

## Red Tide Quick Facts

- ✓ Red tide shellfish closures and openings are the responsibility of the Division of Marine Fisheries (*MarineFisheries*)
- ✓ Red tide blooms are natural phenomena that occur in marine waters along the Massachusetts coastline. Blooms over a large geographical area are unusual.
- ✓ Because of the extensive monitoring system during a bloom episode, it is safe to eat any shellfish and all other seafood that is served at local restaurants and sold at markets
- ✓ Cooking **will not** rid the shellfish of the red tide toxin!
- ✓ Beach activities, including swimming, are perfectly safe during a red tide bloom.

**Remember: Under no circumstances should any individual harvest shellfish from any area closed to shellfishing!**

### What is Red Tide?

Red tide is the name loosely used to describe a bloom in marine waters of single cell microscopic algae which contain both red pigments and harmful neurotoxins. Very dense blooms can discolor the water with a reddish tint. Scientists prefer the term harmful algal bloom (HAB). These “blooms” occur during favorable environmental conditions. The organism that causes a red tide bloom here in the Northeast is known as *Alexandrium fundyense*. Usually blooms are confined to the more northern Gulf of Maine, however a hurricane in Sept. of 1972 and two nor’easters in May of 2005 brought the red tide into warmer Massachusetts waters, where the blooms intensified.

### Why are shellfish areas closed when there is a red tide?

Certain species of marine organisms, such as shellfish, feed on a variety of microscopic algae they collect by filtering large quantities of sea water. During harmful algal blooms the shellfish consume the red tide algae containing neurotoxins. These neurotoxins are stored in the digestive tract and viscera of the shellfish, and can accumulate to

dangerous, even lethal, levels if they are eaten. In Massachusetts, the concern is that the neurotoxins can cause **Paralytic Shellfish Poisoning (PSP)**. However, the toxin does not affect the shellfish themselves, and when the bloom diminishes, they will eventually rid themselves of the toxin and will once again be safe to eat.

### How is red tide detected?

All shellfish-producing states have monitoring programs that test the water for cells and shellfish for toxin. *MarineFisheries* has an extensive **PSP monitoring program**, which remains vigilant and expands its testing in spring, summer and fall when these “blooms” may occur.

For more information visit the Shellfish Sanitation and Management Program at:

**[www.mass.gov/marinefisheries](http://www.mass.gov/marinefisheries)**

### Does red tide affect all seafood?

NO. Due to differences among species and their role in the food web, many species of seafood are perfectly safe to eat during a HAB. Typically, in Massachusetts only the harvest of shellfish and carnivorous snails is prohibited. Unless specified in a public notice, all other species of seafood (e.g. lobster, fish) remain safe to eat.

### Is the seafood I’m buying in the store or restaurant safe to eat?

YES. Seafood dealers and restaurants are well aware of closures and may either change their menus or purchase shellfish from open areas. HABs are closely monitored, with closures enacted well before toxin levels reach dangerous levels. *MarineFisheries* provides MA Dept. Public Health with environmental PSP monitoring data to assist the Food Protection Program with ensuring food in the marketplace is safe.

### Can I cook toxic shellfish and make them safe to eat?

NO. Cooking will not make the shellfish safe to eat. The toxin will remain in the tissue and will remain toxic.

## How do I know the shellfish are safe to harvest and eat once the closure is lifted?

Only safe shellfish are allowed to go to market. Any closure is lifted only after testing indicates shellfish are safe to eat.

### How do I find out if a shellfish area is open or closed?

To be certain always check with the local shellfish constable, local shellfish department or visit the **PSP monitoring program** of the *MarineFisheries* Shellfish Sanitation and Management Program at:

**[www.mass.gov/marinefisheries](http://www.mass.gov/marinefisheries)**  
or call the **Red Tide Hot Line at (978) 282-0308, option 6.**

### What are the symptoms of Paralytic Shellfish Poisoning (PSP)?

Symptoms include tingling and numbness of the lips, tongue, and extremities, drowsiness, giddiness, and/or unsteadiness, vomiting and diarrhea. In extreme cases, respiratory arrest and death can result.

If symptoms are observed call 911. The victim may need artificial respiration and CPR. In most cases after receiving treatment, patients fully recover. Note: Suspected cases of PSP should be reported to MA Dept. Public Health, Bureau of Environmental Health, Food Protection Program at: (617) 983-6712.

### Can I still go to the beach? Can I swim? What if I swallow water?

Yes you can still go to the beach and swim. PSP does not affect swimmers. The toxin is only dangerous when it is consumed and has been concentrated, such as by shellfish, and does not pose a danger to bare skin. Also, unlike red tides in other areas of the South Atlantic, this toxin does not cause respiratory problems in or near the water. Finally, the toxins are not concentrated enough to hurt a swimmer who may swallow a little seawater.

### Is the water red?

During extreme HABs by red tinted species, the sea water color can turn red or rusty. In Massachusetts, the blooms are typically not dense enough to change the color of the sea water.

**Remember: Under no circumstances should any individual harvest shellfish from any area closed to shellfishing!**

# Massachusetts Marine Fisheries Information About Red Tide



**Channeled Whelk**



**Knobbed Whelk**



**Northern Moon Snail**



**Waved Whelk**



**Soft Shell Clam**



**Blue Mussel**



**Surf Clam**

## **Red Tide Information:**

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PSP Monitoring



**Bay Scallop**



**Quahog**



**Razor Clam**



**Commonwealth of Massachusetts**  
Governor Deval Patrick

**Executive Office of Energy and  
Environmental Affairs**  
Secretary Richard K. Sullivan, Jr.

**Department of Fish and Game**  
Commissioner Mary B. Griffin

**Division of Marine Fisheries**  
Director Paul J. Diodati



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**Oyster**

**Marine Fisheries**  
Commonwealth of Massachusetts

