

STATE OF MARYLAND

State-Specific Boating Safety Requirements

SL 1. Law Enforcement Authority

The Maryland Natural Resources Police is the department charged with enforcing all natural resources laws of the State, including provisions of the Maryland State Boat Act on all Maryland waterways. The Natural Resources Police enforce all other laws of the State. Patrol vessels are identified by the blue emergency light, the "POLICE" identification on the side of the vessels, and the uniformed officers on board. Boaters are reminded that when a Maryland Natural Resources Police patrol vessel approaches using a flashing blue light, a vessel operator, unless otherwise directed by the officer, must yield the right-of-way and stop his or her vessel, staying in that position until the Natural Resources Police vessel has passed. Failure to stop and/or permit boarding or inspection may result in a penalty of up to \$500.00. All vessels, including documented boats, are subject to Maryland's rules and regulations. Vessels do not have to be underway to be boarded or inspected and may be boarded at dockside.

SL 2. Age Restrictions

A person must be 16 years of age or older to operate a PWC legally in Maryland waters. Vessel operators born on or after July 1, 1972 must have a certificate of boating safety education.

SL 3. Boater Safety Education Requirements

Maryland's Boating Safety Education Law is intended to give younger generations of boaters a fundamental knowledge of boating rules and safety; eventually, all boaters will be operating with a basic level of boating education. Persons convicted of certain boating violations must also successfully complete a boating safety education course, regardless of the age of the operator.

The law requires that all persons born on or after July 1, 1972, and while operating a numbered or documented vessel on Maryland waters, must have in their possession a certificate of boating safety education. The certificate can be obtained by successfully completing an approved boating safety education course or by passing an equivalency examination.

A certificate of boating safety education is not required for:

1. Commercial vessels.
2. Persons 16 years of age or older and a resident of another state who is visiting Maryland for 60 days or less in a vessel numbered in another state.
3. Persons visiting the State of Maryland for 90 days or less in a vessel from a foreign country.
4. Person operating a vessel on a water body on private property.

A boating safety education certificate issued by another state is valid in Maryland as long as it meets the criteria of the National Association of State Boating Law Administrators.

Once issued, the Certificate of Boating Safety Education is valid for a lifetime and may not be revoked. Internet courses and home study courses are not valid in Maryland.

SL 4. Vessel Registration

Commercial and recreational vessels must be registered in the State of Maryland if (1) equipped with any kind of propulsion machinery; (2) not currently a U.S. Coast Guard (USCG) documented vessel; and (3) operated primarily in Maryland. An owner of a federally

documented vessel, though exempt from state numbering requirements, is required to apply to the Maryland Department of Natural Resources for documented use decals and is subject to the state excise tax requirements.

All undocumented motorized vessels must be registered and numbered in the state in which they are principally used. Principal use is defined as "in use the greatest percentage of time in a given calendar year." A vessel is considered in use whenever it is moving, tied up to any manner of dock, pier or buoy, anchored, or being held in readiness for use on a trailer or in any structure.

SL 5. Maximum Loading and Horsepower

The USCG requires boat manufacturers to install a Capacity Plate in plain view of the helm on most vessels under 20 feet. The capacity plate provides important information on the maximum horsepower of the engine, maximum number of persons on board, and total weight the vessel can carry (including persons, equipment, fuel, engine, etc.). A vessel should not be overloaded.

SL 6. Equipment and Lighting Requirements

The USCG sets minimum safety standards for vessels and associated equipment. To meet these standards, some of the equipment must be USCG-approved. The label, "U.S. Coast Guard-approved Equipment," means that the equipment is in compliance with USCG specifications and regulations related to materials, construction and/or performance. Equipment includes, but is not limited to (depending on boat class), navigation lights, personal flotation devices, visual distress signals, sound producing devices, ventilation systems, fire extinguishers, backfire flame arrestors, and muffling devices.

Under Maryland law, an individual onboard a vessel may not display or operate a flashing, alternating red and yellow light or signal device.

