

NOAA Update DeSSC Meeting May 2019

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OCEAN EXPLORATION



Seafloor Mapping



Visual Surveys



Sampling



Inform traditional and renewable energy siting



Evaluate availability of critical minerals resources



Discover new species with biopharmaceutical/biotechnology potential



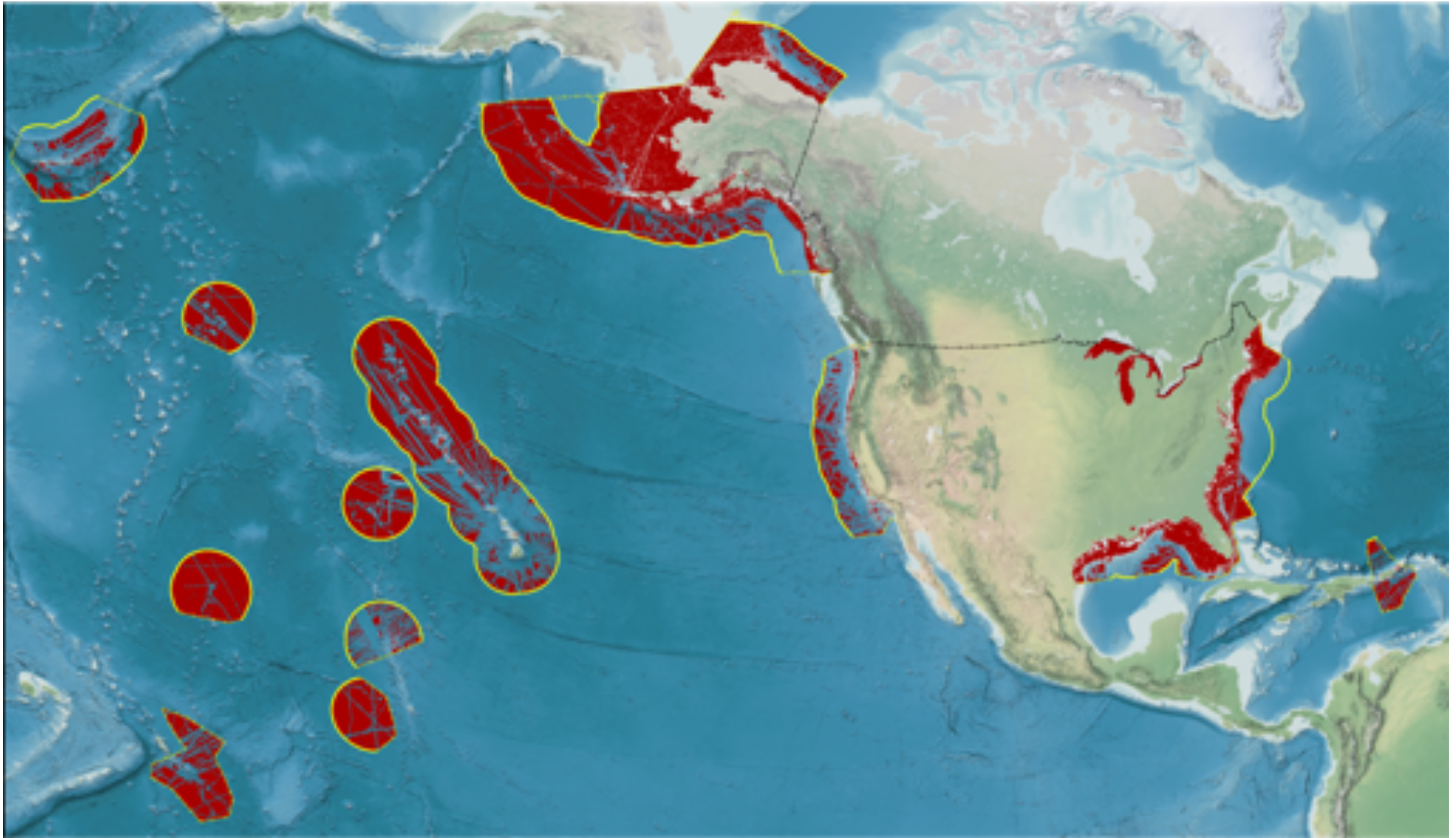
Assess populations and habitats of managed marine species



