



# Aquatic Consulting Services

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## Boating Tip #44: Boat Handling Tips

- Most sailboat engines have right handed propellers
- Angle (pitch) of the prop pushes water aft and moves the boat forward
- The angled blade pushes more water downward on the starboard side and less upward on the port side, which causes the stern of the boat to move to starboard in forward gear, and to port in reverse gear
- In forward gear, the prop spins clockwise
  - Low pressure is created on the forward side of the prop and water is drawn into the prop creating a suction current
  - High pressure is created on the back side of the prop and water is pushed away from the prop creating a discharge current (AKA prop wash)
- In reverse gear, the prop spins counter clockwise and the opposite occurs.
- On a sailboat, the rudder is usually installed aft of the prop so that it is in the discharge current from the spinning propeller. This increased water flow past the rudder increasing its effectiveness and makes the boat more responsive.
- When you are not making way and are sitting still in the water, no water is moving past the rudder, so the rudder has no effect.
- When in neutral, you can still steer using the rudder as long as you have headway.
- When moving from forward gear to neutral and into reverse, you will not be able to steer in reverse until you develop sternway.
- With wheel steering, turning the wheel to starboard in **forward gear** causes right rudder and the **bow** moves to starboard. Turning the wheel to port causes left rudder and the bow moves to port.
- With wheel steering, turning the wheel to starboard in **reverse gear** causes right rudder and the **stern** moves to starboard. Turning the wheel to port causes left rudder and the stern moves to port.
- Docking on the port side is preferred because reversing will cause the stern to walk to port and come up alongside the pier.
- Wind (above the waterline) and current (below the waterline) also affect boat movement. It is easiest to dock with little or no wind, or with the wind and current on the bow (more power needed to maintain way, but easiest to stop).