



GOAL
CLEAN
SEAS
FLORIDA KEYS

Goal: Clean Seas Florida Keys
*Protocols for Underwater Marine Debris Removals
within Florida Keys National Marine Sanctuary*



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INTRODUCTION

Before you proceed with a reef cleanup, please review the following guidelines and suggestions which are designed to help you conduct your cleanup with care and proper planning. Reefs with live corals and other invertebrates are delicate living structures and every effort should be made to minimize damage to living tissues or organisms.

PATIENCE is definitely a virtue when it comes to reef cleanups. This effort is labor intensive and requires a great deal of concentration. Be conscious of your body positioning as well as your gear – be sure to secure gauges and second stages so they do not get tangled or cause further damage to the habitat. Do not be tempted to rip or tear, especially with soft corals that often grow around monofilament line, wire leader, and even trap or anchor line. In addition, be aware that you might have an audience as these types of activities draw the attention of the unsuspecting tourist. Take extra care to minimize impacts.

PRE-CLEANUP PREPARATION

Volunteer Diver Selection

Be selective when soliciting volunteers for underwater cleanups. The more experienced the diver, the better. Less experienced divers, novice divers, or snorkelers need not be excluded. However, limit their responsibilities underwater to smaller tasks such as carrying the debris bag and packing it with materials removed by more experienced divers. Snorkelers can help by spotting debris, transporting debris bags to the boat, and assisting in lifting large items onto the boat.

Prerequisites for reef cleanup volunteers (those who are to clip monofilament line and remove other debris directly from the reef):

- must be an experienced and certified SCUBA diver
- divers should only participate within the boundaries of their dive training
- must have excellent buoyancy control
- advise guests that this is not an activity for novice divers
- all volunteers must attend a training prior to the cleanup
- use local divers who you can count on time and again to assist you in reef cleanups (i.e., charter boat captains and mates, instructors, dive masters, etc.)
- PATIENCE!

To begin preparing for a reef cleanup, you will need to do the following:

1. Purchase **EMT shears** or **Sea Snips**, **underwater mesh debris bags**, and **gloves**, or solicit donations for clipping monofilament line, wire leader, and polypropylene trap line.
2. Gather Dive Against Debris data card, sign-in sheets, and signed release forms found here: <https://www.projectaware.org/DiveAgainstDebrisToolkit>.
3. **Conduct a reconnaissance dive and/or trial run** (i.e., get out and see what's there, what areas to target, which techniques work best for you, and shoot photographs/slides).
4. Collect samples of the types of debris to use in your training program (can be gathered during a trial run of your reef cleanup):

- monofilament fishing line (clean and encrusted with algae)
 - wire leader, lures, hooks, and sinkers
 - lobster or crab trap line (polypropylene)
 - lobster or crab trap debris (slats, cement base)
 - plastic bags or sheathing (entangles soft corals)
 - beverage cans, bottles, and pop tops (glass, aluminium)
 - SCUBA diving equipment parts (dust caps, lead weights and pellets, knives, nets, tickle sticks, etc.)
 - cement blocks or cinder blocks
 - lost and abandoned modern anchors or anchor line
5. Acquire as many underwater photographs/slides of the above mentioned types of debris to use during your training program, especially monofilament line and wire leader that are difficult to see under a cover of algae or fire coral.
 6. Obtain high quality photographs or use guide books (e.g., “Reef Coral Identification,” Paul Humann) to teach volunteers how to recognize coral species common on the reef and encrusting debris (e.g., fire corals, starlet corals). Provide photos of juvenile, newly-settled corals (“recruits”) that demonstrate the unique corallite structure of stony corals so they can be left undisturbed. Provide comparative photos of reef organisms that can be confused for corals, such as encrusting hydroids and sponges. Familiarize yourself and volunteers with what artifacts might look like in the cleanup area.
 7. Prepare and distribute a press release about your cleanup effort, be sure to mention your sponsors if applicable.
 8. You may want to bring a lift bag to assist in the removal of large items such as cement blocks or broken lobster or crab traps. It is essential to make sure that divers are only using tools for which they have been trained. For example, only dive professionals should use lift bags only within the boundaries of their recreational dive training.

