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# NOAA Ocean Exploration Notice of Funding Opportunity

*Process Annual Review*

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Competitive Grant Program Manager  
September 17, 2024

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# Outline

- NOAA Ocean Exploration Notice of Funding Opportunity (NOFO) Process
- NOFO Proposal Topics
- NOFO Summary FY19-FY23
- NOFO Funded 2023 Fieldwork
- Summary and Recent Changes

# NOAA Ocean Exploration NOFO Process

Phase I

Grants  
Notice  
Created and  
Published

Phase II

Pre-Proposals  
Submission and  
Internal  
Assessment

Phase III

Full Proposals  
Submission and  
Administrative  
Assessment

Phase IV

Full  
Proposals  
External  
Review

Phase V

Management  
and Business  
Review,  
Selection,  
Award, and  
Follow-up

# NOFO Develop & Publish



1. Selects regions and/or topics for fiscal year funding announcement based on mission needs and priorities
2. Primary notice publication at Grants.gov
3. Announcement notification:
  - eRA, webinar, email lists, NOAA Ocean Exploration website...etc.

# Pre-Proposal Submission & Internal Assessment



1. Applicants: Submit pre-proposals to NOAA Ocean Exploration via email
2. NOAA Ocean Exploration: Assesses pre-proposals using 4 criteria:
  - Relevance to NOAA and NOAA Ocean Exploration missions and goals
  - Scientific and technical merit
  - Applicant qualifications and competencies (including past performance)
  - Costs for specific items as well as overall project cost, including value of cost sharing and/or in-kind contributions, including strength of National Oceanographic Partnership Program (NOPP) partnership for federal applicants
3. NOAA Ocean Exploration: Encourages/discourages full proposal submission

# Full Proposal Submission & Assessment



1. Applicants: Submit full proposals
  - Only if they submitted a pre-proposal by deadline (No exceptions)
  - Nonfederal applicants submit proposals through Grants.gov
  - Federal applicants email proposals to NOAA Ocean Exploration via email
2. NOAA Ocean Exploration: Review proposals for completeness/compliance
3. NOAA Ocean Exploration: Assigns internal/external reviewers

# Full Proposal Two-Step Review



## 1st Step: (e)Mail Review

- NOAA Ocean Exploration sends each proposal to at least three mail reviewers who are experts in their field and of the project topic
- Reviewers review proposals using published evaluation criteria and return by date established by NOAA Ocean Exploration

# Full Proposal Two-Step Review



## 2nd Step: Panel Review

- NOAA Ocean Exploration team: Selects panelists who are field experts and have broad knowledge of the topics
- Panelists\*: Review and score each proposal using published evaluation criteria and mail reviews

