

Project Instructions: EX-22-07, Transit to US West Coast

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Platform: NOAA Ship *Okeanos Explorer*
Project Number: EX-22-07
Project Title: Transit to US West Coast
Project Dates: September 10- October 03, 2022

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Dated: 8/11/22

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Dated: 8/15/2022

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Dated: 8/15/2022

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I. Overview

A. Brief Summary and Project Period

September 10, 2022 — October 03, 2022

San Juan, Puerto Rico — San Diego, California

EX-22-07 Transit to US West Coast

This document contains project instructions specific to EX-22-07. For the annual cross-expedition details, see the [“NOAA Ship Okeanos Explorer FY22 Field Season Instructions.”](#) This expedition will commence on September 10, 2022, in San Juan, Puerto Rico. Mission personnel will disembark in Balboa, Panama on September 18, 2022 via small boat transfer while *Okeanos Explorer* will continue on and conclude on October 03, 2022 in San Diego, California. Transit operations will be conducted 24 hours per day and consist of ship-to-shore communications via telepresence.

Operations will include a high-bandwidth satellite connection for continuous ship-to-shore communications. Operations will focus on transiting from San Juan, Puerto Rico through the Panama Canal to San Diego, California.

B. Days at Sea

Of the 24 days at sea (DAS) scheduled for this expedition, 19 DAS are Program Funded, 3 days are funded by NOAA Office of Oceanic and Atmospheric Research Allocation, and 2 days are funded by an Office of Marine and Aviation Operations allocation. This expedition consists of 24-hour ship operations, which include shoreside participation via telepresence. No over the side operations will take place.

C. Operating Area

EX-22-07 will focus operations on transit from San Juan, Puerto Rico through the Panama Canal to San Diego, California. **Figure 1** shows the general operating area for the expedition.



Figure 1. Map showing the general operating area for EX-22-07. Note that the expedition track is subject to change based on survey results, field conditions, and discretion of the commanding officer.

D. Summary of Objectives

EX-22-07 operations will involve a transit westward from San Juan, Puerto Rico through the Panama Canal to the Pacific Ocean. This expedition will focus on transiting to the Pacific Ocean.

Mission objectives for EX-22-07 include a variety of objectives focused on science education, outreach, and data management. Overarching objectives that span the entire Fiscal Year 2022

(FY22) field season are covered in the “[NOAA Ship *Okeanos Explorer* FY22 Field Season Instructions](#).” Additional objectives specific to EX-22-07 follow:

1. Science Objectives

- a. Provide a comprehensive overview of operations at sea to personnel including, but not limited to, operations in mission control, wetlab, drylab, and ROV hangar spaces.

2. Telepresence Engineering Objectives

- a. Perform video stream timestamp tests with the ISC to provide timestamp metadata through the work flow. This will include ONC receiving the timestamp on the streams.
- b. Firewall and network system firmware and software updates.
- c. Develop and test additional automation tools for networking and video stream monitoring system.
- d. Maintain networking and Internet access from PR to Panama and then hard stow the VSAT antenna.

3. Data Management Objectives

- a. None.

4. Outreach and Education Objectives

- a. Host interactions with audiences on shore.
- b. Take ship tour footage to create a virtual ship tour.
- c. Create videos for Explorer-in Training Orientation.
- d. Video interviews with O&E team for career section of website.
- e. Test bandwidth of social media connectivity for possible public events and outreach.
- f. Gain insight into data/telepresence operations for future awareness of capabilities.

5. Ship Objectives

- a. Possible fueling at Guantanamo Bay.
- b. Navigate through Panama Canal.

E. Participating Institutions

See “[NOAA Ship *Okeanos Explorer* FY22 Field Season Instructions](#)” for institutions that consistently participate throughout the field season.

F. Personnel (Mission Party)

Mission personnel (see **Table 1**) will arrive in San Juan, Puerto Rico on September 07 day, 2022. Mission personnel will join the ship on September 08, 2022. Mission personnel will then be aboard for part of the expedition (September 10-18, 2022). All mission personnel will depart September 18, 2022. The expedition will also be supported by shoreside personnel (see **Table 2**).

Table 1. Seagoing mission personnel: This list is tentative until travel is booked. Any deviations will be communicated to the operations officer.

