

Exotic Species in the Delta



How do exotic species affect the Delta, Delta planning and Delta management?

How does the PPIC Report's Delta Vision address exotic species?

Effects of Exotic Species

- Good Fish/Bad Fish
- Biodiversity
- Rate of Change

1. Good Fish/Bad Fish

Good Exotic Species

- We can eat them

Bad Exotic Species

- They eat, out-compete or sicken organisms that we're fond of (because we eat them, they're native, or they're rare)
- They clog waterways
- They block water pipes and foul boats and equipment
- They destroy levees

2. Biodiversity

Most people would like to maintain natural ecosystems with native species.

In the Bay/Delta:

- >250 exotic species

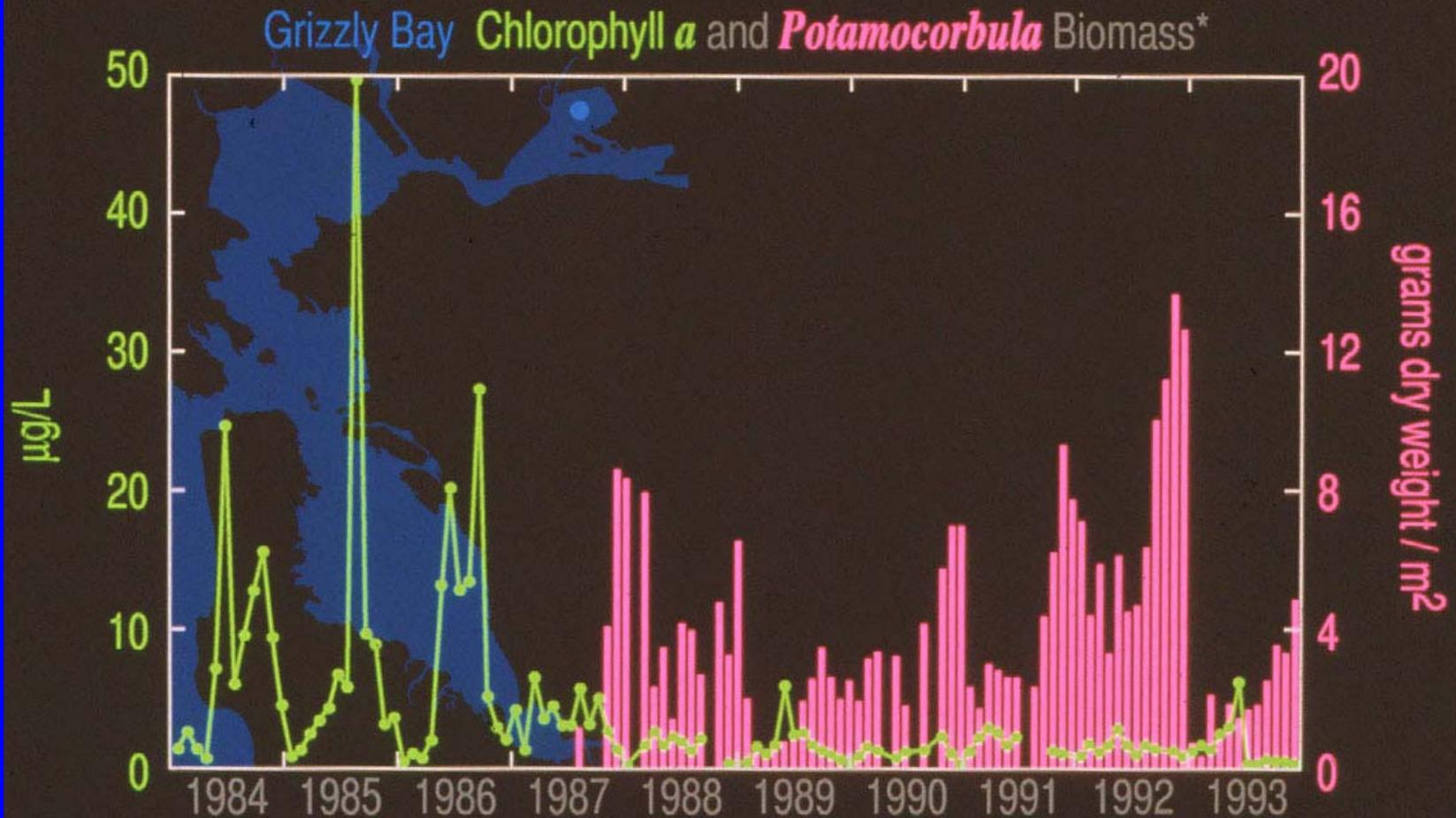
- >90% of the organisms

- >90% of the biomass

3. Rate of Change

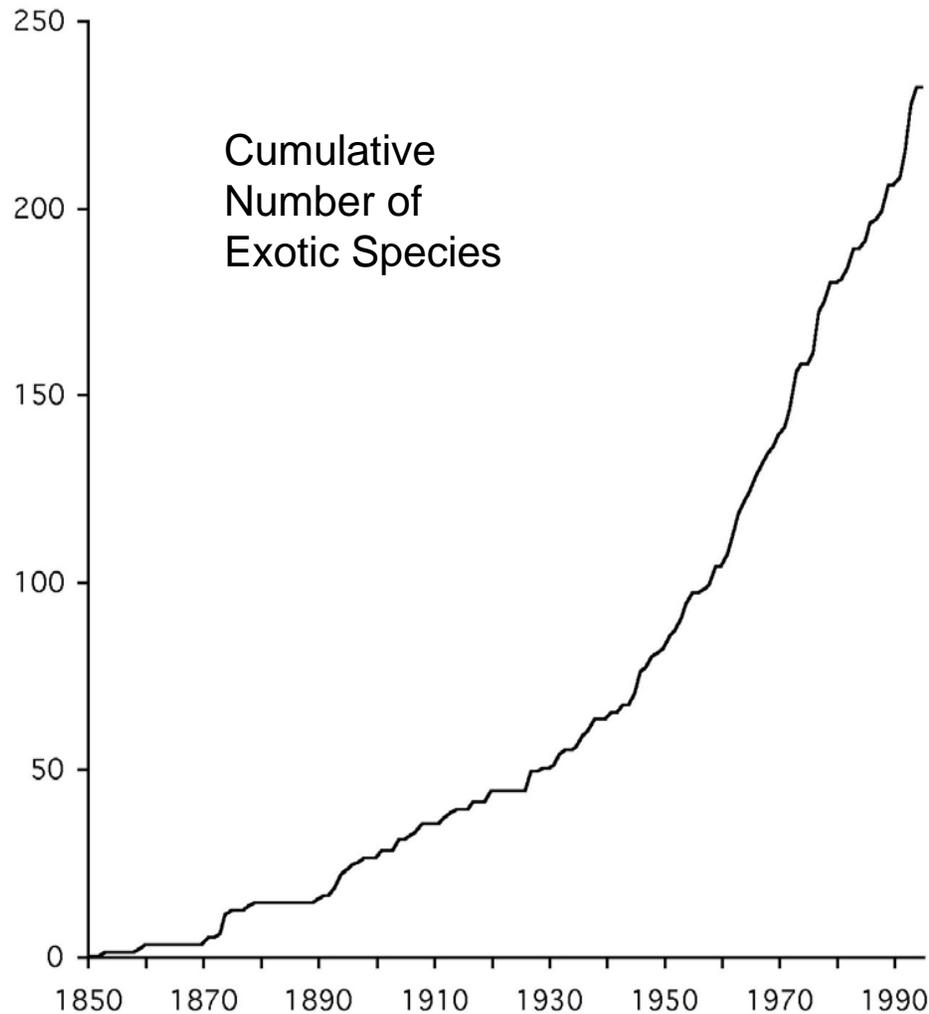
Society interacts most easily with stable, predictable ecosystems

