

TABLE 39  
 Higher education R&D expenditures in the geosciences, atmospheric sciences, and ocean sciences, ranked by all FY 2019 geosciences, atmospheric sciences, and ocean sciences: FYs 2016–19 and by subfield for FY 2019

(Dollars in thousands)

Institution	Rank	2016	2017	2018	2019				
					All geosciences, atmospheric sciences, and ocean sciences	Atmospheric science and meteorology	Geological and earth sciences	Ocean sciences and marine sciences	Geosciences, atmospheric sciences, and ocean sciences nec
All institutions	-	3,083,705	3,148,239	3,160,061	3,185,089	590,387	1,120,621	1,100,653	373,428
U. California, San Diego	1	166,470	186,827	159,294	180,626	27,028	31,144	122,454	0
Woods Hole Oceanographic Institution	2	148,593	132,686	143,179	145,169	0	0	145,169	0
U. Washington, Seattle	3	117,932	118,763	122,167	123,301	50,444	13,901	54,893	4,063
U. Colorado Boulder	4	138,163	128,164	136,586	121,624	39,723	11,395	1,591	68,915
Texas A&M U., College Station and Health Science Center	5	113,893	115,183	115,394	113,459	4,338	14,337	85,229	9,555
Colorado State U., Fort Collins	6	38,038	122,150	116,804	85,500	45,148	36,757	3	3,592
Arizona State U.	7	44,218	53,751	82,299	83,703	0	83,703	0	0
U. Hawaii, Manoa	8	96,094	90,909	78,170	82,955	3,437	16,418	57,613	5,487
Columbia U. in the City of New York	9	84,289	84,745	80,240	75,900	10,489	27,726	37,685	0
U. Oklahoma, Norman and Health Science Center	10	44,835	47,554	63,159	71,836	64,194	7,642	0	0
U. Alaska, Fairbanks	11	64,729	67,711	65,850	69,346	10,208	26,816	29,040	3,282
U. Wisconsin-Madison	12	54,306	52,105	50,280	58,701	35,945	14,233	0	8,523
U. Maryland <sup>a</sup>	13	na	na	na	52,823	35,749	14,275	2,258	541
U. Texas, Austin	14	70,200	64,052	55,302	51,155	21	37,311	11,681	2,142
U. Rhode Island	15	43,504	49,241	47,018	50,513	47	16,292	27,245	6,929
U. Miami	16	64,671	63,018	50,321	48,427	26,839	0	19,729	1,859
U. New Hampshire	17	54,491	51,592	52,678	48,149	20,369	6,267	21,513	0
Pennsylvania State U., University Park and Hershey Medical Center	18	42,273	44,378	50,302	46,390	20,694	21,998	3,698	0
U. Maryland Center for Environmental Science	19	50,127	46,312	42,675	43,867	70	3,794	38,264	1,739
Harvard U.	20	37,326	37,409	42,697	43,664	4,506	10,105	21	29,032
Johns Hopkins U. <sup>b</sup>	21	33,628 i	35,624 i	34,663 i	42,585 i	6,390 i	13,018 i	8,842 i	14,335 i
Oregon State U.	22	45,735	45,970	48,616	40,030	2,332	6,736	20,141	10,821
U. California, Los Angeles	23	32,350	35,266	38,361	38,106	8,088	21,975	0	8,043
California Institute of Technology	24	32,029	33,138	32,030	37,101	4,122	26,942	0	6,037
U. California, Santa Barbara	25	32,012	30,714	33,665	35,554	0	14,509	20,982	63
Massachusetts Institute of Technology	26	54,193	47,798	41,824	34,015	8,787	13,777	8,299	3,152
William & Mary	27	33,396	34,067	33,109	32,425	0	539	31,886	0
Louisiana State U., Baton Rouge	28	32,845	29,452	31,488	31,853	0	5,364	20,412	6,077
U. Arizona	29	32,085	29,723	28,947	31,075	5,180	22,374	2,208	1,313
U. Southern Mississippi	30	24,064	23,802	18,864	29,968	0	4,042	9,890	16,036

