Corporation	Provides analytic support that assists in formulating federal technology policy.	\$2.7
National Astronomy and Ionosphere Center Arecibo, Puerto Rico FFRDC awardee: Cornell University	Supports radio and radar astronomy and atmospheric science by (1) providing facilities, services, and support to scientific investigators; (2) conducting research; (3) evaluating research needs; and (4) engaging in educational and training programs.	\$9.9
National Center for Atmospheric Research Boulder, CO FFRDC awardee: University Corporation for Atmospheric Research	Atmospheric Chemistry Atmospheric Technology Climate and Global Dynamics High Altitude Observatory Mesoscale and Microscale Meteorology Research Applications Scientific Computing Environmental and Societal Impact Advanced Studies Program Other Subtotal	\$16.0 18.8 10.5 8.6 7.6 7.4 26.5 1.0 1.9 1.4 <u>\$99.7</u>

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
NATIONAL SCIENCE FOUNDATION		
National Optical Astronomy Observatories Tucson, AZ FFRDC awardee: Association of Universities for Research in Astronomy, Inc.	Kitt Peak National Observatory (near Tucson, AZ) Cerro Tololo Inter-American Observatory (La Serena, Chile) National Solar Observatory (Kitt Peak, AZ and Sunspot, NM) Central Offices Subtotal	\$6.8 6.8 7.1 <u>9.7</u> <u>\$30.4</u>
National Radio Astronomy Observatory Headquarters in Charlottesville, VA FFRDC awardee: Associated Universities, Inc.	Headquarters Research Central Development Laboratory Green Bank, WV, Observatory Kitt Peak Millimeter Wave Telescope Very Large Array and Very Long Baseline Array Telescopes (Socorro, NM) Other Subtotal	\$5.7 1.6 5.1 2.2 14.4 <u>1.7</u> <u>\$30.7</u>
NUCLEAR REGULATORY COMMISSION		
Center for Nuclear Waste Regulatory Analyses San Antonio, TX FFRDC contractor: Southwest Research Institute	Provide conflict-of-interest free, sustained high quality technical assistance and research in support of the Commission's high-level waste management program under the Nuclear Waste Policy Act, as amended.	\$16.0
SMITHSONIAN INSTITUTION		
Smithsonian Astrophysical Observatory Cambridge, MA	Conduct research on the origin and nature of the universe and communicate this information to the public.	\$15.0

Laboratory campus and location	Mission, major research divisions, or major research areas	Fiscal year 1995 operating budget
SMITHSONIAN INSTITUTION		
Smithsonian Environmental Research Center Edgewater, MD	Conduct environmental research and public education programs on the ecological interactions among the atmosphere, land, and estuary of the Chesapeake Bay region.	\$2.5
TENNESSEE VALLEY AUTHORITY		
Engineering Laboratory Norris, TN	Provide fluid-related engineering analyses, physical modeling, numerical modeling, instrumentation development, and prototype testing for water resources, power generation, and environmental programs.	\$7.4
Environmental Research Center Muscle Shoals, AL	Global Change	\$1.2
	Toxic Substances/ Hazardous and Solid Waste	10.7
	Air Quality	3.4
	Water Resources/Coastal and Marine Environments	<u>4.6</u>
	Subtotal	<u>\$19.9</u>

^aThe Agricultural Research Service often identifies its smaller laboratories by their location, rather than by a formal name.

^bOne of the 11 Forest Service R&D laboratories that the Department of Agriculture has proposed to close or transfer in fiscal year 1996.

^cThe operating budget for the Forest Service's Gulfport laboratory is included in that of the Harrison Experimental Forest laboratory in Saucier, Mississippi. If approved, personnel will move from Gulfport to Harrison Experimental Forest.

^dLegislation has been introduced to transfer the National Oceanic and Atmospheric Administration's Gloucester laboratory to Massachusetts.

^eDefense agencies provided operating budget data for fiscal year 1994.

^fTotal Department of Defense obligations to the FFRDC in fiscal year 1995, including procurement awards made through the laboratory.

^gDepartment of Defense obligations to the Georgia Tech Research Institute in fiscal year 1996.

