

RIFFLE CHANNEL RECOVERY FOLLOWING DRAWDOWN OF KEYSTONE POND



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STUDIES



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- Background
- Hypothesis
- Methods and Results
- Conclusions
- Questions



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BACKGROUND

- Dam removals are becoming more common

(Bushaw-Newton et al. 2002, Stanley and Doyle 2003, Orr et al. 2008)

- Long-term effects of dam removal are not yet well understood

- Water quality is often assessed using macroinvertebrates as bioindicators

(Hansen and Hayes 2011, Colas et al. 2010, Stark 2010)

- The Boardman Dam Removal Project is the largest project of its kind to date in Michigan

(Conservation Resource Alliance 2012)



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QUESTION & HYPOTHESIS

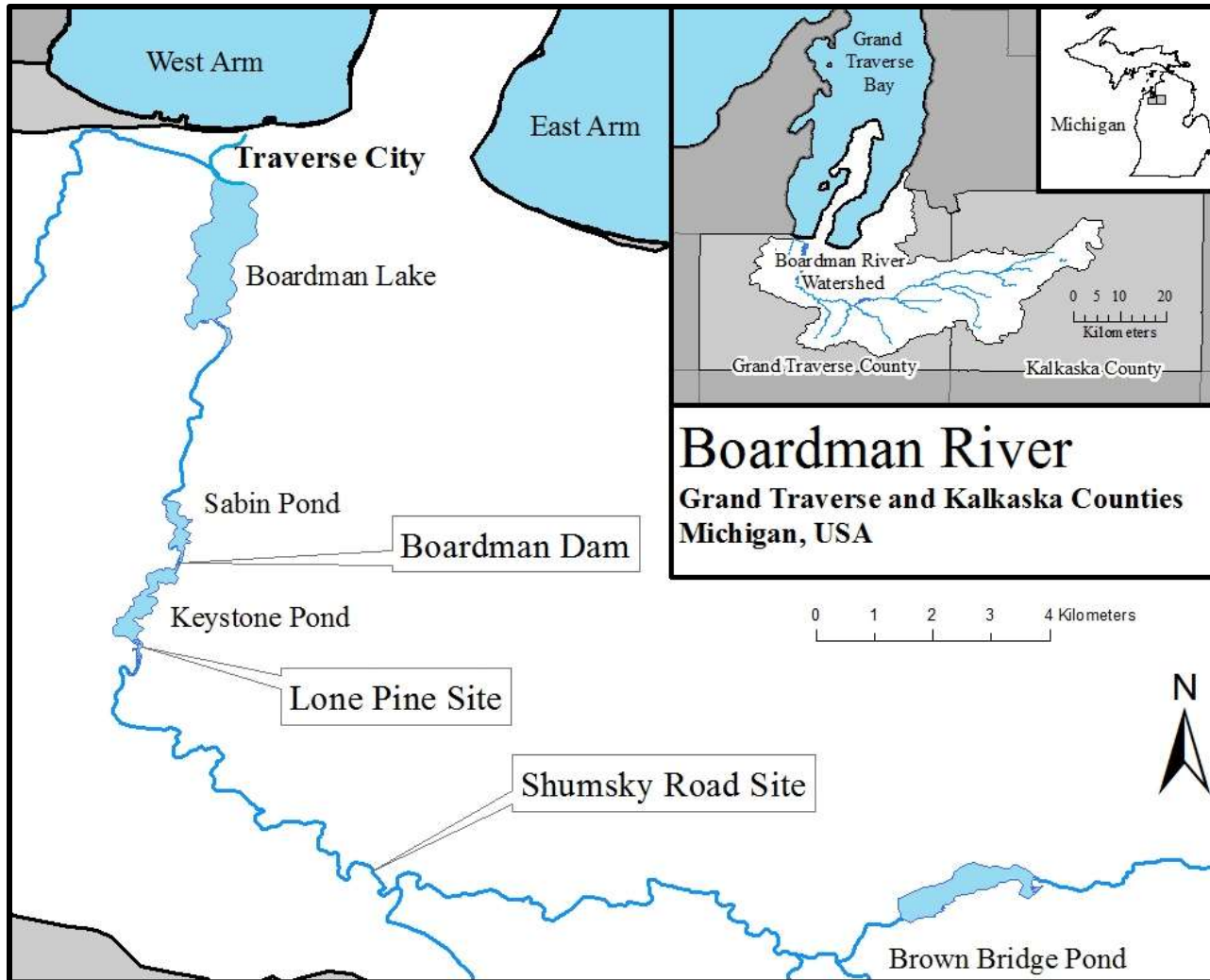
- How does a newly formed riffle channel respond to the drawdown of the reservoir?
- Following the drawdown of Keystone Pond, natural restoration of the river channel will assist in recovery of the macroinvertebrate communities following the disturbance.



