Sea Turtle Stranding Response

Stranded sea turtles are defined by NOAA Fisheries as any ocean turtle found on land or in the water that is dead, injured, or exhibits, any indication of ill health or abnormal behavior (NOAA, 2017).

Maui Ocean Center Marine Institute (MOCMI) works in collaboration and partnership with NOAA Fisheries to respond to stranded sea turtles across the island of Maui. Given the diverse demands of sea turtle strandings, the necessary actions include a wide range of response activities. When a live stranded sea turtle is reported, MOCMI's team of staff, student assistants, interns, and community volunteers, respond as quickly as possible to assess the condition of the turtle. Stranding response often requires a team of trained responders who consider many factors, most importantly human and animal safety, to determine the appropriate course of action. The team may attempt to release the turtle immediately at the stranding site. Some turtles will need to be disentangled. In some cases, the animal will need to be transferred to MOCMI. In other instances, stranded sea turtles may be so sick or injured that they are transferred to NOAA Fisheries in Honolulu for treatment and rehabilitation.

Volunteers are invaluable to the success of MOCMI's stranding response program. This document provides an overview of response and communication protocols to guide volunteers while responding to reports of stranded sea turtles.

Volunteer Roles and Protocols

New Volunteers

To participate in sea turtle response activities, new volunteers need to complete the following:
1. Email turtleresponse@mocmarineinstitute.org to express their interest.
2. Complete the volunteer application found on MOCMI's website, at www.mocmarineinstitute.org.
3. Once their application is received, new volunteers are invited to attend an orientation at MOCMI.
4. All volunteers will receive the Volunteer Response Protocol [this] document, MOCMI's Volunteer Handbook, and MOCMI's Release and Indemnity Agreement. Prior to volunteering, all volunteers must read all three documents and sign signature pages.

Volunteers in Training

Once a new volunteer completes the steps outlined above, they are assigned to shadow an experienced volunteer. Volunteers in Training must shadow/observe at least ten responses before becoming a volunteer.

Once the Volunteer in Training has successfully observed ten responses, they are responsible for emailing turtleresponse@mocmarineinstitute.org and providing their list of ten response dates.

Volunteers

Volunteers have observed a minimum of ten responses and are approved to assist in future responses under the direction of Lead Field Responders.

Lead Field Responders

A designated Lead Field Responder must be present during all in-water sea turtle stranding response activities.

Qualifications:
- Advanced snorkeling experience and familiarity with Maui's ocean conditions
- Have actively participated in at least 25 sea turtle responses
- Comfortable leading other volunteers during sea turtle response activities
- Have the ability to download the mobile app., Slack, take and send photos, and text with their mobile phone

Designated Lead Field Responders (LFR) will receive an invitation to join MOCMI's workgroup on the free mobile app., Slack. Slack will be used for all stranding response communications, photo sharing, and report submissions.

MOCMI will provide each designated LFR with the below equipment:
- Soft measuring tape
- Storage clipboard
- Data sheets and pencils

Response Protocols

Responder (foremost) and animal safety are of the utmost importance to MOCMI's stranding response program. If a volunteer does not feel comfortable participating in a response, they should communicate their concerns to the Lead Field Responder. If they do not feel comfortable discussing their concerns with the Lead Field Responder, they should excuse themselves from the response and follow the chain of command up to and including MOCMI's Director.

Live Turtles

Response is Obvious

Obvious live sea turtle response includes:
1. Sea turtles that are coming to MOCMI no questions asked: boat strike, complicated gear entanglement (gear embedded or deeply hooked), FP turtle in very poor body condition (tumors covering eyes, mouth, lethargic), enforcement involved, shark attack or other obvious trauma, all hawksbills (or any other sea turtle species).

2. Lightly entangled sea turtles where trained volunteers or staff can easily remove gear. Proceed with the response, disentangle and release the animal on site, and submit the report and photos via Slack.

Response Protocol

1. Using Slack, send message including:
    a. Photo of turtle
    b. Description of issue
    c. Location of stranding
    d. Approximate size of turtle (1 or 2 people needed)
2. Send message on Slack when leaving the beach:
    a. [Name of Responder] leaving [X] Beach @ [time] en route to MOCMI, OR follow up message to close the loop, [Name of Responder] removed gear/released, or turtle swam away, or could not find the turtle, etc. All clear.
3. Submit stranding report via Slack.
4. Collect a sample of any fishing gear removed from a turtle and send it to NOAA (ensure that it is labeled correctly). Do not remove gear from dead turtles which will be sent to NOAA for necropsy (samples will be collected at the time of necropsy).

