Committee on Resources Hearing February 27, 2006 Outline
The "Bad Suisun Bay" hypothesis

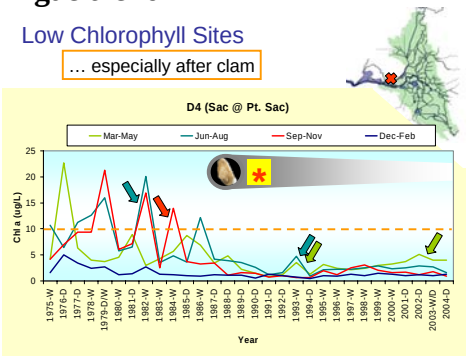
Matt Nobriga
California Department of Water Resources

The focus of my comments will be on briefly describing the "Bad Suisun Bay hypothesis" which is our conceptual model of how this region may have become a less suitable fish nursery.

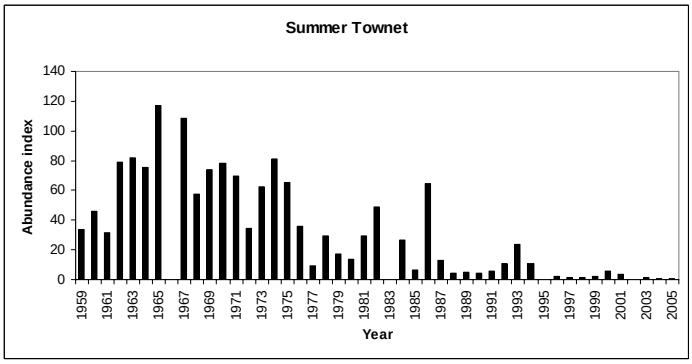
Background

- Suisun Bay was historically an important fish nursery meaning a lot of young fish used it to feed and grow
- Species introductions have changed the Suisun Bay foodweb; a clam has had the largest known effect, greatly reducing productivity. Introductions of various small shrimp-like animals eaten by young fishes have further changed the pathways from primary productivity to fish.
- The hypothesis: Due to these known changes, and possibly others, Suisun Bay is a less suitable nursery than it used to be.

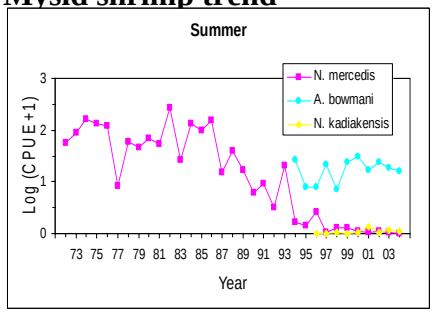
Algae trend



Young striped bass trend



Mysid shrimp trend



The investigation

- The clam has a known effect on fish and fish food abundance
- The fish responses (condition factor, histopath, relative abundance, lower fall sizes, etc.) are presumed effects

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- Both of these effects need to be quantified and put into the context of synthetic analyses and mathematical models to provide a predictive ability for weighing the costs and benefits of alternative management strategies.
- There are other factors besides clams and introduced species that may also contribute to reduced nursery value. We will investigate these as well: toxins, changes in habitat area, and power plant effects. The relevance of these latter factors needs to be determined before we know whether they need to factor into synthetic analyses and models to accurately predict Suisun Bay fish production.