**\*Panelists do not rank or compare proposals and are not asked to reach a consensus**



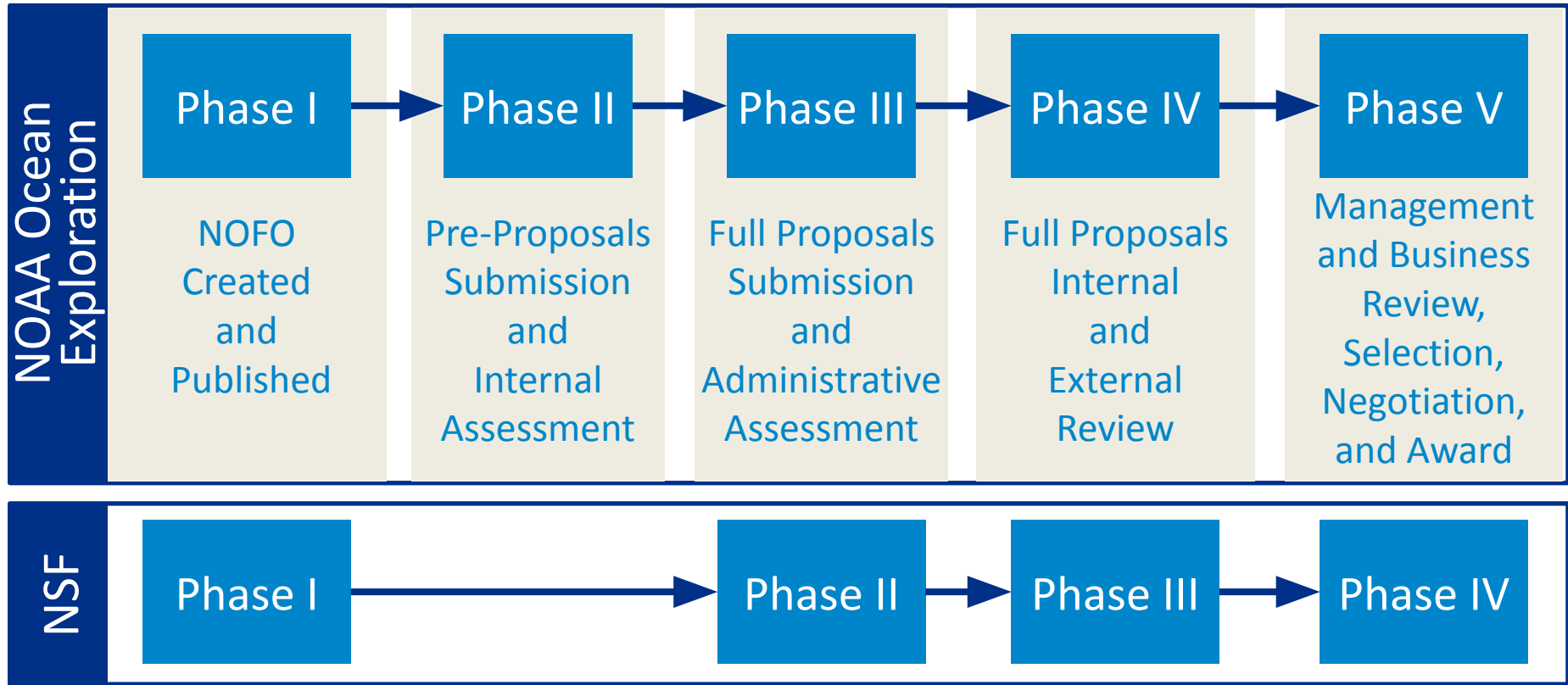
# Management & Business Review



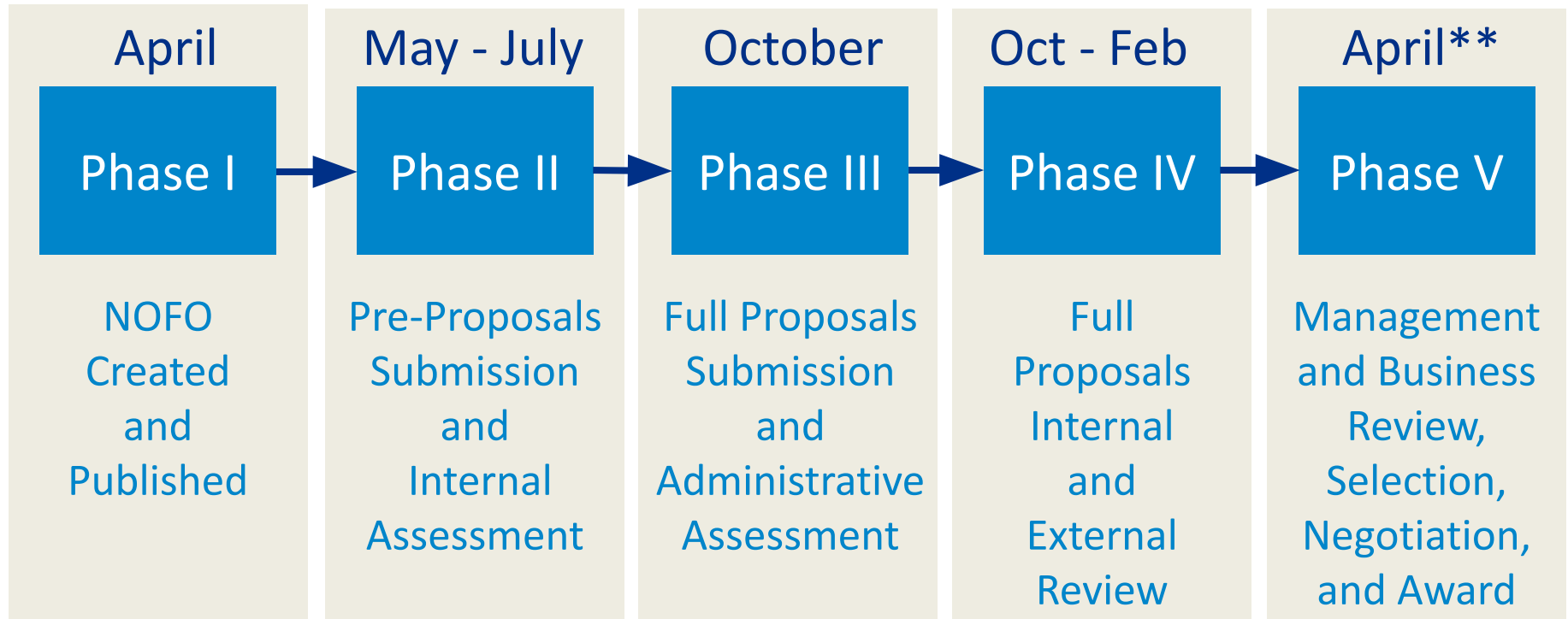
## Selection, Negotiations, and Award

1. NOAA Ocean Exploration: Ranks proposals using mail reviews and panel scores
2. NOAA Ocean Exploration: Recommends proposals for funding based on final ranking, office priorities/budget constraints
3. NOAA Ocean Exploration: Negotiates budgets with applicants, if necessary
4. Applicants revise proposals, if necessary
5. Applicants submits any outstanding items from past funded projects prior to funding recommendation, if applicable (e.g., outstanding data, reports, publications, etc.)
6. Grants Management Division reviews final proposal packages and makes grant awards