^hThe Army consolidated four laboratories located at Aberdeen Proving Ground into a single unit during fiscal year 1995.

ⁱThe Department of Education provided fiscal year 1996 funding data.

^jThe Department of Energy provided funding data based on the source of funding, rather than the research division within a laboratory that obligated the funding for R&D.

^kOne of the three R&D laboratories transferred to the Department of Energy from the Bureau of Mines when it closed operations in January 1996.

^lOne of the two R&D laboratories that the Department of Energy has proposed to close or transfer after fiscal year 1996.

^mTotal operating budget includes \$38 million provided by BDM-Oklahoma, Inc.

ⁿThe Food and Drug Administration provided information only for its R&D activities; FDA excluded other scientific activities that involve (1) testing products for compliance with the Federal Food, Drug, and Cosmetics Act and all implementing regulations, (2) developing methodology to facilitate such testing, and (3) product testing in support of pending regulatory actions.

^oScientists conduct research at 161 Veterans Health Administration medical centers. In fiscal year 1995, VHA awarded peer-reviewed funding to scientists at 113 medical centers, including the 102 medical centers listed that received at least \$50,000.

^pEPA's Cincinnati and Research Triangle Park laboratory campuses are listed several times to reflect the agency's organizational structure.

^qEstimated operating budgets for NASA's research centers include R&D performed by government scientists and onsite contractors.

^rThe operating budget for Dryden Flight Research Center is included in that of Ames Research Center.

FEDERAL R&D LABORATORIES THAT HAVE SATELLITE FACILITIES

Federal R&D laboratory/location	Satellite facility/location
DEPARTMENT OF AGRICULTURE	
Agricultural Research Service	
Beltsville Agricultural Research Center Beltsville, MD	– Chatsworth, NJ
College Station, TX	– Brownwood, TX
Fresno, CA	– Brawley, CA – Reno, NV
Ithaca, NY	– Orono, ME
Jamie Whitten Delta States Research Center Stoneville, MS	– Jackson, TN
Red River Valley Agricultural Research Center Fargo, ND	– East Grand Forks, MN
Southern Regional Research Center New Orleans, LA	– Houma, LA
Forest Service	
Pacific Southwest Research Station Albany, CA	– Institute of Forest Genetics Placerville, CA – Forestry Sciences Laboratory ^a Soda Springs, CA
Institute of Pacific Islands Forestry Honolulu, HI	– Forestry Research Laboratory Hilo, HI – Quarantine Facility Volcano, HI – West Caroline Islands Laboratory Yap, Federated States of Micronesia
Forestry Sciences Laboratory New Orleans, LA	– Laboratory at Tuskegee University Tuskegee, AL

Federal R&D laboratory/location	Satellite facility/location
Forestry Sciences Laboratory Monticello, AR	<ul style="list-style-type: none"> - Laboratory at Crossett, AR - Laboratory at University of Arkansas Fayetteville, AR - Forestry Sciences Laboratory Harrison, AR - Forestry Sciences Laboratory Hot Springs, AR
Southern Research Station Asheville, NC	<ul style="list-style-type: none"> - Bent Creek Experimental Forest Bent Creek, NC - Southern Research Station Aiken, SC
DEPARTMENT OF COMMERCE -- NOAA	
National Environmental Satellite, Data, and Information Service	
Satellite Applications Laboratory NOAA Science Center Camp Springs, MD	<ul style="list-style-type: none"> - University of Wisconsin Madison, WI - Colorado State University Fort Collins, CO
DEPARTMENT OF DEFENSE	
Department of the Air Force	
Armstrong Laboratory San Antonio, TX (Brooks AFB, TX)	<ul style="list-style-type: none"> - Williams AFB, AZ - Tyndall AFB, FL - Wright-Patterson AFB, OH
Phillips Laboratory Kirtland AFB, NM	<ul style="list-style-type: none"> - Hanscom AFB, MA - Edwards AFB, CA
Rome Laboratory Rome, NY (Griffiss AFB, NY)	<ul style="list-style-type: none"> - Hanscom AFB, MA
Wright Laboratory Wright-Patterson AFB, OH	<ul style="list-style-type: none"> - Eglin AFB, FL

