

Offshore Boating Protocol for Palmyra Atoll

In order to insure your safety and the safety of the environment we ask that you observe the following guidelines.

In addition The Nature Conservancy, U.S. Fish and Wildlife Service and PARC are all working together to protect this magical place. It is important to realize the fragile environment which we are all permitted to work in. Please educate yourself and others with USFWS Refuge guidelines to help maintain a healthy, safe environment. All of our boating activities occur within the Refuge.

The CMO is responsible for all Marine Operations and will be supervised directly by the Island Manager. Most importantly: he/she is responsible for the SAFETY of the vessel, crew and all passengers while on the water. He/she will have the final call on all conditions relating to boating operations.

Offshore Vessel

- The vessel we utilize for offshore work is a 25-foot Davis built Rock Harbor “Zenobia”. It is powered by a single diesel inboard with an outdrive.
- Zenobia does not leave the dock without the CMO at the helm and is available for offshore excursions 6 days per week leaving the 7th day for maintenance. Vessel should be back at the dock no later than 5:30.
- According to the manufacturer this vessel has a maximum carrying capacity of approximately 2000 pounds.
- We have established a maximum of 10 people on board, *including the CMO*, without gear for viewing excursions only.
- For SCUBA diving the following maximums have been established,
 - 8 divers with 1 tank each, gear and the boat captain.
 - 7 divers with 2 tanks each, gear and the boat captain.
 - 6 divers with 3 tanks each, gear and the boat captain.

This is based on standard amounts of gear. If excess gear is needed for any projects offshore then the above maximums will need to be adjusted accordingly. The CMO and the Island Manager will have final discretion.

Items to be kept on the offshore boat at all times

1. Base Radio and hand held backup
2. Flare kit to contain 3 hand held and three aerial
3. Sound signaling device
4. Anchor and spare anchor line
5. Pfd's for all passengers
6. Fire Extinguisher
7. First Aid Kit
8. Tool Kit
9. Oxygen Kit
10. Spare mask, snorkel and fins
11. Life Raft
12. EPIRB
13. Tag line for retrieving divers

Boat Operations

- *Offshore.* Offshore at Palmyra is identified as any point beyond the last channel marker out to sea. Note: Lagoon boats are allowed out to this point but not beyond a point from the outer channel markers to the long line wreck and due North to the reef crest and wave break. Many coral heads exist in this area. Careful conning is required, Zenobia is restricted from this area. (See Inner Lagoon Boating protocols for more information).
- *Safety Gear.* Each trip offshore begins with a Safety Briefing of the boat. CMO will inform passengers on where all the safety equipment is located on board including- Life Jackets, First Aid Kit, Flares, Fire extinguisher, signaling device, EPIRB, radio, charts, compass, tools and Oxygen kit for divers. This equipment is to be kept in the Dive boat at all times.

- *VHF Radio.* Radio communications are crucial during offshore excursions. VHF 16 must be monitored constantly. A radio check is required before departure and throughout the trip. (See Dive Protocols and Radio Protocols for Palmyra).
- *Tides.* Palmyra experiences a maximum tidal fluctuation of about 3'. In addition to the Equatorial currents that are present all year, full and new moon tides will cause strong currents offshore. Be knowledgeable of what the tide and current is doing. Tides will affect current, which in turn could effect divers. Tide information is a valuable tool and is available on the crew computer in the Lab.
- *Weather.* Local weather and marine conditions can change rapidly this includes fast moving squalls (generally moving East to West) with heavy rain that can reduce visibility to zero. We receive an average of 175" of rain annually. Prevailing winds are Northeast trade winds. Winds increase with squalls and can deteriorate sea conditions rapidly. The CMO will decide on the safety of offshore trips and may cancel any trip if he/she feels it is unsafe due to weather and sea conditions.
- *No Wake Zones.* Use caution when transiting the Lagoon and offshore. Observe the No Wake (4 knot) area in the Lagoon from the forward range mark (along the warehouse and camp area) to the steel pile dolphins at the West end of the runway. The main ship channel from the North end of Sand Island to the last or red channel marker is designated at 8 knots maximum speed. Manta Rays and Turtles frequent these and other parts of the Lagoon and offshore areas. Keep a careful watch for these and other sea inhabitants at all times.
- *Vessel balance.* Riding on the bow and riding on the pilothouse roof. Balance of the boat can be critical. The CMO makes the call for passenger positioning.
- *Night Operations.* Due to the lack of Navigational lights in the Main Ship Channel; Night operations are not permitted offshore.
- *Alcohol.* Alcohol is not allowed on the offshore boat at any time.

