



The Wilson Bay Watchdogs is a formal Science Volunteer program for 8th grade middle school students of Onslow County designed to merge science with fun and adventure.

The program is part of the Sturgeon City Science Series, and funded by the Burroughs Welcome Fund and the City of Jacksonville.

The Wilson Bay Watchdog program takes place after school, at Sturgeon City and on Wilson Bay with lab work and volunteer work on the Bay. This program demonstrates that with teamwork more can be accomplished than an individual can by themselves. For the Wilson Bay Watchdog program, candidates can concentrate on one of three educational volunteer tracts that include: ***Water Quality Analysis, Bivalve Physiology*** or ***Habitat Restoration***.

The student can determine which tract best suits his or her schedules as well as their individual interests. During the session the students are encouraged to pick one day: Tuesday, Wednesday or Thursday, that best fits their schedule and will attend that work day each week for 6 weeks. The staff will send out a letter after the initial training session with the student's scheduled workday. Only one workday is allowed to be missed and the student still is able to graduate from the program.

Turn in applications to the school representative. There will be a mandatory 6-hour training session before a candidate can participate. Each student will need to attend this training session. Training sessions are scheduled for days that students are out of school from 9:00 am until 3:00 pm at Sturgeon City.

The program will be coordinated with the assistance of the Jacksonville-Onslow Volunteer Center as an environmental volunteer activity. During the graduation ceremony, the students will earn their incentives, such as a Wilson Bay Watchdog certificate, hat and/or T-shirt.

The areas of Focus are:

Water Quality Analysis	Bivalve Physiology	Habitat Restoration
The student will learn chemistry involved in monitoring Wilson Bay. They will learn standard field collecting techniques and lab protocol. They will be responsible for collecting weekly water samples for nutrient analysis, phytoplankton identification, and	The student will learn the biology, ecology and physiology of the shellfish responsible for the Bioremediation of Wilson Bay. This will include the construction and maintenance of spat bags, frames and CHUBS as well as the planting of juvenile bivalves into	This program will allow the student to evaluate the restoration of a healthy ecosystem. The history of the bay and its problems will be identified, at which time the student will be asked to evaluate the short and long term processes and to

<p>coliform and stormwater preparations. The student will learn how to maintain and operate a YSI 85 handheld field meter and 6 YSI dataloggers that are constantly monitoring Wilson Bay and control sites at Mill Creek and Fisherman's Wharf. This includes: cleaning and calibrating the dataloggers, changing dissolved oxygen membranes, pH electrolytes, and turbidity sensors as well as downloading data and deleting /creating files in Microsoft Excel. They will help with stormwater mitigation and learn how these events change the water chemistry and animal distribution. This will allow us to educate them on how to minimize human impact on our natural waterways and habitats.</p>	<p>the bay. Juvenile bivalves are first placed into spat bags and upon maturity, they need to be moved to CHUBS. A set amount of oysters at each of the 15 research sites are monitored monthly for growth and mortality, this will give the student the opportunity to work with micrometers, calipers and electric scales. The student will log all scientific data in a journal and conduct basic background research on bivalves and how they have been utilized in research in the past. This will allow them to make a better assessment of the Bioremediation of Wilson Bay.</p>	<p>conduct basic background research for the "expected results". The student will then assist with the monthly finfish assessments of the bay and three other sites, Mill Creek, Chaney Creek and Fisherman's Wharf. They will learn how to set up, maintain, deploy and break down a 30' Marine Fisheries trawl net. They will learn how to identify and measure the various species of commercial and non-commercial fish as well as the fish's life cycle and where it fits into the food chain. They will help with the quarterly benthic sampling process where the student will learn how to operate box core samplers, how to sieve for organisms and how to preserve the samples for analysis.</p>
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