Federal R&D laboratory/location	Satellite facility/location
Department of the Army	
Army Space and Strategic Defense Command Arlington, VA	<ul style="list-style-type: none"> - Strategic Defense Command, Huntsville, AL - U.S. Army Kwajalein Atoll, Marshall Islands - DOD High Energy Laser Systems TF, White Sands, NM
Aviation Research, Development, and Engineering Center St. Louis, MO	<ul style="list-style-type: none"> - Moffett Field, CA - Fort Eustis, VA - Langley, VA
Aviation Technical Test Center Fort Rucker, AL	<ul style="list-style-type: none"> - Airworthiness Test Directorate, Edwards AFB, CA
Cold Regions Research and Engineering Center Hanover, NH	<ul style="list-style-type: none"> - Alaska Projects Office, Fairbanks, AK
Communications-Electronics Research, Development, and Engineering Center Fort Monmouth, NJ	<ul style="list-style-type: none"> - Fort Belvoir, VA - Vint Hill Farms
Engineer Waterways Experiment Station Vicksburg, MS	<ul style="list-style-type: none"> - Field Research Facility, Duck, NC
Operational Test and Evaluation Command Test and Experimentation Command Fort Hood, TX	<ul style="list-style-type: none"> - Airborne Special Operations, Fort Bragg, NC - Air Defense Artillery, Fort Bliss, TX - Fire Support, Fort Sill, OK - Intelligence & Electronic Warfare, Fort Huachuca, AZ - TEXCOM Test & Experimentation, FHL, CA - TEXCOM, Fort Hood, TX
Simulation, Training, and Instrumentation Command Orlando, FL	<ul style="list-style-type: none"> - Huntsville, AL

Federal R&D laboratory/location	Satellite facility/location
Walter Reed Army Institute of Research, Washington, D.C.	<ul style="list-style-type: none"> - Brooks AFB - Bethesda, MD - Dental Detachment, Washington, D.C. - Wright-Patterson AFB, OH - AFRIMS, Thailand - Brazil - Kenya - Heidelberg, Germany
Department of the Navy	
Naval Air Warfare Center Arlington, VA	<ul style="list-style-type: none"> - China Lake, CA - Point Mugu, CA - Patuxent River Station, MD - Training Systems Division, Orlando, FL - Trenton, NJ - Warminster, PA - Lakehurst, NJ - Indianapolis, IN
Naval Command, Control, and Ocean Surveillance Center San Diego, CA	In-Service Engineering East: <ul style="list-style-type: none"> - Charleston, SC - Norfolk, VA - Portsmouth, VA - St. Inigoes, MD RDT&E Division: <ul style="list-style-type: none"> - Warminster, PA
Naval Health Research Center San Diego, CA	<ul style="list-style-type: none"> - Marine Corps Mountain Warfare Training Center, Bridgeport, CA
Naval Research Laboratory Washington, D.C.	<ul style="list-style-type: none"> - Bay St. Louis, MS - NAS Patuxent River, MD

Federal R&D laboratory/location	Satellite facility/location
<p>Naval Surface Warfare Center Arlington, VA</p>	<p>Carderock Division: - Annapolis, MD - Bayview, ID - Bethesda, MD - Bremerton, WA - Cape Canaveral, FL - Ketchikan, AK - Memphis, TN - Norfolk, VA - Panama City, FL - Patuxent River, MD - Philadelphia, PA - Portsmouth, VA - Santa Cruz, CA Crane Division: - Crane, IN - Louisville, KY Dahlgren Division: - Dahlgren, VA (incl. White Oak, MD) - Panama City, FL Indian Head Division: - Indian Head, MD Port Hueneme Division: - Port Hueneme, CA - San Diego, CA - Dam Neck, VA</p>
<p>Naval Undersea Warfare Center Newport, RI</p>	<p>Newport Division: - Andros Island, Bahamas - Dodge Pond, CT - New London, CT - Seneca Lake, NY Keyport Division: - Hawaii - Keyport, WA - San Diego, CA</p>

