



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE

Florida Keys National Marine Sanctuary

33 East Quay Road
Key West, Florida 33040

May 1, 2025

Dr. Philip Frank
Terramar Environmental Services, Inc.
1241 Crane Boulevard
Sugarloaf Key, FL 33042

Dear Dr. Frank:

The National Oceanic and Atmospheric Administration, Office of National Marine Sanctuaries (ONMS) has approved the issuance of permit number FKNMS-2025-182 to conduct activities within Florida Keys National Marine Sanctuary (sanctuary) for management purposes. Activities are to be conducted in accordance with the permit application and all supporting materials submitted to the sanctuary, and the terms and conditions of permit number FKNMS-2025-182 (enclosed).

This permit is not valid until signed and returned to the ONMS. Retain one signed copy and carry it with you while conducting the permitted activities. Additional copies must be signed and returned, by either mail or email, to the following individual within 30 days of issuance and before commencing any activity authorized by this permit:

Dr. Harrison Albert
Permit Coordinator
Florida Keys National Marine Sanctuary
33 East Quay Road
Key West, Florida 33040
Harrison.Albert@noaa.gov

Your permit contains specific terms, conditions and reporting requirements. Review them closely and fully comply with them while undertaking permitted activities.

If you have any questions, please contact Dr. Harrison Albert at Harrison.Albert@noaa.gov. Thank you for your continued cooperation with the ONMS.

Sincerely,

David Burke
Acting Superintendent

Enclosure





UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE

Florida Keys National Marine Sanctuary
33 East Quay Road
Key West, Florida 33040

FLORIDA KEYS NATIONAL MARINE SANCTUARY PERMIT TO ASSIST IN SANCTUARY MANAGEMENT

Permittee:

Dr. Philip Frank
Terramar Environmental Services, Inc.
1241 Crane Boulevard
Sugarloaf Key, FL 33042

Permit Number: FKNMS-2025-182

Effective Date: May 1, 2025

Expiration Date: December 31, 2025

Project Title: *Assist In Sanctuary Management Permit For The Mallory Square Pier Repair Project.*

This permit is issued for activities in accordance with the National Marine Sanctuaries Act (NMSA), 16 USC §§ 1431 *et seq.*, and regulations thereunder (15 CFR Part 922). All activities must be conducted in accordance with those regulations and law. No activity prohibited in 15 CFR Part 922 is allowed except as specified in the activity description below.

Subject to the terms and conditions of this permit, the National Oceanic and Atmospheric Administration (NOAA), Office of National Marine Sanctuaries (ONMS) hereby authorizes the permittee listed above and the individual(s) listed in Attachment 2 to conduct otherwise prohibited activities within Florida Keys National Marine Sanctuary (FKNMS or sanctuary). All activities are to be conducted in accordance with this permit, the permit application, and any responses to requests for additional information (RFAI) between ONMS and the permittee during the application review and evaluation process. The permit application and any RFAI responses are incorporated into this permit and made a part hereof; provided, however, that if there are any conflicts between the permit application or the RFAI responses and the terms and conditions of this permit, the terms and conditions of this permit shall be controlling.



Permitted Activity Description:

This permit authorizes the person(s) listed above, and staff and contractors under their supervision (hereafter referred to as Authorized Persons or Participants) to conduct the following activities that are otherwise prohibited by the following Florida Keys National Marine Sanctuary regulations for the purposes of conducting educational activities:

1. Moving, removing, taking, harvesting, damaging, disturbing, touching, breaking, cutting, or otherwise injuring, or possessing any living or dead coral, or coral formation, within non-zoned areas of the sanctuary (15 CFR § 922.163(a)(2)(i)) to support management activities (i.e., the Mallory Pier nearshore construction project in Key West).
2. Alteration of, or disturbance to, the seabed within non-zoned areas of the sanctuary (15 CFR § 922.163(a)(3)) to support management activities (i.e., the Mallory Pier nearshore construction project).
3. The temporary placement of objects, tools, materials, and/or other equipment on the seabed within non-zoned areas of the sanctuary (15 CFR § 922.163(a)(3)) to support management activities (i.e., Mallory Pier nearshore construction project).