3. Rate of Change



*DWR data

3. Rate of Change



**A new species
every 14 weeks
since 1960.**

- Cohen & Carlton

1998



Phytoplankton





Zooplankton



Phytoplankton

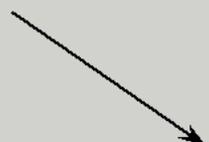




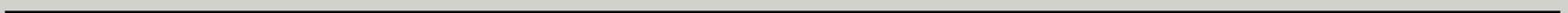
Fish



Zooplankton



Phytoplankton

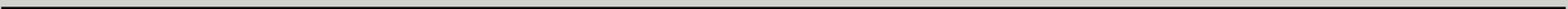
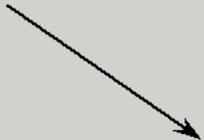


People

Fish

Zooplankton

Phytoplankton



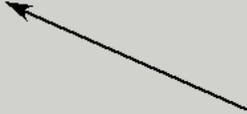
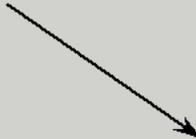
People

Fish

Zooplankton

Phytoplankton

**Freshwater
Clams**



People

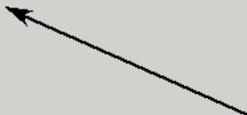
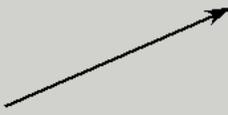
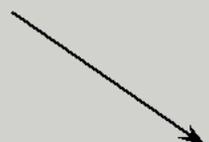
Fish

Zooplankton

Phytoplankton

**Brackish-water
Clams**

**Freshwater
Clams**



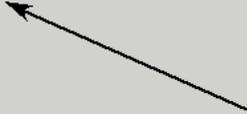
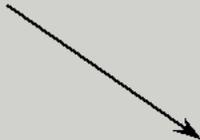
People