Federal R&D laboratory/location	Satellite facility/location
DEPARTMENT OF ENERGY	
Defense Programs	
Sandia National Laboratories Albuquerque, NM	– Livermore, CA
Energy Research	
Argonne National Laboratory Argonne, IL	– Idaho Falls, ID
Lawrence Berkeley National Laboratory Berkeley, CA	– University of California Berkeley, CA
Pacific Northwest Laboratory Richland, WA	– Marine Sciences Laboratory Sequim, WA
Nuclear Energy/Naval Reactors	
Bettis Atomic Power Laboratory West Mifflin, PA	– Naval Reactors Facility Idaho Falls, ID
Knolls Atomic Power Laboratory Schenectady, NY	– Kesselring Site West Milton, NY
DEPARTMENT OF HEALTH AND HUMAN SERVICES	
Centers for Disease Control	
National Center for Infectious Diseases Atlanta, GA	– Medical Entomology Research and Training Unit Guatemala – CDC/KEMRI Unit Kenya
National Center for Infectious Diseases Fort Collins, CO	– Dengue Branch San Juan, Puerto Rico
Food and Drug Administration	
Center for Food Safety and Applied Nutrition Washington, D.C.	– Moffet Center Chicago, IL – Prince Georges County, MD – NETSU

Federal R&D laboratory/location	Satellite facility/location
DEPARTMENT OF THE INTERIOR	
National Biological Service	
Patuxent Environmental Science Center Laurel, MD	<ul style="list-style-type: none"> - Center for Urban Ecology Washington, D.C. - Biological Survey Group Washington, D.C. - Maine Research Group Orono, ME - Minnesota Research Group St. Paul, MN
Leetown Science Center Kearneysville, WV	<ul style="list-style-type: none"> - Columbus Field Research Station Columbus, OH - Orono Field Research Station Orono, Me - Monell Field Station Philadelphia, PA - Conte Anadromous Fish Research Laboratory Turner Falls, MA - Wellsboro R&D Laboratory Wellsboro, PA - Tunison Laboratory of Aquatic Science Cortland, NY

Federal R&D laboratory/location	Satellite facility/location
<p>Great Lakes Science Center Ann Arbor, MI</p>	<ul style="list-style-type: none"> – Lake Erie Biological Station and Vessel Base Sandusky, OH – Lake Ontario Biological Station and Vessel Base Oswego, NY – Lake Huron Biological Station and Vessel Base Cheboygan, MI – Lake Superior Biological Station and Vessel Base Ashland, WI – Lake Michigan Biological Station and Vessel Base Saugatuck, MI – Hammond Bay Biological Project Millersburg, MI – Indiana Dunes National Lakeshore Porter, IN – Pictured Rocks National Lakeshore Munising, MI – Voyageurs National Park International Falls, MN
<p>National Wildlife Health Center Madison, WI</p>	<ul style="list-style-type: none"> – Honolulu Field Station Honolulu, HI

Federal R&D laboratory/location	Satellite facility/location
<p>Southeastern Biological Science Center Gainesville, FL</p>	<ul style="list-style-type: none"> - National Fish Hatchery and Technology Center San Marcos, TX - Caribbean-Virgin Islands Field Station San Marcos, TX - Athens Field Station Athens, GA - Sirenia Project Gainesville, FL - South Florida Field Station Miami, FL - Everglades National Park Field Station, FL - Fish Farming Experimental Laboratory Stuttgart, AR - Southern Appalachian Field Station Knoxville, TN - Auburn Field Station Auburn, AL - Padre Island National Seashore, TX - Clemson Field Station, GA - Big Cypress National Preserve Station Ochopee, FL
<p>Southern Science Center Lafayette, LA</p>	<ul style="list-style-type: none"> - Corpus Christi Field Station Corpus Christi, TX - Vicksburg Field Station Vicksburg, MS - Brazos Field Station College Station, TX
<p>Midwest Science Center Columbia MO</p>	<ul style="list-style-type: none"> - Jackson Field Station Jackson, WY - Yankton Field Station Yankton, SD