Volunteer Diver Preparation

All divers should receive training prior to participating in an underwater cleanup dive. Conduct a training and orientation program for volunteers, ideally scheduled the evening before the cleanup, so the information is fresh in their minds. Included in this packet is a slide program intended to provide you with a starting point for your presentation. You may customize this program or create one of your own to accommodate conditions and underwater features specific to your area. Please include:

- copies of the Reef Cleanup Tips (found at end of this document)
- Dive Against Debris data collection cards with instructions
- demonstration of wire-cutting tools
- samples of the types of debris divers can expect to encounter
- discussion of proper removal methods
- time for questions

It is important to use good judgment when deciding what to remove and what to leave. If any debris has become overgrown with marine life, it becomes part of the reef and should be left behind. Do not remove an object if it cannot be done without further damaging marine life or jeopardizing your safety. When in doubt, leave it behind. Stress the importance of leaving those

items heavily encrusted by fire coral or other types of corals. In some cases, you can direct them to remove portions that are "minimally" encrusted. This is a difficult guideline to establish. Accept a few mistakes during your first reef cleanup attempts and remember that experience is the best guideline here.

Finally, ask your divers to bring the following equipment:

- dive equipment
- gloves
- mesh catch bags or the like
- EMT shears or Sea Snips
- sunscreen
- lunch and plenty of beverages (unless these are donated)

NOTE: Discourage the use of dive knives as they can cause more harm than good in a coral reef habitat.

Artifact or Marine Debris?

Artifacts provide important clues about the past; disturbance robs current and future generations of their educational value. The removal of historical resources from the sanctuary is a prohibited activity that could result in prosecution. Artifacts may include ceramic, glass, metal, and organic items that may or may not have marine life encrustation. If the object is located near a shipwreck or other historic site (ex. lighthouse) and is anything other than plastic or derelict fishing gear, leave it alone. If you are unsure, do not remove the item! Take several photographs while leaving it undisturbed, and provide photos to Florida Keys National Marine Sanctuary staff for review.

ADDITIONAL SUGGESTIONS:

- Designate one or more experienced reef cleanup trainers to dive with your newly trained volunteers to oversee all activities (i.e., one trainer per 10 divers).
- Photo or video document as much of your cleanup as you can. Consider designating an underwater photographer. (Check with local media that are often interested in community volunteer projects.)
- Solicit local businesses for food and drink donations.
- Tally data collected and send the results to Project Aware, Florida Keys National Marine Sanctuary, and local media, including photos and mention of sponsors and permits.

**** IMPORTANT: It is essential that divers only participate in removals within the boundaries of their dive training.****

PERMITTING REQUIREMENTS

Permits may be required for certain activities within marine protected areas or activities that involve private property, such as traps. As the lead for an underwater cleanup, you are responsible for being aware of and in compliance with these rules and regulations. Below is a summary of activities that may require permits in the Florida Keys. This summary is intended as

a guideline, but does not replace the legal regulations. You are responsible for complying with these regulations.

Florida Keys National Marine Sanctuary Permit

Florida Keys National Marine Sanctuary (FKNMS) supports efforts to remove marine debris as it promotes improved ecology and aesthetics within the sanctuary. It is important to ensure that such debris removal is done in an environmentally-responsible manner and adheres to all applicable laws and rules, including [sanctuary-wide and zone-specific regulations](#).

Shoreline and coastal cleanups: Cleanups that target the shoreline and intertidal areas likely do not require any permits or permissions from FKNMS:

- Trash and debris removed from above the mean high water line is technically outside of the sanctuary boundary.
- Picking up trash at or below the waterline is not prohibited by FKNMS; it is only prohibited if the seafloor needs to be altered (by digging, excavating, or similar means) to remove the item, or if any other activity prohibited by FKNMS regulations is occurring.
- The majority of Keys' shoreline does not fall within FKNMS special management zones, so the removal of non-coral organisms or marine life attached to debris is not prohibited.
- Because of their habitat preferences, corals are not likely to be growing on debris or trash that is located in the intertidal or shallow subtidal zone. However, all debris (but notably concrete pieces or other hard materials, like glass) should be inspected for the possibility of attached stony corals. Debris with attached stony corals should not be removed.

Reef cleanups: Cleanups that remove debris from hard-bottom and reef areas may require a permit from FKNMS:

- Activities within any FKNMS zone very likely require a permit because debris that is removed will often have attached marine life (algae, hydroids, sponges, tunicates, etc.), and most zones have some type of prohibition on removing marine life or may have access restrictions. The removal of monofilament line or rope from coral colonies, either inside or outside of a Sanctuary Protected Area/Ecological Reserve, would trigger the need for a permit if the corals are being touched or disturbed in any way during the removal process.
- If debris has coral colonies encrusted on it, a permit would be required to remove it (though this is generally not allowed).
- If debris is embedded in the seafloor and removal involves digging or excavating (basically anything beyond just pulling out the debris), a permit would be required.