Drive innovation of novel technologies



Inspire and educate the next generation of STEM professionals



ASPIRE EXPEDITIONS

Northern Neighbors: Transboundary Exploration of Deepwater Communities

June 2017, June 2019

NOAA NMFS/Dalhousie University, NOAA Ship Henry B. Bigelow

US-Canada ROV and Mapping

Summer 2019

NOAA OER/ONMS, NOAA Ship Okeanos Explorer

New England Seamounts ROV and Mapping

Summer 2020

NOAA OER, NOAA Ship Okeanos Explorer

Mid-Atlantic Ridge ROV and Mapping

Summer 2020

NOAA OER, NOAA Ship Okeanos Explorer

Carolina Canyons

August 2016, August 2017

NOAA NMFS

NOAA Ship Pisces

DEEP SEARCH

2017-2019

BOEM/USGS/NOAA, Multiple Platforms

Seabed 2030 Mapping

Spring 2019

NOAA DER, NOAA Ship Okeanos Explorer

US Southeast and Bahama Ridge Mapping

October 2018

NOAA OER/OCS, NOAA Ship Okeanos Explorer

ASMIWG Pilot Area Mapping

July 2018

NOAA OER, NOAA Ship Okeanos Explorer

Southeast US ROV and Mapping

Summer 2018, Spring 2019

NOAA OER/NMFS/ONMS, NOAA Ship Okeanos Explorer

US Caribbean ROV and Mapping

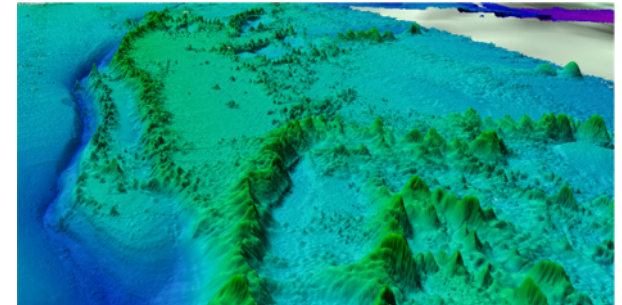
Fall 2018, Spring 2020

NOAA OER/OCS, NOAA Ship Okeanos Explorer

Last updated: March 12, 2019

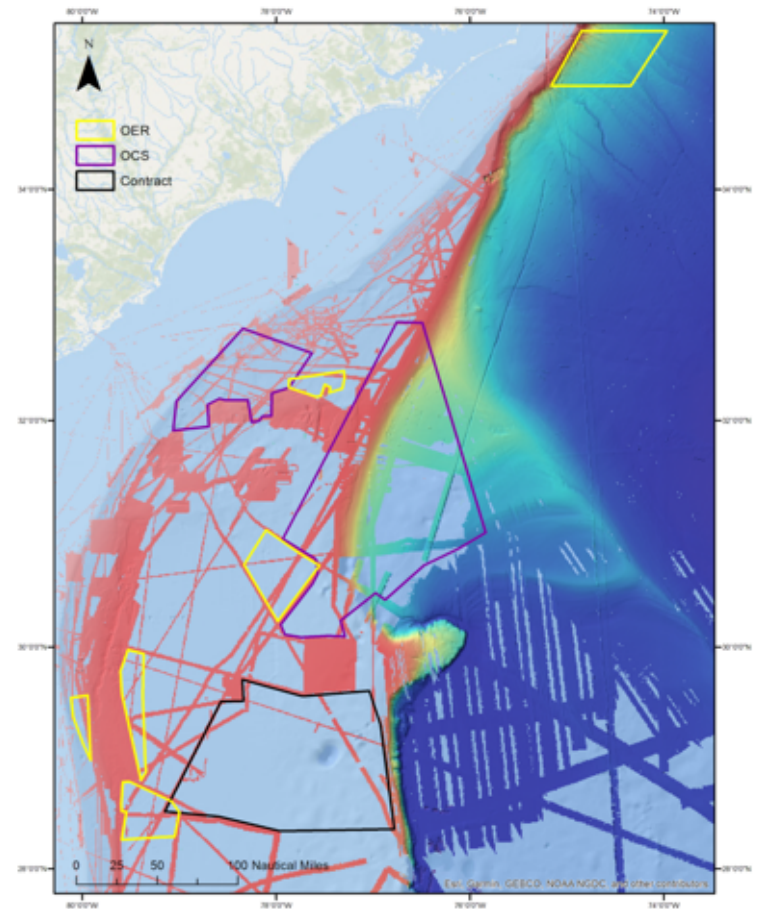
Mechanisms to support ocean exploration

- **Dedicated Platform** - NOAA Ship *Okeanos Explorer*
- **Ocean Exploration Cooperative Institute** - New CI awarded in May 2019. Partnership with URI, WHOI, USM, UNH, and OET.
- **CRADAs** - All for maturation and investment of technology with industry
- **Contracts** - Hydro surveys and data buys from industry
- **Cross-agency partnerships** - NOAA works through the NOPP to facilitate exploration across the federal government, like with the DEEP SEARCH project and through the annual BAA funding call.
- **Federal Funding Opportunity** - OER releases an annual funding call. FY20 pre-proposal call closed on May 24, with full proposals due September 6.



Execution: Ocean exploration in 2019 - US Southeast

- **DEEP SEARCH** - 22-day expedition on NOAA Ship *Ronald H. Brown* with ROV *Jason* that characterized seep, coral, and canyon habitats and discovered tube worms at US Atlantic seeps for the first time.
- **Windows to the Deep 2019** - Two-part *Okeanos Explorer* expedition (May 29 - July 12).
- **Office of Coast Survey** - Mapping expeditions with both *Nancy Foster* and *Ronald H. Brown* this summer to expand bathymetric coverage of Blake Plateau.
- **Contract mapping** - OER planning to expand US mapping coverage through contract hydrographic surveys in 2019 - 2020.



