



Batten down the hatches

Risk to Alaska's Economy from Aquatic Invasive Species

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Outline

1. Elodea's damages to Alaska's economy
2. Preventing mussels hitchhiking on boats



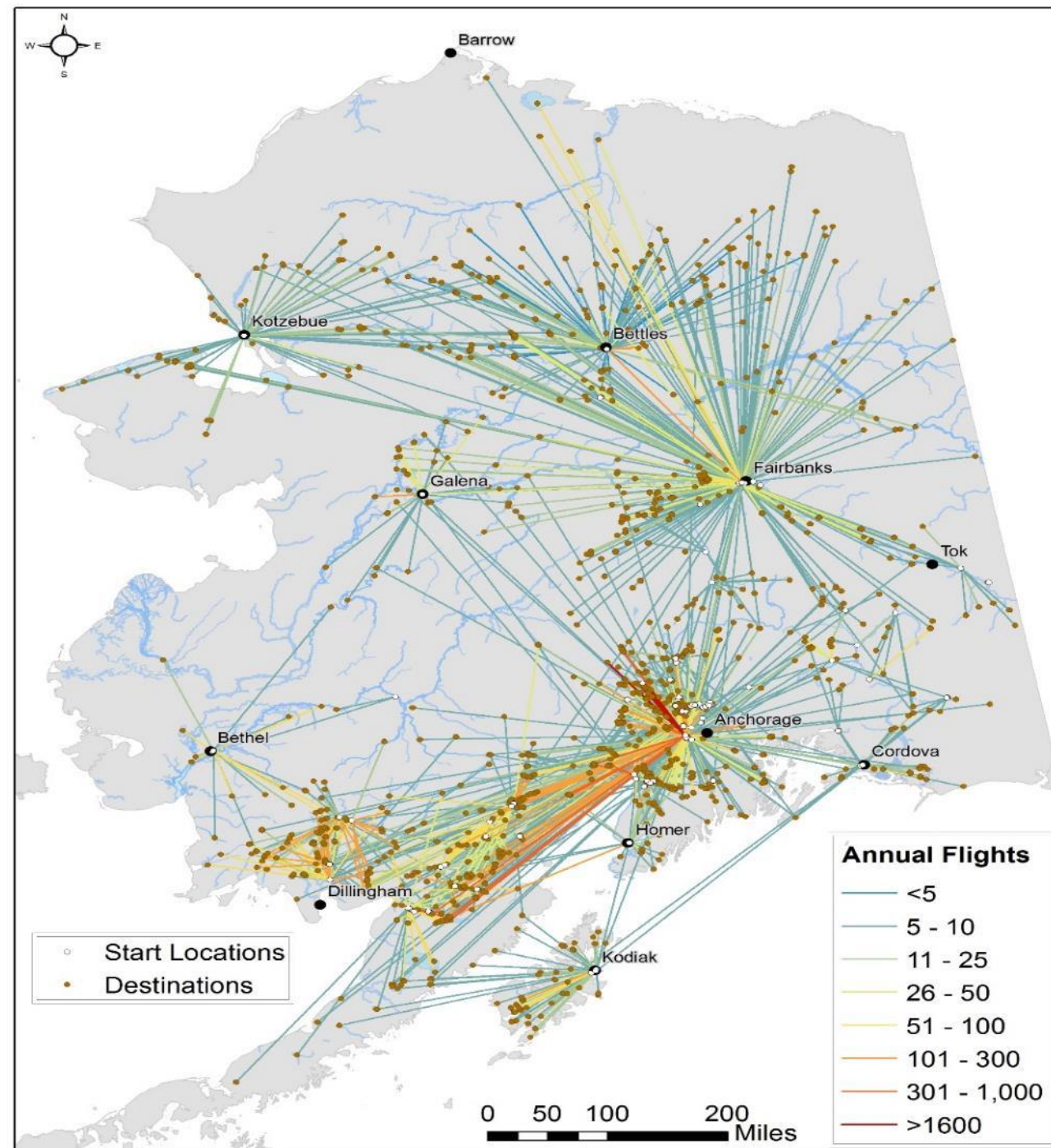
1. Elodea's damages to Alaska's economy



1 in 3
flights
starts in an
Elodea lake



Schwoerer et al. 2019





Half of all pilots stop flying to

Elodea-invaded waters.





=

\$185 / flight in recreation loss.