Caveats:

- The removal of traps or trap debris requires specific approval from Florida Fish and Wildlife Conservation Commission (FWC) in addition to any FKNMS required permit or permission.
- Debris removal activities that may disturb, damage, or remove historical resources, such as removing nets from a shipwreck, should not occur without specific guidance from FKNMS.

- Other local, state, or federal laws or regulations may apply to shoreline or reef cleanup activities. This is a summary of FKNMS rules only.

FKNMS permit application process: If a person believes that a prohibited activity(ies) may occur in the course of shoreline or reef cleanups, they are advised to apply for a NOAA FKNMS permit. The Office of National Marine Sanctuaries application form can be found electronically [here](#). Also, a hard copy is attached to these protocols.

- The form should be completed with details in the “Methods” section on where the cleanup(s) is proposed to take place, dates, duration, number of participants, fate of all collected debris, and other relevant information.
- If multiple or ongoing events are proposed, these details should include any training materials that are provided and standards that are applied to activities.
- Dive shop or organization owner or manager must be the permit applicant.
- Signed, completed applications should be submitted to Joanne Delaney, Florida Keys National Marine Sanctuary Permit Coordinator, by email (Joanne.Delaney@noaa.gov, preferred) or mail.
- There is no fee for a FKNMS general permit to support management activities within the sanctuary, such as debris removal.
- Permit processing time averages 60-90 days, but may be quicker for applications that are of high management value, which is typically the case for debris removal.

Florida Fish and Wildlife Conservation Commission Permit

Lost and abandoned spiny lobster, stone crab, and blue crab traps have been identified as a problem in Florida's marine environment by various stakeholder groups, including the commercial fishing industry. Once traps become lost or abandoned, they may spark user conflicts, "ghost fish" (continue to trap marine organisms until traps degrade enough to allow escape), visually pollute, cause damage to sensitive habitats, and also become hazards to navigation.

Volunteer groups may remove derelict traps and trap debris from state and federal waters when they organize a cleanup event and obtain authorization from the Florida Fish and Wildlife Conservation Commission (FWC). These volunteer cleanup events may take place during the open or closed fishing seasons, and must adhere to guidelines established in [Rule 68B-55, Florida Administrative Code](#) (F.A.C.).

Traps are private property and there are severe penalties for tampering with a trap, line, or buoy, or the contents of a trap that does not belong to you. Only people and organizations participating in an organized group event that has authorization from the FWC can remove derelict traps or trap debris from the water. Individuals are not eligible to receive authorization to remove derelict traps or trap debris. Tampering with a trap, trap contents, line, or buoy without written permission from the trap owner is a felony and may result in fines and the revocation of your fishing privileges. For more information, please see the FWC's [frequently asked questions](#) regarding derelict trap and trap debris cleanup events.

If you will be removing any kind of derelict traps or trap debris during your underwater cleanup, you should contact FWC and apply for a permit.

Steps to apply for an FWC derelict trap and trap debris removal event permit:

1. Read the rules and regulations before planning an event. This information can be found at <http://myfwc.com/fishing/saltwater/trap-debris/volunteer-program/>.
2. Identify a focal area where there is a large number of traps that appear to be derelict or abandoned.
3. Select a boat ramp or staging area near your focal area. Contact the property owner for permission to use this area and for permission to place a dumpster on the property.
4. Get input from your community to see if there will be any willing volunteers, including local fishing and boating clubs.
5. Select a date to hold your event and a backup date should you encounter inclement weather. These events can take some time to organize, receive approval, and implement. The best time to hold an event is when the season is closed for the trap fisheries in your area. The stone crab fishery is closed from May 16 to October 14 statewide, and the spiny lobster fishery is closed from April 1 to August 5 statewide. For blue crab seasonal closures, please refer to <http://myfwc.com/fishing/saltwater/trap-debris/volunteer-program/>.
6. Contact local waste management contractors or dumpster rental companies to make arrangements for disposal. Traps must be transported to a landfill or waste transfer station on the same day as the event, or may be stored in a secure area until they can be transported to a landfill. Some local agencies or businesses may be willing to donate a dumpster for this type of event.
7. Apply for authorization from the FWC to conduct your event by completing a Derelict Trap and Trap Debris Removal Event application form no later than 30 days prior to your event. This application form is available online [here](#) and upon request to: Cleanuptraps@MyFWC.com or call 850-487-0554. A hard copy of the application is attached to these protocols.
8. If you have questions about this process, please contact Pamela.Gruver@myfwc.com, (850) 617-9624.
9. The above requirements apply for derelict trap and trap debris removal in both state and federal waters. NOAA's National Marine Fisheries Service requires notification of projects occurring in federal waters. For projects occurring in federal waters of the Gulf of Mexico, please contact Susan.Gerhart@noaa.gov. For projects occurring in federal waters of the Atlantic Ocean, please contact Rick.DeVictor@noaa.gov.