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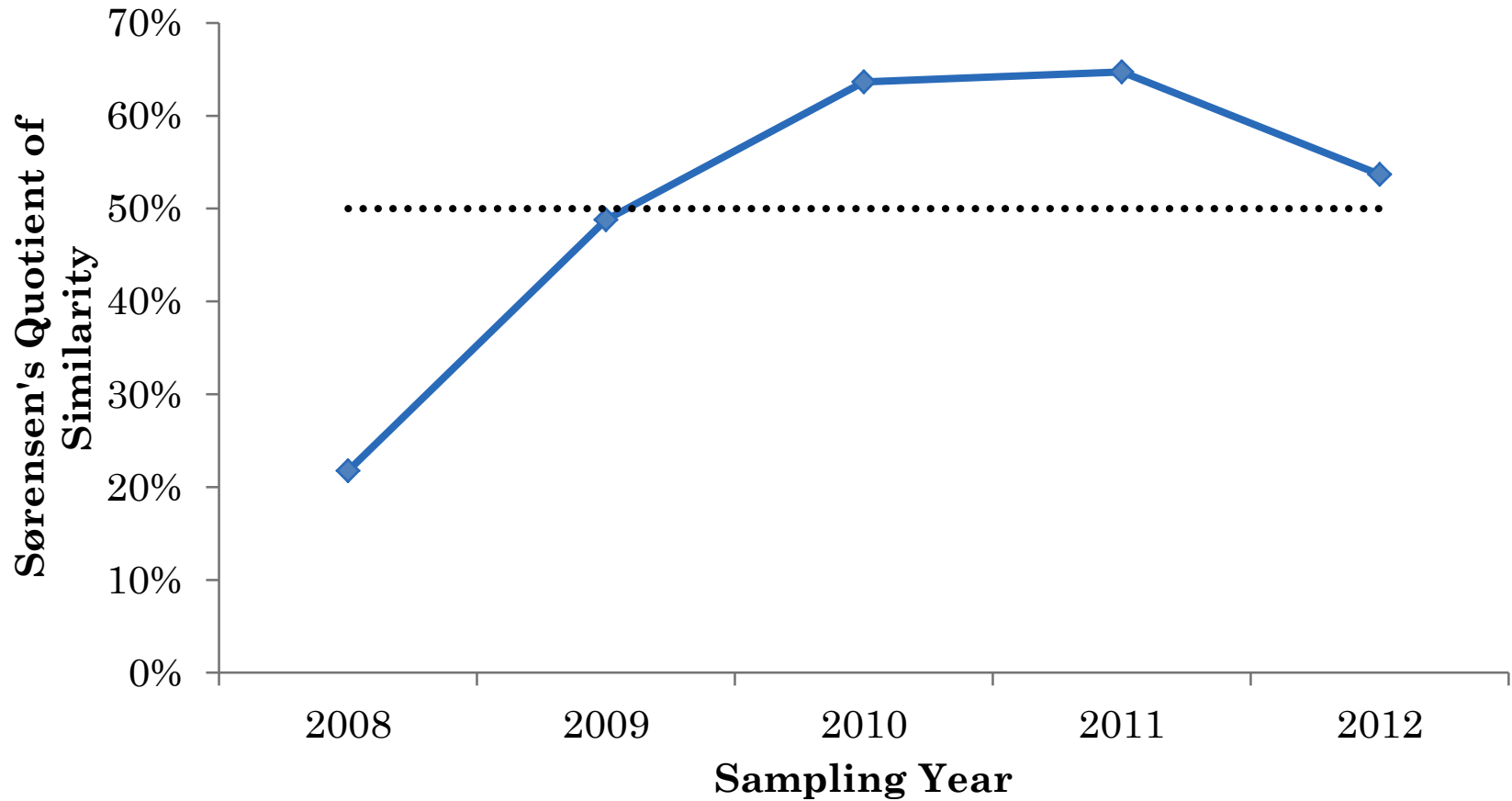
METHODS AND RESULTS



