NSF Report

MSROC December 2024

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Division of Ocean Sciences

Marine Geology and Geophysics Program

U.S. National Science Foundation
Division of Ocean Sciences

2025-2035 Decadal Survey of Ocean Sciences for the National Science Foundation

SHARE

- Report expected early 2025
- Forward-looking approaches to guide investments in research, infrastructure, and workforce development
- Will update priorities identified in Sea Change Survey: 2015-2025
- Will identify research infrastructure needed to advance high-priority ocean science research questions

GEO Directorate ‘Success Rates’ for competitively reviewed awards

nsf.gov

- FY24: Reduction in NSF budget led to a decrease in funding rates across all GEO divisions
- FY25: ???? Currently under a continuing resolution through 12/20/2024

Marine Geology and Geophysics (MGG) Program Directors

- Gail Christeson, permanent program director, marine seismology, marine geophysics
- Al Wanamaker (Iowa State), program director rotator, paleoceanography / paleoclimate
- Scott White (U South Carolina), program director rotator, seafloor volcanology, marine geophysics
- In process of hiring a permanent program director with a specialty in marine sediments / paleoceanography / paleoclimate.

Al Wanamaker

Scott White

Gail Christeson

MGG Program Portfolio

- 3 Core Panels per year (no deadlines or target dates)
  - Oceanic lithosphere
  - Paleoceanography, paleoclimate
  - Submarine volcanology, petrology, geochemistry
  - Marine hydrogeology, gas hydrates, hydrothermal vents
  - Geochemical indicators of life operating below seafloor
  - Marine sedimentology and coastal processes
  - Mid-ocean ridge spreading, back-arc rifting, transform processes
  - Submarine components of subduction zone systems and passive margins
  - Marine geohazards
- P4Climate (1 panel per year) – Paleo Perspectives on Present and Projected Climate (cross-division solicitation)
- Facilities – ocean bottom seismometers, core and sample repositories
- Other: RAPIDs, lead-agency agreements (e.g., NERC-NSF, SNSF-NSF), supplement, etc

MGG: Field Projects

~10 large programs per year

- Sediment coring
- Active-source seismic
- Passive seismic (ocean bottom seismometers)
- Electromagnetic methods
- Seafloor geodesy
- Bathymetry, sidescan, magnetics
- Alvin / Jason / Sentry
- Dredging

FY24: Continued commitment to supporting field programs

- 2 Coring
- Alvin/Sentry/Coring (CO lead)
- Jason/Sentry
- Jason/Sentry/Coring
- Dredging
- Electromagnetic/Dredging
- Active-source seismic
- Hydrothermal flow (non-US vessel)
- Seafloor geodesy

Marcus Langseth Regional Plan

NSF will accept proposals to use R/V *Langseth* in calendar years 2026-2028 as follows:

- 2026: Western Atlantic, Gulf of Mexico, Caribbean, transitioning to the eastern Pacific
- 2027-2028: Eastern Pacific, transitioning to western Pacific

U.S. ARF Scheduling Timeline for NSF Proposals

Vessel Class	21-18 months	18 – 12 months	14 – 12 months	12 – 8 months	September
 Global & Ocean	• Submit proposals with ARF ship time	• NSF review and recommendation process for proposals	• Scheduling starts Jan/Feb of the prior year		Finalize all ship schedules in year prior
 Intermediate, Regional, & Local		• Submit proposals with ARF ship time	• NSF review and recommendation process for proposals	• Spring of prior year, schedule ARF ship time	
			Environmental permitting	Diplomatic permitting	

Challenges:

- Heavy pressure on larger ships. Backlog from pandemic, delay in delivery of regional class research vessels (RCRVs).
- Heavy use of deep submergence assets.

Lead Agency Opportunities – joint proposal that undergoes a single review process through the Lead Agency

- UK – agency with higher budget carries out review
- Switzerland – agency that carries out review alternates annually
- Israel – undergoes NSF review
- Germany – collaborative research on climate change; agency with higher budget carries out review

https://www.nsf.gov/geo/geo-leadagency-opps/

Country	Webpage
Germany	Dear Colleague Letter, NSF 23-113 (May 2023)
Ireland/Northern Ireland	Dear Colleague Letter, NSF 20-264 (March 2020)
Israel	Dear Colleague Letter, NSF 21-119 (September 2021)
Switzerland	Dear Colleague Letter, NSF 23-049 (January 2023)
Taiwan	Dear Colleague Letter, (July 2020)
United Kingdom	Dear Colleague Letter, NSF 16-132 (September 2016)