Austin Youth River Watch

July 2018 - June 2019 Impact Summary





This report summarizes preliminary impact findings of the Austin Youth River Watch (AYRW) program for the year so far. We are still collecting and compiling data on more comprehensive outcomes for the July 2018 - June 2019 year, though we are pleased to report that we are on track to meet or exceed all of our programmatic goals!

Students and Demographics

This year so far, we have had 117 student River Watchers in our regular program, and served an additional 35+ youth through outreach and special projects. The AYRW program is targeted towards high school students from underserved communities and at-risk youth. Approximately 69% of our

students this year are economically disadvantaged, and "economically disadvantaged" is defined for our program as students who are eligible for free or reduced lunch in the public school system. About 89% of our students identify as belonging to an ethnic minority group, with the largest minority group being Hispanic, and the second largest minority group being African American.

Environmental and Educational Impacts

River Watchers monitored water quality at 28 different sites along local waterways, and performed restoration projects at 18 different creek and park sites this past year. Our water quality data, shared with the Lower Colorado River Authority (LCRA), can be found on our website at this page link,

https://riverwatchers.org/results/water-quality-data. Each point on the map on the page will reveal a link to an LCRA data page for each site. Students also performed *E. coli* investigations at three different sites identified by the City of Austin Watershed Protection Department



(WPD) as critical areas with unknown pollution sources. These sites were along Buttermilk Creek, Waller Creek, and at the confluence of Poquito Creek and Boggy Creek. Our data was shared with WPD to help them track the possible sources of *E. coli* pollution in these areas. For the 18 restoration projects, River Watchers performed creek and park clean-ups, watered newly planted trees, planted native vegetation, removed invasive species, and built stormwater control structures such as swales and rain gardens.

Among our 117 students this year, 39 are graduating high school this spring, 10 students became River Watch Mentors by demonstrating a mastery of water quality and watershed restoration concepts taught in our program, and 11 students are serving as River Watch Ambassadors by being elected by their fellow students and performing outreach activities for AYRW. We are still compiling academic year-end assessment data on over 34 different educational and qualitative metrics of our afterschool program, though preliminary results show that 80% of our students now feel more confident about their abilities participating in science or environmental activities, and 87% are more interested in environmental issues than they were before being in our program.

We are on track with our 100% graduation rate, with all 39 seniors graduating high school this year. Nearly all River Watch students are defined as "at-risk" of dropping out by the Texas Education Agency (TEA), which is why among our goals include high school graduation. At this time, data is still being collected, but so far: 31 of our graduating seniors will be attending college after high school; 14 are ranked in the top of their class; 16 have been awarded scholarships, internships, or other honors; and 26 students (67% of our seniors) plan to pursue careers in STEM.



The AYRW program has been designed to meet our educational and environmental goals. Each of our 10 River Watch afterschool groups (Akins High School, Austin High School, Crockett High School, Eastside Memorial High School, Lanier High School, LBJ High School, Manor High School, McCallum High School, Reagan High School, and Travis High School) are with us one day per week for the entire school year. On a typical day in our afterschool program, we take our students out to 1 of 28 testing sites to test the water quality. On some days River Watchers perform environmental restoration activities, often with community partners who are STEM

professionals. Finally, they gain a further appreciation of nature through outdoor adventure activities like overnight campouts and canoe trips approximately 6 times each school year. For most of our students, it is because of the AYRW program that they get to experience outdoor adventure activities like overnight campouts or canoeing for the very first time, and such experiences with their peers are often transformative.

Social and Equity Impacts

Our program is intentionally designed to be accessible to our target population of high school students from underserved communities, and again nearly all of our students each year are defined as "at-risk" of dropping out by the TEA. We provide: transportation, often the #1 barrier for the underserved; healthy food, to alleviate nutrition access issues; and modest participation stipends, to better enable those who are economically disadvantaged, and who work afterschool to support their household, to be in our program. This past year, 69% of our students are economically disadvantaged, and 89% are ethnic minorities.

Among the long-term goals for the AYRW program include diversifying the STEM pipeline. This year, with 67% of our seniors planning to pursue careers in STEM, and preliminary results showing that 80% of our students feel more confident about their abilities participating in science or environmental activities, and 87% are more interested in environmental issues than they were before, we believe we are continuing to make a difference in the diversity of STEM fields.

More comprehensive program outcomes will be compiled mid-summer, but initial feedback from our graduating seniors this year has already been obtained. Here is a sampling of some of their comments about the most important things that they have learned in our program:

- "In River Watch I learned that our surrounding environment can tell stories. It's almost like a
 history museum in a way because what lies within a forest or park can tell the past trails and
 activity. It tells of the damage and care it's received within time."
- "I've learned to be in an environment with my friends having fun but still do the tasks we are supposed to do."
- "One of the most important things I've learned is patience. Whether I'm conducting tests or

waiting to get food at the AYRW EcoHouse, being patient with myself and others is a trait that will translate anywhere and I am proud that River Watch has played such a big role in it."

- "The littlest thing makes the biggest impact"
- "The value of teamwork and friendship"
- "Leave No Trace principles"
- "To not be afraid to try new things. You may end up really enjoying it in the end."
- "How to talk to people better. I've learned this by talking to people about what AYRW is as well
 as how we run our weekly water quality tests."
- "The most important thing I have learned in River Watch is to take care and value our environment."
- "Different components to water quality and survival of aquatic life"
- "The most important thing I have learned in river watch is that it is important to care for our rivers and creeks. Earth is our home and we must take care of it."
- "In River Watch I learned how to test how contaminated water is but most of all I've learned that I should always do my best and test my limits."