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U. California, Davis	31	26,861	25,750	27,316	29,166	3,445	3,191	4,740	17,790
U. Utah	32	13,199	11,668	12,580	27,848	7,784	20,064	0	0
U. California, Santa Cruz	33	20,731	22,218	24,348	26,570	0	6,667	14,043	5,860
SUNY, Stony Brook U.	34	28,524	28,092	25,646	26,282	141	5,785	20,190	166
U. South Florida, Tampa	35	25,346	27,289	26,509	25,127	0	5,954	19,173	0
U. Maine	36	21,622	25,031	22,741	25,039	0	8,803	16,191	45
Princeton U.	37	25,990	25,660	28,636	24,755	9,457	6,755	4,880	3,663
Desert Research Institute	38	27,271	26,941	24,601	23,991	5,877	18,114	0	0
U. Georgia	39	23,210	24,163	22,530	23,281	0	4,643	18,638	0
North Carolina State U.	40	24,589	19,596	19,819	21,691	6,626	0	2,994	12,071
U. Delaware	41	18,814	21,126	20,689	18,346	0	3,953	9,855	4,538
Florida State U.	42	19,820	19,668	20,650	18,343	5,334	3,022	8,363	1,624
Rutgers, State U. New Jersey, New Brunswick	43	44,357	25,429	19,173	18,036	3,007	219	13,575	1,235
Stanford U.	44	17,302	16,079	18,036	17,624	0	11,031	2,972	3,621
U. Florida	45	15,833	15,350	16,846	17,186	0	10,050	6,011	1,125
U. North Carolina, Chapel Hill	46	17,709	19,991	19,136	16,922	0	5,523	7,370	4,029
U. Southern California	47	19,128	15,855	16,323	16,850	0	12,588	4,262	0
U. Alabama, Huntsville	48	13,440	13,866	12,552	16,001	15,586	327	88	0
SUNY, U. Albany	49	17,147	29,115	17,696	15,833	13,860	1,973	0	0
U. Michigan, Ann Arbor	50	13,522	14,449	14,278	15,705	0	15,705	0	0
Florida International U.	51	6,422	10,799	14,800	14,955	3,216	2,643	9,096	0
U. Nevada, Reno	52	12,115	11,868	14,369	14,563	428	13,419	519	197
U. Minnesota, Twin Cities	53	13,960	14,204	14,248	14,391	0	14,391	0	0
Michigan Technological U.	54	13,325	13,880	13,885	14,388	1,569	89	3,840	8,890
U. Maryland, Baltimore County	55	21,300	22,836	20,275	13,585	1,366	9,718	1,995	506
Texas A&M U.-Corpus Christi	56	14,629	15,697	14,719	13,494	829	1,061	4,684	6,920
U. Pittsburgh, Pittsburgh	57	12,513	13,116	12,405	13,185	0	2,907	0	10,278
San Jose State U.	58	14,267	12,216	14,627	12,777	1,629	181	10,967	0
Georgia Institute of Technology	59	11,384	11,942	12,380	12,260	365	11,550	345	0
George Mason U.	60	11,913	12,256	11,977	11,598	4,664	5,671	893	370
U. California, Irvine	61	9,962	11,305	10,922	11,580	156	11,424	0	0

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U. Massachusetts, Dartmouth	62	10,508	10,591	11,084	11,550	0	0	11,550	0
Duke U.	63	10,214	11,054	11,171	11,077	0	3,364	7,713	0
U. Connecticut	64	9,385	9,289	10,356	10,974	0	1,073	9,901	0
Mississippi State U.	65	2,362	7,270	8,947	10,928	1,025	8,411	1,403	89
U. California, Riverside	66	8,887	9,611	9,880	10,774	0	4,168	0	6,606
U. Kansas	67	15,059	12,792	11,329	10,594	317	9,211	299	767
U. Hawaii, system office	68	ne	ne	11,022	10,531	10,531	0	0	0
U. Houston	69	5,365	6,124	8,002	10,516	1,664	8,490	238	124
Washington State U.	70	9,811	11,001	9,041	10,202	463	2,536	208	6,995
West Virginia U.	71	13,090	7,546	7,266	10,049	0	7,881	0	2,168
U. California, Berkeley	72	10,487	9,783	11,473	9,429	13	9,416	0	0
U. Chicago	73	7,475	8,850	9,652	9,370	0	9,370	0	0
Ohio State U.	74	10,523	9,090	9,286	9,030	0	9,030	0	0
Nova Southeastern U.	75	9,457	8,692	7,857	8,878	0	0	8,878	0
Boston U.	76	7,222	6,807	7,105	8,701	0	8,701	0	0
Colorado School of Mines	77	10,458	10,340	8,380	8,238	123	7,654	0	461
Texas Tech U.	78	13,297	6,750	6,583	8,213	629	6,143	0	1,441
Northern Arizona U.	79	9,133	4,380	9,714	7,984	9	4,893	8	3,074
Texas State U.	80	3,387	3,211	5,402	7,349	3	4,713	0	2,633
U. New Mexico	81	6,042	8,233	7,775	7,329	280	7,049	0	0
Montana Technological U.	82	7,533	7,222	7,162	7,235	0	7,235	0	0
Indiana U., Bloomington	83	3,721	3,758	5,528	7,220	2,719	1,458	0	3,043
Purdue U., West Lafayette	84	5,335	6,031	6,013	7,119	5,965	0	0	1,154
Yale U.	85	7,252	6,448	7,613	6,995	0	6,995	0	0
Southern Methodist U.	86	7,393	6,620	5,941	6,954	0	6,954	0	0
U. Illinois, Urbana-Champaign	87	7,211	6,303	7,272	6,868	3,947	2,921	0	0
New Mexico Institute of Mining and Technology	88	3,339	5,733	5,610	6,791	0	6,791	0	0
U. Wyoming	89	11,830	10,877	9,473	6,755	5,109	1,623	0	23
U. North Dakota	90	7,348	5,793	4,056	6,713	5,299	1,414	0	0
U. Massachusetts, Amherst	91	3,849	3,966	5,215	6,569	0	6,564	5	0
Cornell U.	92	4,742	5,152	6,568	6,531	1,079	5,407	45	0

