

CONCLUSION



The Great Lakes right now are experiencing perhaps the most fundamental – and potentially devastating – changes in their recorded history. The Great Lakes food web is undergoing massive disruptions, primarily from the invasion of non-native aquatic species. We see the obvious effects of alewives washing up dead on the beaches, sea lamprey sucking the life out of lake trout, and zebra mussels clogging water intake pipes. But as damaging as these are, the research presented in this report indicates that they only scratch the surface of what’s ailing the lakes.

The entire foundation of the Great Lakes food web is declining precipitously. The largest component of the base of the food web – *Diporeia*, a tiny shrimp-like organism – has nearly disappeared from large stretches of the lake bottoms. Other key components – fingernail clams and opossum shrimp – are beginning to experience similar declines. Although there is no conclusive evidence, most scientists believe that an invasive species, the zebra mussel, is the likely the culprit. And they worry that invasions by a similar species, the quagga mussel, will expand the damage to the remaining food web foundation, attacking deeper-water food sources.

The damage by invasive species is perpetual. Unlike pollution in the lakes, which can improve once new inputs are stopped, invasive species continue to reproduce and thrive even if no new species are introduced. The problem species we see now will

continue to get worse without action; and new invaders (an average of one every eight months) will continue to be introduced.

The lakes need action now. They need research to better understand the disruptions to the food web, the consequences to key species, and the best methods and

places of intervention. They need federal and state legislation and voluntary action to stop the introduction of new invasive species. They need new management tools to address the invaders that are already in the lakes. And they need funding to accomplish these tasks – to restore the Great Lakes. Their future, and ours, are in the balance.



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