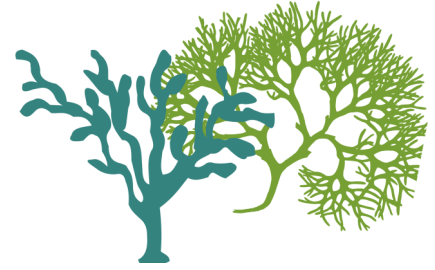


## VIDEO 3. What Are Algal Blooms?

### What are algal blooms?

- Algal blooms are a rapid overgrowth of algae that occur under certain environmental conditions.
- Algal blooms can occur naturally and be beneficial to the ecosystem, but they can also be harmful.
- Harmful algal blooms (HABs) negatively impact ecosystems and people's health.



### Causes of algal blooms

- Algal blooms form when environmental conditions support excessive amounts of algae growth through:
  - Ample levels of nutrients including nitrogen and phosphorus;
  - Favorable weather conditions.
- The exact conditions that trigger an algal bloom are difficult to pinpoint because they are complex and driven by a combination of natural and human influences that make it difficult to predict when a bloom will occur.
- **High levels of nutrients**
  - Algal blooms have been occurring for thousands of years, but the recent rise in documented cases of algal blooms may be linked to increased nutrients from human sources.
  - Sources of nutrient pollution can include:
    - Agricultural runoff;
    - Residential runoff;
    - Septic tanks.
- **Favorable weather conditions**
  - Warm temperatures and sunlight support algal bloom formation.
  - Natural variations in climate can influence algal bloom formation.
  - Warmer temperatures predicted in the future may increase algal bloom frequency, duration, and severity.
  - Increased extreme weather events predicted in the future can provide favorable conditions for algal bloom formation.

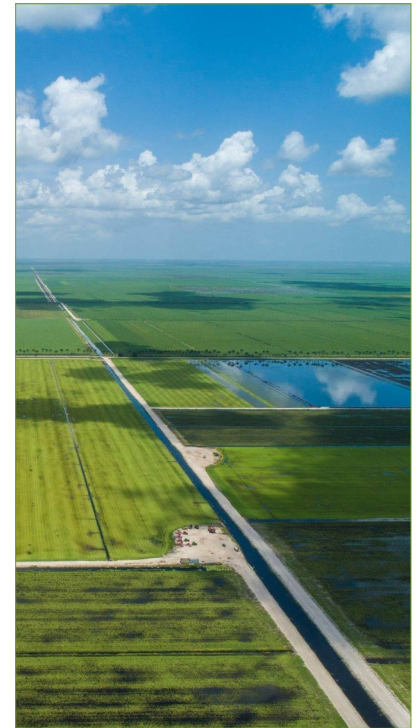


Photo credit: Teddy Mara

### Where do algal blooms occur?

- Algal blooms occur in freshwater, estuarine, and saltwater environments throughout the country and around the globe.
  - Algal blooms occur throughout Florida including the east coast, west coast, and in Lake Okeechobee.

## Examples of algal blooms

- Algal blooms can negatively impact ecosystems as well as people without producing toxins or forming HABs.
  - Green algae can cause habitat degradation in mangroves and coral reefs.
  - Sargassum and red drift algae can be unsightly as they accumulate on the beach and produce an unpleasant odor when they decompose. Large masses of algae in the water can trap boats, block canals, and cause fish kills.



Photo credit: Jaimie Tuchman



Photo credit: Viktoriya A.

## References

### Causes of algal blooms

- Havens, K.E., Hoyer, M.V., & Philips, E.J. (2016, July). [Natural climate variability can influence cyanobacteria blooms in Florida lakes and reservoirs](#). *UF IFAS SGEF-234*.
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