# NOAA Ocean Exploration NOFO Process Compared to NSF



# NOAA Ocean Exploration NOFO Process: Fiscal Year 2025

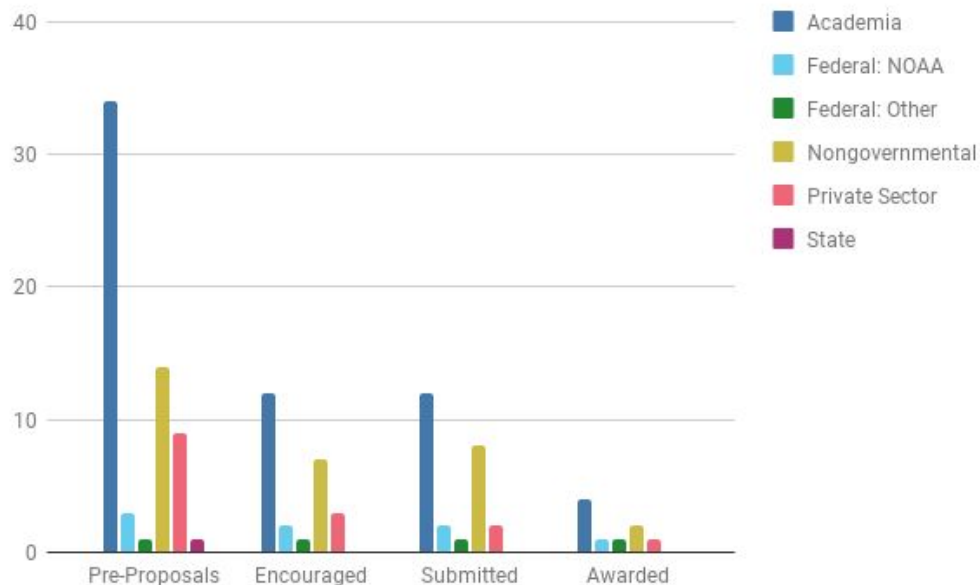


\*\* This depends on FY25 budget allocations

# NOFO Request for Proposal Topics (Past 5 Years)

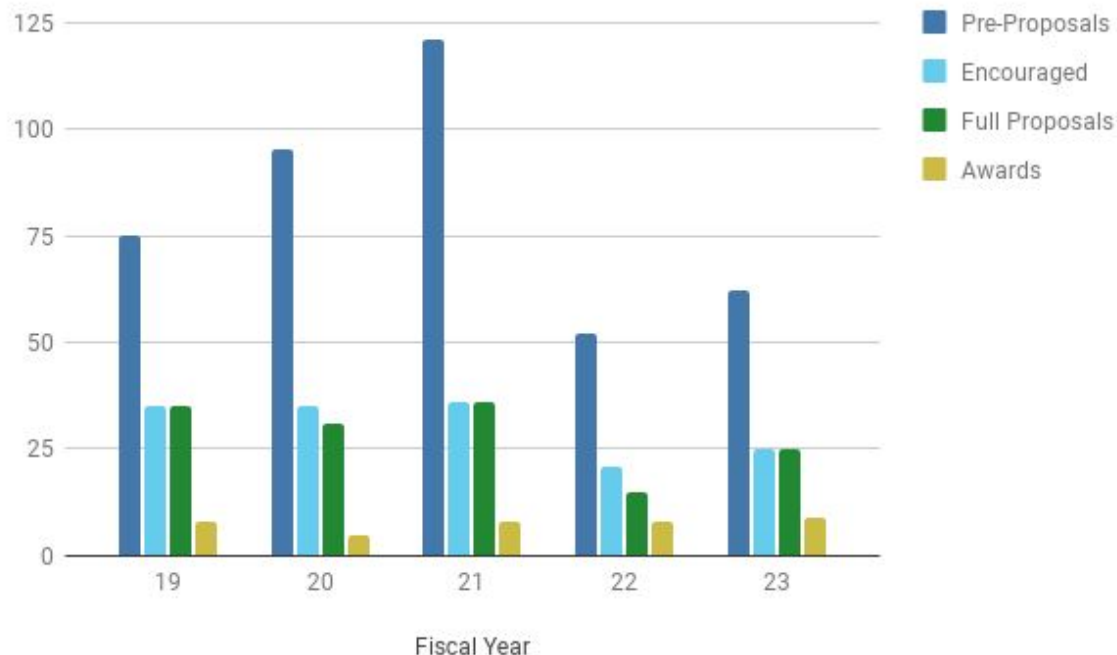
|                 | 2021   | 2022  | 2023  | 2024  | 2025  |
|-----------------|--|---|---|---|---|
| Geographic Area | Waters under U.S. jurisdiction (inc. U.S. EEZ)   | Waters in the Pacific Ocean under U.S. jurisdiction (inc. U.S. EEZ)                       | Waters under U.S. jurisdiction (inc. U.S. EEZ)  | Waters under U.S. jurisdiction (inc. U.S. EEZ) (no limit for Maritime Heritage)   | No restrictions   |
| Themes          | <p>Exploration of Deep Seafloor</p> <p>Water Column Exploration</p> <p>Maritime Heritage</p> | <p>General Ocean Exploration</p> <p>Maritime Heritage</p> <p>Technological Innovation</p> | <p>Ocean Exploration (Biopharma or Biotechnical Potential)</p> <p>Maritime Heritage</p> <p>Technological Innovation</p> | <p>General Ocean Exploration (tropical mesophotic allowed in shallower waters)</p> <p>Maritime Heritage</p> <p>Technological Innovation</p> | <p>General Ocean Exploration (tropical mesophotic allowed in shallower waters)</p> <p>Maritime Heritage</p> |

