

Harmful Algal Blooms

Algae ranging from microscopic, single-celled organisms to large seaweeds

- Toxic forms can kill fish, mammals, and birds, and cause human illness.
- Nontoxic forms can clog fish gills or smother corals and submerged aquatic vegetation.
- Others discolor water, form huge piles on beaches, cause water and fish to taste bad.

Harmful Algal Bloom Impacts

- Paralytic Shellfish Poisoning (PSP)
- Neurotoxic Shellfish Poisoning (NSP)
- Amnesic Shellfish Poisoning (ASP)
- Diarrhetic Shellfish Poisoning (DSP)
- Azaspiracid Shellfish Poisoning (AZP)
- Ciguatera Fish Poisoning (CFP)
- Freshwater toxins (drinking water, recreation)
- Noxious blooms (aesthetics)
- Fish mortalities (wild and farmed)
- Desalination plant closures
- Macroalgal blooms









A satellite photograph of Lake Erie, showing a massive, swirling green algae bloom. The bloom covers most of the lake's surface, appearing as a bright green color with darker, more concentrated areas of cyanobacteria. The surrounding land is visible as brown and green patches along the shorelines.

September 3, 2011

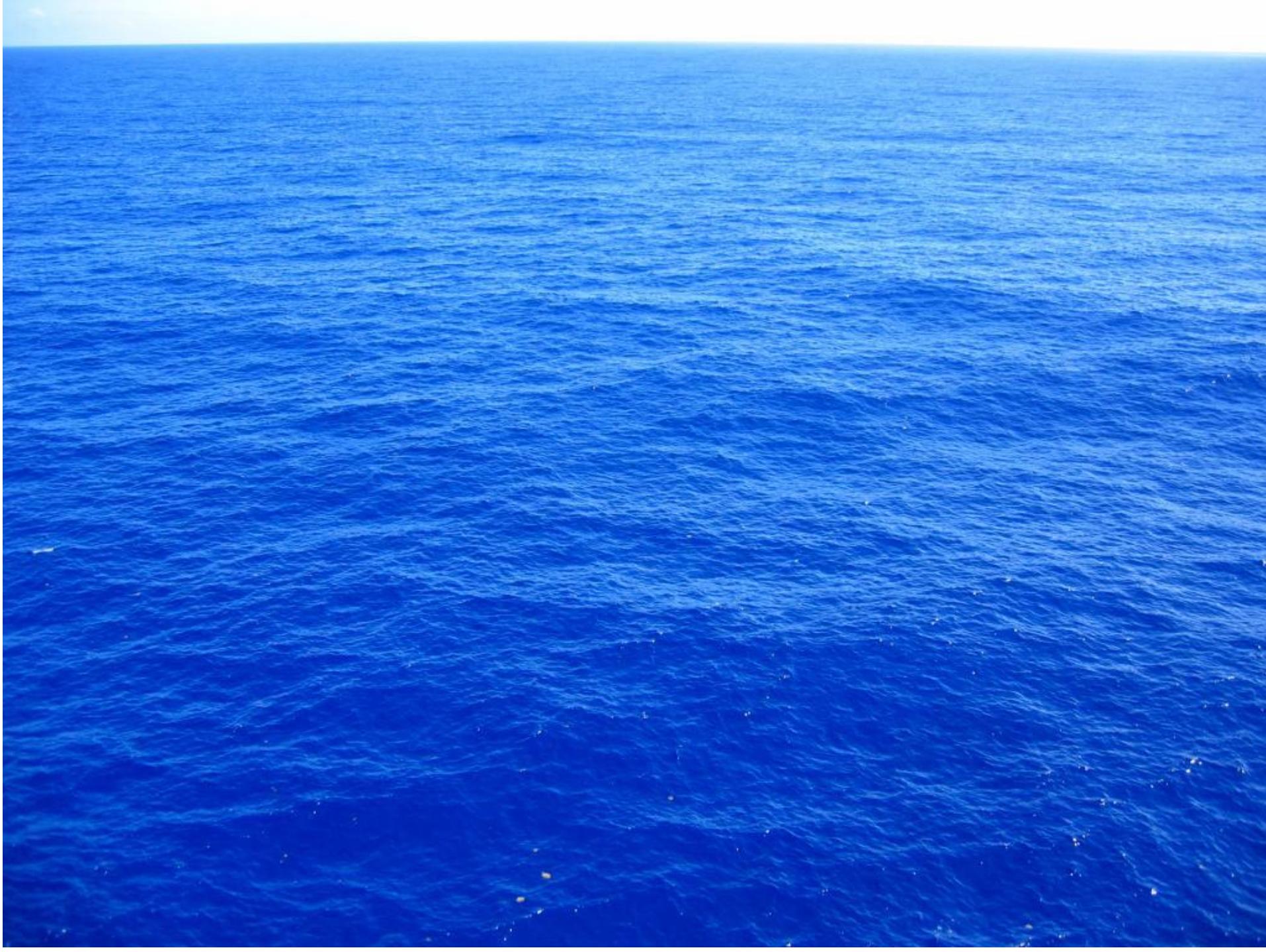
A satellite photograph of the Gulf of Mexico showing a massive oil spill. The spill is a thick, dark green layer that has spread across a significant portion of the water, covering the Mississippi River delta area and extending towards the Texas coast. The surrounding water is a lighter greenish-blue. The spill appears to be moving towards the right side of the frame.

