# Chapter 6

# Sea Kayak Skills

# Sea Kayak Strokes

**Forward Stroke**

- **Torso Rotation/Paddlers Box:** Hold the paddle away from torso and keep arms extended during power phase of stroke
- **Catch:** The paddle should enter the water at the paddlers feet
- **Length of Stroke:** End the stroke when the working blade is in line with the hip
- **Hand Placement:** The trailing hand remains at eye level throughout power phase of the stroke

**Reverse Stroke**

- **Torso Rotation:** Turn to the working blade for set up and rotate back to centerline with each stroke
- **Catch:** Begin stroke behind the cockpit along side the boat
- **Flat Blade Entry:** Blade is entering the water flat at the beginning of the stroke
- **Paddle Close to Boat:** The blade remains close to boat for the entire stroke

**Sweeps**

- **Torso Rotation:** Rotate torso with entire stroke
- **Extension:** Sweep paddle in arc away from boat
- **Horizontal Shaft:** Keep trailing hand/blade low to aid with extension of the working blade
- **Catch/Full Stroke:** Catch near bow and close to the boat, and release near sterns and close to the boat
- **Boat Lean:** Tilt boat to the working blade (away from turn)

**Draw Stroke (Standard and Sculling)**

- **Torso Rotation:** Turn body to face the working blade
- **Vertical Shaft:** Paddle shaft remains vertical during stroke
- **Upper Hand Steady:** Upper hand functions as a pivot point and remains in same position during stroke
- ***J-Draw:*** Pull power face towards boat, then exit by slicing blade to stern of boat
- ***Feathered:***
    - Position paddle to pull power face toward boat, then rotate 90 degrees to slice back to position
    - Paddle does not get closer to boat than elbow length
- ***Sculling:*** Rotate torso with sculling motion and use hands to change blade angle slightly

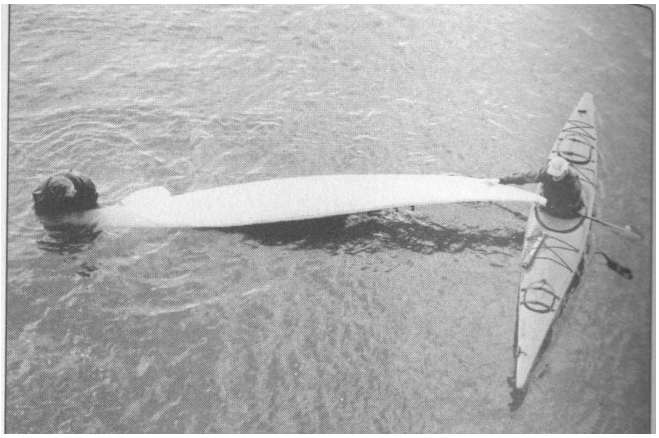
**Low Brace**

- **Elbows Up:** Elbows remain above the paddle shaft
- **Horizontal Shaft:** Paddle shaft remains horizontal
- **Slap:** Slap with the non-power face (backside) of the paddle flat on the water
- **Recovery:** Recover blade forward and straight up
- **Hip Snap:** Snap hips to right boat simultaneously with blade slap

**High Brace:**

- **Elbows Down/In:** Elbows remain below paddle shaft and tight against torso
- **Horizontal Shaft:** Paddle shaft remains horizontal and trailing blade remains low
- **Slap:** Slap with the power face (front) of the paddle flat on the water
- **Recovery:** Recover blade back and straight up
- **Hip Snap:** Snap hips to right boat simultaneously with blade slap

# T-Rescue



**Step 1:** Maneuver to the bow of the overturned kayak.

**Step 2:** Grab the bow of the overturned kayak and leverage your kayak into a right angle with the overturned kayak (making a T)

**Step 3:** Place the hand closest to the overturned kayak on the kayak for personal stability. Place the other hand under the bow of the over turned kayak to lift the kayak onto the deck of the boat*

**Step 4:** Slide the over turned boat across the deck until the cockpit is out of the water and water drains out.

*If the person in the water is calm and able, have them push down on the stern of the boat while lifting it onto the deck. If the swimmer is nervous or unable to help, have them move to the bow of the rescuer's boat.