# FY23 NOFO Summary



For further details see the FY2023 Annual NOAA Ocean Exploration  
Competitive Grants Fiscal Report

# FY19-FY23 NOFO Summary



For further details see the FY2023 Annual NOAA Ocean Exploration  
Competitive Grants Fiscal Report

# NOFO Funded — 2023 Fieldwork

**January 2-12, 2023:** [Paleolandscapes, Paleoecology, and Cultural Heritage on the Southern California Continental Shelf](#)

**PI:** Amy Gusick; Natural History Museum Los Angeles County (\$487,405 leveraged funds; 150 DAS (+40 leveraged from SOI); 91 days UxS deployments (ROV, AUV, ASV); 147 AUV/ROV deployments; 63.79 km<sup>2</sup> mapped (<200m))

The SEASCAPES project team conducted the third phase of the project, which involved remote operated vehicle (ROV) surveys aboard Research Vessel *Sally Ride*. Over the course of 13 ROV dives, the team discovered what represents the first known shallow-water cold seep field in the southern California region.

**January 26-February 25, 2023 and July 27-August 23, 2023:** [Guam: A Biogeographic and Maritime Cultural Landscape Exploration of a World War II Amphibious Battlefield](#)

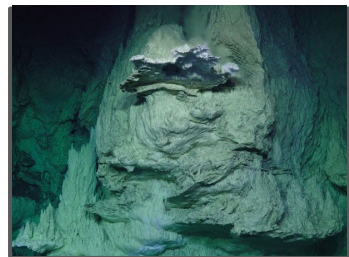
**PI:** Anne Wright; National Park Service (\$112,900 leveraged funds; 11 DAS, 6 days UxS deployments (ROV), 13 ROV dives)

A team of researchers conducted fieldwork on Guam in War in the Pacific National Historical Park to further our understanding of one of the most significant invasions of the World War II (WWII) Pacific theater. During this two-part project, the research team used ship-based instruments, an uncrewed surface vessel, and divers to identify, map, and document submerged resources related to the invasion (e.g., shipwrecks, aircraft, amphibious vehicles, and artillery).

**March 3-April 11, 2023:** [Searching for Serpentinization-Driven Hydrothermal Activity on Oceanic Core Complexes of the Mid-Atlantic Ridge](#)

**PI:** David Butterfield; University of Washington/PMEL (\$304,000 leveraged funds; 40 DAS (funded by SOI), 14 days UxS deployments (ROV SuBastian), 14 ROV dives)

This expedition, the first scientific expedition on Falkor (too), was a multipronged exploration project designed to accelerate discovery and characterization of deep-sea hydrothermal systems. The scientists targeted areas of the seafloor near the slow-spreading Mid-Atlantic Ridge where mantle rocks are exposed to seawater (oceanic core complexes).



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# NOFO Funded — 2023 Fieldwork



**April 14-22, 2023:** [The Search for \*Norlindo\* – The First World War II Casualty in the Gulf of Mexico](#)

**PI:** Leo Macelloni; University of Southern Mississippi (\$70,505 leveraged funds; 10 DAS, 6 Days UxS deployments (Eagle Ray AUV); 4 AUV dives; 21 km<sup>2</sup> mapped (<200 m))

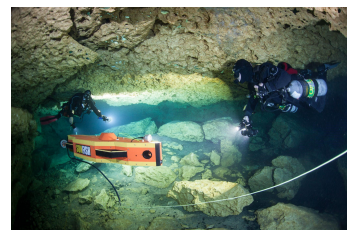
A team comprised of German, Italian, and American scientists and archaeologists embarked on a three-week expedition to search for SS *Norlindo*, an American steam freighter sunk on May 4, 1942, off of the Dry Tortugas by the German U-boat *U-507*. The sinking of *Norlindo* marked the first World War II combat casualties in the Gulf of Mexico.



**April 22-May 14, 2023:** [Exploring Deepwater World War II Battlefields in the Pacific Using Emerging Technologies](#)

**PI:** Jennifer McKinnon; Ships of Discovery/ East Carolina University (21 DAS, 1 day UxS deployment (ROV), 2 ROV dives, 16 SCUBA diver photogrammetric surveys)

For this fieldwork, researchers searched for, investigated, and documented remains of the World War II (WWII) Battle for Saipan's underwater battlefield, including aircraft and amphibious vehicles.