Mandatory Life Jacket Requirements for Children

Effective June 1, 2001, all children under the age of 7 must wear a United States Coast Guard approved Personal Flotation Device (Life Jacket – Type I, II, III or V) while underway on a recreational vessel under 21 feet in length on Maryland waters. Recreational vessel includes motorboats, sailboats, canoes, kayaks, rowboats and any other device capable of being used for transportation on the water, when the vessel is being used for other than commercial purposes. The life jacket must be the proper size for the child and must be in good and serviceable condition. This requirement does not apply when a vessel is moored or anchored, or when a child is below deck or in an enclosed cabin.

Effective April 1, 2006 an addition to the above law has been made regarding personal flotation devices (PFDs) for children. Under the new law, if a child is less than 4 years of age or weighs under 50 pounds, the child must wear a PFD with specific additional safety features including: a strap that is secured between the child's legs to fasten together at the front and back of the PFD; an inflatable headrest or high collar to keep the child's head above the water; and a web handle to ensure the ready accessibility of the child from the water.

SL 7. Marine Sanitation Devices

It is unlawful to discharge raw sewage from a vessel anywhere in Maryland waters. If a vessel has an installed toilet, it must be fitted with an operable marine sanitation device (MSD). Vessels 65 feet or less must have either a Type I, II or III MSD onboard. Vessels greater than 65 feet in length must have a Type II or III MSD onboard. All Type I and II MSDs (those which treat and discharge sewage) must have a manufacturer's certification label affixed.

When operating in Maryland waters, a vessel equipped with a Type III MSD is permitted to have a "Y" valve if it is secured to prevent the discharge of raw sewage. Using a non-reusable wire tie or padlock or removing the valve handle are acceptable ways of securing the "Y" valve.

For any vessel offered as a non-captained charter, the leasing entity must ensure that the vessel complies with the above provision. The lease agreement, to be signed by the leasing party, must include a paragraph outlining the operator's responsibilities. Violators are subject to a fine not to exceed \$2,000. Although Type I and II MSDs do treat sewage, they do not reduce the amount of nutrients found in boat sewage. Reducing nutrient over-enrichment is critical to the health of Maryland waters; thus, it is highly recommended that vessels with installed toilets be equipped with a holding tank. Marine sewage pumpout facilities (designed to empty boat holding tanks and portable toilets) are inexpensive and conveniently located at many of Maryland's marinas.

SL 8. Muffling Devices

Effective June 1, 1996, vessels on Maryland waters must not emit noise in excess of 90dB(a). Vessels manufactured after Jan. 1, 1990 must have a muffler device installed to suppress engine noise. Exemptions include: (1) people who regularly catch or harvest seafood for sale (while engaged in their occupation), and (2) vessels involved in races, regattas, or exhibitions approved by the USCG or the Maryland Department of Natural Resources.

SL 9. Boating Accidents

The operator of any boat involved in an accident must stop, render that assistance which does not result in serious danger to his or her own vessel or persons onboard, and offer identification.

The operator must file with the Maryland Department of Natural Resources full details of the accident (including any information required by regulation), if an accident involves a vessel on Maryland waters and results in the death, disappearance, or injury of any person or in property damage of \$2,000 or more. A full accident report must also be filed if the vessel is a complete loss. If the operator is unable to file the report, the vessel owner must file it. The report must be made within 48 hours if the accident resulted in the death or disappearance of any person or if a person receives medical treatment beyond first aid. Any other accident resulting in personal injury or property damage must be reported within 10 days. Running aground or hitting a fixed or floating object is considered a boating accident. Boating accident report forms (DNR-149) are obtainable from the Natural Resources Police. Accident reports are required by federal law and furnish information for use in accident prevention. Information from individual reports will not be publicly disclosed nor may the information be used in court.

Rendering Assistance

Federal law requires vessel operators to provide assistance that can be safely rendered to any individual in danger on the water. Failure to comply with this provision may result in fines or imprisonment.