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U. Wisconsin-Milwaukee	93	8,732	7,236	7,681	6,442	30	615	5,797	0
U. Montana, Missoula	94	2,376	3,068	5,035	6,376	0	2,803	3,573	0
Naval Postgraduate School	95	6,837	7,020	7,227	6,339	3,236	138	2,769	196
U. Idaho	96	4,765	5,241	5,244	5,923	234	5,689	0	0
U. Puerto Rico, Mayaguez	97	5,783	6,403	5,475	5,676	0	568	5,108	0
Washington U., Saint Louis	97	5,649	6,642	5,045	5,676	0	5,676	0	0
U. Toledo	99	3,228	5,178	4,189	5,659	0	5,659	0	0
Montana State U., Bozeman	100	5,802	5,757	5,125	5,618	0	3,298	0	2,320
U. Tennessee, Knoxville	101	5,314	4,722	5,752	5,557	0	4,164	0	1,393
U. Virginia, Charlottesville	102	4,898	5,916	4,785	5,352	125	0	0	5,227
Florida A&M U.	103	3,080	2,942	3,701	5,282	0	0	4,378	904
U. Massachusetts, Boston	104	6,696	6,587	6,451	5,249	0	1,431	3,808	10
Michigan State U.	105	2,917	3,277	3,779	5,244	0	5,044	0	200
U. North Carolina, Wilmington	106	3,879	4,558	4,511	5,193	0	844	3,861	488
U. Alaska, Anchorage	107	2,757	3,302	5,101	5,186	203	3,735	674	574
Boston C.	108	6,106	6,058	5,533	5,130	4,498	632	0	0
Old Dominion U.	109	5,222	5,214	5,151	4,907	0	0	4,907	0
U. Oregon	110	3,770	3,166	3,785	4,871	0	4,282	589	0
Northeastern U.	111	3,652	4,082	4,296	4,603	0	398	4,205	0
U. Nevada, Las Vegas	112	2,541	4,280	4,253	4,526	35	4,418	0	73
U. Central Florida	113	10,093	7,400	5,039	4,486	4,484	0	0	2
U. Arkansas, Fayetteville	114	3,178	3,792	4,287	4,449	0	4,449	0	0
U. Maryland, Eastern Shore	115	3,210	5,287	2,775	4,369	296	0	4,073	0
Dartmouth C. and Dartmouth Hitchcock Medical Center	116	2,030	4,904	4,771	4,359	0	4,359	0	0
Rice U.	117	4,775	5,491	3,958	4,341	0	4,341	0	0
Tulane U.	118	2,781	3,409	3,753	4,317	0	4,317	0	0
Brown U.	119	6,731	3,540	4,306	4,310	265	1,881	110	2,054
San Francisco State U.	120	4,766	4,197	3,233	4,297	167	375	3,755	0
U. South Alabama	121	3,748	4,020	4,186	4,222	0	69	4,153	0
Virginia Polytechnic Institute and State U.	122	4,385	4,503	3,867	4,185	0	4,181	4	0
U. Memphis	123	3,868	4,132	4,629	4,117	0	4,117	0	0

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U. Louisiana, Lafayette	124	2,254	4,333	3,290	3,957	0	2,215	260	1,482
Morgan State U.	125	4,578	4,984	4,372	3,955	0	3,955	0	0
Iowa State U.	126	2,635	3,178	3,659	3,917	0	3,917	0	0
Syracuse U.	127	1,720	3,940	3,766	3,913	0	3,913	0	0
New Mexico State U.	128	3,192	3,856	4,939	3,908	220	1,715	0	1,973
Western Washington U.	129	2,552	2,931	3,802	3,822	0	2,670	1,152	0
Hampton U.	130	3,537	4,080	4,022	3,779	3,159	0	435	185
East Carolina U.	131	2,057	738	4,433	3,684	0	844	2,840	0
U. Nebraska, Lincoln	132	3,613	4,374	4,014	3,639	0	3,639	0	0
Boise State U.	133	7,204	4,814	5,633	3,536	212	2,780	7	537
SUNY, U. Buffalo	134	3,325	4,212	4,479	3,533	0	3,533	0	0
Tarleton State U.	135	3,122	4,059	4,903	3,504	94	267	0	3,143
U. Minnesota, Duluth	136	3,106	1,166	1,245	3,466	0	3,466	0	0
Stevens Institute of Technology	137	6,146	5,324	3,931	3,365	854	3	174	2,334
Rutgers, State U. New Jersey, Newark	138	1,203	2,525	3,312	3,313	0	3,313	0	0
U. Texas, El Paso	139	3,120	2,948	2,566	3,168	0	3,168	0	0
U. California, Merced	140	2,576	2,459	3,165	2,916	0	2,916	0	0
Grand Valley State U.	141	2,976	3,089	3,124	2,818	0	13	0	2,805
U. Rochester	142	2,136	2,696	2,702	2,765	0	2,765	0	0
U. Guam	143	2,627	2,578	2,548	2,753	20	339	2,150	244
Auburn U., Auburn	144	2,633	3,820	2,171	2,690	61	1,823	0	806
Baylor U.	145	2,211	2,070	2,573	2,685	138	1,878	290	379
Oklahoma State U., Stillwater	146	4,690	2,889	4,546	2,613	0	2,613	0	0
San Diego State U.	147	3,362	3,091	2,978	2,582	0	1,668	429	485
U. Puerto Rico, Rio Piedras	148	2,724	2,203	2,192	2,537	0	494	0	2,043
Stockton U.	149	701	ne	2,171	2,484	0	473	1,989	22
CUNY, City C.	150	1,534	1,438	2,113	2,459	0	2,459	0	0
U. Pennsylvania	151	1,724	1,935	1,266	2,455	0	2,455	0	0
Kansas State U.	152	1,867	2,184	2,574	2,337	0	2,337	0	0
U. Kentucky	153	2,672	2,608	2,385	2,331	0	2,331	0	0
U. Colorado Denver and Anschutz Medical Campus	154	243	477	3,256	2,200	2,083	28	0	89