Diving with Zenobia

- *General Safety.* While diving offshore a Dive Master/Lead Diver and the CMO are required. The CMO must be on board the vessel at all times during dives. The CMO will decide on the safety of offshore trips and may cancel any trip he/she feels is unsafe for any reason including changing weather or sea conditions. The CMO works closely with the Dive Master/Lead Diver to determine location of dive site and all safety concerns related to the dive, such as currents, weather and Sea State. Prior to departure, the CMO will confirm with the Dive Master/Lead Diver that all dive equipment including spares have been, checked and loaded on board. If space is available it is recommended that a complete dive set-up be carried as a spare. The CMO is required to make regular radio calls to the Island Manager to notify, location of dive, how many divers, when the divers descend and when the divers are safely back on board.
- *Drop off.* In most areas divers are dropped into the water at the top of the reef crest. This area can have strong currents and in many cases is also close to the breaking waves. Diver pick up in these areas may require the offshore boat to tow divers to deeper water prior to boarding the vessel.
- *Surface Buoy.* A surface buoy is required on all dives. The CMO must keep the dive buoy in sight at all times and be ready to pick up divers at anytime. Prior to entering the water divers will be informed of their retrieval.
- *Pick up.* The Dive Master/Lead Diver will signal the CMO to move in for pick up. All divers must be visible on the surface before the CMO moves in for pick-up. Pick up is usually done with a safe and efficient upwind approach, then turns in a slow downwind arc bringing the tag line within arms reach of the divers. Once all divers are on the tag line the engine is shut off allowing the boat to drift down wind. This will provide the calmest ride while loading divers onboard. Many dive sites require drop off and pick up very close to the surf zone. Towing divers offshore before pick up may be necessary. Communication with the Dive Master is critical prior to entering water in these areas.
- *Assistance.* The CMO will assist divers with offloading gear and getting them onboard. Those divers first on the vessel should assist the CMO in storing tanks and dive gear coming on the boat from divers in the water.

- *Dive Location.* The South side generally provides the safest dive conditions. Winds or swell from the South can create inaccessible conditions including breaking water across the channel. The North side is assessable only in calm conditions or during periods of South wind/sea conditions. The Western terrace has some of the nicest dive sites, however strong currents, confused wave conditions and distance from shore can make this area very dangerous. The East end of the Atoll is relatively unexplored. Strong currents are common.

Fishing offshore.

- *Safety.* The CMO will decide on the safety of the offshore trips and may cancel any trip he/she feels is unsafe for any reason including changing weather or sea conditions. The CMO is required to do regular radio check-ins on VHF channel 16. These check-ins include a radio check in at departure, every hour for update, and when entering the lagoon.
- *Permits.* All fishing is done through a permit from U.S. Fish and Wildlife Service. We are permitted to keep fish for sustenance purposes only and are allowed to keep up to 150 pounds of fish per week. Barbless hooks on artificial lures are used to troll for Tuna, Wahoo and Mahi Mahi. No live bait is allowed. Any Billfish or trophy fish are to be set free at the earliest possible time.
- *Tagging.* We do participate in a Tuna tagging program. If small Tuna are caught they should be tagged prior to their release.(See Tagging instructions)
- *Sharks & Birds.* Every effort must be made to avoid shark take. Fishing in deeper water and staying away from the reef is a start. Once you are sharked you must pull gear and move to a new area. Every effort must be made to avoid diving Sea Birds. If bird activity is high and risk of snagging is evident, you must pull gear and move to a new area.
- *Coaching, Gear and Clean Up.* Some individuals lack experience in fishing so coaching on the part of the CMO will be necessary. The CMO is responsible for inspecting and rigging all fishing gear. Catch at the end of the day is cleaned and readied for the galley. The boat and gear is washed down and readied for the next trip.

End of Day

If it is at all possible Zenobia should be hauled out of the water. This should be done every opportunity to avoid deterioration of submerged equipment.

If the vessel is to remain in the water it should be secured bow out alongside the sea plane ramp. Caution must be used to have enough slack in the lines for a falling tide.

The boat should be fresh water rinsed, engine fresh water flushed, windows washed and decks cleaned. All equipment put away and the boat readied for the next days work.

Remember that we are operating in a Wildlife Refuge. Minimal impact to the coral, fish and wildlife should be maintained. Respect the environment that we are fortunate enough to be a part of.

Safe Boating is no accident.