No further activities prohibited by sanctuary regulations under 15 CFR §§ [922.163](#) and [922.164](#) may be conducted.

Permitted Activity Location:

The permitted activity is allowed only in the following locations:

RESCUE SITE:

1. Mallory Square Pier, Key West.

RELOCATION SITE:

1. Inshore side of the Hawk Channel in Key West.

Special Terms and Conditions:

GENERAL ACTIVITY SPECIAL TERMS AND CONDITIONS:

1. Advanced daily field notification shall be provided to ONMS for all permitted activities occurring outside of in situ nurseries by completing the FKNMS Field Notification Google Form listed below.
Field Notification Google Form: <https://forms.gle/akQVbLQZDfqE2bfMA>
2. The permittee is responsible for obtaining any additional permits, authorizations, or permissions that may be needed to conduct the activities, including those from other applicable federal, state, or local agencies. This permit also does not authorize activities in any state or national park, state aquatic preserve, national wildlife refuge, or other protected area that may overlap sanctuary waters and have additional jurisdictional authority. If applicable, the permittee is responsible for forwarding these documents to ONMS (fknmspermits@noaa.gov) once obtained.
3. The dive gear decontamination guidelines found at <https://floridakeys.noaa.gov/coral-disease/citizen-participation.html> and presented in Attachment 3 must be followed after all dives in the sanctuary to avoid inadvertently spreading pathogens associated with coral disease.
4. Any injury to seagrass, hardbottom, or other sanctuary resources during activities shall be reported to ONMS (fknmspermits@noaa.gov) immediately. Activities in the area of observed injury shall cease until further guidance is provided by ONMS. Should any sanctuary resources be injured, destroyed, or lost during activities, the permittee may be liable under Section(s) 307 and/or 312 of the National Marine Sanctuaries Act (16 U.S.C. § 1431 et seq.) for damages incurred.
5. Permittees, Authorized Personnel, and all other persons performing activities under this permit must carry one reliable signed copy of the permit with them (either in a digital or paper form) while conducting the permitted activities. See General Term and Condition #4 below and Attachment 2 for more information.
6. Prior to the deployment of all objects, tools, materials, and equipment, the permittee shall conduct a benthic survey with a 72.18 foot (or 22m) radius from the central point of the deployment location to ensure that no queen conch (*Aliger gigas*) are present. Should any live animals be found, the permittee shall notify ONMS by completing the Queen Conch Reporting Google Form listed below. To continue work, deployments must be at least 22m away from the animal's location at the time of the benthic survey.
Queen Conch Reporting Google Form: <https://forms.gle/cNYU7g8Ujy7jZUUq6>
7. Disturbance to historical resources and artifacts, including historical shipwrecks and indigenous archaeological sites, is not authorized. If historical resources and/or artifacts are discovered, only those activities that do not disturb the sediment within a one-hundred (100) meter radius of the discovery location may continue. Notification of such discovery shall be made to ONMS (fknmspermits@noaa.gov) within twenty-four (24) hours.

Activity at the location that disturbs sediment shall not resume without written authorization from ONMS. Notification shall include:

- the GPS coordinates (in decimal degree format),
- depth,
- a description,
- and photographs.

8. If human remains are discovered, all activities within a one-hundred (100) meter radius of the location shall cease immediately. Pursuant to Section 872.05 Florida Statutes, notification of the discovery shall be made within the same business day to the district medical examiner and ONMS (fknmspermits@noaa.gov). Activity at the location shall not resume without written authorization from ONMS. Notification shall include:
 - the GPS coordinates (in decimal degree format),
 - depth,
 - a description,
 - and photographs.
9. Temporary object, tool, material, and equipment deployments may not occur on stony or soft corals, sponges, and shall avoid other living sessile invertebrates or organisms with at least a three (3) foot (or 1m) radial distance.
10. All objects, tools, materials, and equipment deployed under this permit shall be immediately removed upon completion of each day's activities. All objects, tools, materials, and equipment are prohibited to be left overnight without explicit authorization from ONMS and a permit from the U.S. Army Corps of Engineers as applicable.
11. Biodegradable materials shall be used to the greatest extent possible. The use of new materials not described in the final permit application or in any of the requests for additional information must first be reviewed by ONMS. Contact Dr. Andy Bruckner (Andy.Bruckner@noaa.gov) and Dr. Harrison Albert (Harrison.Albert@noaa.gov) for assistance.
12. An interim report of work conducted annually under this permit shall be submitted to ONMS by January 31 of each year that this permit is active. The report shall consist of a summary of activities for the previous calendar year and follow the permit report guidelines in Attachment 1. The report shall be submitted to fknmspermits@noaa.gov.
13. A final report of activities conducted under this permit shall be submitted to ONMS no more than thirty (30) days after the permit expires. The report shall consist of a summary of activities and follow the permit report guidelines in Attachment 1. The report shall be submitted to fknmspermits@noaa.gov.
14. In addition to the required reports, the permittee shall provide raw data resulting from research activities conducted under this permit at the request of ONMS.