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Central Washington U.	155	1,438	2,143	1,779	2,110	0	2,110	0	0
Florida Institute of Technology	156	1,203	1,815	2,559	2,096	104	0	1,992	0
Portland State U.	157	1,411	1,999	2,094	2,090	174	1,817	63	36
U. Iowa	158	1,941	2,434	2,113	2,088	0	830	0	1,258
U. Texas Rio Grande Valley	159	149	1,122	1,280	2,049	13	31	1,924	81
SUNY, Binghamton U.	160	1,484	1,884	2,108	2,026	0	1,749	0	277
U. Massachusetts, Lowell	161	469	787	1,938	1,977	938	1,039	0	0
South Dakota State U.	162	5,879	5,600	3,991	1,933	0	1,933	0	0
Rensselaer Polytechnic Institute	163	2,593	1,873	2,601	1,931	0	1,931	0	0
California State U., Northridge	164	2,577	1,993	1,859	1,832	0	348	967	517
U. Washington, Tacoma	165	705	746	1,452	1,827	0	0	1,827	0
Jackson State U.	166	1,764	2,130	1,562	1,794	0	0	0	1,794
Clark U.	167	940	909	1,052	1,787	0	1,629	158	0
U. New Orleans	168	2,602	2,488	2,356	1,778	0	1,778	0	0
U. Mississippi	169	3,176	1,678	1,797	1,726	0	802	924	0
Ohio U.	170	2,237	2,232	1,400	1,618	51	1,471	0	96
Carleton C.	171	205	304	292	1,607	0	1,607	0	0
Vanderbilt U. and Vanderbilt U. Medical Center	172	4,146	3,608	3,355	1,586	0	1,586	0	0
Coastal Carolina U.	173	1,460	1,617	1,301	1,573	266	12	972	323
Temple U.	174	1,250	1,229	1,721	1,559	0	1,559	0	0
Northwestern U.	175	1,655	1,821	1,627	1,547	0	1,547	0	0
Western Michigan U. and Homer Stryker M.D. School of Medicine	176	1,378	1,575	1,278	1,546	11	1,535	0	0
Humboldt State U.	177	4,673	4,584	2,660	1,490	75	366	941	108
Idaho State U.	178	2,829	2,963	2,913	1,447	0	1,447	0	0
U. North Texas, Denton	179	230	698	747	1,444	0	1,444	0	0
Montclair State U.	180	819	1,024	1,128	1,424	0	1,147	277	0
Alaska Pacific U.	181	929	781	1,210	1,406	1	46	1,359	0
U. New England	182	965	1,526	1,092	1,405	0	0	1,405	0
Southern Illinois U., Edwardsville	183	1,264	1,496	1,987	1,383	0	847	0	536
California Polytechnic State U., San Luis Obispo	184	795	882	1,410	1,362	0	0	1,362	0
Southern Illinois U., Carbondale	185	1,025	1,182	1,271	1,354	40	757	0	557

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Salisbury U.	186	1,034	1,165	1,274	1,334	0	1,232	0	102
California State U., Monterey Bay	187	1,491	740	922	1,327	4	344	714	265
Georgetown U.	188	77	107	599	1,296	0	0	0	1,296
Saint Louis U.	189	1,442	1,453	1,161	1,281	0	1,043	0	238
Georgia State U.	190	835	971	1,070	1,268	0	1,255	0	13
U. Texas, Arlington	191	1,323	1,385	1,275	1,266	0	1,266	0	0
U. Missouri, Columbia	192	1,088	1,448	1,001	1,261	0	1,261	0	0
Missouri U. of Science and Technology	193	0	9	668	1,247	0	1,234	0	13
Emory U.	194	939	1,391	1,675	1,237	0	0	0	1,237
Heidelberg U.	195	0	408	911	1,222	0	0	1,222	0
C. Charleston	196	1,174	1,424	1,365	1,212	77	465	670	0
Lehigh U.	197	914	1,144	1,166	1,191	0	1,115	0	76
U. Texas, San Antonio	198	893	1,018	1,087	1,178	0	1,178	0	0
Pennsylvania State U., Behrend	199	1,897	1,885	1,034	1,154	37	36	1,081	0
Utah State U.	200	2,216	1,431	1,836	1,150	1,150	0	0	0
Florida Atlantic U.	201	217	405	1,017	1,149	179	0	0	970
CUNY, Hunter C.	202	1,328	794	1,297	1,147	0	1,147	0	0
U. Cincinnati	203	1,398	1,377	1,439	1,143	0	1,143	0	0
Bowling Green State U.	204	531	657	723	1,112	0	290	822	0
U. North Carolina, Charlotte	205	306	207	366	1,111	0	1,111	0	0
Monmouth U.	206	821	ne	ne	1,082	0	0	1,082	0
U.S. Naval Academy	207	687	531	1,110	1,079	0	0	1,079	0
St. Edward's U.	208	370	1,583	440	1,077	660	417	0	0
SUNY, Buffalo State	209	1,376	960	915	1,050	0	169	0	881
Northwest Indian C.	210	ne	ne	466	1,043	290	294	459	0
Miami U.	211	513	514	1,241	1,031	0	1,031	0	0
James Madison U.	212	429	745	678	1,003	0	894	0	109
U. Alabama, Tuscaloosa	213	1,597	828	895	1,000	0	996	0	4
Carnegie Mellon U.	214	561	1,228	1,599	994	6	0	0	988
U. South Carolina, Columbia	215	5,000	3,389	1,781	988	0	0	988	0
Western Kentucky U.	216	1,510	1,270	1,175	979	130	849	0	0

