

Who Does it Best?

Engineers vs. Beavers in a Stormwater Treatment Facility



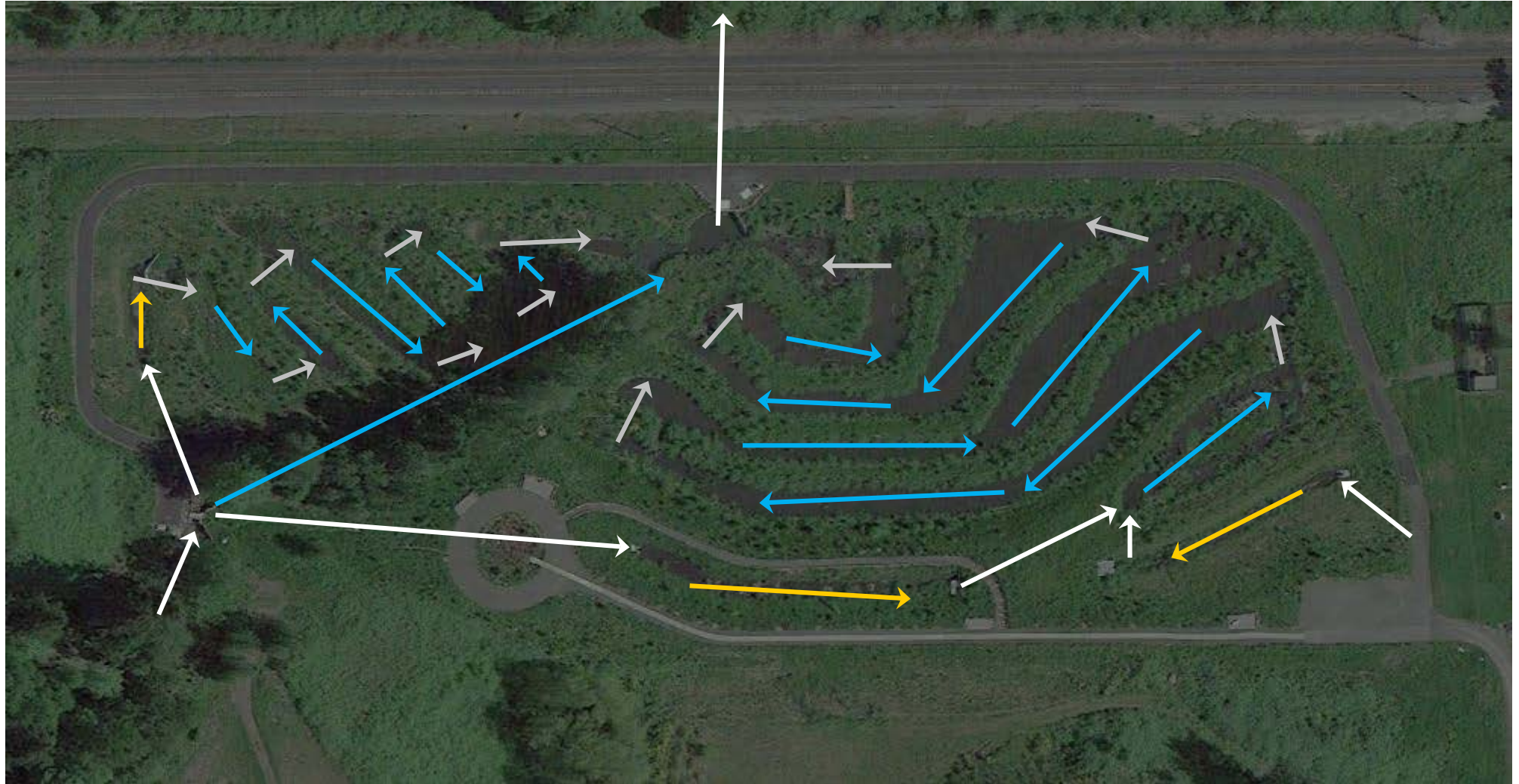
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Columbia Slough Regional Water Quality Facility