SL 10. Vessel Speed Restrictions

Speed limits of 6 knots have been imposed and skiing is not allowed in areas deemed too populated with boats and/or persons to allow unlimited speed. These areas are marked with white signs or buoys and the restrictions noted in an orange circle. These signs and buoys conform to the national system of state markers. Special time restrictions may apply, as posted.

One knot is 1.15 statute miles per hour. Therefore 6 knots equals 6.9 MPH.

There is a special limit of 6 knots on Seneca Creek in Montgomery County established by the Maryland State Boat Act. The penalty upon conviction is a fine of \$25.00 to \$200.00 or imprisonment for not more than 30 days, or both.

A special speed limit of 6 knots is also in effect on Broad Creek in Harford County. Several counties and towns in Maryland have established specific speed limits by special act of the Maryland General Assembly.

SL 11. Mooring to Markers or Buoys

It is unlawful to moor or attach a boat to a buoy, beacon, light, or any other navigational aid placed on public waters by proper authorities. It is also unlawful to move, displace, tamper with, damage, or destroy any navigational aid. Vessel operators are permitted to tie off their boats to designated mooring buoys.

SL 12. Reckless and Careless Operation

Negligence or gross negligence in operation of a vessel resulting in the endangerment of lives and/or property is prohibited. A civil penalty may be imposed by the USCG for this offense. Violators may be subject to a fine of up to \$5,000 and or imprisonment for up to one year, or both. In the State of Maryland, the penalty is a fine of up to \$500 for the first offense.

Examples of actions that may constitute negligent or grossly negligent operation include, but are not limited to:

1. Operating in an area designated for swimming only.
2. Operating under the influence of alcohol or drugs.
3. Operating the vessel at excessive speed near other boats or in dangerous waters.
4. Dangerous water skiing practices.
5. Bowriding or riding on seatbacks, the gunwale or transom.

Termination of Use

When a Natural Resources Police Officer observes a boat being operated in an unsafe condition and determines that an especially hazardous condition exists, he or she may direct the operator to take immediate steps to correct the condition, including returning to port.

Termination for unsafe use may be imposed for, but is not limited to:

- Insufficient number of USCG-approved Personal Flotation Devices (PFDs)
- Lack of adequate fire extinguishers
- Overloading beyond the manufacturer's recommended safe loading capacity
- Improper display of navigation lights
- Insufficient ventilation requirements for tank and engine spaces
- Leakage of fuel
- Fuel found in bilges
- Improper backfire flame control

SL 13. Interference with Navigation

It is unlawful to:

- Anchor a boat in the traveled portion of a river or channel in a way that will prevent or interfere with any other passing boat.
- Obstruct a boat ramp, pier, wharf, or access to any facility.

SL 14. Boating Under the Influence

It is unlawful to operate or attempt to operate a vessel while:

- Intoxicated,
- Under the influence of alcohol,
- Under the influence of any drug, combination of drugs, or combination of drugs and alcohol such that the person cannot safely operate a vessel, or
- Under the influence of any controlled dangerous substance.

In Maryland, a person is considered under the influence if he or she has a blood or breath alcohol concentration of 0.08% or greater.

SL 15. Mandatory Violator Education

Maryland Law mandates that persons convicted of certain boating violations must successfully complete a boating safety education course regardless of the age of the violator. Boaters convicted of any violation regarding negligent operation, reckless operation, or operating under the influence of drugs or alcohol are required to take and pass a boating safety education course. If a boater is convicted of 2 violations within a year with respect to vessel operation or required safety equipment, he or she must take and pass a boating safety education course.

SL 16. PWC Regulations

A person must be at least 16 years of age to operate a personal watercraft (PWC) and carry a certificate of boater safety education if born on or after July 1, 1972.

PWCs may not be operated between sunset and sunrise.

All persons aboard a PWC must wear a USCG-approved Type I, II or III PFD.

All PWCs must be equipped with a self-circling device or a lanyard cutoff switch. The cutoff switch lanyard must be attached to the operator or the operator's clothing or PFD. Self-circling devices and cut-off switches must function properly and may not be tampered with.