TABLE 39  
 Higher education R&D expenditures in the geosciences, atmospheric sciences, and ocean sciences, ranked by all FY 2019 geosciences, atmospheric sciences, and ocean sciences: FYs 2016–19 and by subfield for FY 2019

(Dollars in thousands)

Institution	Rank	2016	2017	2018	2019				
					All geosciences, atmospheric sciences, and ocean sciences	Atmospheric science and meteorology	Geological and earth sciences	Ocean sciences and marine sciences	Geosciences, atmospheric sciences, and ocean sciences nec
Rockefeller U.	217	807	1,086	1,052	974	0	0	0	974
Air Force Institute of Technology	218	1,616	2,365	1,792	967	967	0	0	0
Kent State U.	219	594	940	1,022	942	140	725	53	24
Texas A&M U.-Kingsville	219	1,483	1,417	1,368	942	0	0	0	942
Indiana U.-Purdue U., Indianapolis	221	1,043	1,164	1,266	926	0	926	0	0
California State U., Sacramento	222	696	798	934	909	0	909	0	0
U. Texas, Dallas	223	1,541	920	938	907	0	338	444	125
Florida Gulf Coast U.	224	654	555	1,032	877	0	3	873	1
Virginia Commonwealth U.	225	1,115	1,220	1,196	871	0	0	0	871
U. Alabama, Birmingham	226	2,022	1,496	1,199	870	870	0	0	0
SUNY, C. Plattsburgh	227	622	521	476	850	0	16	834	0
U. Hawaii, Hilo	228	446	528	785	842	275	338	229	0
U. of the Virgin Islands	229	0	420	542	830	0	0	830	0
Embry-Riddle Aeronautical U.	230	217	189	1,475	818	818	0	0	0
Occidental C.	231	155	133	573	817	0	154	663	0
Illinois State U.	232	490	546	474	809	0	809	0	0
Villanova U.	232	308	437	824	809	0	809	0	0
New School	234	38	6	330	800	0	332	0	468
Georgia Southern U.	235	416	476	259	774	54	189	531	0
U. Vermont	236	290	141	446	772	12	459	0	301
Skidmore C.	237	115	103	495	762	0	743	0	19
Loyola Marymount U.	238	0	297	805	761	0	69	0	692
North Dakota State U.	239	439	612	296	714	0	714	0	0
Franklin and Marshall C.	240	204	215	355	710	0	485	225	0
U. Illinois, Chicago	241	346	650	653	701	0	701	0	0
Roger Williams U.	242	458	753	913	700	0	0	533	167
CUNY, Brooklyn C.	243	655	784	625	690	0	690	0	0
Central Michigan U.	244	395	501	644	661	60	548	52	1
Towson U.	245	151	528	650	653	0	653	0	0
Delaware State U.	246	597	980	956	633	155	0	478	0
Savannah State U.	246	987	479	591	633	0	177	435	21



TABLE 39  
 Higher education R&D expenditures in the geosciences, atmospheric sciences, and ocean sciences, ranked by all FY 2019 geosciences, atmospheric sciences, and ocean sciences: FYs 2016–19 and by subfield for FY 2019

(Dollars in thousands)

Institution	Rank	2016	2017	2018	2019				
					All geosciences, atmospheric sciences, and ocean sciences	Atmospheric science and meteorology	Geological and earth sciences	Ocean sciences and marine sciences	Geosciences, atmospheric sciences, and ocean sciences nec
Case Western Reserve U.	248	740	877	789	591	0	591	0	0
Appalachian State U.	249	743	1,268	945	583	438	112	33	0
Brigham Young U., Provo	250	586	627	302	567	0	567	0	0
SUNY, C. of Environmental Science and Forestry	251	1,369	1,264	1,131	554	225	137	142	50
Creighton U.	252	0 i	0 i	474 i	539 i	539 i	0 i	0 i	0 i
Colgate U.	253	450	520	765	511	0	408	0	103
Bowdoin C.	254	714	301	562	507	0	32	475	0
Middle Tennessee State U.	255	174	183	134	500	0	0	0	500
Indiana U. Pennsylvania	256	67	192	233	497	0	140	16	341
Western Carolina U.	257	503	637	489	494	0	159	335	0
American U.	258	436	396	511	482	0	0	0	482
Tufts U.	258	107	212	1,151	482	184	218	29	51
U. Washington, Bothell	260	419	485	116	462	462	0	0	0
Rowan U.	261	10	172	481	451	0	451	0	0
Wesleyan U.	262	344	294	512	444	0	444	0	0
New York U.	263	145	468	361	434	0	290	144	0
West Texas A&M U.	263	0	161	191	434	351	0	0	83
U. Dayton	265	194	77	225	428	252	174	0	2
CUNY, Queens C.	266	479	541	414	427	0	427	0	0
Macalester C.	266	432	420	210	427	0	375	0	52
California State U., Fullerton	268	106	364	693	420	0	393	27	0
Wayne State U.	269	460	235	339	412	0	412	0	0
U. Missouri, Kansas City	270	612	582	495	401	43	358	0	0
Eastern Michigan U.	271	397	397	505	399	43	356	0	0
SUNY, C. Brockport	272	132	206	85	396	5	391	0	0
Northern Illinois U.	273	458	290	568	395	0	395	0	0
Fort Hays State U.	274	ne	ne	ne	331	0	287	0	44
Hawaii Pacific U.	275	414	371	318	324	0	0	324	0
Oregon Institute of Technology	275	0	0 i	0 i	324 i	0 i	324 i	0 i	0 i
Wright State U.	277	800	594	570	312	0	312	0	0
U. Alaska, Southeast	278	195	526	424	309	0	20	289	0