#	Name (Last, First)	Title	Date Aboard	Date Disembark	Gender	Affiliation	Nationality
1	Galvez, Kimberly	Expedition Coordinator	09/07	09/18	F	NOAA Ocean Exploration (FedWriters)	USA
2	Gulbraa, Rachel		09/07	09/18	F	NOAA Ocean Exploration (UCAR)	USA
3	Hoadley, Liz	Education Program Manager	09/07	09/18	F	NOAA Ocean Exploration (National Marine Sanctuary Foundation)	USA
4	Albano, Trish	Internship Program Coordinator	09/07	09/18	F	NOAA Ocean Exploration (National Marine Sanctuary Foundation)	USA
5	Durbin, Mark	Telepresence Engineer	09/07	09/18	M	Global Foundation for Ocean Exploration	USA

* Not confirmed.

Table 2. Shoreside support personnel and key contacts

#	Name (Last, First)	Title	Affiliation	Nationality
1	Crossett, Kristen	Outreach and Education Division Chief	NOAA Ocean Exploration	USA
2	Crum, Emily	Communications Team	NOAA Ocean Exploration	USA

1. Foreign National Guests (FNGs) Access to OMAO Facilities and Platforms

Foreign national access to *Okeanos Explorer* or other federal facilities will not be required for this expedition.

G. Administrative

1. Points of Contact

Table 3. Points of contact

Operations	Name, Title	Office	Address	Phone/Fax	Email
Marine Operations Center, Atlantic	CAPT Nicholas Chrobak, Commanding Officer	Marine Operations Center, Atlantic	439 West York Street Norfolk, VA 23510-1145	(757) 441-6776/ (757) 441-6495	co.moc.atlantic@noaa.gov
Marine Operations Center, Atlantic	LCDR Steven Barry, Chief of Operations	Marine Operations Center, Atlantic	439 West York Street Norfolk, VA 23510-1145	(757) 441-6842/ (757) 441-6776	Chiefops.MOA@noaa.gov
NOAA Ship Okeanos Explorer (primary)	CDR Colin Little, Commanding Officer	NOAA Ship Okeanos Explorer	NOAA Ship Okeanos Explorer 47 Chandler Street Newport, RI 02841	(401) 439-7848	CO.Explorer@noaa.gov
NOAA Ship Okeanos Explorer (primary)	LT Hunter Brendel, NOAA Operations Officer	NOAA Ship Okeanos Explorer	NOAA Ship Okeanos Explorer 47 Chandler Street Newport, RI 02841	(808) 659-9179 x221	ops.explorer@noaa.gov
Mission (primary)	Kimberly Galvez, Expedition Coordinator	NOAA Ocean Exploration	1315 East-West Highway, Silver Spring, MD 20910	(305) 951-6956	kimberly.galvez@noaa.gov
Mission (other)	Kasey Cantwell, Operations Chief	NOAA Ocean Exploration	1315 East-West Highway, Silver Spring, MD 20910	(301) 717-7776	kasey.cantwell@noaa.gov
Mission (other)	Rachel Medley, Chief, Expeditions and Exploration Division	NOAA Ocean Exploration	1315 East-West Highway, Silver Spring, MD 20910	(301) 789-3075	rachel.medley@noaa.gov
Mission (other)	Jeremy Weirich, Director	NOAA Ocean Exploration	1315 East-West Highway, Silver Spring, MD 20910	(301) 452-7366	jeremy.weirich@noaa.gov

2. Diplomatic Clearances

None required.

3. Shipments

The *Okeanos Explorer* operations officer should be notified of any shipments to the ship. Send an email describing the shipment (including size and number of items) to

OPS.Explorer@noaa.gov and newengland.portops@noaa.gov.

All mail that needs to be sent to the *Okeanos Explorer* prior to the expedition should be sent to the Newport, RI home port address for forwarding on to San Juan, Puerto Rico. **Shipments should arrive in Newport no later than September 02, 2022**, and be shipped to the following address:

NOAA Ship *Okeanos Explorer*
Attn: Name/Dept
47 Chandler Street
Newport, RI 02841

For shipments that need to be sent to meet the ship when it arrives in port in San Diego, California after the expedition from October 03, 2022, shipments should be sent to the Newport, RI home port address for forwarding on to Horta. **No shipments should be made to Balboa, Panama. Shipments should arrive in Newport no later than September 26, 2022**, and should be shipped to the following address:

NOAA Ship *Okeanos Explorer*
Attn: Name/Dept
47 Chandler Street
Newport, RI 02841

4. COVID-19 Contingency Plan for Scientific Party

In accordance with the “OMAO Marine Operations COVID-19 Protocols” effective April 16, 2022, shelter-in-place is not required for sailing. All mission personnel shall follow the guidelines written within the documentation, subject to change pending new guidance released. All sailing personnel are required to be fully vaccinated, which means they must have completed the initial vaccination series and all applicable boosters.