Marine (in-water) Activities

Any marine activities should always employ a team ("buddy system") technique. In-water **capture** of animals is not authorized. Injured animals can be encouraged to shore for assessment and must be on shore for stranding response activities to proceed (see above).

Marine (in-water) Protocol

Due to the inherent dangers of associated with in-water activities, MOCMI will shall use a risk management approach to all in-water response. Operational activities should be continually re-assessed throughout the response.

1. Using Slack, send message BEFORE any response activities.
2. MOCMI staff will contact Lead Field Responder to discuss the following:
    a. Ocean conditions and weather
    b. Location of turtle, including distance from shore
    c. Turtle's condition
    d. Extent of interaction/entanglement
    e. Number of staff and volunteers present
    f. Expertise of staff and volunteers present

In-water response will only be considered if it can be accomplished safely and effectively.

If the decision is made to respond
1. Only the minimum number of personnel needed to perform response tasks should be used, and response time in the water should be limited to 30 minutes or less.
2. The response team must consist of a minimum of three staff members or volunteers including:
    a. Lead Field Responder
        i. Ensure that all volunteers participating in the response are accounted for and the team has the appropriate safety gear (see below)
        ii. Develop a response plan and back-up plan
        iii. Ensure the plan and back-up plan, which include emergency procedures, are communicated to all staff and volunteers participating in the response
        iv. Monitor the response for the safety of all staff and volunteers participating
        v. Communication with MOCMI staff, data collection, and reporting
    a. Volunteer Support
        ▪ Assist Lead Field Responder with response activities
    b. Shoreline Support
        ▪ Remain onshore at all times with "eyes" on the response team
        ▪ Shoreline support must have a working cellphone, whistle, familiarity with the site and Maui's ocean conditions
        ▪ Consider the effects of inclement weather and water conditions
        ▪ Communicate effectively with lead field responder and emergency personnel if needed
        ▪ Record time entering and exiting the ocean
3. Required safety equipment for in-water response includes:
    a. A Coast Guard approved flotation device or rescue can
    b. All personnel in the water and shore support shall have a whistle with them
    c. Dive Flag
    d. All responders must wear personal protective gear including a wetsuit and gloves.
3. In-water response activities must always employ a team ("buddy system") technique
    a. Every staff member or volunteer assisting with in-water response must have an assigned "buddy."
    b. There must be at least one lead field responder for every three volunteers participating in the response.
    c. The lead field responder must have an assigned "buddy"
4. BEFORE entering the water:
    a. If there are lifeguards present, alert them of planned response activity
        a. Inform lifeguards that in-water have whistles and will blow 4+ times in the event of an emergency
    b. Message Slack App with time entering the ocean

If it is determined that it is not safe to respond
1. Staff/volunteers will not enter the water to perform response activities
2. Submit stranding report via Slack with as much information as possible

Marine (in-water) Response Communications

Whistles and hand signals will be used to communicate between shoreline support and the in-water response team using the following signals.

Whistle Blasts		Hand Signals	
1 blast	Attention (Look at me)	Hand to top of your head	I'm OK
2 Blasts	Come to shore	Raise hand	Turtle spotted
4 Blasts	Help!	Wave hand (s) overhead	Help!

Emergency Plan

In the event of an emergency (in-water team blows whistle 4+ times), notify the following:
- Blow whistle repeatedly to get lifeguards attention
- Call 911
- Keep eyes on the in-water team until help arrives
- Shoreline Support waits on the beach for help to arrive

Entangled turtles

For a turtle in the water with trailing line, the line can be cut close to the hook without handling the animal. The line is most detrimental. Leave the hook and report the response. There may be instances of an animal found (or reported) entangled in gear (e.g., net or line) which is affixed to the reef. Assistance may be provided if MOCMI and Lead Field Responders determine activities can occur safely (i.e., human safety and consistent with MOCMI safety plan).

In-Water Assessment

Prior to taking action, observe the turtle underwater to determine if response is needed. Observe the turtle's body condition, diving ability, buoyancy, flipper movements, swimming, and overall behavior.