PROJECT SPECIFIC SPECIAL TERMS AND CONDITIONS:

15. Activities performed under this permit shall follow the plans and protocols outlined in the attachment named below:

Attachment Number	Document Name
Attachment 4	<i>Benthic Resource Assessment & Coral Relocation Plan Mallory Squire Pier Improvements April 21, 2025</i>

16. All coral fragments from the same colony that are not removed as entire colonies at the rescue site shall be placed either physically contacting one another or be no more than 1-2 centimeters apart at the identified relocation site.
17. Coral fragments from separate colonies or genotypes may not be placed or mixed together in single outplant clusters at the relocation site as noted in Special Term and Condition #16 above.
18. Corals with recent tissue loss (e.g., partial mortality that is characterized by white, recently denuded skeleton) should not be removed. However, if a coral exhibits partial "old" mortality and has no active tissue loss (e.g., all the skeletal material is colonized by algae and no bare white skeleton is observable), these colonies should still be rescued.
19. Corals identified as those with partial old mortality and those that do not have active tissue loss as defined in Special Term and Condition #18 above shall be temporarily placed in a quarantine area of the Key West Rescue nursery to verify that they are not suffering from a disease and that tissue loss does not progress. Contact Dr. Andy Bruckner (Andy.Bruckner@noaa.gov) and Dr. Harrison Albert (Harrison.Albert@noaa.gov) prior to the transport of these corals from the quarantine area to the relocation site.
20. The outplanting of the corals from the quarantine site to the relocation site shall follow all of the Special Terms and Conditions described in this permit. Additionally, these corals shall be reattached at the relocation site such that there is adequate space between the individual corals to promote minimal competition and support colony growth and tissue recolonization.
21. Corals that show recent tissue loss, disease, or mortality during the first monitoring event (e.g. 7 days) does not count against the 65% loss and that the Responsible Party will be required to pay mitigation fees for.
22. All coral colonies that are relocated from the project footprint (i.e., rescue site) shall be monitored according to the monitoring plan proposed in the above reference rescue and relocation plan (Attachment 4).

23. Adherence to all the FKNMS/FWC Coral Outplanting Protocols at all times, including but not limited to:
 - a. conducting a pre-outplant disease assessment at the proposed relocation site and verifying that the disease prevalence is 5% or less immediately prior to relocation activities.
 - b. conducting comprehensive seven (7) day monitoring to ensure that minimum data is collected to be in compliance with the FWC Protocols (i.e., recording the total number of corals outplanted by species and indicating if they are live, dead, and whether or not they exhibit recent tissue loss).
 - c. removing recently dead and diseased colonies if 10% or more of the relocated colonies show signs of disease or mortality.
24. Exact GPS coordinates (in decimal degree format) of the outplanting of the corals conducted at the relocation site shall be submitted to Dr. Andy Bruckner (Andy.Bruckner@noaa.gov) and Dr. Harrison Albert (Harrison.Albert@noaa.gov) within thirty (30) days of completing the relocation activities.
25. This permit only explicitly authorizes the rescue and relocation work at the Mallory Square project site. No other activities related to the project that would otherwise violate sanctuary regulations defined in No further activities prohibited by sanctuary regulations under 15 CFR §§ [922.163](#) and [922.164](#) may be conducted without further review and approval (i.e., the demolition and replacement of structures, piers, seawall, etc.).