Mission personnel will be tested via rapid antigen tests the day of or night before sailing and potentially before being cleared to move onboard the ship for berthing. Any mission personnel

who test positive will be disqualified from sailing, and backup personnel will be activated as mission objectives and priorities dictate.

If any mission personnel test positive for COVID-19 during any required testing as dictated by OMAO:

- NOAA Marine Health Services will notify the individuals who test positive that they are not cleared to board the ship. NOAA Ocean Exploration will reimburse the individual for 5 days of shelter-in-place lodging to complete their isolation and for a COVID-19 test to confirm they are negative prior to returning home or returning to work to sail if the expedition has not already departed.
- The expedition coordinator will be notified of any mission personnel who are not cleared to sail.
- The expedition coordinator will notify the NOAA Ocean Exploration operations chief.
- The expedition coordinator will determine, in consultation with the ship's commanding officer, NOAA Ocean Exploration's operations chief, and appropriate parties, whether the mission will continue without the uncleared personnel.

If any mission personnel develop COVID-19-like symptoms while underway, OMAO protocols will be strictly followed. The expedition coordinator (or designee if they are unable to fulfill this role) will remain the primary point of contact for all mission personnel. Additional support with onshore logistics for impacted mission personnel will be provided by:

Kasey Cantwell, NOAA
Operations Chief, Expeditions and Exploration Division
NOAA Office of Ocean Exploration and Research
1315 East West Hwy
SSMC3, #10229
Silver Spring, MD 20910
Cell: 301-717-7776

II. Operations

The expedition coordinator is responsible for ensuring mission personnel are trained in planned operations and are knowledgeable about expedition objectives and priorities. The commanding officer is responsible for ensuring all operations conform to the ship's accepted practices and procedures.

A. Expedition Itinerary

Table 4 summarizes the expedition itinerary. All times and dates are subject to prevailing conditions and the discretion of the commanding officer. Additional items may be added to the itinerary as expedition plans are further developed.

Table 4. Expedition itinerary: This is an approximate itinerary and is subject to change based on objective completion, weather, and logistical needs. See Table 5 for ROV dive details.

Date	Activities
9/07	Mission personnel begin to arrive on ship. Underway preparations and training. Mobilization. Mission personnel will need laptop computers added to the wireless network.
9/08	Mobilization. Remaining mission personnel arrive. More mission personnel will need laptop computers added to the wireless network. Vessel familiarization (~45 minutes) with mission personnel that have not sailed on <i>Okeanos Explorer</i> within last year.
9/09	Mobilization. Mission personnel will need laptop computers added to the wireless network. Backup for vessel familiarization (~45 minutes) with mission personnel that have not sailed on <i>Okeanos Explorer</i> within last year.
9/10	Depart San Juan, Puerto Rico, in the morning. Welcome aboard briefings and drills.
9/11	Outreach and education objectives.
9/12	Outreach and education objectives.
9/13	Outreach and education objectives.
9/14	Outreach and education objectives.
9/15	Outreach and education objectives.
9/16	Outreach and education objectives. Tentative Panama Canal transit.
9/17	Outreach and education objectives. Tentative Panama Canal transit.
9/18	Mission team disembark via small boat transfer in Balboa, Panama.
9/18-10/03	<i>Okeanos Explorer</i> continues transit to San Diego, California.

B. Staging and Destaging

No staging or destaging is anticipated for this expedition.

C. Operations to Be Conducted

1. ROV Dives

No ROV dives are scheduled to occur during EX-22-07.

2. CTD Casts

No CTD casts are planned for this expedition.

3. Telepresence/Outreach Events

- a. Three live video feeds will be used throughout the expedition to provide situational awareness for onshore personnel either playing from ship cameras or cycle through footage of previous expeditions.
- b. It is expected that at least live interactions with shore-based participants will be conducted during the expedition. Specifics for each event are TBD.

4. In-Port Events

- a. No in port public events are planned for this expedition.

5. Special/Unusual Operations or Requests

A small boat transfer is requested for mission personnel to disembark at Balboa, Panama on September 18, 2022.

D. SCUBA Dive Plan

All SCUBA dives are to be conducted in accordance with the requirements and regulations of the [NOAA Diving Program](#) and require the approval of the ship's commanding officer. No SCUBA science dives are planned during EX-22-07, but the ship may plan training, safety drills, or maintenance dives.

