

# National Association of Marine Laboratories



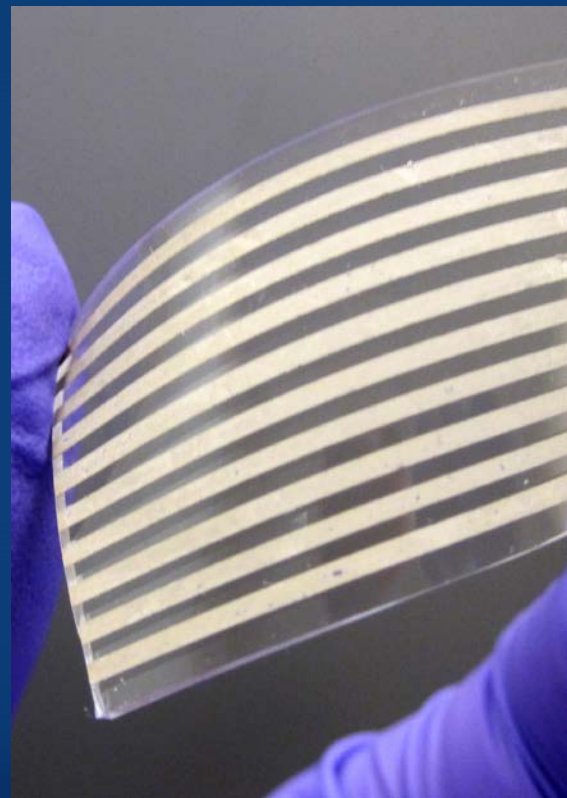
Dr. Terry Quinn  
Geosciences Directorate  
October 26, 2021



# Administration Priority Areas



Racial Equity



Economic Recovery



COVID-19



Climate Change

# NSF Fiscal Year 2022 Budget Request

(Dollars in Millions)					
	FY 2020 Actual	FY 2021 Estimate	FY 2022 Request	Change over FY 2021 Estimate	
				Amount	Percent
Biological Sciences	\$809.31	\$818.14	\$948.51	\$130.37	15.9%
Computer & Information Science & Engineering	996.40	1,005.49	1,116.06	110.57	11.0%
Engineering	754.31	761.85	916.79	154.94	20.3%
<b>Geosciences</b>	<b>993.72</b>	<b>1,004.18</b>	<b>1,194.92</b>	<b>190.74</b>	<b>19.0%</b>
Mathematical & Physical Sciences	1,530.12	1,580.48	1,690.74	110.26	7.0%
Social, Behavioral & Economic Sciences	280.35	282.06	319.66	37.60	13.3%
<b>Technology, Innovation, &amp; Partnerships</b>	<b>352.31</b>	<b>364.87</b>	<b>864.87</b>	<b>500.00</b>	<b>137.0%</b>
Office of International Science & Engineering	51.04	51.32	75.32	24.00	46.8%
Office of Polar Programs	480.59	483.35	506.29	22.94	4.7%
Integrative Activities <sup>2</sup>	352.97	527.14	504.90	-22.24	-4.2%
U.S. Arctic Research Commission	1.60	1.60	1.65	0.05	3.1%
<b>Total, Research and Related (R&amp;RA)</b>	<b>\$6,602.70</b>	<b>\$6,880.48</b>	<b>\$8,139.71</b>	<b>\$1,259.23</b>	<b>18.3%</b>
<b>Total, NSF Discretionary Funding</b>	<b>\$8,210.09</b>	<b>\$8,486.76</b>	<b>\$10,169.30</b>	<b>\$1,682.54</b>	<b>19.8%</b>



# GEO's Fiscal Year 2022 Budget Request

(Dollars in Millions)

	FY 2020 Actual	FY 2021 Estimate	FY 2022 Request	Change over FY 2021 Estimate	
				Amount	Percent
Atmospheric and Geospace Sciences (AGS)	\$280.08	\$283.47	\$341.71	\$58.24	20.5%
Earth Sciences (EAR)	199.21	201.36	240.04	38.68	19.2%
Integrative & Collaborative Education & Research (ICER)	113.07	116.30	137.03	20.73	17.8%
Ocean Sciences (OCE)	401.36	403.05	476.14	73.09	18.1%
<b>Total</b>	\$993.72	\$1,004.18	<b>\$1,194.92</b>	\$190.74	<b>19.0%</b>