TABLE 39  
 Higher education R&D expenditures in the geosciences, atmospheric sciences, and ocean sciences, ranked by all FY 2019 geosciences, atmospheric sciences, and ocean sciences: FYs 2016–19 and by subfield for FY 2019

(Dollars in thousands)

Institution	Rank	2016	2017	2018	2019				
					All geosciences, atmospheric sciences, and ocean sciences	Atmospheric science and meteorology	Geological and earth sciences	Ocean sciences and marine sciences	Geosciences, atmospheric sciences, and ocean sciences nec
U. Louisiana, Monroe	279	63	147	33	307	307	0	0	0
North Carolina Central U.	280	408	395	287	303	0	303	0	0
William Paterson U.	281	108	216	156	299	0	299	0	0
SUNY, Geneseo	282	411	421	301	298	0	298	0	0
California State Polytechnic U., Pomona	283	167	393	319	295	0	295	0	0
Lewis and Clark C.	284	430	225	195	294	134	160	0	0
Stephen F. Austin State U.	285	237	216	342	292	0	125	0	167
George Washington U.	286	667	821	716	288	0	224	0	64
Middlebury C.	287	159	512	260	270	0	270	0	0
California State U., Bakersfield	288	1,530	243	299	262	0	262	0	0
Claffin U.	289	97	101	138	259	0	259	0	0
Fayetteville State U.	290	300	300	250	250	0	0	0	250
Howard U.	291	3,394	1,101	618	248	0	0	248	0
Illinois Institute of Technology	292	168	269	416	246	105	141	0	0
Pomona C.	293	648	453	131	236	0	143	0	93
Chapman U.	294	357	209	274	231	0	0	0	231
Haverford C.	295	0	0	154	229	0	30	199	0
U. Minnesota, Morris	296	271	229	ne	216	0	216	0	0
CUNY, New York City C. of Technology	297	ne	ne	367	209	0	136	0	73
Gettysburg C.	297	ne	108	130	209	0	36	173	0
Williams C.	299	185	189	180	205	0	196	0	9
Bethune-Cookman U.	300	ne	ne	158	204	0	0	150	54
Indiana State U.	301	123	94	42	199	0	199	0	0
U. Louisville	302	263	152	192	197	39	158	0	0
U. San Francisco	303	98	187	295	194	80	114	0	0
U. Akron	304	481	244	187	192	0	192	0	0
Union C., Schenectady	305	868	312	625	189	0	189	0	0
U. Denver	306	40	99	108	186	0	186	0	0
Bryn Mawr C.	307	327	401	268	185	0	185	0	0
U. San Diego	307	1,156	1,122	583	185	0	0	184	1
Texas Christian U.	309	308	204	168	178	0	124	0	54

TABLE 39  
**Higher education R&D expenditures in the geosciences, atmospheric sciences, and ocean sciences, ranked by all FY 2019 geosciences, atmospheric sciences, and ocean sciences: FYs 2016–19 and by subfield for FY 2019**

(Dollars in thousands)

Institution	Rank	2016	2017	2018	2019				
					All geosciences, atmospheric sciences, and ocean sciences	Atmospheric science and meteorology	Geological and earth sciences	Ocean sciences and marine sciences	Geosciences, atmospheric sciences, and ocean sciences nec
Claremont McKenna C.	310	51	88	93	173	0	89	84	0
Amherst C.	311	138	92	74	169	0	169	0	0
Southern Connecticut State U.	312	105	267	109	168	0	43	96	29
Providence C.	313	4	8	103	166	0	0	166	0
Marshall U.	314	476	58	39	164	0	4	0	160
Central State U.	315	110	45	122	163	4	159	0	0
U. Northern Iowa	316	204	174	165	161	0	0	0	161
Benedict C.	317	359	439	532	157	0	0	157	0
Oberlin C.	317	219	500	224	157	0	157	0	0
Virginia State U.	317	97	28	54	157	157	0	0	0
Northern Michigan U.	320	137	55	207	155	0	155	0	0
Wellesley C.	321	0	0	30	154	2	152	0	0
Colby C.	322	50	81	122	152	0	152	0	0
U. New Haven	322	0	0	185	152	0	0	152	0
CUNY, system office	324	0	54	144	148	0	0	0	148
U. Wisconsin-Stevens Point	325	142	148	146	146	0	146	0	0
U. North Florida	326	78	128	132	144	0	0	0	144
California State U., Chico	327	468	131	160	140	0	140	0	0
Texas Southern U.	327	0	176	0	140	21	0	0	119
U. Northern Colorado	327	45	42	74	140	1	139	0	0
U. West Florida	330	7	42	189	138	0	138	0	0
Wheaton C., Wheaton	331	ne	15	49	136	0	90	0	46
Northeastern Illinois U.	332	ne	200	150	131	0	131	0	0
North Carolina Agricultural and Technical State U.	333	324	230	135	129	0	0	0	129
U. North Georgia	333	ne	134	121	129	0	60	0	69
U. North Carolina, Asheville	335	812	545	412	128	108	20	0	0
California State U., Fresno	336	133	100	113	125	3	42	80	0
California State U., Long Beach	336	437	276	209	125	0	125	0	0
C. Wooster	338	ne	110	103	120	0	120	0	0
Murray State U.	338	189	193	181	120	0	120	0	0
Bates C.	340	206	167	100	119	0	119	0	0

