



Sample coupons coated with acrylic base, submerged at the Tonka Bay Marina (Lake Minnetonka), the UMN boathouse (Mississippi River) and the Duluth Superior Harbor. Coupons were coated with paint containing control protein (BSA; 200µg/mL), copper oxide (Copper; 200µg/mL) or our lactonase enzyme (GcL; 200µg/mL) and submerged for 45 days (July-August 2019). In the Duluth Superior harbor, steel and polycarbonate coupons were used. Polycarbonate was used for the other sites. The lactonase embedded coatings shows highest performance in reducing biofouling (the dark dots attached to the coupons) and the adhesion of zebra mussels (circled in red). Replicates (A and B) shows that lactonase-based coating significantly outperforms other testing coatings for biofouling and zebra mussel adhesion.