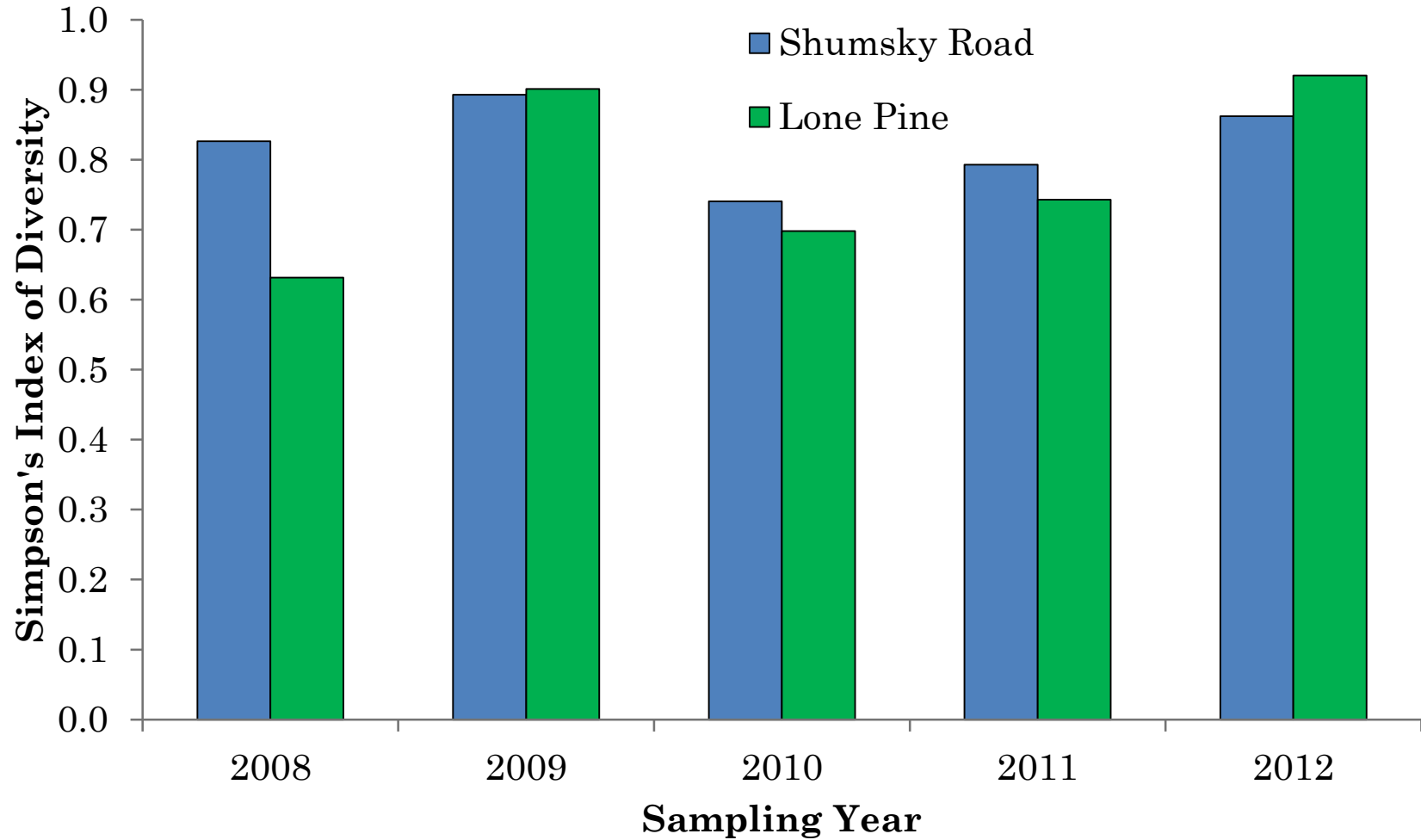
METHODS AND RESULTS



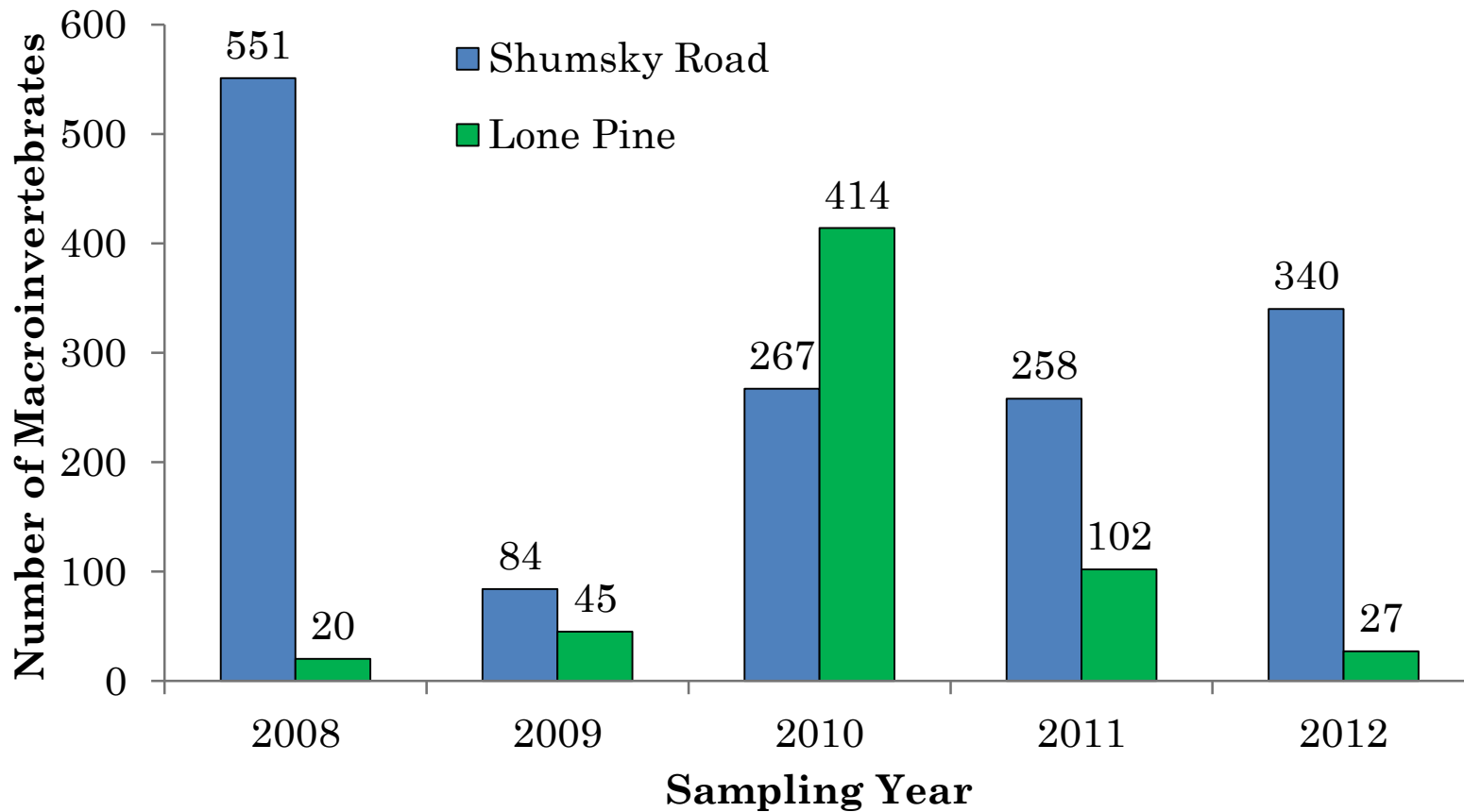
METHODS AND RESULTS



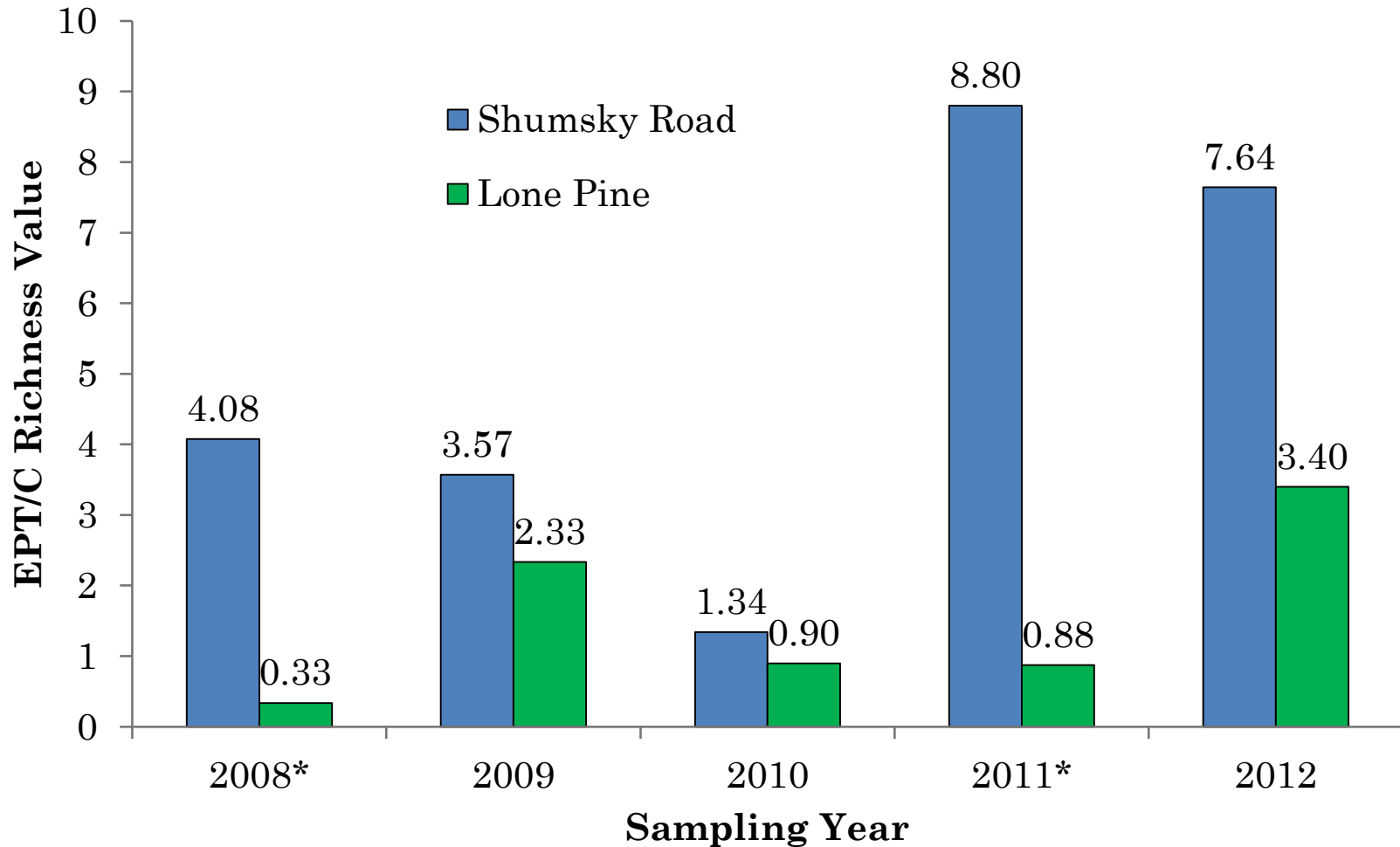
METHODS AND RESULTS