**Step 5:** Roll the boat over

**Step 6:** Position boats parallel, bow to stern

**Step 7:** Have person move to behind the cockpit, never losing contact with the boat.

**Step 8:** Stabilize the kayak by leaning over it (armpit to cockpit) and holding onto the front of combing.

**Step 9:** Have person kick feet out behind them and grab onto combing and back deck of kayak.

**Step 10:** Have person kick feet and pull up on hands to get chest onto back deck of kayak.

**Step 11:** With the person's chest on the back deck, have them turn to maneuver their feet into cockpit.

**Step 12:** Have the person slide into cockpit until their hips are at the seat, keeping their check on the back deck.

**Step 13:** Have the participant rotate body toward the rescuers kayak so they end seated in the kayak.

**Step 14:** Pump any remaining water out of kayak, ensure foot pegs are working and the person's feet are on them, and help put on spray skirt.

*From Sea Kayak Rescue by Roger Shumann & Jan Shriner*

## Paddle Float Re-Entry

**Step 1:** Right the boat or, if in rough conditions, leave the boat upside down until after paddle float is inflated

**Step 2:** Hook leg inside cockpit

**Step 3:** Unclip paddle float from deck and place it onto paddle, clipping it around the shaft of the paddle

**Step 4:** Inflate the paddle float

**Step 5:** Place the shaft of the paddle behind the cockpit combing with the float end of the paddle extended in the water, and grip the shaft and combing securely with forward hand.

**Step 6:** Place aft hand on the back deck and kick your feet near to the surface while keeping your arms extended, and head low.

**Step 7:** Kick feet and pull on arms to launch body onto kayak and check onto back deck, keeping center of gravity low.

**Step 8:** Put ankles over the paddle shaft, one at a time

**Step 9:** Slide forward leg into kayak

**Step 10:** Move stern hand (that was on back deck) to paddle shaft

**Step 11:** Move second leg into kayak, keeping the weight onto the paddle float

**Step 11:** Move hand from combing to shaft of the paddle

**Step 12:** Rotate toward the paddle float and into the seat of the kayak

**Step 13:** Pass paddle overhead and into a bracing position

**Step 14:** Attach spray skirt, leaving small opening for pump

**Step 15:** Pump out remaining water from the cockpit and then fully attach spray skirt

**Step 16:** Deflate paddle float and stow

# Towing

Towing in sea kayaking is used in a variety of applications, including

- Paddlers lack strength to keep up with group
- Paddlers are not feeling well or there is a medical emergency
- A boat is experience a mechanical issue (typically a broken rudder)
- A boat is approaching a hazard and needs assistance to avoid it
- Maintain the position of a rescue

*Any time a rope is deployed it constitutes a hazard and thus it is critical that it be done correctly.*

**Waist tow belt:** ETC uses waist tow belts with a quick release system that contain 25 feet of line.

**Packing the towrope:**

- ETC stores tow ropes with the line coiled and out of the bag.
- When packing the towrope, flake the rope directly into the bag. Do not coil the rope and stuff it into the bag as this will cause it to tangle when deployed.
- Place the floater inside the bag, then cinch the bag closed so the clip is out of the bag.
- Clip with bag closed with the plastic carabineer inside the cover.

**Wearing the tow belt:**

- The tow belt should be worn around the torso below the PFD and should be the last piece of equipment put on before paddling.
- Put the strap through the quick release harness and pull through until the belt (the belt should be worn slightly loose so it can easily rotate around the body while seated).
- Flip the lever down to fasten the belt.
- Ensure that the belt can spin freely around you and that if you were to release the belt under tension that it would easily come off.

**Towing:**

- Approach the bow or stern of the boat and cradle boat with shoulder.
- Spin the towrope in front of you and open the pouch.
- Clip the carabiner either to the deck-line or D-Ring (depending on type of boat) with the gate of the carabineer facing up.
- Spin the bag to your side and paddle away slowly so that the rope will deploy but not become entangled in your rudder system.
- Once the rope is tight the bag should spin to your back.
- Paddle so there is tension in the line. If paddlers can paddle, encourage them to do so.
- Constantly look behind to check on the boat under tow.

**Taking a boat off tow:**

- Pull the tow rope in so the boat under tow comes alongside tower's boat.
- Once the boats are together, cradle the boat with shoulder and unhook the towline.
- Stuff the towline back into the tow bag. If this is not possible, stuff the entire ball of line into the top of the PFD, leaving no slack line out that could potentially get snagged.
- NEVER stuff a ball of uncoiled line into your cockpit. This could create a very dangerous situation.