General Terms and Conditions:

1. Within 30 (thirty) days of the date of issuance, the permittee must sign and date this permit for it to be considered valid. Once signed, the permittee must send copies, via mail or email, to the following individual:

Dr. Harrison Albert
Permit Coordinator
Florida Keys National Marine Sanctuary
33 East Quay Road
Key West, Florida 33040
Harrison.Albert@noaa.gov
2. It is a violation of this permit to conduct any activity authorized by this permit prior to the ONMS having received a copy signed by the permittee.
3. This permit may only be amended by the ONMS. The permittee may not change or amend any part of this permit at any time. The terms of the permit must be accepted in full, without revision; otherwise, the permittee must return the permit to the sanctuary office unsigned with a written explanation for its rejection. Amendments to this permit must be requested in the same manner the original request was made.
4. All persons participating in the permitted activity must be under the supervision of the permittee, and the permittee is responsible for any violation of this permit, the NMSA, and sanctuary regulations for activities conducted under, or in conjunction with, this permit. The permittee must assure that all persons performing activities under this permit are fully aware of the conditions herein.
5. This permit is non-transferable and must be carried by the permittee at all times while engaging in any activity authorized by this permit.
6. This permit may be suspended, revoked, or modified for violation of the terms and conditions of this permit, the regulations at 15 CFR Part 922, the NMSA, or for other good cause. Such action will be communicated in writing to the applicant or permittee, and will set forth the reason(s) for the action taken.
7. This permit may be suspended, revoked or modified if requirements from previous ONMS permits or authorizations issued to the permittee are not fulfilled by their due date.
8. Permit applications for any future activities in the sanctuary or any other sanctuary in the system by the permittee might not be considered until all requirements from this permit are fulfilled.
9. This permit does not authorize the conduct of any activity prohibited by 15 CFR Part 922, other than those specifically described in the "Permitted Activity Description" section of this permit. If the permittee or any person acting under the permittee's supervision

conducts, or causes to be conducted, any activity in the sanctuary not in accordance with the terms and conditions set forth in this permit, or who otherwise violates such terms and conditions, the permittee may be subject to civil penalties, forfeiture, costs, and all other remedies under the NMSA and its implementing regulations at 15 CFR Part 922.

10. Any publications and/or reports resulting from activities conducted under the authority of this permit must include the notation that the activity was conducted under National Marine Sanctuary Permit FKNMS-2025-182 and be sent to the ONMS official listed in general condition number 1.
11. This permit does not relieve the permittee of responsibility to comply with all other federal, state and local laws and regulations, and this permit is not valid until all other necessary permits, authorizations, and approvals are obtained. Particularly, this permit does not allow disturbance of marine mammals or seabirds protected under provisions of the Endangered Species Act, Marine Mammal Protection Act, or Migratory Bird Treaty Act. Authorization for incidental or direct harassment of species protected by these acts must be secured from the U.S. Fish and Wildlife Service and/or NOAA Fisheries, depending upon the species affected.
12. The permittee shall indemnify and hold harmless the Office of National Marine Sanctuaries, NOAA, the Department of Commerce and the United States for and against any claims arising from the conduct of any permitted activities.
13. Any question of interpretation of any term or condition of this permit will be resolved by NOAA.

Your signature below, as permittee, indicates that you accept and agree to comply with all terms and conditions of this permit. This permit becomes valid when you, the permittee, countersign and date below. Please note that the expiration date on this permit is already set and will not be extended by a delay in your signing.

May 15, 2025

Philip A. Frank

Dr. Philip Frank
Terramar Environmental Services, Inc.

Date



David Burke
Acting Superintendent
Florida Keys National Marine Sanctuary

5/1/25

Date



NOAA FLORIDA KEYS NATIONAL MARINE SANCTUARY



ATTACHMENT 1

PERMIT REPORT GUIDELINES

Permit reports are intended to be brief, but comprehensive, summaries of activities conducted under specific permits, typically in no more than two pages. Please submit the required information electronically to ONMS (fknmspermits@noaa.gov). When submitting narrative reports (i.e., interim and final report summaries should follow the information outlined in #1-9 below), please attach a separate Word or PDF document. When submitting data reports (on the next page), please attach a separate Excel file.

