



# CALIFORNIA'S MARINE INVASIVE SPECIES PROGRAM



CALIFORNIA STATE LANDS COMMISSION • MARINE ENVIRONMENTAL PROTECTION DIVISION

Jeremy Bishop

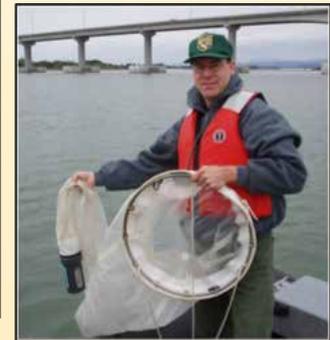
## The Program

The **Marine Invasive Species Program (MISP)** seeks to be a world-leading program that reduces the risk of aquatic nonindigenous species introduction into California's waters.

The program strives to accomplish this goal through:

- The development, implementation, and enforcement of innovative vessel biofouling and ballast water management policies.
- The use of best available technology and peer reviewed science.
- Partnerships with stakeholders to improve awareness of invasive species issues and assess program efficacy.

### The Marine Invasive Species Program at work



Photos courtesy of California State Lands Commission

### Marine Invasive Species Program History

The MISP began in 1999 with the passage of California's Ballast Water Management for Control of Nonindigenous Species Act, which addressed the threat of species introductions from vessels arriving at California ports. In 2003, the Marine Invasive Species Act was passed, reauthorizing and expanding the 1999 Act. Subsequent amendments to the Act and additional legislation further expanded the Program's scope.

For more information, please visit the MISP webpages at the California State Lands Commission website:

<http://www.slc.ca.gov/Programs/MISP.html>



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## Vessel Vectors of Nonindigenous Species

### What are Nonindigenous Species (NIS)?

NIS are organisms that are intentionally or unintentionally transported through human activities to new habitats such as California's marine, estuarine, and freshwater environments. NIS threaten human health, the economy, and the environment. A NIS is considered an invasive species once it is moved, becomes established in a new geographic location, and causes impacts.

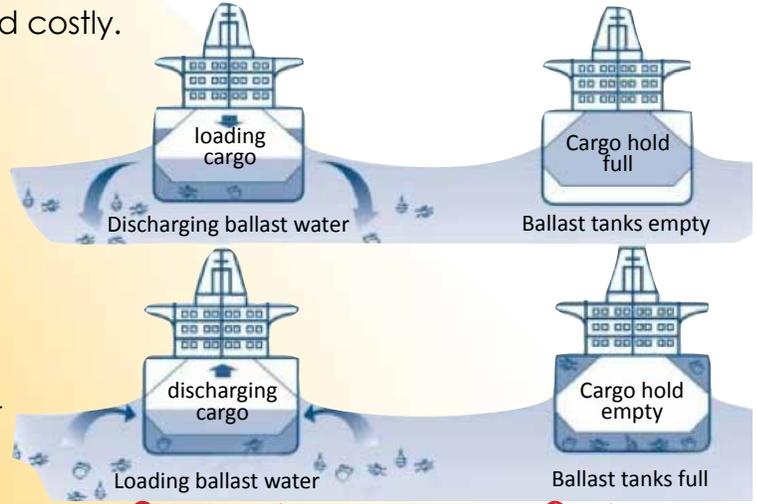


Photo courtesy of David Britton, USFWS



Photo courtesy of California State Lands Commission

In coastal aquatic habitats, vessel ballast water and biofouling are two of the most significant NIS vectors. Prevention of species introductions through vector management is considered the most effective way to address invasive species because, once established, attempts to eradicate invasive species are often unsuccessful and costly.



"Ballast Water Stowaways" GEF/UNDP/IMO GloBallast Programme

**Ballast Water:** As vessels move throughout the world, they can discharge ballast water and introduce NIS. It is estimated that unmanaged ballast water moves more than 7,000 species around the world on a daily basis, with a single vessel ballast water discharge having the potential to release over 21.2 million individual planktonic animals.



Photo courtesy of California State Lands Commission

**Vessel Biofouling:** Vessels can carry biofouling as they move throughout the world, and these organisms can be introduced when they spawn (reproduce) or fall off a vessel. Vessel biofouling is an organism or a community of organisms that are attached to or associated with a vessel's hard surfaces that are wet or underwater. Vessel biofouling includes attached organisms such as barnacles, algae, and mussels, and also includes organisms that associate with the attached organisms such as worms, crabs, and amphipods (small shrimp-like animals).