Federal R&D laboratory/location	Satellite facility/location
Northern Prairie Science Center Jamestown, ND	<ul style="list-style-type: none"> - Woodworth Field Station Woodworth, ND - Central Plains/Ozark Plateau Field Station Columbia, MO
Midcontinent Ecological Science Center Fort Collins, CO	<ul style="list-style-type: none"> - Canyonlands Field Station Moab, UT - St. George Field Station St. George, UT - Bozeman Field Station Bozeman, MT - Las Vegas Field Station Las Vegas, NV - Riverside Field Station Riverside, CA - Colorado Plateau Field Station Flagstaff, AZ - Albuquerque Field Station Albuquerque, NM - Bandelier Field Station Bandelier, NM - Air Quality Field Station Denver, CO - Water Resources Field Station Denver, CO - Glacier Field Station, MT - Yellowstone Field Station, WY
Forest and Rangeland Ecosystem Science Center Corvallis, OR	<ul style="list-style-type: none"> - Olympic National Park Field Station Fort Angeles, WA - Northwest Research Station Corvallis, OR
Northwest Biological Science Center Seattle, WA	<ul style="list-style-type: none"> - Columbia River Field Station Cook, WA - Marrowstone Island Field Station, WA

Federal R&D laboratory/location	Satellite facility/location
<p>California Science Center Davis, CA</p>	<ul style="list-style-type: none"> - Dixon Field Station Dixon, CA - Channel Island Field Station Ventura, CA - Point Reyes Field Station Point Reyes, CA - Davis Field Station Davis, CA - Piedras Blancas Field Station San Simeon, CA - Santa Cruz Field Station Santa Cruz, CA - Sequoia and Kings Canyon Field Station, CA - Yosemite Field Station Yosemite National Park, CA - Golden Gate Field Station San Francisco, CA - Redwood Field Station Redwood National Park, CA - San Diego Field Station San Diego, CA - Kern Field Station Fresno, CA - San Francisco Bay/Estuary Field Station Vallejo, CA - Reno Field Station Reno, NV

Federal R&D laboratory/location	Satellite facility/location
Alaska Science Center Anchorage, AK	<ul style="list-style-type: none"> - Glacier Bay National Park Field Station, AK - Denali National Park Field Station, AK - Wrangell – St. Elias National Park Field Station, AK - Kodiak National Wildlife Refuge Field Station, AK - Katmai Field Station, AK - Fairbanks Field Station Fairbanks, AK
Pacific Islands Science Center Volcanoes National Park, HI	<ul style="list-style-type: none"> - Hawaii Volcanoes National Park, HI - Haleakala National Park Maui, HI - Honolulu, Oahu, HI
U.S. Geological Survey	
Eastern Region Reston, VA	<ul style="list-style-type: none"> - Woods Hole, MA - Flagstaff, AZ - EROS Data Center Sioux Falls, SD - Cascades Volcano Observatory, WA - Alaska Volcano Observatory, AK - Hawaiian Volcano Observatory, HI
ENVIRONMENTAL PROTECTION AGENCY	
Western Ecology Division Corvallis, OR	<ul style="list-style-type: none"> - Pacific Coast Ecology Branch Newport, OR
Mid-Continent Ecology Division Duluth, MN	<ul style="list-style-type: none"> - Community Based-Science Support Staff Grosse Ile, MI - Monticello Ecological Research Station^b Monticello, MN
Technology Transfer and Support Division Cincinnati, OH	<ul style="list-style-type: none"> - Test and Evaluation Facility Mill Creek, Cincinnati, OH

Federal R&D laboratory/location	Satellite facility/location
Land Remediation and Pollution Control Division Cincinnati, OH	<ul style="list-style-type: none"> - Center Hill Facility Cincinnati, OH - Incineration Research Facility^b Jefferson, AR
Ecological Exposure Research Division Cincinnati, OH	<ul style="list-style-type: none"> - Newtown Facility Cincinnati, OH
Characterization Research Division Las Vegas, NV	<ul style="list-style-type: none"> - Environmental Photographic Interpretation Center^b (Vint Hill Farms Station) Warrenton, VA
NATIONAL SCIENCE FOUNDATION	
National Center for Atmospheric Research Boulder, CO	<ul style="list-style-type: none"> - Jefferson County Airport Marshall, CO - Mauna Loa, HI
National Optical Astronomy Observatories Tucson, AZ	<ul style="list-style-type: none"> - Kitt Peak National Observatory near Tucson, AZ - Cerro Tololo Inter-American Observatory La Serena, Chile - National Solar Observatory Kitt Peak - National Solar Observatory Sunspot, NM