# NSF FY22 Request for Climate and Clean Energy

Total Funding for USGCRP <sup>1</sup> (Dollars in Millions)			
	FY 2020 Actual	FY 2021 Estimate	FY 2022 Request
BIO	\$90.00	\$145.00	\$212.15
GEO	\$294.17	\$329.23	\$481.70
MPS	-	\$10.00	\$14.63
SBE	\$19.61	\$17.18	\$25.14
OPP	\$15.40	\$19.40	\$28.38
<b>Total, NSF</b>	<b>\$419.18</b>	<b>\$520.81</b>	<b>\$762.00</b>

Clean Energy Technology Funding <sup>1</sup> (Dollars in Millions)			
	FY 2020 Actual	FY 2021 Estimate	FY 2022 Request
BIO	\$18.00	\$45.00	\$59.28
CISE	\$18.50	\$23.50	\$31.12
ENG	\$113.54	\$123.03	\$178.57
MPS	\$92.62	\$90.00	\$118.56
TIP <sup>2</sup>	\$48.47	\$52.47	\$52.47
<b>Total, NSF</b>	<b>\$291.13</b>	<b>\$334.00</b>	<b>\$440.00</b>





# GEO's FY22 Budget Themes

*Addressing national priorities:*

- Climate Change
- Racial Equity
- Pandemic Recovery

# GEO's Climate Change Budget Theme

- Investment in core science & infrastructure
  - Discovery Machine
- Cross-Directorate efforts
  - CoPe, NNA
  - Climate Modeling (CISE)
  - TIP Directorate



# GEO's Climate Change Budget Theme

- Climate Change Coordinating Committee (C4)
- GEO and OCE observatories
- USGCRP





# GEO's Racial Equity Budget theme



Removal of barriers to participation in the geosciences.

Climate change and social justice activity to build diverse research ecosystems focused on institutional transformation.

# GEO's Recovery from the Pandemic Budget Theme



Help the academic community recover



Help restart field campaigns / ship operations



Research support (e.g., postdocs)

# AGU Advances

Commentary |  Open Access |   

## Combating Racism in the Geosciences: Reflections From a Black Professor

Vernon R. Morris 

First published: 25 March 2021 | <https://doi.org/10.1029/2020AV000358> |

**URGE**   
Unlearning Racism in Geoscience



# Convergence Accelerator: Networked Blue Economy

- Convergence Accelerator Program Phase One awarded \$21 million to 27 multidisciplinary teams
- Networked Blue Economy Track represented by 16 awards
- Goal of producing innovative tools, techniques, methods, and resources to improve human engagement with oceans



# New Science and Technology Centers



## Elizabeth Kujawinski

*Center for Chemical Currencies of a Microbial Planet (C-CoMP)*

C-CoMP will leverage recent advances in analytical and data sciences, incorporate new ocean sampling technologies and an open-science framework, and engage educators and policymakers to promote a deeper understanding and appreciation of the chemicals and chemical processes that underpin ocean ecosystems and other microbiomes that affect daily life.

# Mid-scale Research Infrastructure



**MSRI-1: Ocean Bottom Seismometers**



**MSRI-2: GO-BGC Array**

# Coastlines and People (CoPe) Research Hubs

**Focused Hubs: \$1M/Yr for 3-5 Yrs**

**Supporting Environmental Justice in Connected Coastal Communities through a Regional Approach to Collaborative Community Science**



