COSEE West presents a selected glossary of terms for
Amnesic Shellfish Poisoning in California by Erica Seubert and
Ecology of a Harmful Algal Bloom in a Fresh Water Ecosystem by
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Amnesic Shellfish Poisoning - is a rare syndrome caused by a toxin made by a microscopic, red-brown, salt-water plant, or diatom called *Nitzchia pungens.* The toxin produced by these diatoms is concentrated in shellfish such as mussels and causes disease when the contaminated shellfish are eaten. Patients first experience gastrointestinal distress within 24 hours after eating the contaminated shellfish. Other reported symptoms have included dizziness, headache, disorientation, and permanent short-term memory loss. In severe poisoning, seizures, focal weakness or paralysis, and death may occur.

Bioaccumulation - the build up of a substance, such as a toxic chemical, in various tissues of a living organism. It takes place within an organism when the rate of intake of a substance is greater than the rate of excretion or metabolic transformation of that substance.

Diatom - any of various microscopic protists of the phylum Bacillariophyta that live in both fresh and marine water, have hard bivalve shells (called frustules) composed mostly of silica, and often live in colonies. Most diatoms can perform photosynthesis. They make up a large portion of the marine plankton and are an important food source for many aquatic animals. The skeletal remains of diatoms are the main constituent of diatomite.

Dinoflagellate - any of numerous one-celled organisms found mostly in the ocean, usually having two flagella of unequal length and often an armorlike covering of cellulose. Dinoflagellates are one of the main components of plankton. Since dinoflagellates have characteristics of both plants and animals, their classification is controversial.

Domoic Acid - a neurotoxin $C_{15}H_{21}NO_6$ that is produced by some diatoms (especially genus *Pseudo-nitzschia*) and has caused poisoning in vertebrates (as sea lions, birds, and humans) that have consumed diatom-contaminated fish or shellfish. The fish or shellfish accumulate the toxin by feeding on the diatoms or other animals that have accumulated the toxin from the diatoms.

Food Web - Complex network of many interconnected food chains and feeding relationships showing predator/prey relationships that are found in a specific ecosystem.

Harmful Algal Bloom - occur when certain types of microscopic algae grow quickly in water, forming visible patches that may harm the health of the environment, plants, or animals. HABs can deplete the oxygen and block the sunlight that other organisms need

to live, and some HAB-causing algae release toxins that are dangerous to animals and humans. HABs can occur in marine, estuarine, and fresh waters (from CDC)

Invasive Species - non-native plant, animal or other organism (including microbes) to the ecosystem under consideration and whose introduction causes or is likely to cause economic or environmental harm or harm to human health. Human actions are the primary means of invasive species introductions.

Mixotrophy - The property of certain microorganisms that can assimilate organic compounds as carbon sources, not as energy sources. It is a strategy by which photosynthetic micro-organisms supplement their nutrition by uptake of bacteria/algae and/or dissolved organic carbon and, often limted nutrients such as phosphorus and nitrogen.

Phytoplankton - the free floating phyotosynthetic (autotrophic) component of the plankton community in aquatic systems

Red Tide - a population explosion of certain species of dinoflagellates, a kind of protozoan found in plankton. The dinoflagellates color the water red or reddish-brown and secrete a toxin that kills fish. Red tide usually occurs in warm coastal waters.

Watershed - the area of land where all of the water that is under it or drains off of it goes into the same place and all living things within it are inextricably linked by their common water course.