

**NATIONAL SCIENCE FOUNDATION
RESEARCH INFRASTRUCTURE SUMMARY
FY 2022 BUDGET REQUEST TO CONGRESS**

(Dollars in Millions)

	FY 2020 Actual	FY 2021 Estimate	FY 2022 Request	FY 2022 Request change over:			
				FY 2020 Actual		FY 2021 Estimate	
				Amount	Percent	Amount	Percent
Operations and Maintenance of Major Facilities¹	\$912.77	\$947.27	\$950.21	\$37.44	4.1%	\$2.94	0.3%
Major Research Facilities Construction Investments	\$162.30	\$169.15	\$183.35	\$21.05	13.0%	\$14.20	8.4%
Construction, Acquisition, and Commissioning (MREFC) ²	153.87	163.75	171.75	17.88	11.6%	8.00	4.9%
Design Stage Activities ³	8.43	5.40	11.60	3.17	37.6%	6.20	114.8%
Mid-scale Research Infrastructure⁴	\$102.21	\$160.98	\$179.99	\$77.78	76.1%	\$19.01	11.8%
MREFC Mid-scale Research Infrastructure	-	76.25	76.25	76.25	N/A	-	-
NSF-wide Mid-scale Research Infrastructure (R&RA)	30.37	32.67	50.00	19.63	64.6%	17.33	53.0%
Directorate Midscale Research Infrastructure Programs	71.84	52.06	53.74	-18.10	-25.2%	1.68	3.2%
Major Research Instrumentation (MRI)	\$75.37	\$75.00	\$89.85	\$14.48	19.2%	\$14.85	19.8%
Polar Logistical and Infrastructure Support⁵	\$135.79	\$137.30	\$143.10	\$7.31	5.4%	\$5.80	4.2%
CISE Networking and Computational Resources Infrastructure and Services (NCRIS)⁶	\$146.78	\$130.65	\$140.65	-\$6.13	-4.2%	\$10.00	7.7%
Research Resources⁷	\$217.73	\$187.43	\$211.67	-\$6.06	-2.8%	\$24.24	12.9%
BIO	61.75	51.87	57.65	-4.10	-6.6%	5.78	11.1%
CISE	48.49	40.75	37.24	-11.25	-23.2%	-3.51	-8.6%
GEO	74.21	64.83	82.50	8.29	11.2%	17.67	27.3%
MPS	18.15	15.10	18.40	0.25	1.4%	3.30	21.9%
SBE	13.01	9.59	9.59	-3.42	-26.3%	-	-
OPP	2.12	5.29	6.29	4.17	196.5%	1.00	18.9%
Other Research Infrastructure	\$104.68	\$100.73	\$106.85	\$2.17	2.1%	\$6.12	6.1%
Subtotal, Research Infrastructure Support	\$1,857.62	\$1,908.51	\$2,005.67	\$148.05	8.0%	\$97.16	5.1%
Research Infrastructure Stewardship Offset	-1.44	-1.44	-2.40	-0.96	66.8%	-0.96	66.7%
RESEARCH INFRASTRUCTURE TOTAL	\$1,856.19	\$1,907.07	\$2,003.27	\$147.08	7.9%	\$96.20	5.0%

¹ For facility level detail on operations and maintenance, see the Research Facilities and Other Research Infrastructure O&M funding table in the Summary Tables chapter.

Summary Tables

² Construction, Acquisition, and Commissioning are for implementation support provided through the MREFC account. MREFC funding is included for the Antarctic Infrastructure Modernization for Science (AIMS) project of the Antarctic Infrastructure Recapitalization (AIR) program, (\$47.78 million in FY 2020, \$90.0 million in FY 2021 and FY 2022); Vera C. Rubin Observatory (\$46.35 million in FY 2020 and \$40.75 million in FY 2021 and FY 2022); the High Luminosity-Large Hadron Collider Upgrade (HL-LHC) (\$33.0 million in FY 2020 and FY 2021 and \$36.0 million in FY 2022), the National Ecological Observatory Network (NEON) (\$740,000 in FY 2020), Regional Class Research Vessels (RCRV) (\$25.0 million in FY 2020 and \$5.0 million in FY 2022) and Mid-scale Research Infrastructure (\$65.0 million in FY 2020 (carried over into FY 2021) and \$76.25 million in FY 2021 and FY 2022, shown on the MREFC Mid-scale RI line below). For more information, refer to the MREFC chapter.

³ Design Stage Activities include support for potential next generation multi-user facilities. This line reflects FY 2020 funding of \$3.50 million and \$3.60 million in FY 2021 and FY 2022 for the potential Leadership Class Computing Facility, and \$4.93 million in FY 2020 for the Antarctic Infrastructure Modernization for Science (AIMS) project of the Antarctic Infrastructure Recapitalization (AIR) program, and \$1.80 million in FY 2021 and \$8.0 million in FY 2022 for the Antarctic Research Vessel (ARV).

⁴ NSF-wide Mid-scale Research Infrastructure is provided through both the R&RA account (if the total project cost is less than \$20.0 million) and the MREFC account (if the total project cost is greater than \$20.0 million). For more information, please refer to the Mid-scale Research Infrastructure narrative in the NSF-wide Investments chapter.

⁵ Polar Logistical and Infrastructure Support includes funding for Arctic Logistics; U.S. Antarctic Logistical Support Activities (USALS); and Polar Environment, Health, and Safety (PEHS).

⁶ Funding for Networking and Computational Resources Infrastructure and Services excludes support for the potential Leadership Class Computing Facility in FY 2020 (\$3.50 million), and in FY 2021 and FY 2022 (\$3.60 million), which is captured under Design Stage Activities above.

⁷ Funding for Research Resources includes support for the operation and maintenance of minor facilities, infrastructure and instrumentation, field stations, museum collections, etc.