# VHF Radio Communication

**Common VHF Radio Terminology:**

- **OVER:** I am done talking and I am waiting to hear your reply.
- **OUT:** I am done talking and I am not going to listen to your reply.
- **ROGER:** Yes
- **COPY:** I heard what you said
- **MAYDAY**: In imminent danger of loss of life or property. The Coast Guard will respond (if they successfully receive the message and are able).
- **PAN** (pronounced pon pon): Difficult situation with possible injury or loss of property but not immediate danger. This is a method for readying the Coast Guard.
- **SECURITE SECURITE:** dangerous situation, general navigation information between ships.

**Communication between VHF Radio Users:**

- Recreational watercraft users may use channels 68, 69, and 71
- Hold VHF Radio approximately 3 inches from mouth when speaking
- Push button to talk and release when done speaking
- Speak slowly and clearly
- Keep conversations brief and professional

**Hailing the US Coast Guard:**

The Coast Guard monitors **Channel 16** continuously. For outside assistance from the US Coast Guard, they should be hailed on channel 16.

1. Stay calm
2. Turn on the radio
3. Press red channel 16 button to tune to channel 16
4. Hold down the button on the left side (PTT button) and repeat "Mayday-Mayday-Mayday"
5. Say "We are a group of (#) sea kayakers requesting assistance
6. Release button and wait for response. If no response, repeat above, then release button and wait for response. If still no response, follow all the directions below, as sometimes you can transmit, but not receive
7. State your position (use landmarks). For example "Approximately 200 yards south of Point Stewart"
8. Provide a description of the group (Number of kayaks and color of boats
9. Describe the situation and the condition of anyone that is injured
10. The Coast Guard will tell you to switch to another channel to continue communication. Use the up or down buttons to switch to the given channel.

**If it appears Coast Guard assistance could become necessary but is not currently, replace "Mayday-Mayday-Mayday" in the above steps with "Pan Pan-Pan Pan-Pan Pan."