NOTE: When removing derelict traps or trap debris under a FWC permit, it is important to understand the following definitions.

Derelict Trap: A trap is considered to be derelict if:

- a. It is in the water during the closed season for that fishery;
- b. It is a "fishable trap" in the water during the open season for that fishery that lacks more than two of the following:
 1. Buoy
 2. Line

3. Current Commission-issued trap tag or identification (for recreational traps)
4. Current license

Fishable Trap: A fishable trap has six intact sides, and at least two of the following:

- a. Buoy
- b. Line
- c. Current Commission-issued trap tag
- d. Identification (for recreational traps)

Trap Debris: any piece of a trap or any combination of trap pieces that do not make up a fishable trap.

Under permitted activities, data must be recorded from each derelict trap removed and reported to FWC after each removal conducted. This is separate from the reporting outlined below and will be provided when you receive your permit.

REPORTING

Community-Based Observations of Coastal Ecosystems and Assessment Network (C-OCEAN)

With support from and coordination with [Florida Keys National Marine Sanctuary \(FKNMS\)](#), the Community-Based Observations of Coastal Ecosystems and Assessment Network (C-OCEAN) (mote.org/cocean) is designed to provide early detection and assessment of biological events occurring in the Florida Keys and surrounding waters. The goal of the network is to help the scientific community better understand the nature and causes of marine events that adversely affect marine organisms, and assist ongoing research efforts to assess and monitor events as they develop. Understanding these events will help scientists and managers determine whether the events are natural or are linked to human activities.

People on the water are key to the early detection. Anyone who is on the water frequently and notices changes is encouraged to report observations as soon as possible. Hurricane Irma left an abundance of marine habitat damage, as well as debris. **In order to better focus on cleanup efforts of the marine debris, reports are needed about where the debris is located and when you observed it.** Please report any marine debris sightings, and/or debris that is too large or difficult to remove during a cleanup, to C-OCEAN: www.mote.org/ceocean. Click on “Report an Observation” or contact Cory Walter, Project Coordinator, at (305) 395-8730 (call or text), or cwalter@mote.org.

Project Aware Dive Against Debris

Document what is collected during your underwater cleanup. For this effort, all debris removed from **underwater** should be reported to **Project Aware Dive Against Debris Program**, <https://www.projectaware.org/diveagainstd debris>. Only submerged debris can be reported to this system. When reporting your information, please include “FKNMS” under “Organization/Dive Center.” For example, if your shop is called Scuba Fun, you would enter “Scuba Fun/FKNMS.”

This will allow tracking of debris removed from Florida Keys National Marine Sanctuary as a part of this effort.

Your Dive Against Debris data enters a global database to help support the development and implementation of policies to improve solid waste management, locally and globally. Download the free Dive Against Debris app from Google Play or iTunes, and turn your phone into a tool for conservation. Project Aware also has Dive Against Debris Data Card Slates that can be purchased on its website or printed on waterproof paper using this file: https://www.projectaware.org/sites/default/files/DAD_Data_Card_V2.0.pdf.

Permit Reporting

In addition, please note that permits may have their own additional reporting requirements. Please make sure you are familiar with these and are reporting accordingly.

DISPOSAL

Many public works departments are supportive of marine debris removal efforts. As you plan removal events, contact your local solid waste department to see if it will provide a dumpster. This may include a small fee. This fee can be built into funding requests.

Monroe County welcomes groups that want to do community cleanups of areas that big equipment could not reach following Hurricane Irma. Monroe County also supports marine debris cleanup efforts.

