

Chapter 5

Equipment

Sea Kayaks

Singles: ETC has a large fleet of singles that vary widely with regard to maneuverability and stability. ETC has both plastic and fiberglass singles, and maintains a varied fleet to accommodate differing body types and ability levels. It is strongly advised that Guides paddle a given single before using it on a trip to ensure they feel comfortable maneuvering the boat safely.

Double: ETC doubles are all Northwest Kayaks Seascape or Seacape2 with the exception of several boats. These boats are very wide and thus are reliably stable and highly adaptable. These boats also have a high volume and are thus desirable for packing for overnight expeditions.

- Utilized when participants are able to steer themselves.
- Double kayaks that have center hatches are great for storing community gear, such as food or Environmental Education items, on overnight trips to Angel Island and Tomales Bay.
 - In Sausalito these boats are located in the triples container.
 - At Tomales center hatch doubles are mixed in with the other doubles.
- Seascape 2's have deeper keels than regular Seascapes.
- Kayak AA (#21) is utilized when seat adaptations are needed.
 - AA does not have a seat in the bow cockpit and can accommodate a more supportive Adventure Maker Chair, sit-on-top seat, or Crazy Creek chair instead.
- The Pink Caddy, located in the 5th container in Sausalito, can be used for larger participants. This boat is very stable. The seat has been removed from the large center cockpit, creating an excellent place to store a folded wheelchair.

Triples: ETC triples are all Northwest Kayaks Seacape 3's.

- Utilized if the group number is large (e.g., more than 15 participants) to better manage boats safely on the water.
- Participants that may have difficulty paddling should sit in the middle cockpit. Two strong people should sit in the bow and stern cockpits.

Outfitting Kayaks

Single kayak

- Spray skirt
- Paddle float
- Towline
- Boat must be equipped with a bulkhead or float bag

Double or Triple Kayak

- One spray skirt for each cockpit
- One bilge pump

Boat Condition Checklist

This checklist should be completed for each boat before it is used on the water to ensure that it is in proper working order.

1. Rudder Components
 - a. Cable attachments to rudder and foot-pegs are not frayed
 - b. Foot-pegs and rudder move freely
 - c. Foot-pegs can be adjusted though will lock in place
2. Seat back is functional
3. All hatch covers seal
4. Hull is intact and free of significant scratches or cracks
5. Bow and stern bulkheads are present or inflatable float-bags are in place
6. Carrying grab loops are intact

Choosing the Right Paddle

- **Yellow paddles**, or paddles with yellow tape on the shaft, are unfeathered and are used by most participants.
 - Advantages of unfeathered paddles:
 - Less awkward for first time paddlers.
 - Doesn't require rotating wrists around the shaft.
 - Disadvantage of un-feathered paddles
 - Windy conditions create significant wind resistance against the blade, which requires considerably more energy and strength to paddle, increasing the likelihood of fatigue and/or muscle strain.
 - In heavy winds, the paddle could be blown out of the hands, with the possibility of injury to head and face.
- **Red paddles**, or paddles with red tape on the shaft, are feathered.
 - Advantages of feathered paddles:
 - The blades of the paddle, positioned at opposite angles to each other, helps to reduce wind resistance when kayaking, resulting in greater energy efficiency.
 - Disadvantage of feathered paddles:
 - Because the blades are at different angles, the need to rotate wrists may initially feel awkward and uncomfortable.
 - Takes practice to feel comfortable with a feathered paddle, therefore resulting in inefficiency when paddling.
 - Might be too difficult for those with wrist problems.

Personal Equipment

Spray Skirt

- **Neoprene:** The neoprene deck spray skirts are only to be used by Guides. Neoprene skirts fit more snugly (and are thus more effective at keeping out water), though can be difficult for some participants to remove. Cockpits range in size and there are variable sizes of neoprene deck spray skirts so it is important to check that a given skirt works with a given boat.
 - Medium tube: Yellow
 - Large tube: Red
- **Regular Vinyl (Blue):** Participants will mostly wear the blue vinyl spray skirts. Spray skirts can be worn over or under the PFD (under the PFD for people with taller torsos, over the PFD for people with shorter torsos). The shoulder straps should be adjusted to keep the spray skirt at waist level.
- **Large Vinyl (All Black or Blue with Red Grab Loop):** Larger participants will require one of these spray skirts because the tube of the skirt is wider. These participants will likely wear the spray skirt under the life jacket.

