

## **Silicon concentration comparison of five eelgrass (*Zostera marina*) locations in the Bagaduce River, ME**

Seagrasses are being threatened by anthropogenic eutrophication, which has led to recent declines in seagrass populations globally. The processes contributing to silicon uptake and use in marine angiosperm plants is unknown. The following study quantifies and compares the silicon concentration of rhizomes and leaves of eelgrass (*Zostera marina*) in five locations in the Bagaduce River, ME estuary that have experienced little changes. Samples from five locations were collected, processed and dried. Once dried, samples were digested in 5% sodium carbonate solution at 90 °C for 1 h. Silicon was measured using a molybdenum blue colorimetric analysis using a spectrophotometer at 810 nm. No significant difference was found between sites for the rhizome silicon concentration, while site 5 (360 m downstream) was significantly higher than the other sites for the leaves. No significant relationships were found regarding the epiphyte, leaf growth and silicon concentration. In the Bagaduce River silicon is likely not limiting because diatom dominant epiphytes and eelgrass can coexist within the same area, which does not result in changes.