Elodea's effects on salmon

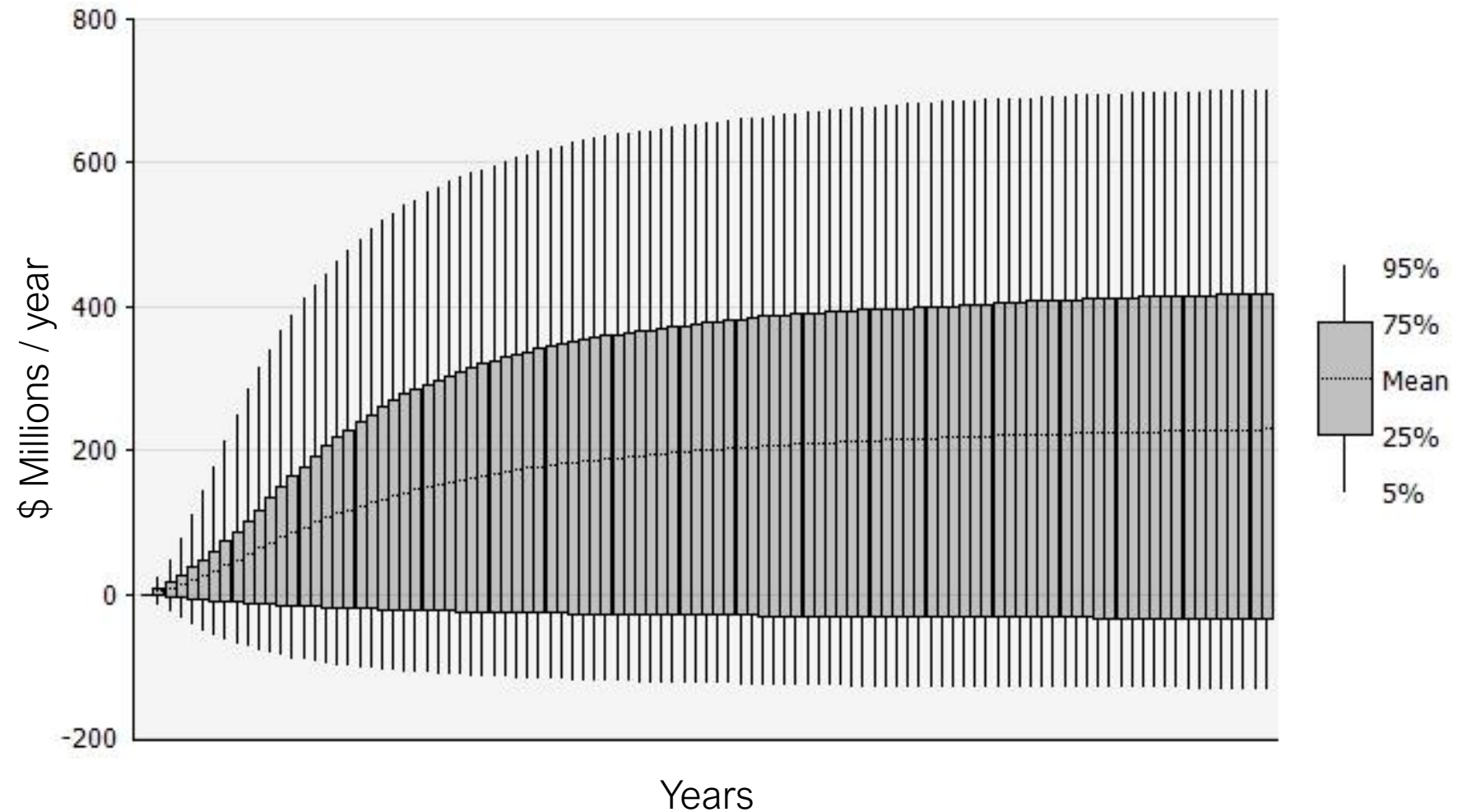


- Harmful dissolved oxygen levels 
- Dense vegetation 
- Predator habitat 
- Potentially more prey 