**Large-Scale Hubs: \$2-4M/Yr up to 5 Yrs**

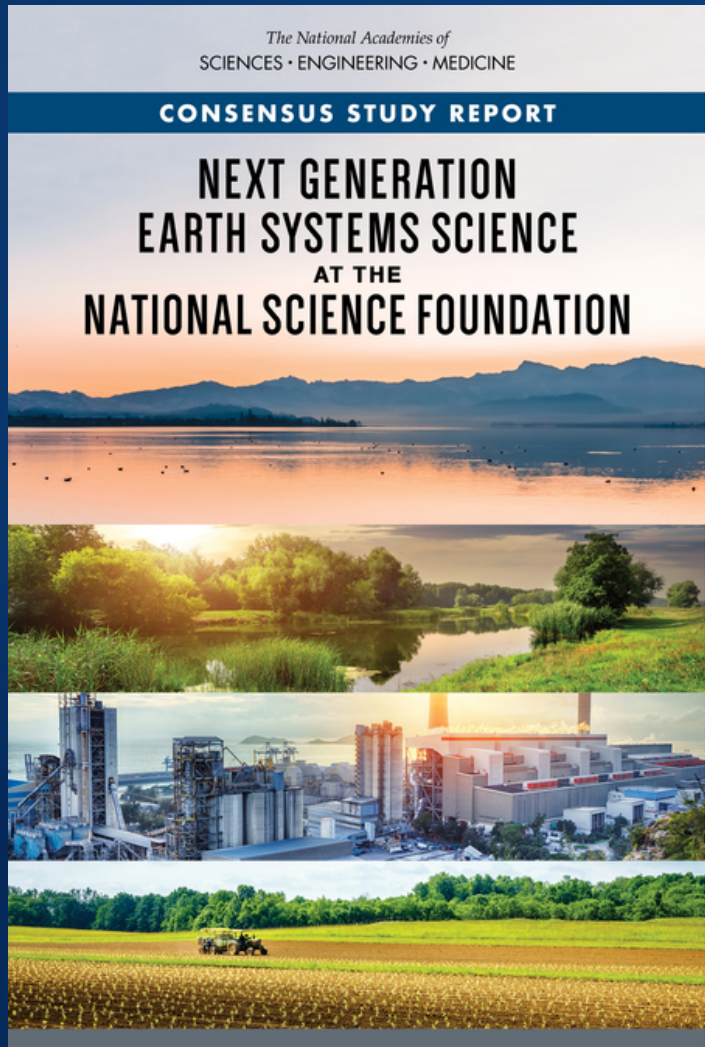
**Megalopolitan Coastal Transformation Hub (MACH): Researching complex interactions between climate hazards and communities to inform governance of coastal risk**



John Gattuso



# NASEM Study – *Next Generation Earth Systems Science at the National Science Foundation*



## Vision

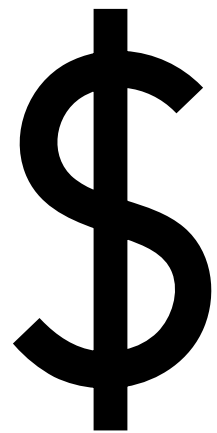
A next generation Earth Systems Science that explores interactions among natural and social processes that affect Earth's capacity for sustaining life, now and in the future.

## NSF Role

To innovate, advance, and nurture systems approaches to discover how our planet functions and to inform how society can function as part of Earth's systems for the well-being of communities, regions, the nation, and world.





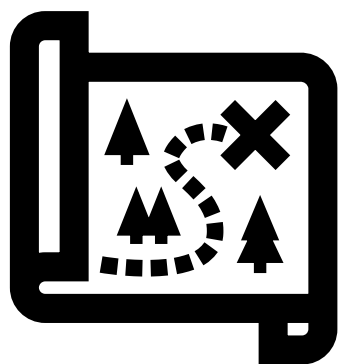


# NSF By the Numbers

Statistical and funding information for awards, NSF-funded institutions, funding rate, proposals evaluated, and obligations by fiscal year.

## Graphs and visuals:

- 10-year view for all measures
- Map view and bar graph view of States, Congressional Districts, Institutions,
- Metrics at the Directorate level
- Detailed reports for Awards
- Trendline comparisons for all metrics



# GEO Senior Staff Updates



**Alexandra Iern**  
Assistant Director  
Directorate for  
Geosciences



**Lina Patino**  
Acting Deputy Assis. Dir.  
Directorate for  
Geosciences



**Roberta Marinelli**  
Director  
Office of Polar  
Programs



**Shelby Walker**  
Senior Advisor for Facilities  
Directorate for Geosciences



# OCE Staff Updates



**Kanchan Maiti**  
Program Officer  
Chemical Ocean.  
IPA



**Elizabeth Canuel**  
Program Officer  
Chemical Ocean.  
Permanent



**Katsumi Matsumoto**  
Program Officer  
Chemical Ocean.  
IPA



**Maurice Tivey**  
Section Head  
Marine Geosciences  
IPA

# Thank you for nurturing the next generation of scientists!