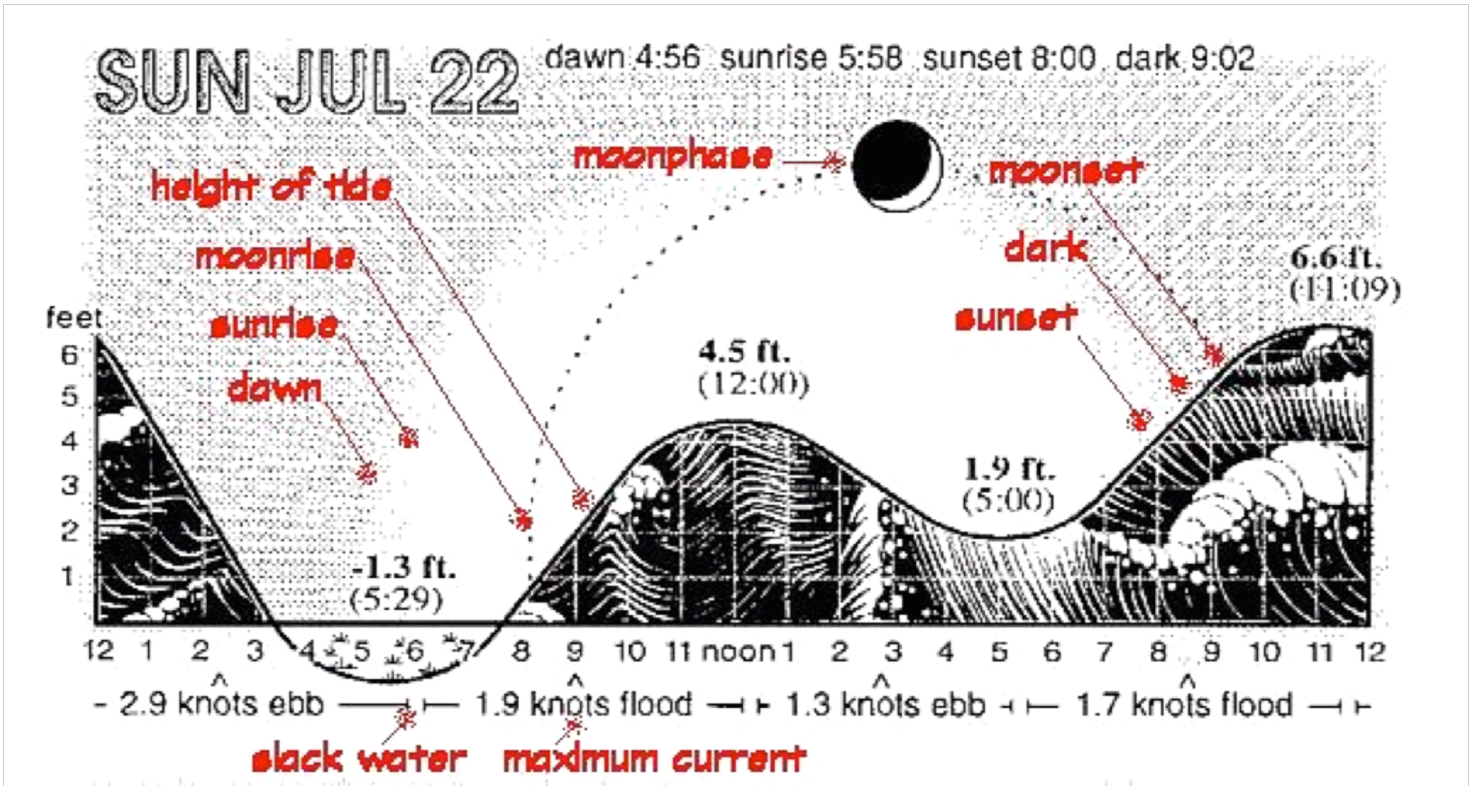
## Interpreting Tides and Currents

Tides and currents are caused by the gravitational forces of the moon and sun and their effect on the earth's oceans. Generally speaking, tidal cycles contain two high tides and two low tides each day. During the time between high and low tide there will be movement of water, which is called current. The time between high and low tides is a little over 6 hours, and the entire tidal cycle takes approximately 24 hours and 50 minutes. For this reason, the tidal cycle repeats itself approximately fifty minutes ***later*** each consecutive day.

**Important Definitions:**

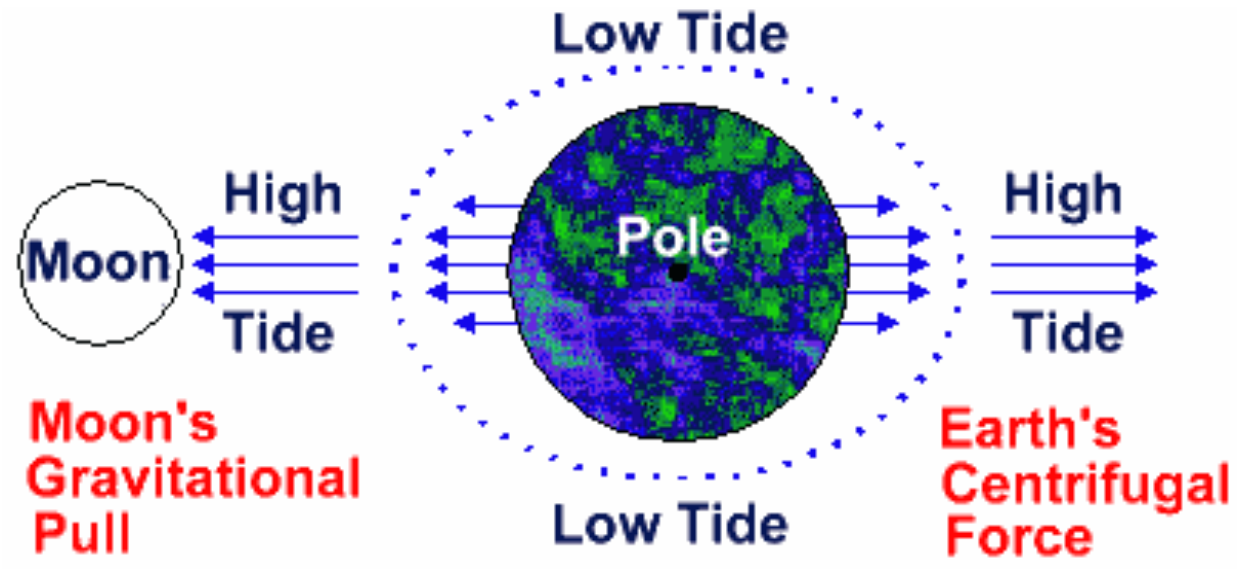
- **Tide:** the vertical movement of water, affecting water level.
- **Current:** the horizontal or sideways flow of water.
- **Flooding current** is experienced when the tide is rising.
- **Ebbing current** is experienced when the tide is falling.
- **Slack Water** is a brief period where there is no significant ebbing or flooding current