Personal Flotation Devices: PFDs must be worn by every person while on the water with ETC and must be equipped with a whistle (not attached to the main zipper). PFDs are available in different sizes and should be worn snugly so that if someone were to pull up on the shoulder straps of the life jacket while someone is wearing it, the shoulder straps should not come above the ears. Guides should check each participant's PFD before they are allowed to get into their boat. If a Guide is ever skeptical of the condition of a PFD it should not be used.

- Youth: glacier blue
- Small: yellow
- Medium: purple
- Large: orange
- Extra-Large: red
- Double Extra-Large: yellow

Spray Jacket: Spray jackets can be provided to participants to be worn if they are cold or conditions are windy. Typically, splash jackets are worn over or under the spray skirt, but never over the PFD. ETC has spray jackets available in small, medium, large, and extra large and sizes are on the back of the jacket below the neck.

Paddles: ETC has Werner Paddles. Paddles range in length from 220-230 centimeters and all paddles have an ETC sticker on the right blade.

- **Unfeathered:** Unfeathered paddles have each paddle blade on the same plane. This means that it is not necessary to rotate the paddle while paddling (often easier for participants), but the paddle blade that is out of the water will likely catch the wind more dramatically. Unfeathered paddles are marked with yellow tape on the shaft.
- **Feathered:** Feathered paddles have paddle blades that are slightly angled (typically 15-45 degrees). This allows the paddle blade that is out of the water to slice through the air better (less wind resistance) though the paddle has to rotate the paddle shaft with each stroke (which can be difficult for participants). Feathered paddles are marked with red tape on the shaft.

Safety Equipment

Paddle Float: Paddle floats are to be used in the event of a capsize when a self-rescue is necessary. Every single should carry a working paddle float.

Towropes: Towropes are to be used in the event that an underpowered or malfunctioning boat or sick paddler needs to be given assistance. All Guides in singles should carry a towrope and a minimum of 1 towrope for every 6 participants must be carried in a pod. (See page 120)

Breakdown Paddle: One breakdown spare paddle should be carried in each pod. The Guide in the Sweep Boat role should carry the breakdown paddle.

First Aid Kit: A First Aid Kit and Ouch Kit should be carried in each pod. Both must be inventoried and restocked before each trip. The First Aid Kit lives in a designated dry bag and must include the Health Forms of each participant and Guide while the trip is in progress. The First Aid Kit can be kept in the hatch. The Ouch Kit is in a smaller red dry bag and must be kept accessible while paddling, either in the cockpit or under a deck bungee. Items from either kit used during a trip must be refilled at the end of each trip. (See page 111 for kit inventory lists)

Repair Kit: The Guide in the Sweep Boat role should carry a Repair Kit on every trip. Repair Kit Contents:

- 1-Vice grips
- 1-Pliers with wire cutters
- 1-Screw driver
- 1-Multi-tool
- 2-Replacement rudder cable
- 4-Ferrules (2-1/16th inch, 2-1/8th inch)
- 1-Duct tape
- 1-Tube Aquaseal
- 4-Zip ties
- 1-Replacement hatch strapping
- 1-Replacement hatch closure clips
- 2-Replacement foot pegs (both types)
- Assorted nuts, bolts, and washers

Visual Distress Signaling (VDS) Kit: The Trip Leader must carry the VDS Kit accessible while paddling. VDS Kit Contents:

- 1-Flare gun
- 3-flares
- 1-Strobe light
- 1-White light
- 1-Signal mirror
- 1-Horn
- 1-Compass
- 1-Chart of the given paddling area

- 1-Tide chart

Warm Clothes: Warm clothes must be carried in a dry bag on each trip in the event of a capsized or if an individual is cold or becoming hypothermic

Communication Equipment:

VHF Radios: VHF Radios are important for communication between Guides on the water as well as with the US Coast Guard in the event of an emergency. 1 VHF radio must be carried in each pod for every 10 participants, though more are encouraged to assist with on-water communication. VHF radios must be kept accessible while on the water. (See page 122)

Cell Phone: Cell phones are important for communication with outside support agencies and the ETC office in the event of an emergency. One cell phone must be carried in each pod for every 10 participants. Each cell phone must be carried with an updated ETC Call Down List. ETC provides waterproof containers for cell phones and laminated ETC Call Down Lists.