A PWC may not be used to tow a person on water skis, aquaplanes or other similar devices unless:

- The PWC has the capacity to carry 3 persons – the operator, a rear facing observer and the skier; and
- The PWC is specifically designed by the manufacturer for skiing.

On Maryland waters, a PWC may not be operated at a speed in excess of 6 knots within 100 feet of any bridge abutment, shore, wharf, pier, or persons in the water.

On Maryland waters along the Atlantic Ocean, a PWC may not be operated within 300 feet of surf fishermen or persons in the water.

A PWC may not be operated faster than 6 knots within 100 feet of another vessel. There is an exception for crossing or overtaking situations as described in the Federal Rules of the Road.

It is illegal to operate above idle speed in water less than 18 inches in depth.

All PWCs registered in Maryland must display a regulations sticker explaining the PWC regulations in clear view of the operator.

Negligent operation of a PWC is prohibited.

It is unlawful to operate a PWC in the following negligent or reckless ways:

- Jumping or attempting to jump the wake of another vessel within 100 feet of that vessel.
- Riding backwards and/or standing on the seat of the craft while riding.
- Weaving through and recklessly operating in areas of congestion.
- Speeding in restricted areas, including marinas, no-wake zones, and environmentally sensitive areas, or operating in a manner that endangers life, limb, or property of any

person, including the operator (i.e., splashing another PWC or swimmers, buzzing piers and other boaters, etc.).

- Disturbing waterfowl and wildlife.

Fines of up to \$500 may be imposed for violating these regulations.

SL 17. Water Ski Regulations

Water skiing is not allowed in Maryland between the hours of sunset and sunrise. Towing boats must have at least two persons aboard, an observer and an operator, both of whom must be at least 12 years of age. Water skiing is not allowed in certain marked areas. Towlines may not be greater than 75 feet long, except a towline 100 feet long may be used when barefoot skiing. Except when taking off from shore, the towing boat must stay at least 100 feet from the shore, piers, bridges, people in the water, and other passing boats.

Water skiers are considered on board the vessel and a PFD is mandatory for compliance with the PFD carriage requirements. It is recommended that a skier wear a PFD designed to withstand the impact of hitting the water at high speed. It should be noted that "Impact Class" marking on the label refers to PFD strength, not personal protection. See Upper Potomac River Regulations for special regulations on towing tubes and similar devices used on the Upper Potomac.

SL 18. Divers-down Flag

Federal Navigation Rules require vessels restricted in the ability to maneuver to display appropriate day shapes or lights. To meet this requirement, recreational vessels engaged in diving activities may exhibit a rigid replica of the international code flag "A" not less than one meter in height, or at night, display navigation lights 360 degrees red on top, white in middle and red on the bottom. Scuba divers, skin divers and snorkelers must mark their diving area by means of a diver's down flag. Vessel operators must keep a distance of at least 100 feet between the flag and their boats when on inland waters. If boating on bays or open waters, all vessels must stay at least 300 feet away from a displayed diver's down flag.

SL 19. Liveries (Rental Agencies)

"Livery vessel owner" is defined as a person who engages in whole or in part in the business of renting, leasing, or chartering a vessel for a period of less than 24 hours.

"Seaworthy condition" is defined as the ability to withstand the ordinary stresses of wind, waves, and other weather that a vessel might normally be expected to encounter.

Requirements for rentals - A livery vessel owner or an agent or employee of the livery vessel owner may not rent or offer for rent a vessel for operation on the waters of the State of Maryland unless:

- Each vessel is in seaworthy condition and equipped for the waters in which the vessel is intended to be used; and
- The livery vessel owner or agent or employee of the livery vessel owner has a boating safety certificate approved by the Maryland Natural Resources Police.