TABLE 39  
 Higher education R&D expenditures in the geosciences, atmospheric sciences, and ocean sciences, ranked by all FY 2019 geosciences, atmospheric sciences, and ocean sciences: FYs 2016–19 and by subfield for FY 2019

(Dollars in thousands)

Institution	Rank	2016	2017	2018	2019				
					All geosciences, atmospheric sciences, and ocean sciences	Atmospheric science and meteorology	Geological and earth sciences	Ocean sciences and marine sciences	Geosciences, atmospheric sciences, and ocean sciences nec
California State U., San Bernardino	341	41	72	40	118	0	118	0	0
Hobart and William Smith Colleges	341	ne	218	ne	118	100	18	0	0
Smith C.	343	49	64	69	117	0	117	0	0
Trinity U.	344	245	125	46	113	0	113	0	0
U. Tulsa	345	592	279	223	112	0	73	0	39
U.S. Military Academy	346	114	215	245	111	0	111	0	0
Colorado C.	347	52	160	58	109	0	109	0	0
St. Olaf C.	348	21	8	13	102	67	9	26	0
U. North Carolina, general administration	349	0	214	97	100	0	0	100	0
Texas A&M International U.	350	89	152	232	96	0	96	0	0
Bucknell U.	351	94 i	98 i	102	94	0	94	0	0
U. Wisconsin-Green Bay	352	88 i	78 i	66 i	92 i	0 i	92 i	0 i	0 i
U. Wisconsin-Oshkosh	353	ne	88 i	92 i	91 i	0 i	91 i	0 i	0 i
Johnson C. Smith U.	354	0	0	0	90	0	90	0	0
U. South Dakota	355	179	304	78	87	0	87	0	0
Sam Houston State U.	356	38	13	31	86	0	86	0	0
CUNY, York C.	357	ne	ne	ne	85	0	85	0	0
Duquesne U.	358	220	109	77	84	0	84	0	0
U. of the District of Columbia	358	124	189	102	84	0	84	0	0
Des Moines U.	360	190	124	162	82	0	82	0	0
CUNY, Baruch C.	361	169	190	135	79	0	0	79	0
U. Colorado Colorado Springs	361	187	124	55	79	0	1	78	0
Louisiana Tech U.	363	87	84	76	77	0	0	0	77
Tennessee Technological U.	364	6	27	56	74	0	74	0	0
Hamilton C.	365	128	87	29	72	0	69	0	3
Gallaudet U.	366	143	109	56	71	0	28	43	0
U. Wisconsin-Platteville	367	ne	0 i	ne	70 i	5 i	42 i	0 i	23 i
Eastern Washington U.	368	35	45	45	66	0	66	0	0
Andrews U.	369	ne	ne	ne	64	0	64	0	0
Central Connecticut State U.	370	51	91	ne	61	0	61	0	0
West Chester U. Pennsylvania	371	97	87	77	60	0	60	0	0

TABLE 39  
Higher education R&D expenditures in the geosciences, atmospheric sciences, and ocean sciences, ranked by all FY 2019 geosciences, atmospheric sciences, and ocean sciences: FYs 2016–19 and by subfield for FY 2019

(Dollars in thousands)

Institution	Rank	2016	2017	2018	2019				
					All geosciences, atmospheric sciences, and ocean sciences	Atmospheric science and meteorology	Geological and earth sciences	Ocean sciences and marine sciences	Geosciences, atmospheric sciences, and ocean sciences nec
Ball State U.	372	44	22	91	57	0	57	0	0
Prairie View A&M U.	372	0	0	0	57	0	0	0	57
New Jersey City U.	374	ne	3	30	55	0	55	0	0
Albion C.	375	ne	64	80	53	0	53	0	0
Rider U.	376	177	220	38	52	0	0	32	20
SUNY, Oswego	376	ne	39	63	52	13	39	0	0
Whitman C.	376	ne	ne	ne	52	0	52	0	0
U. Richmond	379	115	75	49	49	0	49	0	0
Mercyhurst U.	380	60	147	ne	41	0	41	0	0
U. Southern Maine	380	0	0	3	41	0	0	41	0
Long Island U.	382	0	0	0	40	0	26	14	0
Keene State C.	383	ne	101	ne	39	0	14	25	0
Calvin U.	384	5	13	2	37	0	37	0	0
DePaul U.	384	27	11	27	37	0	37	0	0
Seattle U.	384	0	0	4	37	0	0	37	0
Missouri State U.	387	26	99	133	34	0	34	0	0
Minnesota State U., Mankato	388	52	0	62	32	0	32	0	0
Dickinson C.	389	444	21	ne	31	0	5	0	26
U. Wisconsin-La Crosse	389	50	34	25	31	0	31	0	0
U. Puerto Rico, Medical Sciences Campus	391	0	0	0	29	0	29	0	0
U. Houston-Downtown	392	9	6	8	27	0	27	0	0
U. Wisconsin-Superior	393	ne	ne	34	25	0	25	0	0
Wichita State U.	393	49	82	36	25	0	25	0	0
Eastern Connecticut State U.	395	64	123	110	22	0	18	4	0
Fort Lewis C.	395	ne	ne	ne	22	0	7	0	15
Hofstra U.	397	38	20	9	20	2	0	0	18
Albany State U.	398	49	27	288	18	18	0	0	0
Allegheny C.	398	61	21	20	18	0	18	0	0
U. of Mary Washington	400	ne	ne	25	17	0	17	0	0
Furman U.	401	161	132	121	16	16	0	0	0
U. of St. Thomas (MN)	402	31	85	56	15	0	15	0	0