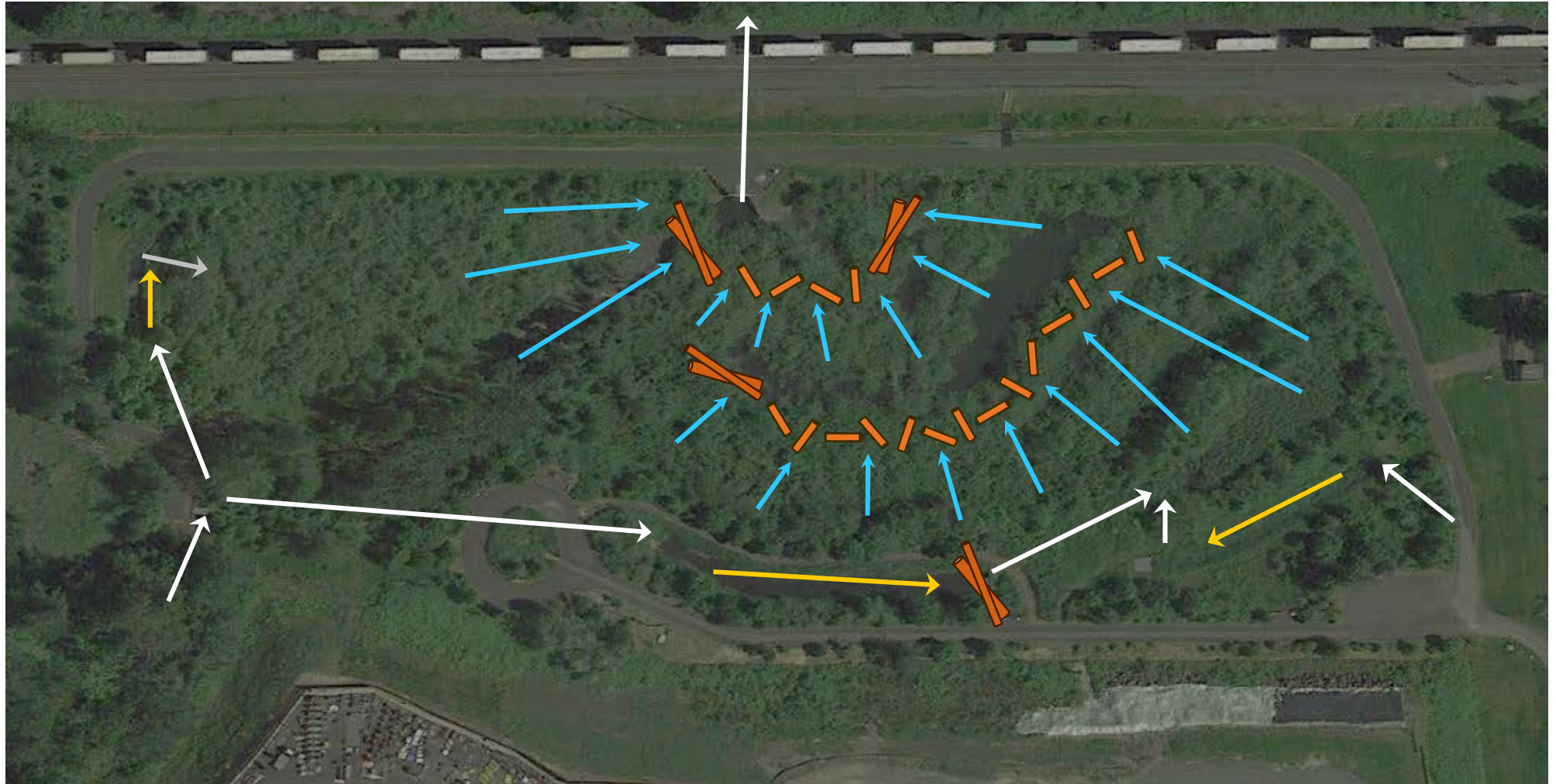
- Constructed in 2007-08
- 13 acre site
- Treats 965 acres of industrial and commercial land
- Cost = \$2.4M



Columbia Slough Regional Water Quality Facility



Columbia Slough Regional Water Quality Facility + Beavers



Question: Do the beaver dams help or hinder the water quality treatment in this facility?