SL 20. Other State-Specific Regulations

Boating Activities

Sailing

Sailing is a popular water activity in Maryland waters. Unlike powerboats, sailboats use the natural force of the wind as a means of propulsion and are therefore considered to be manually propelled. Many, however, have auxiliary motors to assist in docking or navigating in tight areas. There are many different types of sailboats with a wide

variety of sizes, sail configurations and hull shapes. All sailboats, however, have the same basic parts that include the hull, rigging, keel or centerboard and rudder. As mentioned previously in this course, the hull of the boat is the shell of the boat that floats in the water. The rigging includes the sails and associated lines that control the speed and directionality of the boat. Two basic types of lines on a sailboat are the sheets and the halyards. The sheets control the angle of the sails and the halyards raise or lower the sails. Every sailboat has at least one sail and many have two, the mainsail and the jib or headsail. The keel or centerboard is attached to the bottom of the hull and controls the amount of leeway or sideways motion of the boat. Keels are traditionally much larger than centerboards and extend deeper into the water. Finally the rudder is what sailors use to steer the boat. On smaller boats, the rudder is attached to a tiller and to a wheel on larger boats.

Sailboats are also unique from powerboats in that there are different safety concerns associated with sailing. For example, the mast can be a conductor for lightning. Masts can also be a navigation concern for boaters when they are passing under power lines and bridges. When sailing under a structure be sure that there is sufficient clearance for all of your rigging. As a precaution, sailors should not operate their vessels during periods of high winds or during storms. Of course, sailors should also be aware of other safety issues that affect all boaters such as capsizing and falling overboard. Take the proper steps necessary to ensure the safety of yourself and your passengers while sailing.

Swimming

Drowning is one of the most common causes of death associated with boating. Even more surprising is that many drowning victims are able to swim. It is important that swimmers take the proper precautions to avoid a potential accident. When swimming in a water body, if possible, stay within designated swim areas. It can be difficult for boaters to see a swimmer in the water so be aware of boats near the area where you are swimming. If you are swimming off a boat in deep water, stay near the boat. Do not overestimate your swimming ability. Keep in mind that objects in the water as well as the shoreline can often appear closer than they really are. Be careful not to swim to the point of exhaustion so that you do not have the energy to return safely to shore. Only rely on approved flotation devices as swimming aids. Inflatable toys should not be used as flotation devices. If you are swimming or playing with an inflatable toy in an area with tidal current, stay alert so that you will not drift too far away from shore. If caught in a fast moving current that is taking you away from shore, do not try to swim against the current since you will only become exhausted. Instead, swim parallel to the shoreline until you are out of the current and then swim back to the shore.

Windsurfing

Windsurfing, also known as sailboarding, is a combination of surfing and sailing. Since getting started in this sport can be difficult, it is recommended that beginners take lessons to acquaint themselves with proper technique and safety measures. All windsurfers should wear a PFD as well as hypothermia protection such as a wet suit in cooler air and water temperatures. Like swimming, windsurfers should be careful not to overestimate their abilities and sail so far from shore that they become exhausted and are unable to get back. Windsurfers should also take the same precautions as boaters by paying attention to weather conditions and their surroundings, being careful to avoid other boaters or swimmers and not hindering navigation.

