2. Citizen Science

For more than 50 years, Fairfield has benefitted from the Mill River Wetland Committee (MRWC), a non-profit organization with the simple mission: to educate the community about the value of wetlands, to advocate for their continued protection, and to engage all people in the fight to protect our environment. MRWC believes that the most powerful protection for our environment comes through education.

MRWC is an integral part of the Town of Fairfield and the curriculum of the Fairfield Public and Parochial schools. Recognizing this, the Town gave $5,000 to MRWC in FY 2017. The Fairfield Public Schools paid $8,500 for the administration and provision of field trips for over 3,000 school children. The Fairfield Public School PTAs that had their students participate in the MRWC River Lab program donated a total of $8,000. This funding and collaboration shows how MRWC is truly a public-private partnership with the Fairfield Community.

In MRWC’s fourth watershed education unit, members of the community monitor watershed health at a local estuary. Every May, students from middle schools across Fairfield, guided by teachers and trained adult volunteers, observe and record conditions, perform field tests of water quality, and assess biodiversity. Several groups of students collect and analyze data from the same estuary over a one month period.

Water data collected:

* Turbidity (cm)
* pH
* Salinity (ppt)
* Dissolved Oxygen (ppm)
* Nitrate Levels (ppm)
* Phosphate Levels (ppm)
* Water temperature (degrees Celsius)
* Depth of water (cm)

Additional data collected:

* Air temperature
* Rainfall (past 7 days)
* Date of last rain
* Current Date Time
* Time of low tide
* Tide phase and direction (coming in or going out)
* Moon phase
* Wind speed (knots) and direction

In combination, these additional data points give context to the water data collected. For example, heavy recent rainfall may increase the height of the water while decreasing the salinity and turbidity of the water.

While in the field, students also collect and record organism data to assess the biodiversity of the estuary. Fish are weighed and measured. Population densities are assessed for a wide variety of organisms, including plants, macro-algae, crustaceans and mollusks. These measures assess the health not just of the estuary, but of the entire watershed.

More information about these, and other MRWC programs, can be found on the website: [www.mrwc-fairfield.org](http://www.mrwc-fairfield.org)