**\$172
million
on avg.
every year**



Elodea's annual damages to sockeye fisheries



2. Why prevention now?

Unchecked pathways for Quagga and Zebra mussels hitchhiking to Alaska





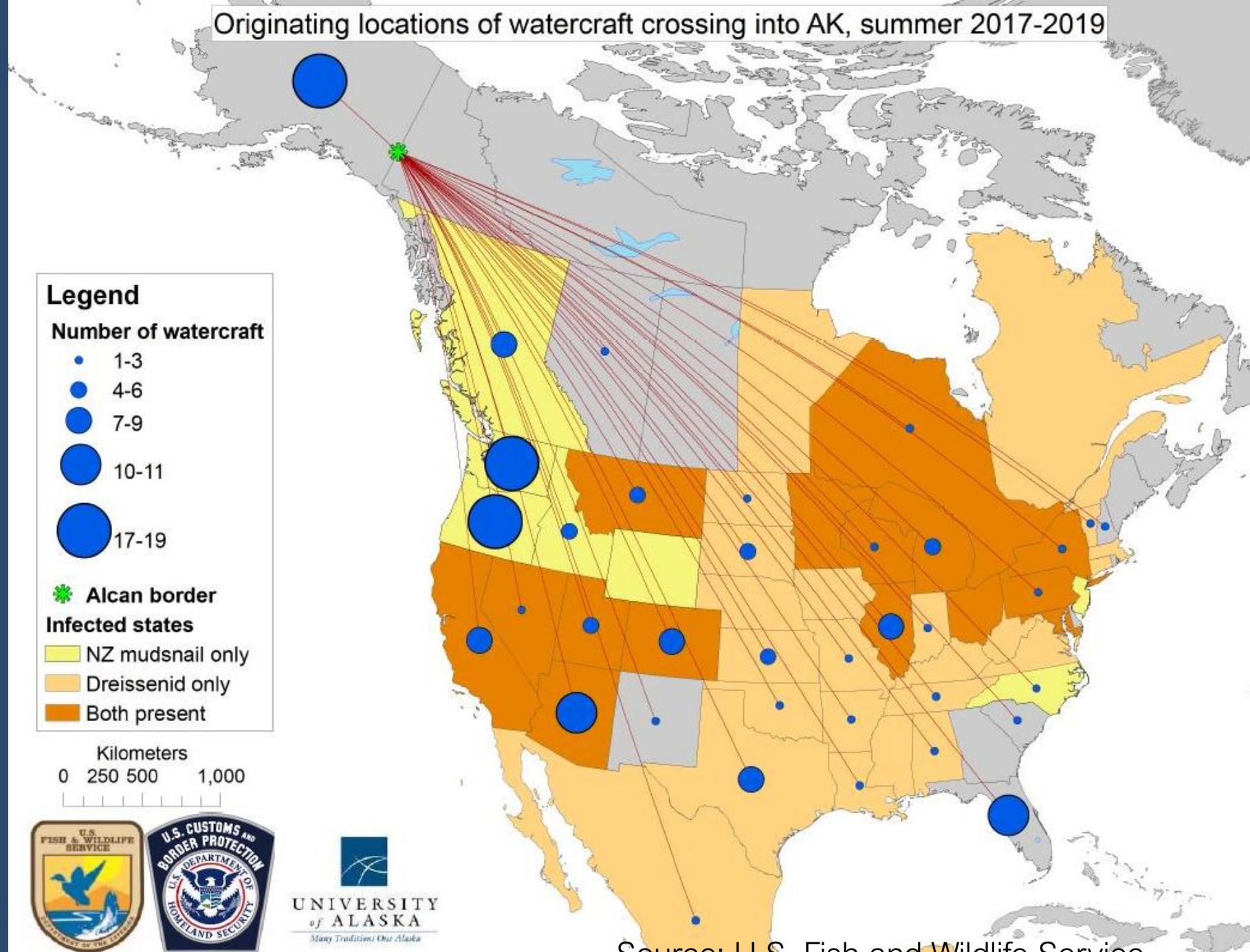
U.S. Economic damages of Quagga and Zebra mussels

\$1.5 billion every year

Pimentel et al. 2004



1,000
boats
“visit” every
year



Source: U.S. Fish and Wildlife Service



70% of boats not inspected
before reaching ALCAN border

+

No inspection at ALCAN border

Sailboat being decontaminated, Tok AK July 2019



It takes
just
1



ZEBRA MUSSEL



QUAGGA MUSSEL



Source: U.S. Fish and Wildlife Service

~ 250
used
boats
bought
every year



- 5,741 currently registered boats were previously registered elsewhere
- 1,981 (35%) were registered in states with Quagga and Zebra mussels

Source: Alaska DMV registration database

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