October 9, 2011

Photo: NOAA Satellite Image



Photo: Richard Kraus, United States Geological Survey

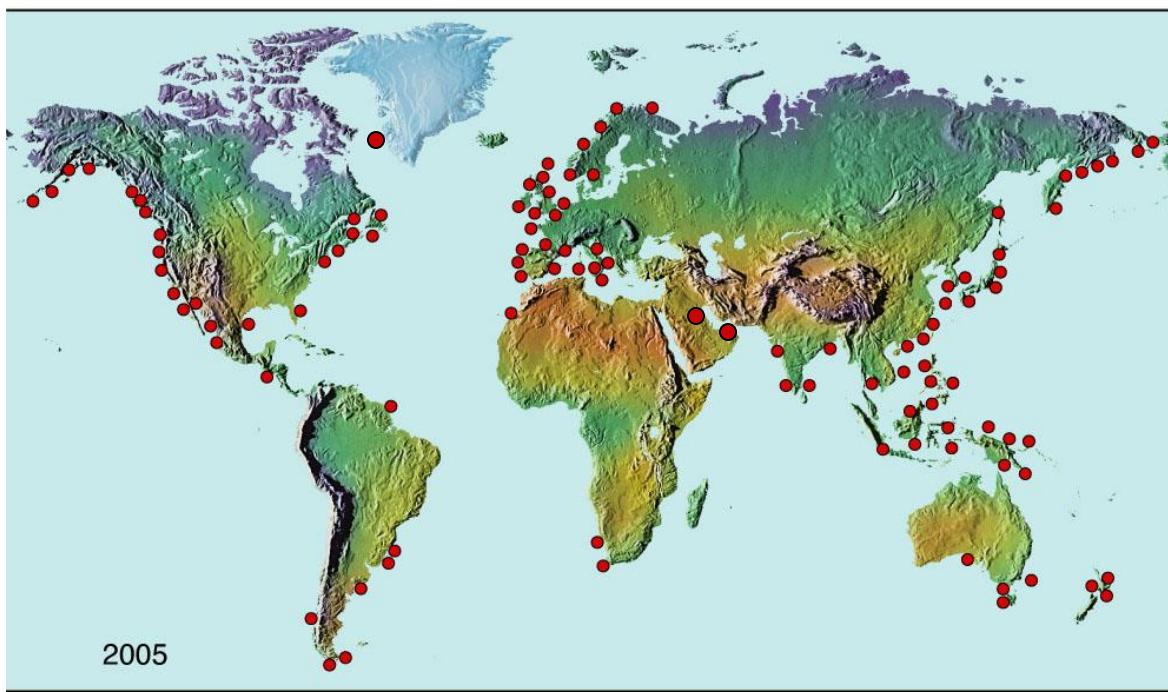
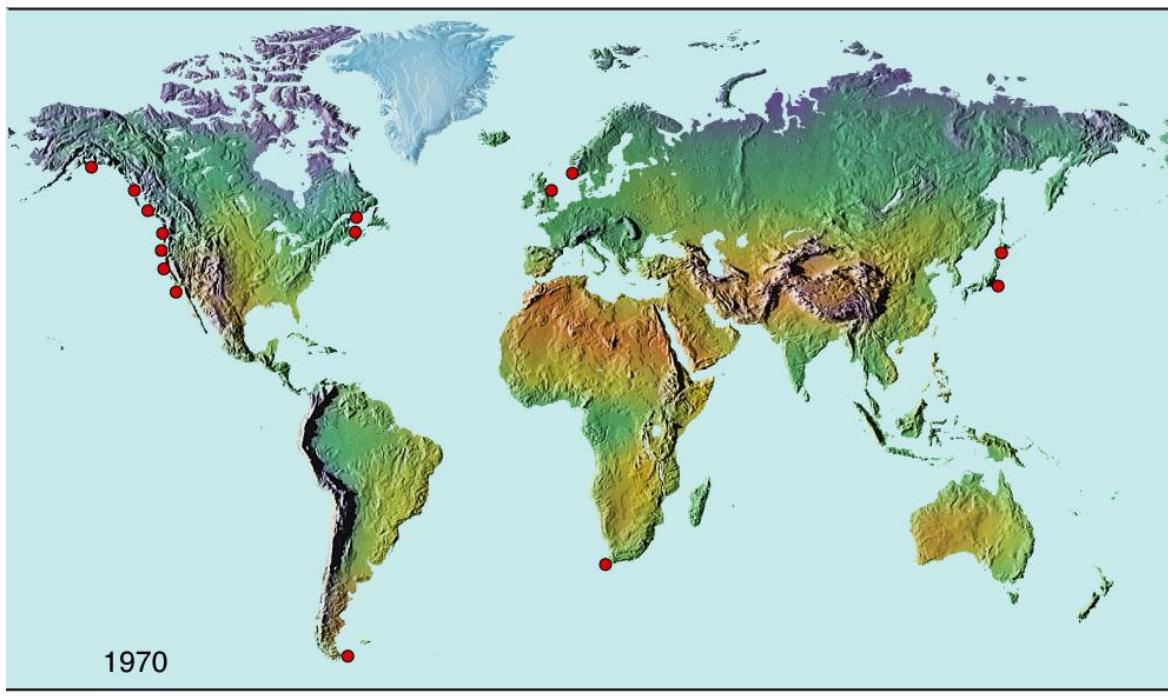