**Below is an example of a tide chart, visually graphing tide and indicating the associated current speed:**



## Explanation for Tides and Currents

The gravitational pull of the moon tugs on the surface of the ocean until its surface mounds up and outward in the direction of the moon. When the mound of water has reached its highest point it is called high tide. On the side of the earth opposite the moon, the centrifugal force caused by the earth's rotation produces another mound of water and high tide on the opposite side of the earth, which is another high tide. Somewhere between these two high tides are two flat areas on the surface of the ocean, which are low tides.




The moon appears to rotate around the earth each day, however it is the earth's rotation that gives this appearance. The moon actually orbits the earth in an elliptical pattern, taking 27.3 days to complete one orbit. The length of time that it takes for the earth to rotate around so that the moon is in the same position is 24 hours and 50 minutes or a tidal day. That is why the tidal cycle starts approximately 50 minutes later each day. As the earth rotates, the moon's gravitational force continually mounds the water and that fluid mound moves around the earth. The shape of the coastline and depth of the water influence the actual height of the tide.

## Crossing Currents and Ferry Angles

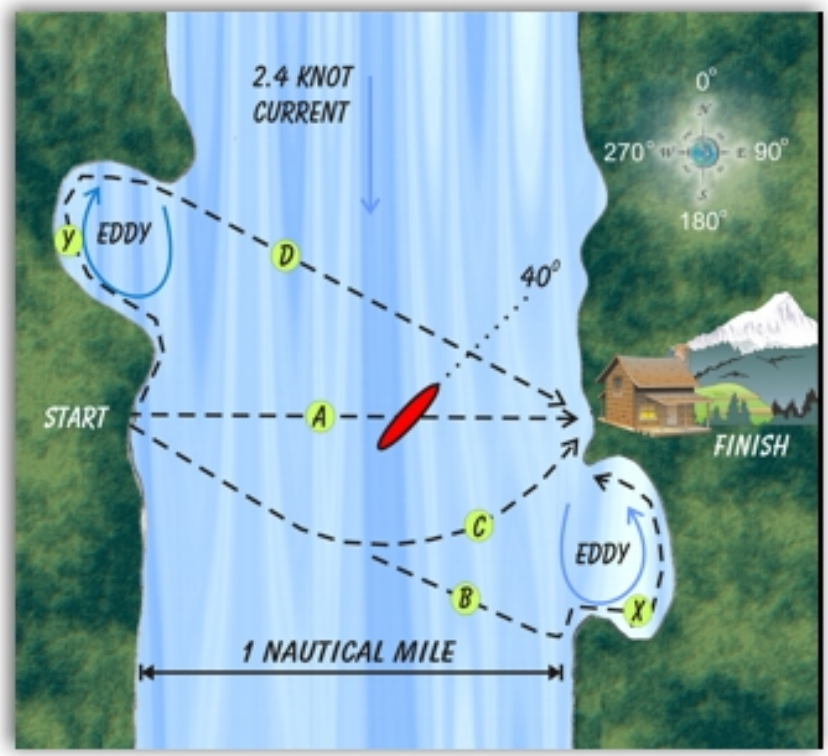
The currents in or out of a bay, estuary, or in a channel or strait have the potential to be strong, which can affect course plotting. For this reason, it is important to utilize ferry angles to cross these areas and reach the intended destination.

- Path **A** in the diagram is the direct line across the current from "start" to "finish." If the paddler chooses to point his kayak east and maintain a due East heading, without angling into the current, they will end up following path **B**, drifting down stream while crossing.

- If a paddler simply aims for a visual landmark at the "finish" he will follow path **C** drifting down stream while continually changing heading, always pointing his kayak to the goal. Naturally, at some point the paddler will be paddling directly against the current.

- Alternatively, the paddler may decide to paddle up current and then cross, with the intention that the current will take them to the finish point on path **D**.

- Lastly, the paddler may paddle across the current in path **A**, with an up current angle so as to maintain the same position throughout the crossing. This is a **ferry angle**.