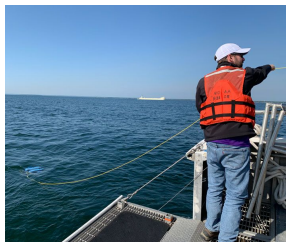
**May 24–June 10, 2023:** [Our Submerged Past: Exploring Inundated Late Pleistocene \(10,600 - 17,000 years ago\) Caves in Southeast Alaska with Sunfish \(second expedition\)](#)

**PI:** Kristof Richmond; Sunfish, Inc. (18 DAS; 15 days UxS deployment (Sunfish AUV), 19 AUV dives, 0.64 km<sup>2</sup> mapped (<200m))

A team of Indigenous Alaskans, local community members, and scientists explored the continental shelf west of Prince of Wales Island in southeast Alaska, as the second part of a multi-year project. Their goal was to locate and explore submerged caves and rock shelters that would have been accessible to early inhabitants of the region.



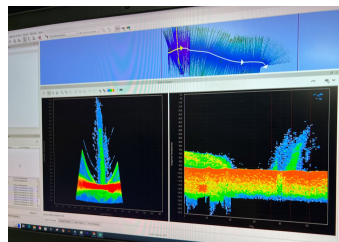
# NOFO Funded — 2023 Fieldwork



**June 5-23, 2023:** [Machine Learning for Automated Detection of Shipwreck Sites from Large Area Robotic Surveys \(second expedition\)](#)

**PI:** Katherine A. Skinner; University of Michigan (19 DAS, 10 days UxS deployments (IVER-3, BlueAUV Dory, and BlueROV Bruce), 43 dives in US EEZ, 10.7 km<sup>2</sup> mapped (<200m))

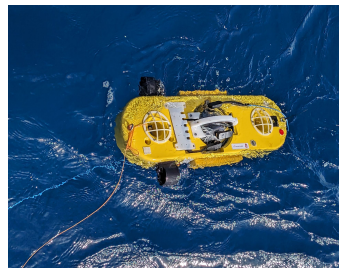
This expedition included advancing and training the capabilities of marine robotic systems to search for and survey shipwreck sites autonomously in Thunder Bay National Marine Sanctuary.



**August 11-16, 2023:** [Characterizing Variability in Pacific Northwest Methane Seeps Using a Fleet of Small AUVs](#)

**PI:** Craig McNeil; University of Washington (8 DAS, 15 Days UxS deployments (VT690 and Remus-100 AUVs), 32 AUV deployments, 3 km<sup>2</sup> mapped (<200m))

For this first expedition, the team of researchers visited known methane seeps off the coast of Washington to test their new approach to mapping and characterizing methane seeps over wide areas.

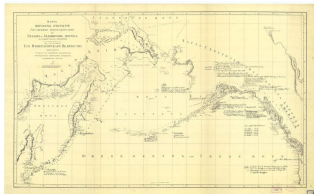


**August 14-18, 2023:** [Field Validation of Novel Low-Cost Underwater Robot for Deepwater Exploration and Characterization](#)

**PI:** Matthew Johnson-Roberson, Carnegie Mellon University (5 DAS, 4 days UxS deployments (Bruce AUV, DropSphere AUV/ROV) , 11 ROV/AUV dives)

A team of engineers and scientists have been developing two low-cost, open-source, underwater vehicle systems for the survey and classification of deep-sea corals and in this project they tested the new system off Florida.

# NOFO Funded — 2023 Fieldwork



**August 15-September 15, 2023:** [Early Encounters on a Western Frontier: The Search for Svyatoy Nikolai \(1807-1808\)](#)

**PI: Madeline Roth; NOAA Office of National Marine Sanctuary (\$61,380 leveraged funds; 30 DAS, 2 days UxS deployments (Sea Dragon ROV), 9 ROV dives, 25.99 km<sup>2</sup> mapped (<200 m))**

A team of researchers explored the nearshore area off La Push, Washington in search of shipwrecks, and one in particular: Svyatoy Nikolai, a historically significant survey vessel for the Russian-American Company.

# Summary Points

- Detailed metrics are in the FY2023 Annual NOAA Ocean Exploration Competitive Grants Fiscal Report
- Despite variation in themes, the number of applications, amounts requested, and funds disbursed have been relatively consistent over the past few years
- Regular bibliographic citation analyses demonstrate program's impact and value: <https://library.noaa.gov/oceanexplorationbib/home>
- Grant funded projects continue to feel the impacts of COVID — still approving multiple no cost extensions (NCEs) due to limited shiptime availability

# Ongoing Improvements for the NOFO

- <https://oceanexplorer.noaa.gov/about/funding-ops/ffo-recipients.html>
  - Project data landing pages (currently eight projects are live)
    - <https://www.ncei.noaa.gov/waf/ocean-exploration-nofo/>
- Continuing to do the presentation and panel discussion at the Deep Submergence Science Committee (DESSC) New User Symposium
- FY25 NOFO webinar:
  - <https://oceanexplorer.noaa.gov/about/funding-ops/welcome.html>
- Continuing to co-sponsor a NOAA Science Seminar Series on past funded NOFO projects. First seminar held on June 8, 2022; 15+ seminars held to date