REQUIRED INFORMATION FOR INTERIM AND FINAL REPORTS

- 1) Date of report.
- 2) Permittee(s) name(s) and contact information (institutional affiliation, mailing and email addresses, phone number).
- 3) Permit number:
- 4) Type of report: Interim or Final
- 5) Permission: YES or NO – Please indicate if ONMS can share the information contained in your project summary with the public, with credit to you and/or your institutional affiliation. Credit will follow information supplied in #2, above, unless otherwise specified.
- 6) Was this permit conducted as a result of a student project (i.e., undergraduate, masters, doctoral, or post-doctoral research)? If so, please specify which kind. If not, please indicate “independent research investigation of PI”.
- 7) Project / permit title.
- 8) List of keywords.
- 9) Project Summary (as a narrative in paragraph form, no more than 2 pages maximum):
 - a. Goal(s) of project.
 - b. Significance of project.
 - c. Connection to Sanctuary Management or Research issues.
 - d. Research Questions and Hypotheses (if applicable).
 - e. Description of all permitted activities conducted, including field or laboratory methods.
 - f. Results/findings to date. If results are not available at the time of this report, indicate when they are expected and in what format/publication.
 - g. Table, graph, photos as appropriate.
 - h. List of / links to publications resulting from permitted activities.

Numbers 1-9 above will be required information to be submitted in all interim and final reports.

The information below will only be submitted, if applicable, to your specific project.

- 10) Collections: If your permitted activities included the collection of organisms, please provide the following as an Excel file appendix to your report (lists, tables or charts are acceptable):
- a. Dates of collections.
 - b. Locations of collections (GPS coordinates in decimal degree format with latitude and longitude in separate columns).
 - c. Species collected.
 - d. Quantity collected of each species:
 - (i) Coral and octocoral - if fragmenting, cutting, or otherwise sampling from a “parent” colony, provide the total number of individual samples per species collected, and how many samples were taken from each parent. A separate parent colony report may also be required.
 - (ii) Non-coral species - if collecting marine life flora (e.g., seagrass or algae) volumetric estimate is acceptable; provide exact numbers for fauna (e.g., fish, non-coral invertebrates).
 - e. Sizes of organisms and/or samples collected (binned by size class is acceptable).
 - f. Fate of all specimens collected.
 - g. Mitigation completed.
- 11) Equipment Deployment: If your permitted activities included temporarily deploying materials, tools, or equipment on the seabed, please provide an Excel file as an appendix to your report with the following information for each deployment:
- a. Dates of deployments.
 - b. Types of equipment deployed.
 - c. Locations of deployments (GPS coordinates in decimal degree format with latitude and longitude values in separate columns).
 - d. Method of deployment.



NOAA FLORIDA KEYS NATIONAL MARINE SANCTUARY



ATTACHMENT 2

PROJECT LEAD, PRIMARY CONTACT, AND AUTHORIZED USERS
FOR PERMIT # FKNMS-2025-182

The National Oceanic and Atmospheric Administration Office of National Marine Sanctuaries has decided to issue permit number FKNMS-2025-182 to Dr. Philip Frank for the project entitled: *Letter of Authorization For The Mallory Square Pier Coral Rescue & Relocation*.

This form will be updated, as necessary, with each annual report. The complete forms will be submitted to Dr. Harrison Albert at Harrison.Albert@noaa.gov within thirty (30) days of receiving the permit or when new authorized users are added. Please review this form when sending the annual report to confirm no changes are needed.

PROJECT LEAD & POINT OF CONTACT

The project lead and point of contact for FKNMS-2025-182 is Dr. Philip Frank of Terramar Environmental Services, Inc. and contact information: terramar.env@gmail.com.

AUTHORIZED USERS

All authorized users, and staff and contractors, working under permit FKNMS-2025-182 shall sign this signature form indicating.