Local Restrictions

Deep Creek Lake

- Fishing is allowed according to state regulations and all persons 16 years of age or older must have a license.
- Vessels may not exceed 26 feet in length; however, pontoon boats may not exceed 30 feet.
- Houseboats are prohibited.
- Engines may not exceed the manufacturer's recommended capacity or total displacement of 550 cubic inches, whichever is less.
- Parasailing is prohibited on the lake.
- Vessels must be muffled and not exceed state noise level limits.
- No garbage, sewage, or other waste materials may be discharged into the lake.
- Aircraft are not permitted on either the lake or buffer strip.
- Personal watercraft and hovercraft are prohibited on the lake between 11:00 am and 4:00 pm on Saturdays, Sundays, and holidays from Memorial Day weekend to Labor Day. Personal Watercraft includes vessels such as jet skis, wave runners, wet bikes, etc.
- It is unlawful to operate a vessel faster than 3 knots within 100 feet of the shoreline anywhere on the lake, except to begin towing a skier from a shore or pier directly away from the restricted area.
- Water skiing is prohibited beyond the buoys in the upper end of North Glade Cove from 12:00 noon until sunset each Saturday, Sunday, and holiday.
- It is unlawful to operate a vessel at a speed greater than minimum wake within 100 feet of the shoreline anywhere on the lake. However, a vessel operator may begin towing a skier from a dock or shore and then exit the restricted area immediately. Minimum wake is defined as the minimum speed necessary to maintain vessel steerage.
- It is unlawful to operate a vessel greater than minimum wake between the hours of 11:00 am and 4:00 pm on Saturday, Sunday, and holidays from the Memorial Day weekend to Labor Day in the area between Beckman's Cove and North Glade Cove.
- It is unlawful to operate a vessel at a speed greater than minimum wake at any time in the following areas:
 - Meadow Mountain Run east of the Meadow Mountain Bridge
 - McHenry Cove north of the restriction buoys
 - Upper End of Red Run Cove southwest of the restriction buoys
 - Thayersville Cove southwest of a line of buoys extending from the eastern most point of the Arrowhead peninsula
 - Upper End of Hoop Pole Cove southwest of the restriction buoys and
 - Upper End of Pawn Run Cove northwest of the restriction buoys

For further information on Deep Creek Lake regulations, contact: Lake Manager, Deep Creek Lake Recreation Area, Route 2 Box 69 C, Swanton, MD 21561, or call (301) 387-4111.

Upper Potomac River

All persons aboard a vessel, raft, or tube must wear a USCG-approved Type I, II, III, or V PFD at all times when on the Upper Potomac River between November 15 and the following May 15. This regulation is in addition to class III, IV and V White Water Stream segment regulations, which state that PFDs must be worn at all times by persons underway.

A 6-knot speed limit is in force in the vicinity of boat ramps.

On the slack water areas above Dams 3, 4, and 5 on the Upper Potomac River, a motorboat is not allowed to tow more than two tubes or similar devices when the towline is attached directly to the device.

Severn, Magothy, Middle and South Rivers

Special regulations apply to the Severn, South, Middle, and Magothy Rivers and their tributaries. Various speed limits and time restrictions are in effect in these river systems, including maximum daylight speed limits of 35 knots, and 25 knots at night during the boating season (April 15 – October 15) on the entire river, unless otherwise regulated. The speed on the upper section of the Middle River is limited to 6 knots during Saturdays, Sundays, and holidays.

Part of the upper South River is designated as a controlled ski area (slalom course water ski). The following regulations apply to this area:

- When the slalom course is being used, all other vessels must operate at minimum wake speed.
- It is unlawful to place mooring buoys within 200 feet of the permitted slalom course.
- Posted speed-limit signs and signs delineating the minimum wake area must be observed.

Mooring buoys within the Rowing Area of the Severn River are not permitted; the maximum speed on the beach area is 6 knots. The ski course located at Maynadier Creek - Severn River is open Monday through Thursday, noon to sunset and closed March 15 through June 15. During the boating season (April 15 – October 15), the vessel speed limit is 26 knots (30 MPH) during daylight hours and 6 knots during nighttime hours in Browns Pond, Cool Spring Creek, and Lake Ogleton East Branch. The Minimum Wake speed restriction applies at all times in Brewer Pond, Chesapeake Harbor, College Creek, Martins Pond, Old Place Creek, Rays Pond, Severn Run, Shady Lake, Weems Creek (upper portion), and Winchester Pond.

Additional information is available from the Maryland Natural Resources Police, Safety Education Division at (410) 260-3280.

Upper Youghiogheny River

The Upper Yough can become a dangerous river and must be treated with respect at all times. The river consists of roughly 20 class IV and V rapids, which challenge the skills of even the most experienced boaters. Only those paddlers with the skills and capabilities needed to run the river are capable of attempting it.