Methods

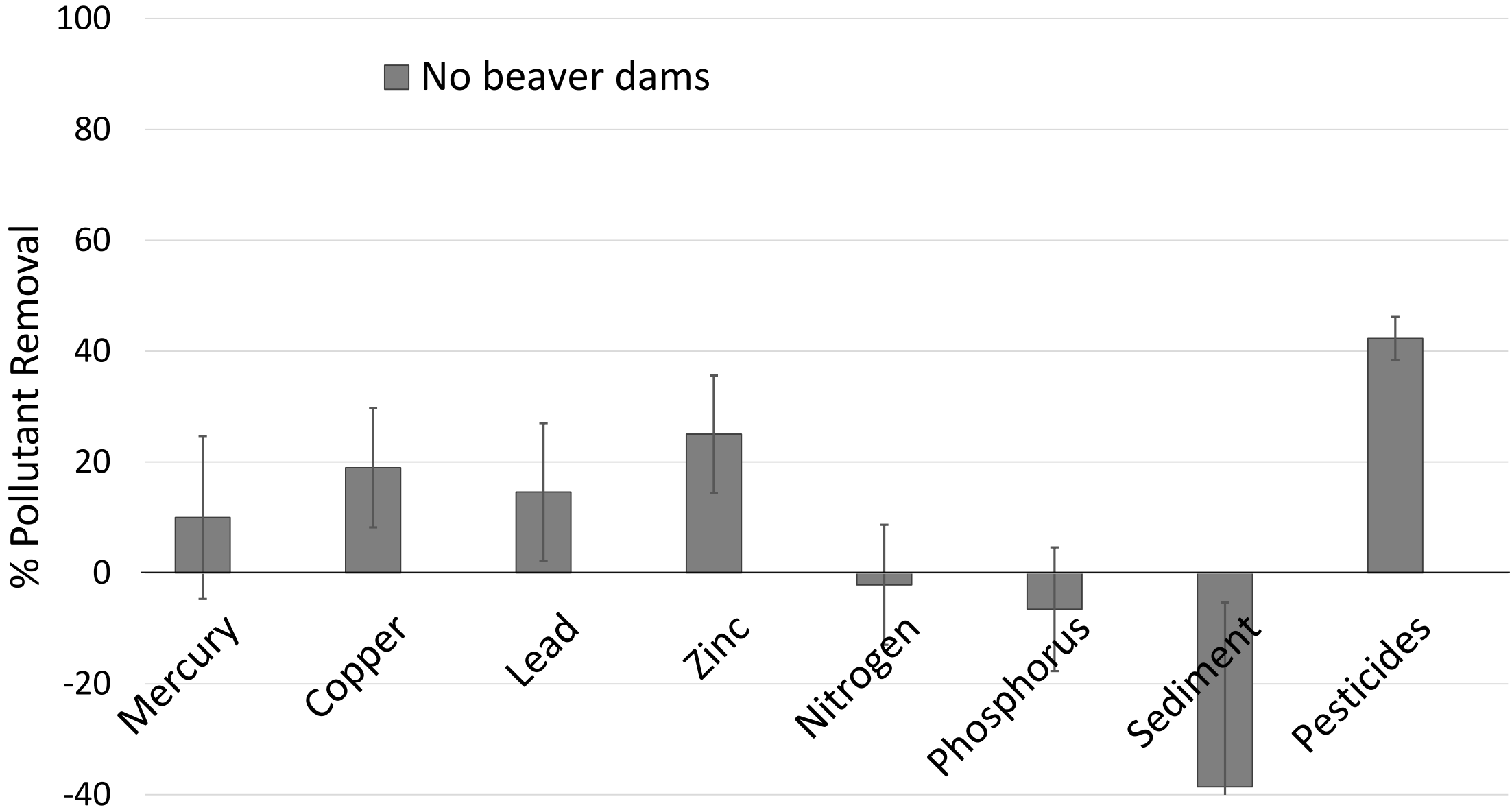
- Collected water quality samples during storms
 - Inlets and outlets of facilities
 - 7 storms without dams, 6 storms with dams
 - Metals, nutrients, sediment, pesticides