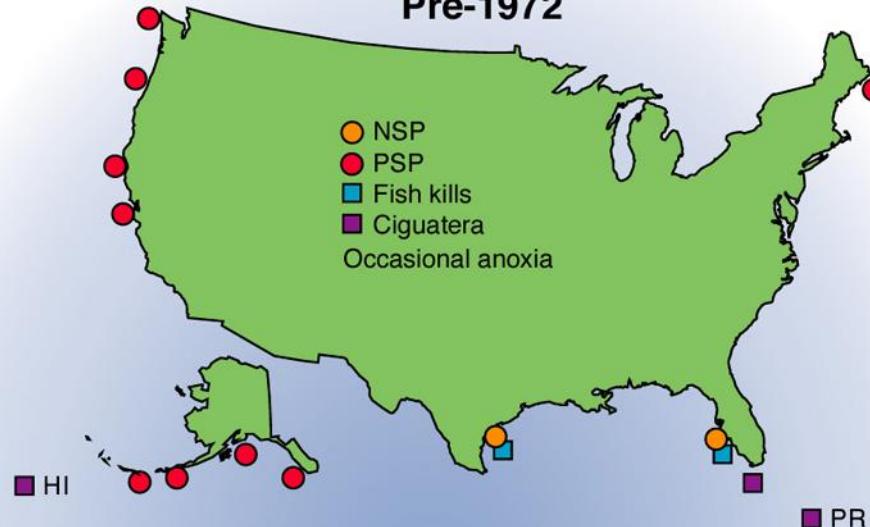




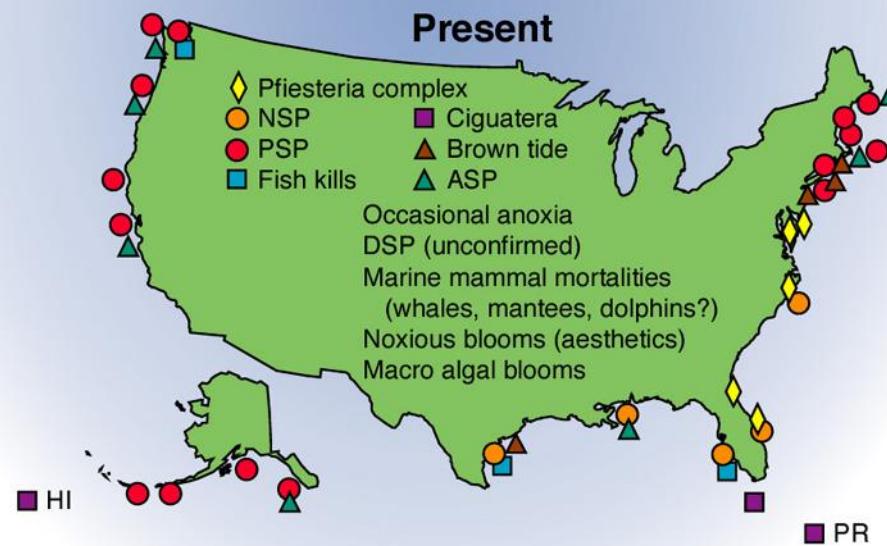
• PSP



Pre-1972



Present



Dan Ayers



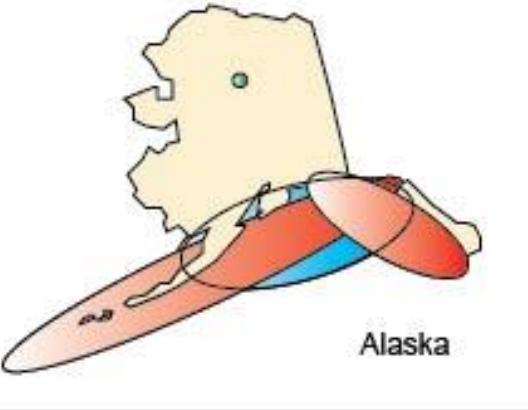
Today's Panelists

Gail Hesse

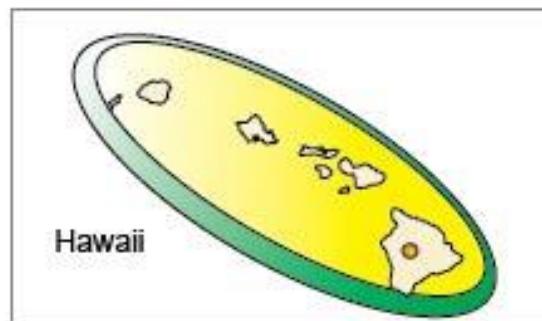
Don Anderson

Kevin Sellner

Alina Corcoran



Alaska



Hawaii

- PSP ASP CFP NSP
- Karlodinium & Pfiesteria Brown tide
- CyanoHABs Golden alga DSP

Puerto Rico