Response Methods

If it is determined that the turtle must be brought to shore for further assessment:
1. Safely guide the injured turtle to the floating platform
2. Once on the platform, place a damp cloth over the turtle's head to help reduce stress
3. Swim the turtle to the beach for further assessment
   a. One volunteer remains on the back of the floating platform to swim the turtle to the beach, and two volunteers are assigned to either side of the platform to manage the turtle's flippers (three total volunteers)
4. Once on the beach, follow response protocols (see above)

Handling Methods

Juvenile turtles should be carried by the shell margins, allowing the flippers to hang freely. Larger sea turtles are carried with one hand on the cranial carapace (behind the head) and the other hand on the caudal carapace (behind the hind flippers). Additional staff and volunteers, slings, and animal crates may be used to transport injured animals. Sea turtles often slap their flippers with great force; handlers should use caution when assisting with transport (Tristan & Norton, 2017).

If an animal is in an unsafe location or responders are unable to access the animal (e.g., high surf, slippery rocks, at sea/off shore, etc.) it is okay to not attempt a response and inform the public that the situation is unsafe and therefore not possible. Take photos and submit a stranding report. Often a dead animal that cannot be recovered safely can be pushed back into the water so that it may strand in a more accessible location.

If animals are found entangled in monofilament gillnet DOCARE should be notified. It is unlawful to use lay nets within 3 miles of the shoreline around the entire island of Maui. Therefore such gear must be reported and officially documented. Do not remove a dead turtle out of the net prior to DOCARE's arrival (and a sample of the net should accompany the turtle which is sent to NOAA for necropsy). If the turtle is still alive, make every effort to photo document prior to release (save a sample of the net to accompany the stranding report).

Response is NOT obvious or need help:

1. Uncertain about FP turtle's body condition. FP turtle is active but unsure if it requires a response, or if the turtle is not located in a common basking area
2. Need guidance on gear disentanglement or removal
3. Injury looks unusual or odd
4. Unsure about something, turtle is in high profile location, or it has been basking for three days or more

Response Protocol

1. Using Slack, send message and request conversation (i.e., "call me"). If possible, please send photos before requesting a phone conversation.
2. If the decision is made to respond, the responding volunteer should send a message via Slack, when IN THE FIELD WITH TURTLE to discuss the appropriate actions.

Expired Turtles

Volunteer Response

Volunteers do not need prior communication; proceed with response. Send message via Slack when responding (so MOCMI staff know that a turtle will be coming in) and message when leaving the beach with ETA.
- Message when leaving the beach so MOCMI can make arrangements to receive turtle
  - Message Slack, 'Dead turtle en route to MOCMI, [Volunteer Name] leaving [X] beach @ [time].'
- "Tag, bag, and tag" turtle and bag before placing in freezer at MOCMI. The tag should have the following information: Date, Location, Species, CCL. There should be a labeled tag on the turtle and on the bag after the turtle is bagged.
- Submit stranding report via Slack.

Decomposed dead turtle without value for necropsy or science

- Communicate with MOCMI via Slack to agree on action. [Note: The concern is someone coming across it and keeping parts (shell/bone) which is illegal to possess.]
- The turtle may be left in place or buried only if in remote location or very difficult to access. Regardless there should be some discussion and agreement with MOCMI staff/NOAA that the turtle will be left in place. [MOCMI staff will communicate with NOAA to make this determination.]
- Submit stranding report via Slack.

Literature Cited

NOAA. (2017, June 25). Understanding Marine Wildlife Stranding and Response. Retrieved March 7, 2020, from https://www.fisheries.noaa.gov/insight/understanding-marine-wildlife-stranding-and-response#what-is-a-marine-wildlife-stranding?

Tristan, T. E., & Norton, T. M. (2017). Physical Examination. In *Sea Turtle Health and Rehabilitation* (pp. 99–102). Plantation, FL: J. Ross.

MARINE INSTITUTE
MAUI OCEAN CENTER

Maui Ocean Center Marine Institute
Volunteer Response Protocols Agreement Form

Welcome to Maui Ocean Center Marine Institute's sea turtle stranding response team. We look forward to working with you. Please read and initial each line below. If you have any questions about response protocols, please contact a MOCMI staff member.

_____ 1. I have received a copy of the Response Protocols and have read it in its entirety.

_____ 2. I agree to the terms and conditions set forth in the Volunteer Response Protocols.

_____ 3. I will abide by any policy changes brought to my attention by MOCMI staff.

_____ 4. I will bring a positive attitude along with me as I spread the mission of MOCMI.

_____
Volunteer Name

_____   _____
Volunteer Signature   Date