Fish

Zooplankton

**Brackish-water
Clams**

**Freshwater
Clams**

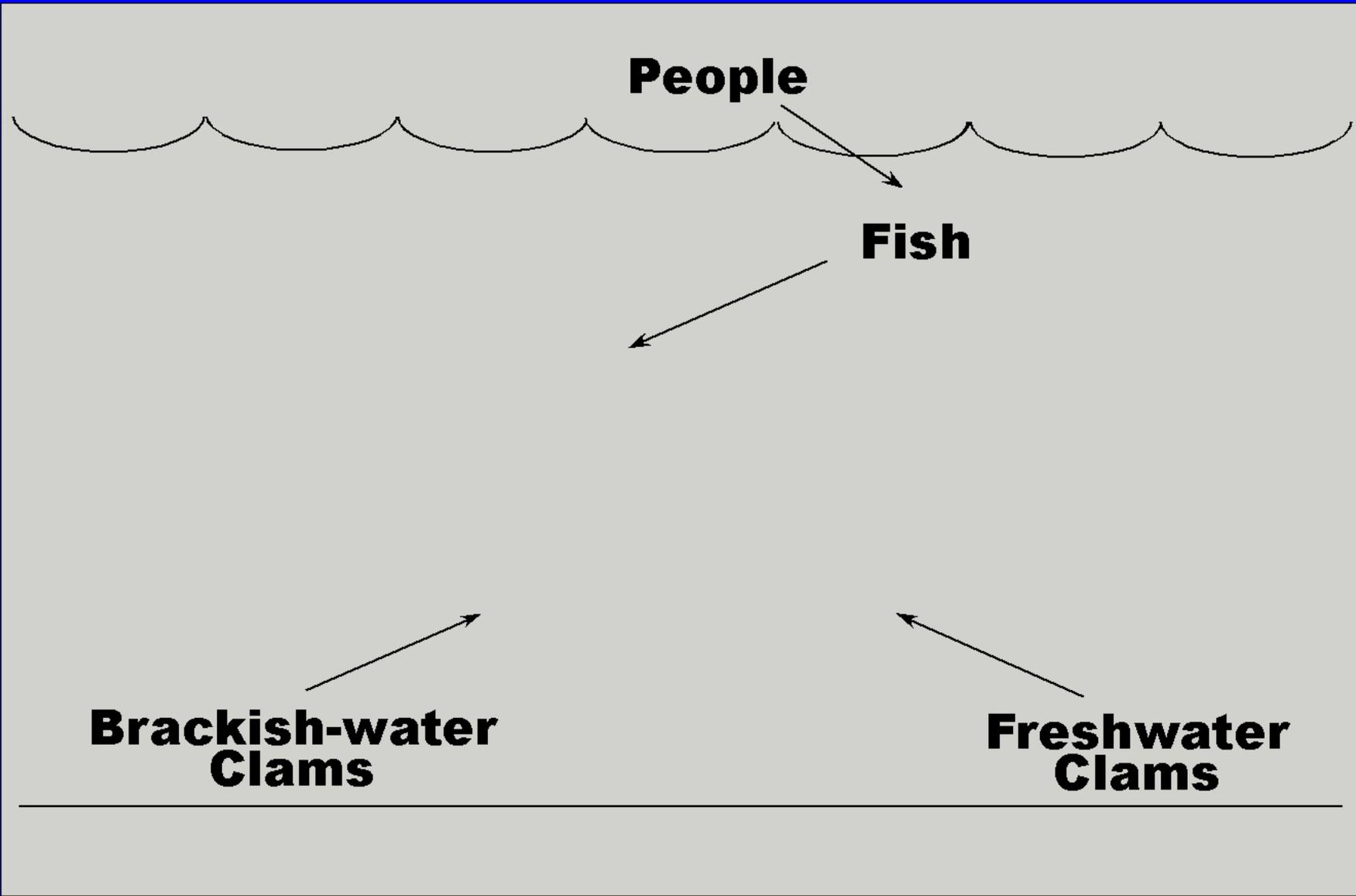


People

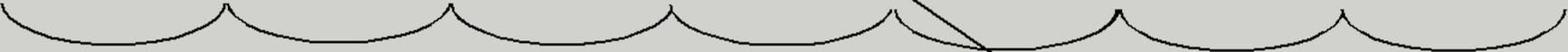
Fish

**Brackish-water
Clams**

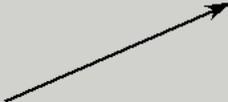
**Freshwater
Clams**



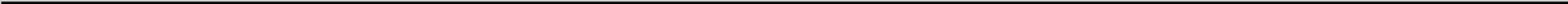
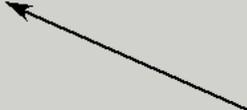
People



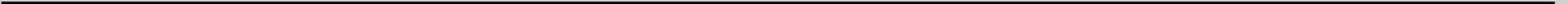
**Brackish-water
Clams**



**Freshwater
Clams**



People



People

Fish

Zooplankton

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