# Questions?

[adrienne.copeland@noaa.gov](mailto:adrienne.copeland@noaa.gov)

[oceanexplorer.noaa.gov](http://oceanexplorer.noaa.gov)



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NOAA Ocean Exploration  
Notice of Funding  
Opportunity  
Annual Process Review

*5-Year Education  
Funding Opportunity*

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Liz Hoadley  
Education Team Lead  
September 17, 2024



# Transitioning to a Competitive Grant for the Education Program

## Previous Operating Model

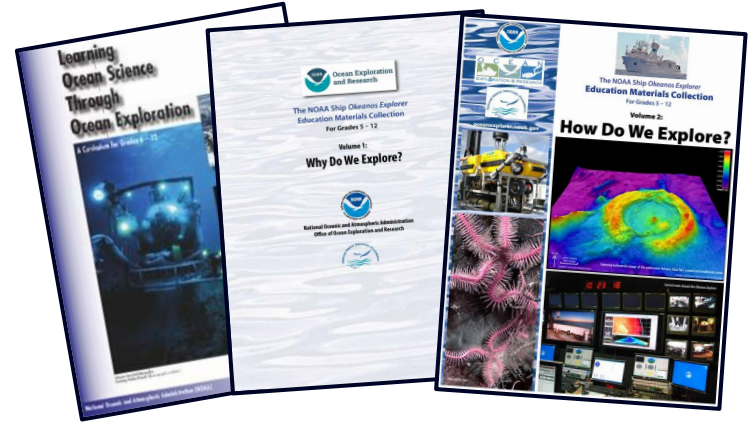
- Work through partners
- Cooperative agreement with National Marine Sanctuary Foundation for two decades
  - For the past six years, operating via a Broad Area Announcement Award (BAA), 2 year structure

BAA Award 2018-2019

BAA Award 2020-2021

BAA Award 2022-2023

*(No cost extension through Aug 2024)*



# Transitioning to a Competitive Grant for the Education Program

## New Operating Model

- Pulling it back to a structured, competitive grant process
- Overarching 5-year framework
- Continuing our national program -
  - similar in scale, capabilities, capacity

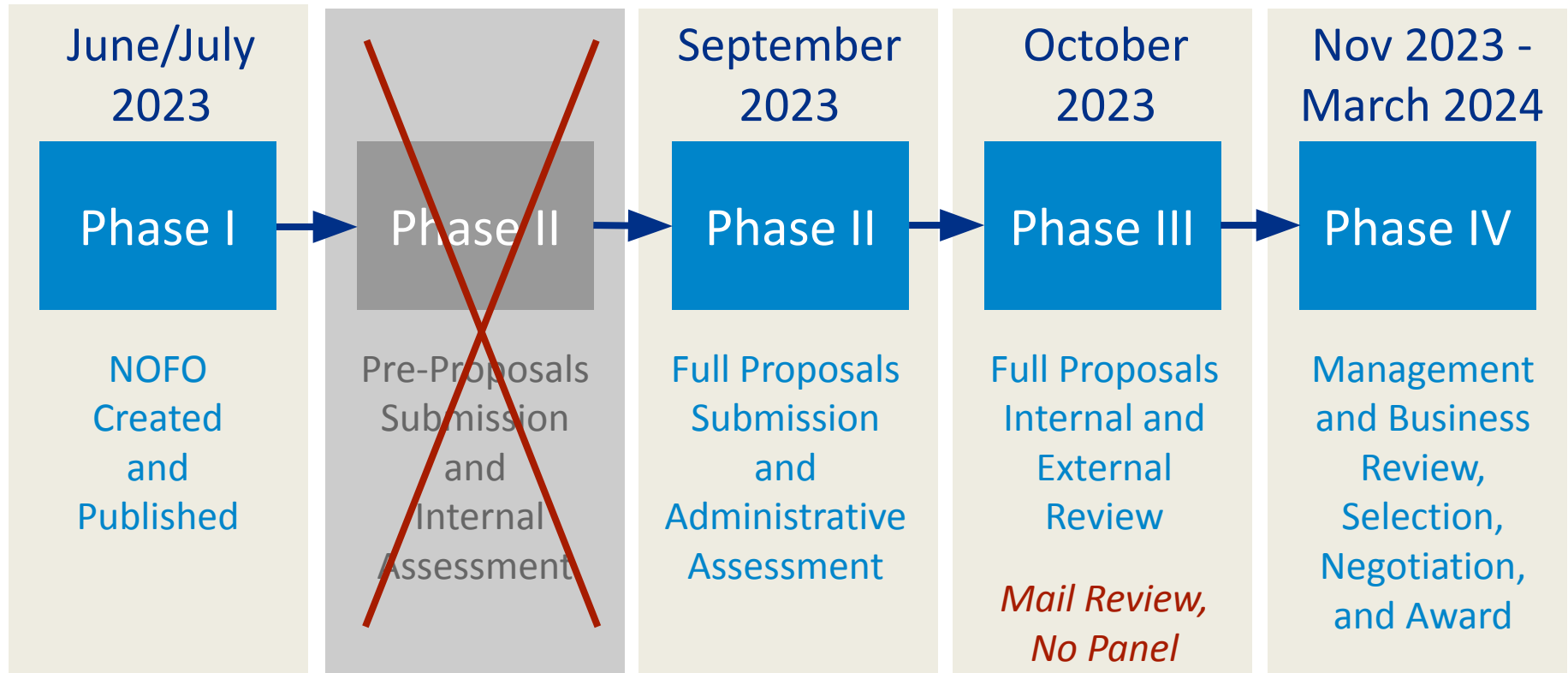
## NOFO Award 2024-2029 Focus Areas:

1. Connect NOAA Ocean Exploration's exploration resources to the expanded delivery of professional development for educators;
  - *Expand in terms of quantity, diversity, and geographic location*
2. Invest in STEM education programming for diverse youth to learn about the ocean, develop or advance STEM skills, and increase awareness of ocean science and exploration careers.
3. Minimize barriers faced by students from communities historically marginalized from ocean industries to support a future ocean workforce that is more representative of U.S. demographics.

**\$500,000 - \$1,000,000 per year**



# NOAA Ocean Exploration Education 5-Year Funding Opportunity

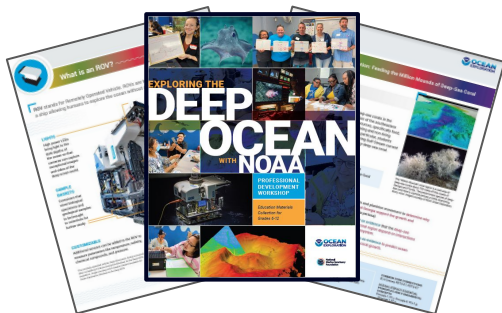


# Education NOFO 2024-2029 Awardee



National  
Marine Sanctuary  
Foundation

## Investing in Our Ocean Future: Public-Private Partnership to Advance Exploration Education Collaboration



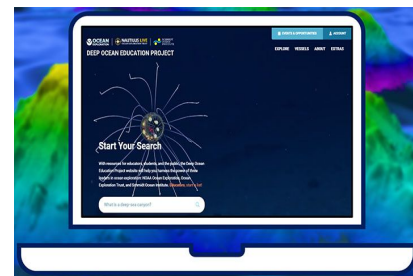
High Quality  
Education  
Products



Teacher  
Professional  
Development



Ocean  
Odyssey  
Grants



Deep Ocean  
Education  
Project



National  
Marine Sanctuary  
Foundation



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# Ocean Odyssey Grants

## Ocean Exploration Awards for Diversity, Equity, Inclusion, Justice, and Accessibility (DEIJA)

**Objective:** To increase inclusion in and/or access to STEM education and workforce development opportunities for diverse youth in middle school, high school, or college to learn about ocean science and/or exploration.

Projects should directly or indirectly result in:



