

Mission:

To protect, promote & improve the health of all people in Florida through integrated state, county & community efforts.



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Governor

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Vision: To be the **Healthiest State** in the Nation

-SARGASSUM FREQUENTLY ASKED QUESTIONS-



What is *Sargassum*?

Sargassum is a floating, marine brown alga (seaweed) that floats freely in the ocean (does not attach to the bottom). It provides an important habitat for migratory organisms that have adapted specifically to this floating algae including crab, shrimps, sea turtles, and commercially important fish species such as tuna and marlin (Doyle and Franks 2015, Pendleton et al. 2015). *Sargassum* is common in the Sargasso Sea and northwestern Gulf of Mexico, and it moves throughout and beyond the Caribbean region with currents, waves, and tides (Franks et al., 2016). When nutrients are available, and temperatures are high, *Sargassum* can grow into large mats (Doyle and Franks 2015). These mats naturally wash up on beaches, where it helps stabilize beach structure and provides nourishment for wildlife, including birds.

In 2014, *Sargassum* was identified as “critical habitat” for loggerhead turtles by the U.S. National Marine Fisheries Service (NMFS) (Pendleton et al. 2015) and the United States has designated *Sargassum* as essential fish habitat administering regulations restricting the harvesting of *Sargassum* in the South Atlantic exclusive economic zone (NMFS 2003).

What happens to *Sargassum* left on the beach?

Sargassum provides nourishment for the coastal ecosystem and helps stabilize the shoreline (Doyle and Franks 2015). Eventually, *Sargassum* will decompose (rot). Rotting *Sargassum* naturally smells and attracts flies and other insects. The smell is caused by natural production of hydrogen sulfide gas. Over time, remaining *Sargassum* will be buried in the sand or washed or blown away by waves and wind.

Why is *Sargassum* on and near beaches a concern?

Two common species, *Sargassum natans* and *Sargassum fluitans*, have started to wash up on beaches in massive quantities since 2011 (Doyle and Franks 2015, Franks et al., 2011, Franks et al., 2016). These washups have occurred throughout the Caribbean region, along the Florida coast line and as far south as West Africa (Franks et al., 2011, USF 2019).

This amount of *Sargassum* on beaches concern people living and working on or near the beach, because rotting *Sargassum* produces hydrogen sulfide gas which is unpleasant to smell. Because small organisms like jellyfish larvae can live in seaweed, some people have also experienced skin rashes and blisters from the organisms living in the seaweed.

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FAQ – *Sargassum*

Does *Sargassum* cause skin rashes and blisters?

Sargassum does not sting, and it does not cause skin rashes or blisters. However, *Sargassum* is important habitat for many other organisms that may cause skin reactions via direct contact. Tentacles from jellyfish and jellyfish larvae living in the seaweed are examples of other organisms that can cause rashes and blisters.

Why does *Sargassum* smell and is it bad for my health?

Rotting *Sargassum* naturally produces hydrogen sulfide gas, which smells of rotten eggs. Humans can smell hydrogen sulfide at levels much lower than those that cause harmful effects, although the ability to smell hydrogen sulfide can be reduced over time with constant exposure.

Since hydrogen sulfide is heavier than air, it can linger near the ground for some time. Hydrogen sulfide is an irritant to the respiratory system and can cause irritation to eyes, nose, and throat. Vulnerable individuals (for example persons with asthma) may wish to avoid the beach. People with asthma and other respiratory illnesses can be particularly sensitive to hydrogen sulfide exposure (inhalation) and may experience breathing difficulties when exposed to hydrogen sulfide.

Odors from most substances in the outdoor air are not at levels that can harm your health. The situation would be different for enclosed spaces where concentrations of gases may have the chance to accumulate. Wind on beaches will help hydrogen sulfide gas to mix into the air and become diluted.

Currently, Florida has no regulatory guidelines for exposure to hydrogen sulfide at the beach. The Occupational Safety and Health Administration (OSHA) and the National Institute for Occupational Safety and Health (NIOSH) have set acceptable limits for occupational exposure of 20 and 10 ppm (parts per million), respectively (ATSDR 2016) working over an eight-hour day often in enclosed spaces.

For more information about hydrogensulfide, please see FDOH's factsheet:

<http://www.floridahealth.gov/environmental-health/hazardous-waste-sites/documents/h/h2sfaqs2016.pdf>

Will hydrogen sulfide from rotting *Sargassum* cause long-term health effects such as cancer?

Hydrogen sulfide is not known to cause cancer in humans (ATSDR 2016). Long-term exposure to high levels of hydrogen sulfide, such as those that may occur in enclosed occupational settings, can have health implications. High constant levels of hydrogen sulfide are not expected in open environments.

For more information about hydrogen sulfide, please see FDOH's factsheet:

<http://www.floridahealth.gov/environmental-health/hazardous-waste-sites/documents/h/h2sfaqs2016.pdf>

Are children more sensitive to health effects associated with *Sargassum*?

Children are generally more sensitive to irritants than adults and may also be more bothered by the stinging sensation from jellyfish and other stinging organisms. It is generally recommended that children are supervised on the beach and in the ocean. Small children are also known to eat non-edible items, and it is recommended that children are supervised on the beach to prevent them from eating the seaweed, which could contain unhealthy levels of heavy metals. The heavy metals in seaweed are only a problem if the seaweed is consumed.

Can I use *Sargassum* in cooking?

It is recommended not to eat *Sargassum* because they may accumulate relatively large amounts of heavy metals such as arsenic and cadmium. Heavy metals in *Sargassum* are only a health issue if the seaweed is consumed.

Is *Sargassum* bad for my pet?

Because *Sargassum* can accumulate unhealthy levels of heavy metals, it is recommended that you prevent your pets from eating the seaweed.

How can I protect myself and my family from exposure to *Sargassum*?

- Always keep children under supervision on the beach.
- Avoid touching and swimming in the seaweed to avoid stinging by organisms that live in the seaweed.
- Gloves can help protect from stinging organisms if it is necessary to handle the seaweed.
- If you experience irritation or breathing difficulties from hydrogen sulfide gas associated with rotting *Sargassum*, it is recommended that you stay away from the beach until the symptoms subside.
- If you live near the beach, you may want to close windows and doors when the smell is in the air.
- People with respiratory problems including asthma can be more sensitive to hydrogen sulfide exposure (inhalation). It is recommended that people with respiratory problems avoid or limit their time on the beach when the smell is strong.

For more information on how to stay safe at the beach, please see:

http://www.floridahealth.gov/newsroom/2019/05/052319-safe-and-healthy-at-the-beach-lake-river-or-spring_article.html

How can workers protect themselves from exposure to *Sargassum*?

Currently, Florida has no regulatory guidelines for occupational exposure to hydrogen sulfide at the beach.

As noted above, OSHA and NIOSH have set acceptable limits for occupational exposure of 20 and 10 ppm (parts per million), respectively (ATSDR 2016). If workers are collecting and transporting *Sargassum*, it is recommended that protective clothing including gloves, boots and gas filter half masks be worn.

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If you have questions or comments about, we encourage you to contact us.

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