TABLE 39  
Higher education R&D expenditures in the geosciences, atmospheric sciences, and ocean sciences, ranked by all FY 2019 geosciences, atmospheric sciences, and ocean sciences: FYs 2016–19 and by subfield for FY 2019

(Dollars in thousands)

Institution	Rank	2016	2017	2018	2019				
					All geosciences, atmospheric sciences, and ocean sciences	Atmospheric science and meteorology	Geological and earth sciences	Ocean sciences and marine sciences	Geosciences, atmospheric sciences, and ocean sciences nec
Austin Peay State U.	403	0	131	56	14	0	0	14	0
Manhattan C.	403	ne	ne	ne	14	14	0	0	0
Willamette U.	403	36	75	43	14	0	6	8	0
Loyola U., Chicago	406	0	13	16	13	0	13	0	0
St. Cloud State U.	406	22	1	12	13	9	4	0	0
C. of Saint Benedict	408	69	17	12	12 i	0 i	0 i	0 i	12 i
Pennsylvania State U., Harrisburg	409	1	0	0	11	0	11	0	0
Saginaw Valley State U.	409	149	3	30	11	0	1	0	10
Saint John's U., Collegetown	409	61	15	11	11 i	0 i	0 i	0 i	11 i
Vassar C.	409	0	0	0 i	11	0	11	0	0
Barnard C.	413	25	21	24	9	0	0	9	0
Youngstown State U.	413	1	6	5	9	0	9	0	0
U. Detroit Mercy	415	0	0	0	8	0	8	0	0
U. Wisconsin-Eau Claire	415	90	62	1	8	0	8	0	0
California State U., Dominguez Hills	417	2	4	13	7	0	0	0	7
Eastern Kentucky U.	417	6	11	21	7	0	0	0	7
Morehead State U.	417	19	13	22	7	0	7	0	0
Santa Clara U.	417	0	0	0	7	7	0	0	0
U. Nebraska, Omaha	417	74	86	113	7	0	7	0	0
East Tennessee State U.	422	0	0	29 i	6 i	0 i	6 i	0 i	0 i
Northeast Ohio Medical U.	422	0	2	3	6	0	6	0	0
Western Illinois U.	422	ne	96	93	6	0	6	0	0
Winthrop U.	425	0	3	5	5	0	5	0	0
Clarkson U.	426	0	0	0	4	0	4	0	0
U. Texas, Tyler	426	0	8	8	4	0	0	4	0
CUNY, Advanced Science Research Center	428	ne	446	1,442	3	0	0	0	3
U. Portland	428	ne	ne	ne	3	0	3	0	0
CUNY, Graduate Center	430	75 i	62	8	2	0	2	0	0
All other surveyed institutions	-	67,957	55,867	53,248	0	0	0	0	0

i = imputed. na = not applicable; institution did not exist or did not exist as a separate entity. ne = not eligible; institution did not meet the criteria for inclusion.

nec = not elsewhere classified.

<sup>a</sup> The University of Maryland includes expenditures from the University of Maryland, Baltimore and University of Maryland, College Park campuses. In FY 2019, the two campuses began reporting as one research unit to reflect their new strategic partnership. This relationship was codified through the University of Maryland Strategic Partnership Act passed by the Maryland General Assembly in 2016. Prior to FY 2019, both campuses reported to the survey as separate institutions.

<sup>b</sup> Johns Hopkins University includes the Applied Physics Laboratory (APL), with \$24,209 thousand imputed for total R&D expenditures in geosciences, atmospheric sciences, and ocean sciences in FY 2019. Total expenditures by field for Johns Hopkins University are flagged as imputed because APL was unable to distribute a portion of institutionally funded R&D by field.

**Note(s):**

Institutions reporting zero expenditures in ranked total for FY 2019 are not listed in this table. Tied institutions are ranked alphabetically. Ranked institutions are geographically separate campuses headed by a campus-level president or chancellor. Some campuses are part of large, multi-campus universities; some are part of state university systems. For a complete list of campuses that belong to a larger university or system and their aggregate R&D expenditures, see table 6.

**Source(s):**

National Center for Science and Engineering Statistics, Higher Education Research and Development Survey.