I affirm that I have the necessary qualifications to conduct the activities under permit FKNMS-2025-182. I agree to abide by all permit terms and conditions and ensure that all persons under my supervision are aware of, and will abide by, the terms and conditions of the permit.

Mr. Erich Bartels

Date



NOAA FLORIDA KEYS NATIONAL MARINE SANCTUARY



ATTACHMENT 3

DIVE DECONTAMINATION PROTOCOLS, GUIDELINES, AND PROCEDURES

The permittee shall adhere to the detailed dive gear decontamination protocols, guidelines, and procedures found at the website below during all dives in the Sanctuary to avoid inadvertently spreading pathogens associated with coral disease. The dive gear decontamination protocols, guidelines, and procedures must be followed for all gear used after sampling, monitoring, or observing one or more diseased coral colonies from an infected reef, prior to accessing a new unaffected location.

Website: <https://floridakeys.noaa.gov/coral-disease/citizen-participation.html>

General Guidelines For Disinfection

General Guidelines for Disinfection



DO

- ✓ Inspect dive gear and equipment and remove debris
- ✓ Move from “cleanest” site first to “dirtiest” last
- ✓ Decontaminate dive gear at end of day
- ✓ Decontaminate dive gear between sites, countries, & sensitive areas
- ✓ Properly dispose of disinfectant & rinse waste into sink, tub, or shower

DON'T

- ✗ Don't leave debris on dive gear
- ✗ Don't move from a diseased to a healthy site
- ✗ Don't forget to disinfect gear between sites, countries, sensitive areas, & end of day
- ✗ Don't dispose of disinfectant & rinse waste into ocean or storm drain

Non-Sensitive Equipment and Tools Guidelines



Gear - Specific Guidelines for Disinfection



SOAK

10 min

1% Bleach

Soak non-sensitive gear for 10 min in a 1% bleach solution

USE IMMEDIATELY AFTER MIXING

1/2 cup of bleach

2 gallons of fresh water
(e.g., in a 5 gallon bucket)

RINSE

Water

Rinse non-sensitive gear in fresh water
(e.g., in a 5 gallon bucket)

Properly dispose of disinfectant solutions and rinse waste into sink, tub, or shower

AIR DRY

Allow gear to air dry thoroughly

Non-Sensitive Equipment & Tools

Sensitive Dive Gear Guidelines



Gear - Specific Guidelines for Disinfection

SOAK 10 min

Soak sensitive gear for 10 min in quaternary ammonium disinfectant

- 0.5% RelyOn (8 tablets 5g ea. / 2 gallons of water)
- 1% Virkon (1.3 oz / 2 gallons of water)
- 6.6% Lysol (64 oz / 2 gallons of water)

(e.g., in a 5 gallon bucket)

RINSE 10 min

Rinse sensitive dive gear in fresh water by soaking for 10 min

(e.g., in a 5 gallon bucket)

Properly dispose of disinfectant solutions and rinse waste into sink, tub, or shower

AIR DRY

Allow gear to air dry thoroughly

Sensitive Dive Gear

BC internal bladders: Pour ~ 1 quart of ammonium disinfectant solution into mouthpiece of BC's exhaust hose while depressing exhaust button, inflate BC, & gently rotate BCD in all directions (cover all internal parts). Soak for 10 min & then dump waste into a container for proper disposal. Pay attention to wetsuit crevices and folds.

Sensitive Equipment Guidelines



Gear - Specific Guidelines for Disinfection



Sensitive Equipment



SOAK

Soak sensitive equipment for 20 min in antibacterial dish soap

OdoBan (5 oz per gallon of warm water)
(e.g., in a 5 gallon bucket)

OR clean with an isopropyl alcohol wipe



RINSE

Rinse sensitive equipment in fresh water thoroughly
(e.g., in a 5 gallon bucket)

Properly dispose of disinfectant solutions and rinse waste into sink, tub, or shower



AIR DRY

Allow gear to air dry thoroughly



NOAA FLORIDA KEYS NATIONAL MARINE SANCTUARY

ATTACHMENT 4



SUPPLEMENTAL INFORMATION

*Benthic Resource Assessment & Coral Relocation Plan
Mallory Squire Pier Improvements
April 21, 2025*