E. Applicable Restrictions

Mission personnel are to restrict to the ship during fueling operations at Guantanamo Bay.

III. Hazardous Materials

A. Policy and Compliance

See the "[NOAA Ship *Okeanos Explorer* FY21 Field Season Instructions.](#)"

B. Inventory

Table 5. Inventory of hazardous materials that will be aboard for EX-22-07

Item	Use	Approximate Locations
95% UPS denatured ethanol (248 gal)	Sample preservation	02 Deck, port side ethanol storage container
Formaldehyde (2 gal) to be buffered into 10% buffered formalin	Sample preservation	Wet lab, under the chemical hood
Bleach (1 qt)	Sterilization and sample preservation	Wet lab cabinet under sink
Magnesium chloride (500 g)	Sample preservation	Wet lab under hood
Sodium phosphate (1 kg)	Sample preservation	Wet lab under hood
AquaShield	Underwater lubricant	ROV workshop fire cabinet, pit
Dow Corning 4	Electrical insulating compound	ROV workshop fire cabinet, pit
Fluid film spray	Silicone lubricant	ROV workshop fire cabinet
Isopropanol alcohol (2 gal)	Solvent	ROV workshop fire cabinet
Scotchkote	Electrical insulating compound	ROV workshop fire cabinet
3M silicone spray	Silicone lubricant	ROV workshop fire cabinet
Synthetic AW hydraulic oil, ISO-22	Amsoil (AWG-05)	Hanger, pit, vehicles
Tap Magic cutting fluid	Cutting/machining lubricant	ROV workshop fire cabinet
Tap Magic heavyweight cutting fluid	Cutting/machining lubricant	ROV workshop fire cabinet
Tuff Coat M	Marine lubricant	Winch room
Dow Corning Molykote 111	Valve lubricant and sealant	ROV workshop Fire cabinet, pit
WD40	Lubricant	ROV workshop fire cabinet
Loktite	Bolt adhesive	ROV workshop fire cabinet
Shell Diala S2	Vitrea	Hanger, vehicles
Por-15	Paint kit	ROV workshop fire cabinet
Aeroshell 41	Hydraulic fluid	Hanger, ROV Deep Discoverer
Ultratane	Butane fuel	ROV workshop fire cabinet
Rust-oleum	Protective enamel	ROV workshop fire cabinet
Flux-Off	Soldering flux remover	ROV workshop fire cabinet
Propane	Torch fuel	ROV workshop fire cabinet
Adhesive Pliobond 25	General adhesive	Tool room

Item	Use	Approximate Locations
AP 120 Metal Prep	Degreaser/cleaner for metal surfaces	Pit
Butane fuel	Torch refill	Tool room
PVC cement	Adhesive for PFV plastic piping	Tool room
Phosphoric acid	Ferrous metal rust removal	Tool room
Pipetite paste	Plumbing sealant	Tool room/pit
Spindle oil 10, ROS PT	Lubricant/compensation oil	Tool room
DC557	Silicon grease	Tool room/pit
Tether potting catalyst	Two part epoxy catalyst	Pit
Tether potting compound	Two part epoxy ingredient	Pit
ThermaPlex bearing grease	Lubricant	Pit
Tritech Seaking	Compensator oil for sonar head	Pit

IV. Equipment

A detailed list of equipment provided by the ship and NOAA Ocean Exploration can be found in the [“NOAA Ship *Okeanos Explorer* FY21 Field Season Instructions.”](#) There are no specific changes relative to this expedition.

Appendix A. Licenses, Permits, and Environmental Compliance

Pursuant to the National Environmental Policy Act (NEPA), NOAA Ocean Exploration is required to include in its planning and decision-making processes appropriate and careful consideration of the potential environmental consequences of actions it proposes to fund, authorize, and/or conduct. The companion manual for NOAA Administrative Order 216-6A describes the agency's specific procedures for NEPA compliance.

No over the side operations are taking place during this expedition.

See the "[NOAA Ship *Okeanos Explorer* FY21 Field Season Instructions](#)" for additional information regarding environmental compliance that applies to the entire field season (e.g., Endangered Species Act Section 7 consultation and potential impacts to essential fish habitat).

Appendix B. Emergency Contact Data Sheet

Mission personnel sailing aboard NOAA Ship *Okeanos Explorer* must fill out a [Sailing Contact Form](#) that collects emergency contact information for each person. This information is available to the operations officer to fulfill safety requirements to sail.