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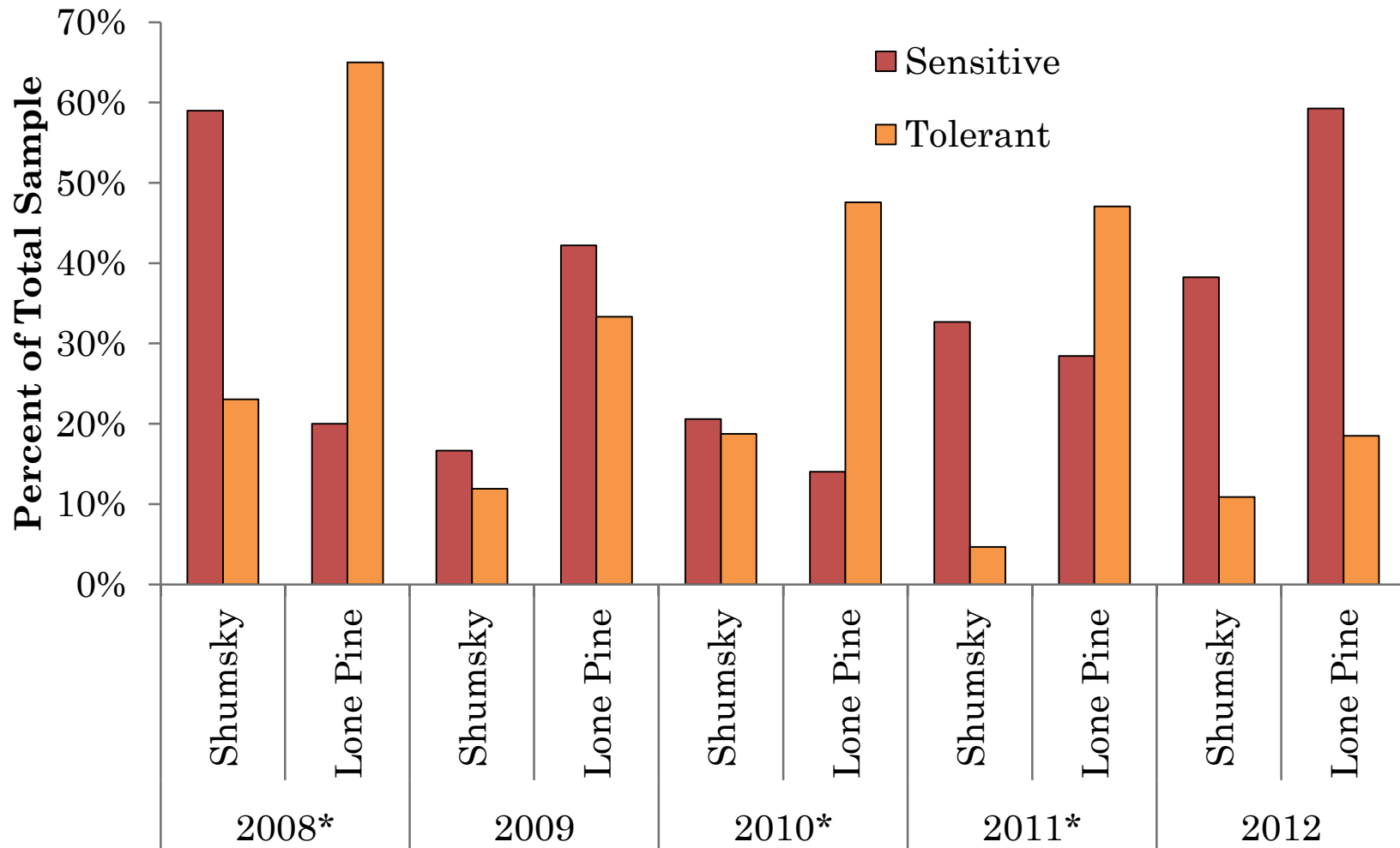


METHODS AND RESULTS



* Notes a significance of $P < 0.01$

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CONCLUSIONS

- The sites have become more similar.
 - The total number of individuals, however, is still very different between sites.
- EPT/C richness is consistently higher at Shumsky Road.
- The recovery site is still undergoing restoration.
- Macroinvertebrate communities ought to be monitored through the duration of the dam removal and recovery process.

(Hansen and Hayes 2011)



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QUESTIONS?