Federal R&D laboratory/location	Satellite facility/location
National Radio Astronomy Observatory Headquarters in Charlottesville, VA	<ul style="list-style-type: none"> - Green Bank Observatory Green Bank, WV - Kitt Peak Millimeter Wave Telescope near Tucson, AZ - Very Large Array and Very Long Baseline Array Telescopes Socorro, NM - Very Long Baseline Array Telescope St. Croix, U.S. Virgin Islands - Very Long Baseline Array Telescope Hancock, NH - Very Long Baseline Array Telescope North Liberty, IA - Very Long Baseline Array Telescope Fort Davis, TX - Very Long Baseline Array Telescope Los Alamos, NM - Very Long Baseline Array Telescope Pie Town, NM - Very Long Baseline Array Telescope Kitt Peak, AZ - Very Long Baseline Array Telescope Owens Valley, CA - Very Long Baseline Array Telescope Mauna Kea, HI

^aThe Department of Agriculture has proposed to close this satellite facility in fiscal year 1996.

^bOne of three EPA satellite facilities scheduled for closure in fiscal year 1996.

FEDERAL R&D LABORATORIES CLOSED SINCE
THE BEGINNING OF FISCAL YEAR 1996

Federal agency	R&D laboratory or satellite facility/location
DEPARTMENT OF ENERGY	
Energy Research	Radiobiology and Environmental Health San Francisco, CA
DEPARTMENT OF THE INTERIOR	
Bureau of Mines	Denver Mining Research Center Denver, CO
	Reno Research Center Reno, NV
	Rolla Research Center Rolla, MO
	Salt Lake City Research Center Salt Lake City, UT
	Tuscaloosa Research Center Tuscaloosa, AL
	Twin Cities Research Center Minneapolis, MN

OBJECTIVES, SCOPE, AND METHODOLOGY

The Chairman, House Committee on the Budget, requested that we provide information on all federal research and development (R&D) laboratories operated by federal agencies or contractors. Specifically, the Committee asked us to identify for each federal R&D laboratory (1) its name, (2) location, (3) research field or mission, (4) estimated fiscal year 1995 operating budget, and (5) the name and location of any satellite research facilities. The Committee also asked that each laboratory with an operating budget of at least \$10 million identify its primary research divisions and an approximate percentage of the laboratory's operating budget that each division received, to the extent that such information was readily available. In addition, we asked federal agencies to identify any R&D laboratories that they have closed since the beginning of fiscal year 1996.

To develop a comprehensive list of federal R&D laboratories, we used the National Science Foundation's Federal Funds for Research and Development: Fiscal Years 1993, 1994, and 1995 (NSF 95-334) to identify each federal department and independent agency that performed at least \$10 million in intramural R&D or had at least one federally funded R&D center (FFRDC).¹ Of 22 federal agencies we then contacted, 17 said that they have at least one R&D laboratory, while 5 agencies—the Department of Housing and Urban Development, the Department of Labor, the Agency for International Development, the Social Security Administration, and the U.S. International Trade Commission—told us that they do not have any R&D laboratories.

To help ensure that the 17 federal agencies provided uniform information about their R&D laboratories and that our list is comprehensive, we asked each to:

- Provide information on the basis of a laboratory campus location. For example, the National Institutes of Health (NIH) performs most of its intramural research at its main campus in Bethesda, Maryland. Each of NIH's 15 institutes, which all perform research at this campus, could be considered a separate laboratory. However, for our purposes, the Bethesda campus is considered a single laboratory.

¹In general, an FFRDC performs or manages R&D, receives at least 70 percent of its funding from the federal government, has a long-term relationship of 5 or more years with its sponsoring agency, and has an average annual budget of at least \$500,000. Most or all of an FFRDC's facilities also are owned by, or funded under contract with, the federal government.

