AQUATIC NUISANCE SPECIES

Coast Guard Auxiliary Prevention Outreach

DEFINITION OF AQUATIC NUISANCE SPECIES

Aquatic nuisance (or invasive) species (ANS) are nonindigenous species that threaten the diversity or abundance of native species or the ecological stability of infested waters, or commercial, agricultural, aquacultural or recreational activites.



AQUATIC NUISANCE SPECIES IN THE SAN FRANCISCO BAY

According to an article by the Marin Independent Journal (2008), the "San Francisco Bay is **the most invaded aquatic region on Earth**, with more than half its fish and most of its bottom-dwelling organisms representing non-native species, according to a new report released by the Nature Conservancy."

EXAMPLES OF AQUATIC NUISANCE SPECIES IN THE SAN FRANCISCO BAY

Asian clam, Chinese Mitten Crab, Japanese Gobi, Amur River Clams,









Asian Sea Slug, and Black Sea jellyfish





There are 234 nonindigenous species (plus up to 123 others) in the San Fracisco Bay.

DON'T FORGET TO CONSIDER PLANTS AS AQUATIC NUISANCE SPECIES!



HYDRILLA

Hydrilla is considered one of the worst aquatic weeds in the United
States. This aquatic plant forms dense mats that crowd out other plants, provide a breeding ground for mosquitos, impede draining and irrigation, and obstruct boating, waterskiing, swimming, and other water-related activities.

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WATER HYACINTH

Water Hyacinth is considered invasive throughout the world because it grows rapidly and can form thick layers over the water. These mats shade out other aquatic plants, interfere with boat navigation, and prevent fishing, swimming, and other recreational activities.

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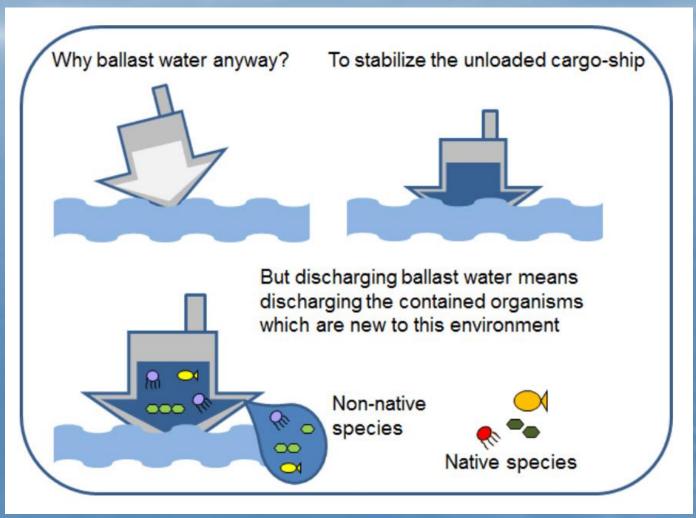
HOW DO AQUATIC NUISANCE SPECIES NEGATIVELY IMPACT THE ENVIRONMENT?

- Once discharged into a new environment, ANS can cause impacts in three general categories:
 - 1) ecological 2) economic, and 3) public health
- 42% of listed endangered species are significantly impacted by ANS.
- The mitten crab's burrowing activity, threatens banks and levees that protect agricultural and urban areas. They also damage rice fields, compete with commercially important species, damage fishing nets, and steel bait from fishermen
- While microbial content of ballast water can often be attributed to poor drinking water and wastewater systems of developing countries, coastal waters of developed countries are not free of human pathogens. When taken on board as ballast, the microbial infested water is transported to other areas. This discharge may infect the local fish and shellfish populations, which are later harvested for human consumption.

HOW DO THEY FIND THEIR WAY HERE?



Annually, 21 billion gallons of ballast water containing thousands of nonindigenous species are discharged into U.S. waters. The large ballast water capacity for some commercial vessels, upwards of 120,000 metric tons (32,000,000 gallons) each.



RECREATIONAL BOATERS CAN TRANSPORT AQUATIC NUISANCE SPECIES AS WELL



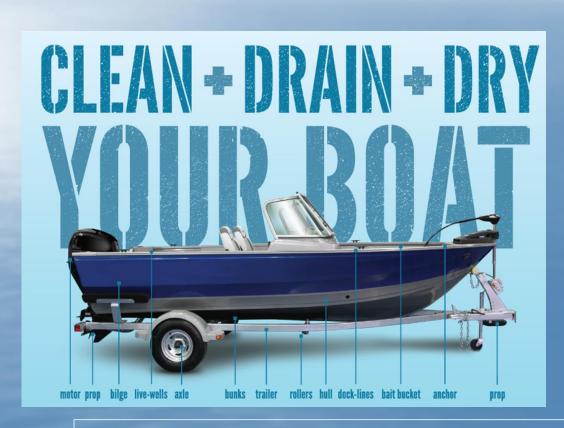


Zebra Mussels hitching a ride on a recreational boat.

WHAT CAN YOU DO TO HELP PREVENT THE SPREAD OF AQUATIC NUISANCE SPECIES?



INFORM THE PUBLIC ABOUT CLEANING, DRAINING, DRYING, AND CHECKING THEIR BOATS





Boats should be dried for at LEAST five days before entering another body of water. Some ANS, like the Zebra Mussel, can live for days or even WEEKS out of the water, depending on the relative humidity and time of year.

DON'T MOVE A MUSSEL

The only real way to stop an invasive species from causing harm is to prevent it

from entering the environment in the first place. This is because once

established, invasive species are almost impossible to eradicate.