Deepening student understanding of the Ocean and/or Great Lakes



Increasing student awareness of ocean careers



Advancing STEM skills applicable to ocean science

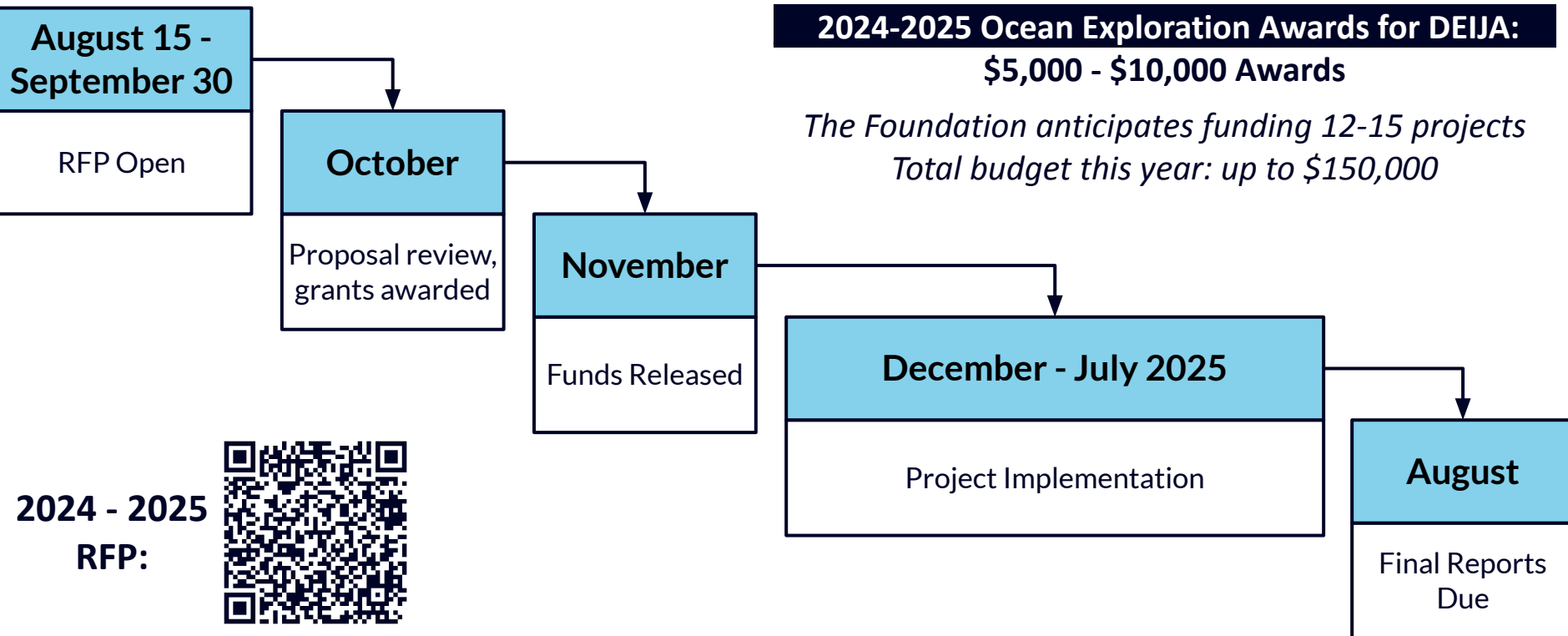


National  
Marine Sanctuary  
Foundation



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# Ocean Odyssey Grants Process



<https://oceanexplorer.noaa.gov/edu/deia-grants/welcome.html>

# Investing In Our Ocean Future

**3 Years**

**39 Projects**



**4,764**

K12 Students



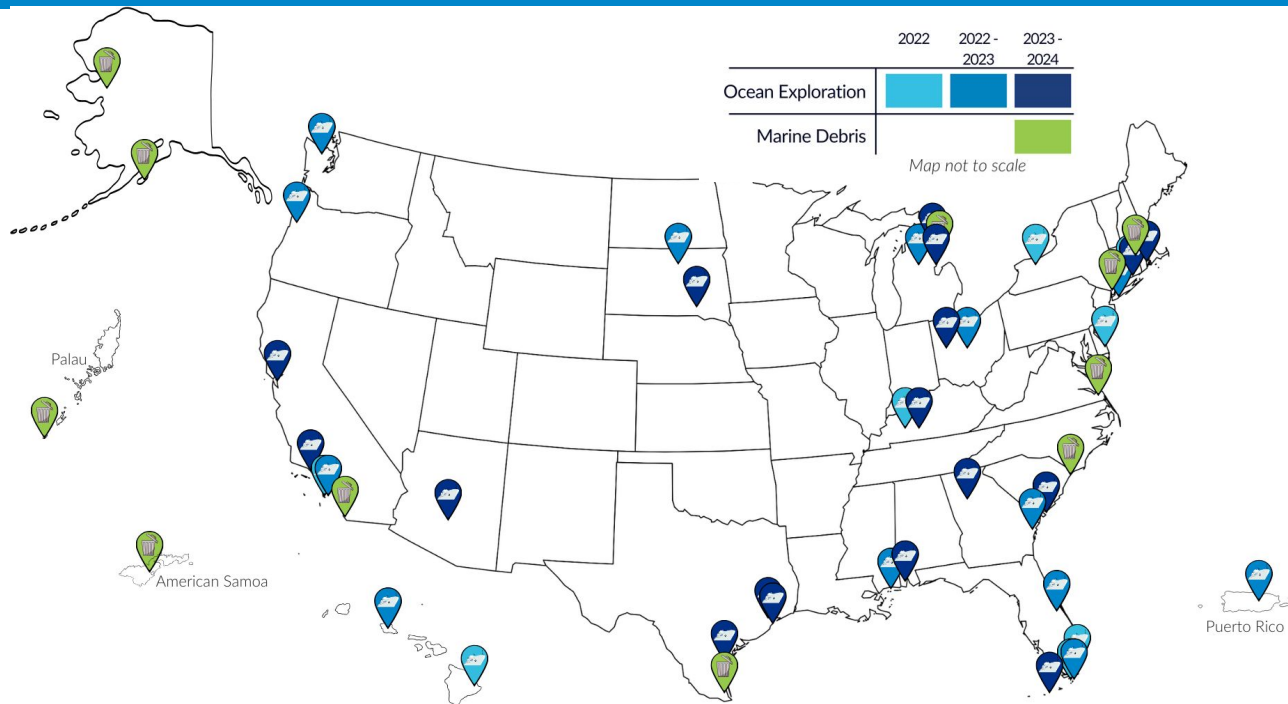
**207**

College  
Students



**1,028**

Educators



The first round of the **Ocean Odyssey Grants** (DEIA Ocean Exploration Education Mini Grants) were offered for 2021-2022 school year.



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Marine Sanctuary  
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DISCOVER WONDER



**National  
Marine Sanctuary  
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# Questions?

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