Due to the difficult nature of the river, certain safety precautions should be followed to ensure a safe and enjoyable boating experience. Under Maryland regulations, anyone boating any whitewater segment of the Youghiogheny River must wear a PFD and helmet at all times. In addition, the following precautions are recommended:

- Avoid alcohol. It impairs judgment and increases the effect of cold weather.
- Know the river. Knowledge of the river and the rapids is essential. Scout out the rapids from shore before attempting to run them.
- Avoid boating alone. Two whitewater crafts at a minimum are recommended for safety reasons.
- Know how to swim. Sooner or later you may be in the water.
- Hypothermia is a danger. Wearing a wetsuit will help protect against cold water. Indicators include shivering, bluish lips, drunken behavior, and how to treat hypothermia.
- Bring proper gear. This includes warm clothing, protective footgear, a throw rope, knife, whistle, and repair equipment.
- File a trip plan. Provide information to someone about where you are going, when you expect to return, and what should be done if you are not on time.
- Be courteous. Extend courtesy to other boaters, fishermen, and other users of the river.
- Do not litter or trespass. Some land along the river is privately owned and should be treated respectfully. Boaters should bring along a trash bag; a good rule of thumb is to pack out more than you brought in.

Commercial Whitewater Outfitters: There are a number of commercial outfitters that provide all the equipment necessary to conduct a safe and enjoyable experience, especially for the inexperienced.

SL 21. Environmental Awareness

Brown Tides

Brown (and red) tides are due to increased concentrations (blooms) of algae in the water that cause it to become discolored. Water color will vary according to which is the more abundant species of algae present. While not all algal blooms are harmful to marine organisms, some algal species can harm certain marine life under different conditions. These events are called "harmful algal blooms." On the East Coast, the species of algae that causes brown tides is *Aureococcus anophagefferens*, first discovered in 1985.

What are the impacts of brown tides?

Brown tides do not cause any known human health effects or appear to harm fish (they simply swim away from bloom areas). Brown tides mainly impact marine species that are immobile (sessile) and unable to avoid blooms. Harmful brown tide blooms with densities greater than 500,000 cells per milliliter (ml) may have severe impacts on sessile species, such as eelgrass (*Zostera marina*), and bivalves, such as bay scallops (*Argopecten irradians*) and blue mussels (*Mytilus edulis*). Algal blooms negatively impact eelgrass because blooms prevent adequate light from reaching the eelgrass. Harmful algae blooms are damaging to bivalves because they prevent the mollusks from feeding on more nutritious forms of algae and because of the toxins that may be produced by the algae. While specific toxins have not been identified in *Aureococcus* to date, toxins in similar species have been documented. In mid-Atlantic estuaries, *Aureococcus* blooms coincide with the spawning season of several commercially important bivalves, thus threatening reproductive success and population growth. The short life span of bay scallops (most adults do not survive to a second annual reproductive season) makes this mollusk particularly vulnerable to harmful algal outbreaks.

Bay Grasses

Bay grasses (known as Submerged Aquatic Vegetation or SAV) are rooted plants resembling terrestrial plants. Unlike terrestrial plants, bay grasses live and grow completely underwater and extend from the sea floor to the water surface. Because bay grasses live in an environment surrounded and supported by water, they have a number of structures different or absent from those commonly found in terrestrial plants. For example, bay grasses lack tissues for structural support. Instead, their leaves and stems have specialized cells, which are thin-walled with large intercellular air spaces providing additional buoyancy and support to the plants. In addition, their leaves and stems lack a waxy covering present in most terrestrial plants. Since they lack this waxy covering, they will dry out quickly and die when bay removed from the water. Bay grasses have a complex vascular system and obtain nutrients from soil via the root system and from the water column.

Two species of bay grasses common to Maryland's Coastal Bays are eelgrass and widgeon grass. These are important species as they filter the water column and re-cycle nutrients, provide habitat for a number of marine organisms, and act as nurseries for juvenile fish species. When anchoring or boating in shallow water, please do not disturb bay grass communities. Appropriate precautions to help protect these marine environments help preserve the entire marine ecosystem.

Additional Information

For more information on Maryland boating law refer to the Maryland Department of Natural Resources: <http://www.dnr.state.md.us/boating/regulations>; and the Maryland Natural Resources Police at <http://www.dnr.state.md.us/nrp>.