Tomales Bay Trips: In addition to the above communication devices (VHF Radio and Cell Phone), one of the following must also be carried on every Tomales Bay trip:

- **HX870 VHF Radio Equipped with Digital Selective Calling (DSC) and GPS:** In the event of an incident requiring immediate outside agency support, this radio can be used to send a distress signal that will transmit our location and organizational information to other vessels and the US Coast Guard. The Trip Leader should carry this radio on Tomales trips.
 1. Turn the HX870 on by holding down the power button.
 2. The radio can be used as a normal VHF radio.
 3. To send an “in distress” signal, push the red “Distress” button on the right side of the radio.
 4. Follow the sending of a distress signal with a verbal call for help on Channel 16.
- **Satellite Phone:** In the event of an incident requiring immediate outside agency support and cell phone service does not allow for sufficient contact with outside agency, use the satellite phone. Steps for using the satellite phone:
 1. Turn on the phone using the power button in the lower right
 2. Fully rotate the antenna to extend
 3. Dial the number of the appropriate outside support agency using the updated ETC Call Down List.

Satellite phones can have unreliable connection due to the position of satellites overhead. If there you experience difficulty making a call, move locations and continue trying. When not in use the satellite phone must be kept in a watertight Pelican Case with an updated Call Down List.

**Environmental Traveling Companions
Sea Kayak Program First Aid Kit Inventory**

Item	Size or Amount	Quantity
Equipment/General Supplies		
Trauma Shears		1
Tweezers		1
Safety Pins		4
Lighter		1
Thermometer		1
Rescue Mask		1
Emergency Blanket	56 x 84	1
Gloves (Nitrile)		10 Total
Zip Lock Bags	Quart	3
Hand Sanitizer	2 ounces	1
Forms		
SOAP Note		2
Incident Report Form (Yellow Card)		2
Call Down List (Red Card)		1
Spiral Note Book	3 x 5	1
Pens		2
Sharpie		1
Wound Management		
Irrigation Syringe	10 cc	1
Povidone Iodine Solution: 10% (e.g. Betadine)	0.5 ounces	1
Alcohol Towelette		6
Wound Closure Strips	1/3 x 3	3 sheets
Tincture of Benzoin Swabs		2
Antibiotic Ointment Packets	0.5 grams	4
Fabric Bandages (e.g. Band Aids)	1 x 3	10
Fabric Bandages (e.g. Band Aids)	Knuckle	5
Sterile Gauze Pad	4 x 4	4
Sterile Gauze Pad	2 x 2	2
Roller Gauze	3 inch	2
Coban Wrap	3 inch x 5 yards	1
Transparent Film Dressing	4 X 4.75	2
Trauma Dressing	10 x 30	1
2nd Skin Dressing		2
Moleskin Dressing	4-5/8 x 3-3/8	1
Other Injury Management		
Cloth Tape	1 inch x 10 yards	1
SAM Splint		1
Triangular Bandage		2
Elastic Wrap: 3 inches x 5 yards (Ace Wrap)	3 inches x 5 feet	1

**Environmental Traveling Companions
Sea Kayak Program First Aid Kit Inventory**

Item	Size or Amount	Quantity
Cold Pack		1
Feminine Hygiene Pads		2
Medications		
Medication Information Card (Blue Card)		1
Acetaminophen (e.g. Tylenol)	325 milligrams, 2/pack	4
Aspirin (e.g. Bayer)	325 milligrams, 2/pack	4
Ibuprofen (e.g. Advil)	200 milligrams, 2/pack	4
Diphenhydramine Hydrochloride (e.g. Benadryl)	25 milligrams, 1/pack	4
Loratidine (e.g. Claritin)	10 milligrams, 1/pack	4
Hydrocortisone	1/32 grams	4
Calcium Carbonate (e.g. Tums)	750 milligrams, 2/pack	4
Meclizine (e.g. Bonine)	25 milligrams, 2/pack	4
Loperamine Hydrochloride (e.g. Imodium)	2 milligrams, 1/pack	4
Glucose Paste	15 grams	1
Sooth a Sting swabs		2
OUCH KIT CONTENTS		
Fabric Bandages (e.g. Band Aids)	1 x 3	10
Fabric Bandages (e.g. Band Aids)	Knuckle	5
Alcohol Towelette		6
Sterile Gauze Pad	4 x 4	4
Sterile Gauze Pad	2 x 2	2
Cloth Tape	1 inch x 10 yards	1
Antibiotic Ointment Packets	0.5 grams	4
Meclizine (e.g. Bonine)	50 milligrams, 12/pack	1
Ibuprofen (e.g. Advil)	200 milligrams, 2/pack	4
Glucose Paste	15 grams	1
Diphenhydramine Hydrochloride (e.g. Benadryl)	25 milligrams, 1/pack	4
Sooth a Sting swabs		2
Epinephrine Auto Injector	0.3 mg	2
<i>First Aid Kits and Ouch Kits must be inventoried before each trip and restocked after each trip!</i>		