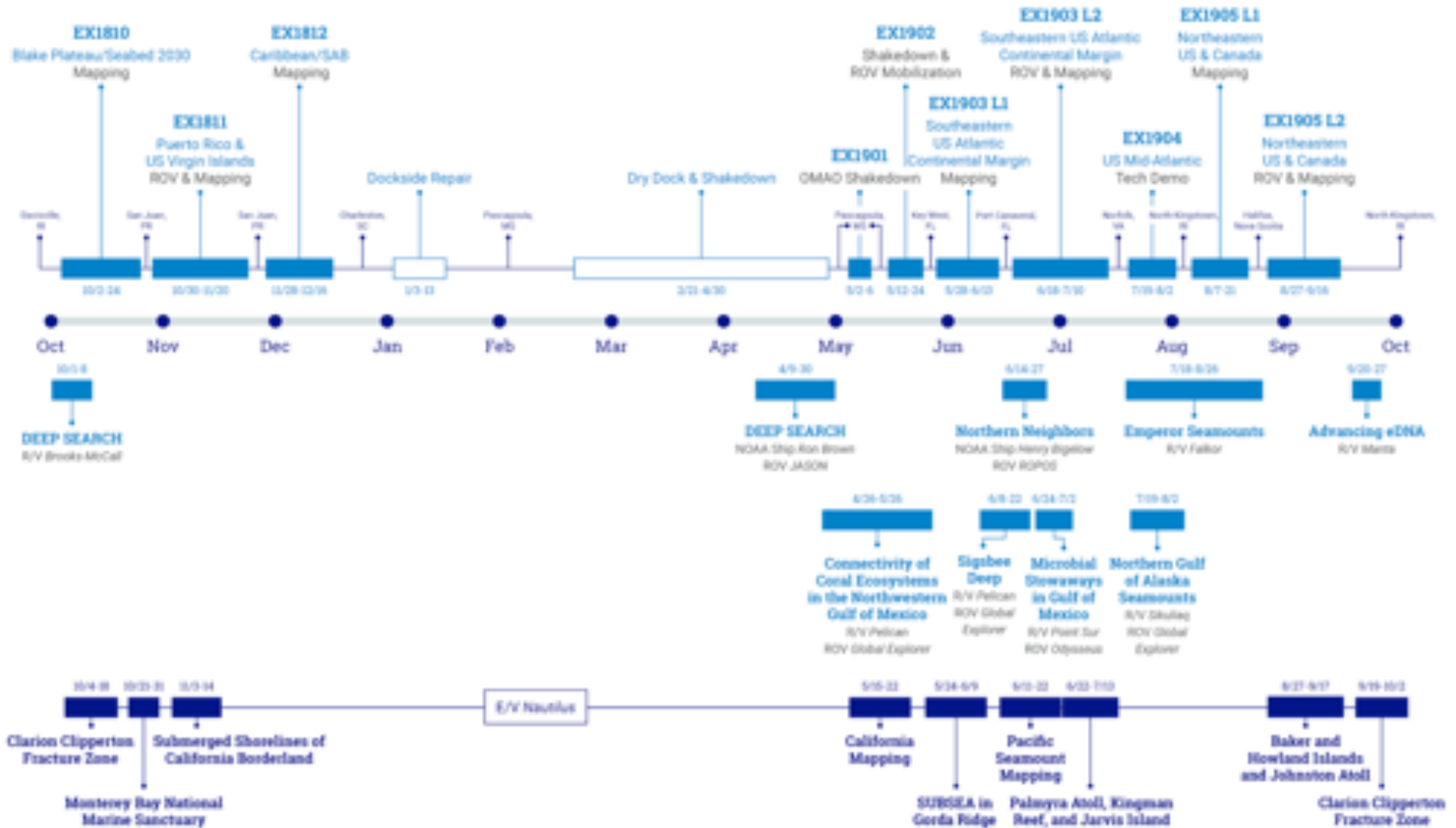
Execution: Ocean exploration in 2019 - Mid- and North Atlantic

- **Mid-Atlantic Tech Demo** - 15-day *Okeanos Explorer* cruise to deploy and test four emerging technologies, including NOAA-Kraken CRADA tech.
- **NE & Canada Expedition** - 36-day, two-leg *Okeanos Explorer* to map and characterize US and Canadian Atlantic continental margin.
- **Northern Neighbors** - NOAA-DFO collaboration using *Henry Bigelow* with ROV *ROPOS* for 14 days this June to explore coral and canyon habitats along the US-Canada transboundary area.



FY 2019 Expeditions

Last Updated: 5/23/19



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and Research**