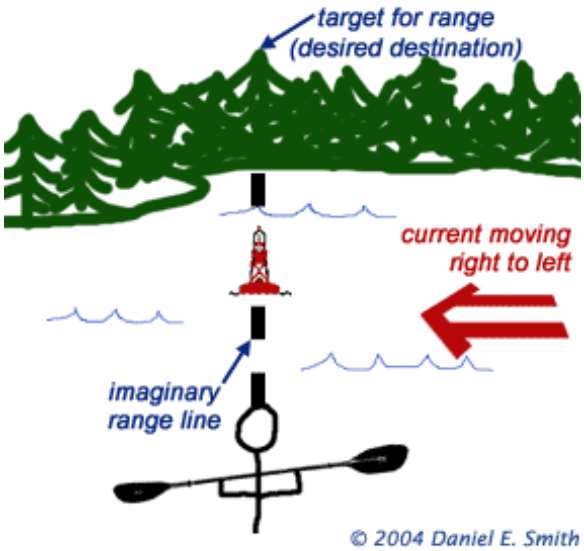



*From www.topkayaker.net by Tom Holtey*

## Utilizing a Range for a Crossing

**Use:** A range is used to track movement while on the water using stationary objects in view.

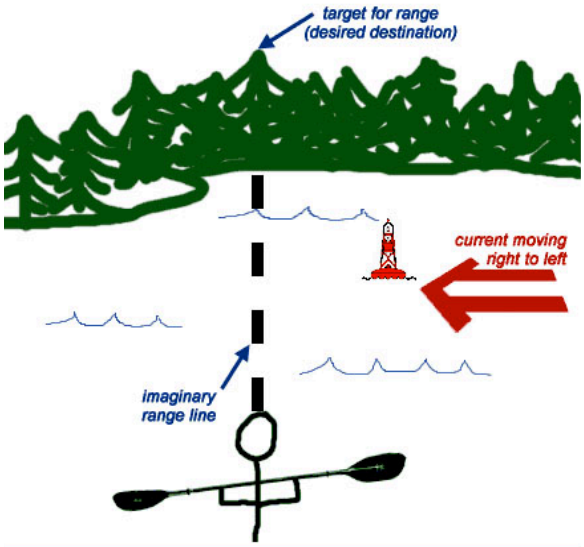
**Definition:** A range is an imaginary straight line drawn from your position through two fixed objects to see if you have moved side-to-side off of the range line.




**Goal:** The paddler's goal is to reach the tallest tree in the distance. To assess if the paddler is moving off course due to the current, the paddler will use a range line.

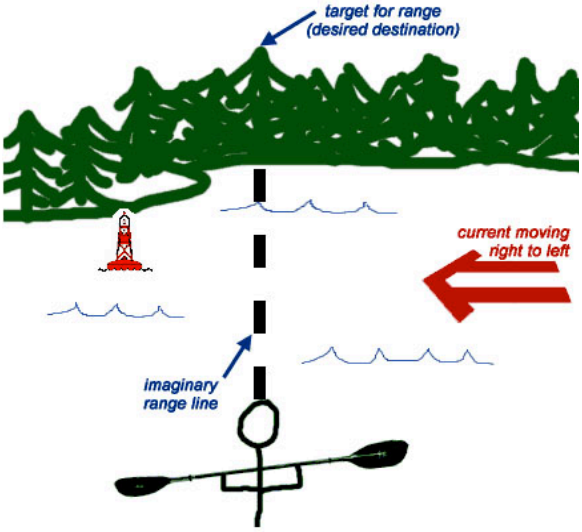
**Range Line:** Tallest tree (target) and a stationary buoy

With a ferry angle to account for the current so that the paddler moves directly across the channel, the range line will remain intact.




If the paddler does not use enough of a ferry angle, the current will push the paddler off course. Additionally, the same might happen if the current is stronger than expected. The paddler is no longer in line with the range (the tallest tree and stationary buoy.

Because the further away object has moved to the left, this indicates that the paddler has moved to the left.




If the paddler uses a ferry angle that is too strong or the current is weaker than expected, the paddler will go off course.

Because the further way object has moved to the right, this indicates that the paddler has moved to the right.

**Side Ranges:** A range using two objects to the side of the paddler can be used to track forward progress. When using a side range, changing range lines indicates forward or backward progress.

*From kayak.scenicnewengland.net/2005a/instruction.php by Daniel E. Smith*