- Provide information only for federal laboratories that perform R&D. Specifically, our list does not include federal laboratories that test and analyze samples for chemical, physical, or biological properties because such testing is not considered R&D. The Environmental Protection Agency and the Food and Drug Administration have many laboratories that analyze samples as part of their regulatory mission.
- Provide information for each of their FFRDCs and other R&D laboratories operated by contractors. In addition to FFRDCs that perform traditional R&D, these laboratories include the Department of Defense's so-called "think tanks" and six university-affiliated research centers and the National Science Foundation's Critical Technologies Institute. Contractor-operated R&D laboratories that once were FFRDCs but no longer meet the FFRDC definition are included on our list if they continue to perform R&D under a long-term agreement with a federal agency. We also asked the Department of Energy to provide information for three of its longstanding R&D laboratories operated by nongovernment organizations through cooperative agreements.
- Include R&D laboratories regardless whether a laboratory's land and buildings are (1) owned by the federal government, (2) leased by the government at commercial rates or at nominal or no cost, or (3) owned or leased by a contractor.
- Include in each laboratory's operating budget only funds associated with performing R&D at the laboratory, excluding funds that the laboratory staff awarded for extramural R&D through contracts, grants, or cooperative agreements.
- Identify any laboratories the agency has closed since the beginning of fiscal year 1996 or has proposed for closure.

The National Aeronautics and Space Administration (NASA) does not distinguish between money each research center spent for R&D performed by government scientists and onsite contractors as opposed to funding for outside contractors awarded through the research center. To estimate the portion of each NASA research center's total funding that supported R&D activities at the center, we contacted the director of the Critical Technologies Institute's database of federal R&D activities (known as RaDiUS). The director, in consultation with NASA officials, developed an estimated operating budget using fiscal year 1994 budget data. For each NASA center, except the Jet Propulsion Laboratory, the estimated operating budget is the sum of (1) the total estimated costs of each program at each center and (2) the center's personnel costs associated with each program based on the average cost per fulltime equivalent per center, minus (3) the total

amount of contracts that each center awarded within each program where the place of performance listed on the contract was other than the awarding center. The operating budget estimate for the Jet Propulsion Laboratory does not exclude funding for R&D activities performed by outside organizations because it is a contractor-operated laboratory and information about its subcontracts was not readily available.

In addition to discussions with Critical Technologies Institute staff, we compared information that agencies submitted with (1) the Directory of Federal Laboratory and Technology Resources prepared by the National Technical Information Service and the National Technology Transfer Center, (2) NSF's list of FFRDCs, and (3) recent GAO reports that addressed federal R&D laboratories. (See Related GAO Products at the end of this report.) We provided each agency with relevant portions of our tables for review and incorporated clarifying information, as appropriate.

RELATED GAO PRODUCTS

Federal Research: Information on Fees for Selected Federally Funded Research and Development Centers (GAO/RCED-96-31FS, Dec. 8, 1995).

Federally Funded R&D Centers: Use of Management Fees by the MITRE Corporation (GAO/NSIAD-96-26, Nov. 27, 1995).

Federally Funded R&D Centers: Use of Contract Fee by the Aerospace Corporation (GAO/NSIAD-95-174, Sept. 28, 1995).

Agricultural Research Lab Closings (GAO/RCED-95-178R, May 26, 1995).

Department of Energy: National Laboratories Need Clearer Missions and Better Management (GAO/RCED-95-10, Jan. 27, 1995).

Federal Research: Aging Federal Laboratories Need Repairs and Upgrades (GAO/RCED-93-203, Sept. 20, 1993).

Federal Budget: Choosing Public Investment Programs (GAO/AIMD-93-25, July 23, 1993).

Navy Laboratories: Plans for Consolidation and Progress Toward Implementation (GAO/NSIAD-93-160, June 23, 1993).

Military Bases: Army's Planned Consolidation of Research, Development, Test and Evaluation (GAO/NSIAD-93-150, Apr. 29, 1993).

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