

Standard Operating Procedure (SOP) #20

After the Field Season

Version 1.01 (July 23, 2021)

Change History

New Version #	Revision Date	Author	Changes Made	Reasons for Change	Previous Version #
1.01	7/23/2021	Kelly Kozar	Updates to SOP numbers.	To accurately reflect current SOP numbers.	1.00

Only changes in this specific SOP will be logged here. Version numbers increase incrementally by hundredths (e.g., version 1.01, version 1.02) for minor changes. Major revisions should be designated with the next whole number (e.g., version 2.0, 3.0, 4.0). Record the previous version number, date of revision, author of the revision, changes made, and reason for the change along with the new version number.

Purpose

This SOP explains chronological actions after the field season for personnel involved in the Marine Fish Monitoring Protocol in the Pacific Island Network. The field season for this protocol begins in the spring and includes the installation and maintenance of any transect or sampling equipment, underwater surveys, and ends with the clean up and storage of the equipment. This SOP outlines the proper post-season maintenance and storage for the SCUBA gear, vessel, and survey equipment for each objective of the protocol. The post-field season will follow the last dive of the season.

A master equipment list for the entire Marine Fish Monitoring Protocol can be found in Appendix SOP 1.a of SOP #1 Before the Field Season. The master equipment list should be updated simultaneously if any SOP requiring an equipment list is revised.

SCUBA Gear

Rinse

All SCUBA gear must be rinsed with fresh water following each dive, as described in SOP #9 Post-dive Procedures and Equipment Maintenance. Marine environments can accelerate wear and deterioration of sampling tools and equipment thus requiring special consideration for adequate maintenance and storage while not in use. After the final dive of the season, all field gear should be thoroughly immersed for one-half hour, and then rinsed with running clean fresh water. Allow gear to dry completely prior to returning it to the proper storage area.

Inspect for Repairs

During the final rinse and storage of equipment, inspect and identify SCUBA gear that may be in need of repair, maintenance, or replacement. An equipment list for conducting diving activities can be found in Appendix S1.a in SOP #1 Before the Field Season. Prepare a service schedule as required by Reference Manual #4 – Diving Management (RM-4)¹ and coordinate the maintenance activities to accommodate the next field season.

Storage

After servicing, store the SCUBA gear in a cool, dry location away from weathering elements (e.g., sun, rain, wind).

Maintenance Log

Prepare a maintenance log that clearly identifies each piece of gear, the date serviced, and the type of maintenance performed.

Marine Fish Survey Equipment

Step by Step Procedures:

1. Rinse all equipment for marine fish surveys after each use and at the end of the field season with freshwater. Allow equipment to dry thoroughly prior to returning it to the proper storage areas.
2. After rinsing the transect tape/lines with freshwater, verify that they are functioning properly. To rinse thoroughly, unspool the transect tape in a container of freshwater. Repair or replace as necessary and re-spool on reels without twists, kinks or cuts. When dried, store the transect tapes/lines in a cool, dry location.
3. After identification of the equipment that may require servicing, prepare a maintenance schedule in preparation for SOP #1 Before the Field Season.

Research Vessel Maintenance

Step by Step Procedures:

1. Inspect all boating supplies (Appendix SOP 1.a in SOP #1 Before the Field Season) to verify that they are in working order and will be ready for use during the next scheduled field season. Remove and care for engine batteries.

¹ https://www.nps.gov/policy/DOrders/RM-4_6-2014.pdf (accessed 23 July 2021)

2. Inspect the mooring lines, including chafing gear, and ensure that they are undamaged and secure. Repair or replace as necessary.
3. Inspect anchor, shackle(s), wire(s), and chain/line for any rust, wear or breakage. Repair or replace as necessary.
4. Ensure that the bilge pump is in working condition.
5. Inventory the first aid kit (including sunscreen and water) and replace the items that have been used or are past their expiration date.
6. Inspect personal floatation devices (PFDs) for damage, including any straps, whistles or lights. Service or replace as needed.
7. Inspect emergency oxygen kit. Test equipment to ensure masks and valves are working properly. Replace, refill, or service as needed.
8. Ensure that all electronics are in working order. Electronics include any compasses, GPS (Global Positioning System)/plotter, depth finder, or CB/VHF radio.
9. Check the expiration dates for the fire extinguisher and flares and compare with the schedule for the next field season. Make arrangements to service or replace them before they expire.
10. Note the expiration dates for the boat registration and ramp fees (if required). Arrange to have them updated as necessary before the next field season.
11. Carefully do a visual inspection of the inner and outer hull, anchor locker, console, canopy, or antenna mounts (if any) for cracks, stress, or other damage. Pay particular attention to stress areas including cleats, line or lifting eyes, rails, and transom near engine mounts. Thoroughly flush cable channel with freshwater or clean other under deck spaces as recommended by manufacturer. Clean out and air dry under deck spaces and console interior to prevent mold, mildew, or damage. Repair or replace any parts or areas as necessary. Cover the whole boat, including engine, and trailer chassis securely with a heavy duty, opaque, waterproof material secured by ropes or bungee cords. Then store the vessel as per park specific guidelines to protect the boat from the elements.

Boat Motor Maintenance

Step by Step Procedures:

1. Follow the manufacturer's guidelines for scheduled boat motor maintenance.
2. Inspect all boat motor equipment (Appendix SOP 1.a in SOP #1 Before the Field Season) to verify that it's in working order and will be ready for use during the next scheduled field season.

3. After identification of the equipment that may require servicing, or seasonal/long-term storage, prepare a maintenance schedule and coordinate the activities in preparation for the next field season.

Boat Trailer Maintenance

Step by Step Procedures:

1. Rinse in fresh water and allow it to dry. Inspect the boat trailer to verify that it's in working order and will be ready for use during the next scheduled field season.
2. Follow the manufacturer's guidelines for scheduled maintenance of the boat trailer's tires, axle bearings, frame, and lights.
3. Note the expiration dates for the trailer registration and safety check. Arrange to have these updated as necessary before the next field season.
4. After identification of the equipment that may require servicing, prepare a maintenance schedule and coordinate the activities in preparation for the next field season.