If you are planning a community cleanup in unincorporated Monroe County and need Monroe County Public Works' support for pickup of the collected debris or disposal at a county transfer station, please contact Monroe County Solid Waste at least one week in advance of the cleanup at (305) 292-4536 to schedule.

**** For any questions regarding information in this document please contact Marlies Tumolo at Florida Keys National Marine Sanctuary: marlies.tumolo@noaa.gov or (305) 434-9385.****

Many organizations and individuals participated in the Florida Keys National Marine Sanctuary Advisory Council working group to develop these protocols. Thanks to the Florida Keys National Marine Sanctuary Advisory Council marine debris working group members, NOAA Marine Debris Program, National Marine Sanctuary Foundation, Florida Department of Environmental Protection, Florida Fish and Wildlife Conservation Commission, Florida Keys Commercial Fishermen's Association, Florida Keys Dive Center, Florida Park Service, Florida Sea Grant, History of Diving Museum, MOTE Marine Lab, National Association of Underwater Instructors, Project Aware Foundation, Rainbow Reef Dive Center and REEF Environmental Education Foundation.

Goal Clean Seas Florida Keys—Graphic design by Christina Stefan

REEF CLEANUP TIPS FOR PARTICIPANTS

**We suggest that you provide these cleanup tips to volunteer divers and snorkelers prior to their participation in a reef cleanup and ask each participant to sign below. **

CORAL REEFS ARE ALIVE!

Please regard all coral as a colony of living animals and be cautious while you maneuver around these delicate structures. Coral colonies are comprised of hundreds of thousands of tiny animals called polyps. Polyps are made of delicate tissue, much like that of a sea anemone. Touching the coral can rob the coral polyps of a protective membrane layer causing them to be more susceptible to disease. Coral reefs are fragile and take hundreds, even thousands, of years to grow. It is essential that we are careful not to cause further damage to the reef during a cleanup. Listed below are a basic techniques that will make your reef cleanup a great success.

Please be aware that this type of activity should only be conducted by certified SCUBA divers. **DO NOT ATTEMPT A REEF CLEANUP WHILE SNORKELING.** Non-divers can participate in many other ways – locating debris, data collection, hauling debris, recording diving times, and on beach or shoreline cleanups, etc.

1. All divers should have an orientation and training session before their first cleanup to familiarize them with the types of debris they can expect to find and to learn correct reef cleanup procedures.
2. **PATIENCE** is the key to a reef-friendly cleanup. Plan your strategy and most of all do not rip, tear, or jerk at debris. Take your time and **GENTLY** remove items such as plastic bags, monofilament, and trap line.
3. Realize before you begin that you will not be able to cover a large area of the reef. This activity is labor intensive and time consuming. It is far more important that you work slowly and carefully to remove debris, than to rush and inadvertently damage living coral.
4. Avoid touching the coral. The mucous membranes of the polyps can be damaged by human touch, making them more susceptible to disease.
5. While cleaning the reef in a stationary location, maintain a body position such that your legs are higher than your head and hands. Your body should be oriented at a 45 degree angle to your work area. Make sure to secure your gauges and second stage, so they do not come in contact with the reef.
6. Avoid standing on the bottom, resting your knees on the bottom, or kicking up sediments with your flippers.
7. Maintain neutral or slightly positive buoyancy at all times.
8. **DO NOT STAND ON OR AROUND CORAL!** You may crush young coral recruits. If you must stand or kneel, find a clean, sandy area.
9. If you find debris that is partially covered by new coral recruits, do not attempt to remove this portion. Only clip away the portion that is free floating with a minimum of encrusting organisms.
10. Do not pull off monofilament line, anchor line, or nets. Cut into smaller pieces using the wire cutters/Sea Snips.

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11. Do not collect anything that is too large/heavy/deep or that will jeopardize your safety. Only use tools that are within your recreational dive training.
 12. Be careful with sharp objects (fishing hooks, broken glass). Cut off fish hooks from fishing line because it will rust/decompose in the water.
 13. Data collection is a crucial part of any reef or beach cleanup, enabling organizations to take action against polluters. Feel free to recruit non-divers who can remain on board or onshore to fill out data cards, documenting what is found.

I agree to follow the reef cleanup tips listed above to minimize negative impacts to the important ecosystems in Florida Keys National Marine Sanctuary.

Participant Signature: _____

Date: _____