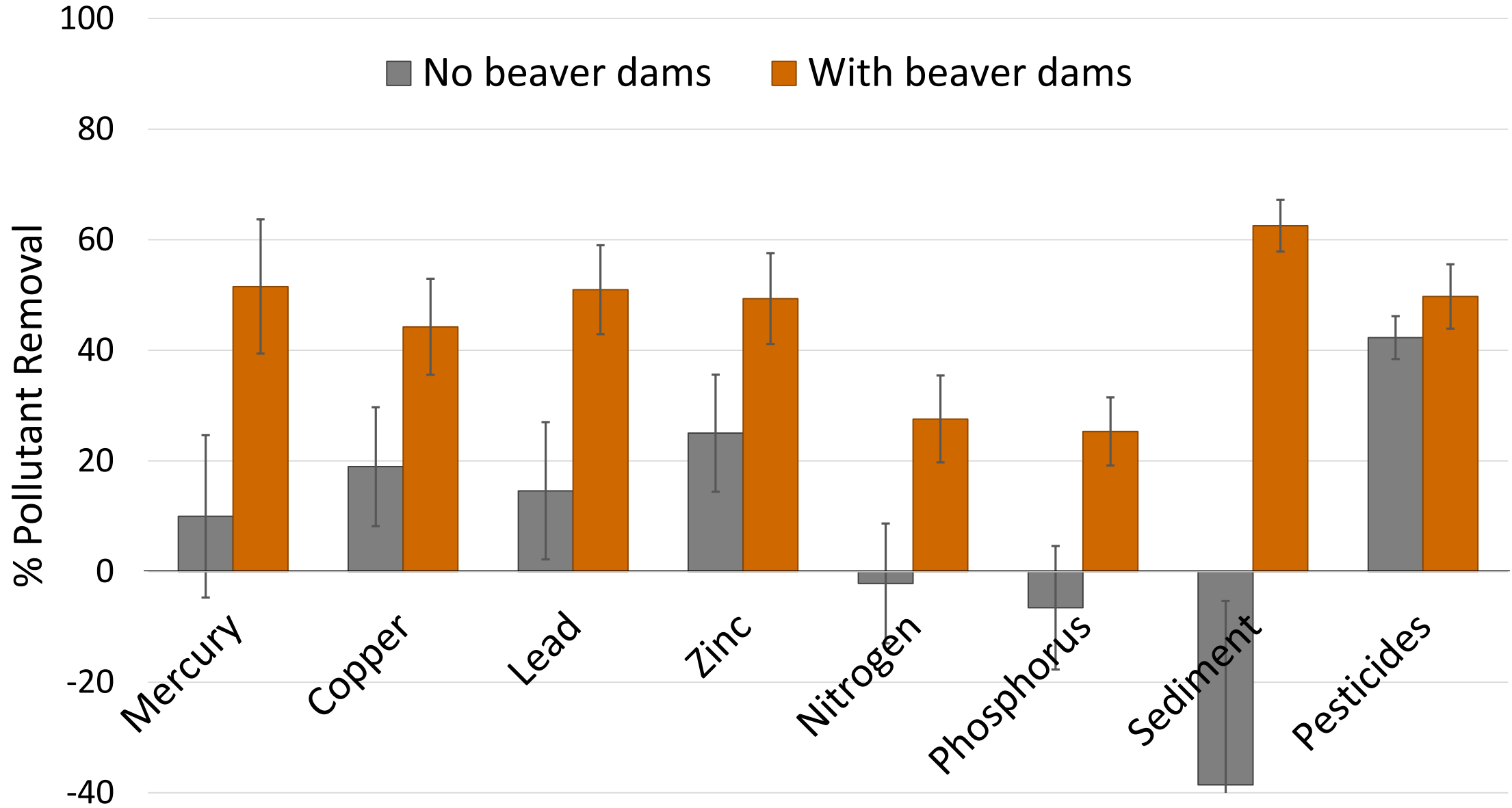
- Removed dams experimentally



Results



Results



Beaver dams slow and filter stormwater



Conclusions

- Beavers in water quality facilities
 - Can show up where you least expect them (so, always plan for them)
 - Can drastically alter flow paths, residence times, etc.
 - In this case, dams improved pollutant removal

