

**Broward Schools/NatureScape Broward Environmental Partnership Agreement  
Return on Investment  
July 2017 - June 2018**

This past school year (2017-2018) saw implementation of the first year of the third partnership agreement between the School Board of Broward County and the NatureScape Broward program. This agreement continues to build upon the progress and achievements realized during the original two agreements and focuses on enhancing sustainability measures within schools in a holistic approach that brings all of the County's efforts, resources, and programs under an umbrella initiative, thereby maximizing access and the use of various tools. Among the most notable program accomplishments during the reporting period were:

- The delivery of the Sixth Annual P<sub>3</sub> Eco-Challenge, a school-wide competition that entails demonstrating participation in or implementation of different sustainability metrics based on a rubric composed of six comprehensive categories. The P<sub>3</sub> Eco-Challenge Recognition Awards Ceremony, which was held in May 2018, encourages, recognizes, and rewards schools, teachers, students, administrators, and volunteers for their efforts in addressing the challenge. Over \$35,000 in cash and in-kind prizes were received in sponsorships and awarded to schools, teachers, students, and support staff this year.
- Irrigation Service evaluations resulting in actual water savings of almost 36,000,000 gallons of water annually and approximately \$150,000 in annual cost savings\* Water audits conducted at three Broward schools identified an additional \$71,667 worth of potential annual cost savings that could be made by retrofitting/replacing various fixtures within the schools and, in addition, save over 6,700,000 gallons of water annually.
- The implementation of new climate change training and curriculum resources for teachers to utilize in presenting Climate Change Science and Water Resources Management education to students.
- Bringing increased support from NatureScape Broward's partner, the National Wildlife Federation, to provide environmental training and landscaping materials for several schools as part of the Broward Habitat Connectivity Project as well as sponsoring additional climate change training for teachers.
- The implementation of the Junior Sustainability Stewards program to introduce at-risk students to STEM/environmental citizen science, mentoring, scholarships and a career path toward environmental science or advocacy/policy making.

During the past year of program implementation, reimbursement paid to Broward County for delivery of program services per the terms of the Agreement averaged \$54,553.50 per quarter for a total annual cost of \$218,214. Funding provides for the dedicated support of 2.5 FTEs and program operational expenses (e.g., print materials, educational resources, office supplies, vehicle expenses, etc.).

*\*Additional funds that would be incurred annually in the absence of changes made as a result of irrigation evaluations.*

Environmental Planning & Community Resilience Division (EPCRD) program staff dedicated to implementing the Environmental Partnership with Broward Schools include:

- 1 FTE – Delivering environmental programming to students, teacher trainings, and securing sponsors for the P<sub>3</sub> Eco-Challenge Recognition Ceremony (Victor Suarez)
- 1 FTE – Providing irrigation system assessments, indoor water audits, and Facilities Management training (Maena Angelotti)
- 0.5 FTE – Providing NatureScape Broward program and office support (Kimberly Mayo)

Additional EPCRD personnel providing program management and administrative support include:

- Director, Environmental Planning and Community Resilience Division (EPCRD), (Jennifer Jurado, Ph.D.)
- Water Resources Manager, EPCRD (Carolina Maran, Ph.D., P.E.)
- Water Planning Program Manager, EPCRD (Robert Rudolph)
- NatureScape Broward Outreach Coordinator, EPCRD (Rose Bechard-Butman)
- NatureScape Broward Irrigation Service Coordinator, EPCRD (Robert Wanvestraut)
- Administrative Support, EPCRD (Andrew Tucker/Carole Wilschke/Norma Ellison)
- GIS/Technical Support, EPCRD (Katie Lejis)
- Assistant Director, EPCRD (Samantha Danchuk, Ph.D., P.E.)
- Natural Resource Specialist, EPCRD (Jill Horwitz)
- Junior Sustainability Stewards Program Manager, EPCRD (Nancy Metayer)

This additional program support represents the additional dedication of 0.8 FTEs provided as a Broward in-kind cost share.

Other measurable program accomplishments for the past school year include:

- The delivery of 236 educational programs and workshops (exclusive of Water Matters Day) and staff training to directly benefit 5,830 students, 42 teachers, and 60 facilities managers. These include classroom and outdoor programs, teacher in-service training, Habitat Steward training, and facility maintenance training.
- 38 Irrigation system evaluations conducted at 17 schools to achieve a total water savings of 35,820,939 gallons of water. Along with this, an estimated annual additional cost savings of \$149,743 derived from irrigation system evaluations and associated reductions in energy and water usage.
- \$154,367 in grant awards and other funding and in-kind services secured by Broward County on behalf of the Broward School District, including:
  - \$50,000 in foundation funding to support the Junior Sustainability Stewards program
  - \$38,841 in cash and in-kind prizes to support the P<sub>3</sub> Eco Challenge awards and ceremony.
  - \$46,987 for 2,014 hours of NatureScape Broward-solicited volunteer time to assist with environmental programming and school landscaping improvements and projects.

- \$36,955 in grant funding to support, climate change training for teachers and students, and miscellaneous equipment for Broward schools

In addition to the in-kind cost share provided by other EPCRD staff, annual operational cost savings, grant awards, funding secured for the P<sub>3</sub> Eco-Challenge awards and ceremony, and volunteer hours provided by NatureScape Broward volunteers for school projects, a return-on-investment (ROI) of 1.14 or 114% was realized this reporting period.

There are other benefits provided by the Partnership Agreement as well which are more difficult to quantify. On the academic side, these include opportunities for students to learn about their natural environment through outdoor classroom experiences; exposure to career opportunities in various environmental fields; and, the development of a strong foundation in environmental stewardship to be shared at home and in the communities in which we live. On the physical side, benefits of improved irrigation efficiency include improved resiliency of our aquifer system to saltwater intrusion, reductions in use of fertilizers, fungicides, and other landscape care chemicals, as well as development of more resilient school landscapes.

The following provides additional details on the return-on-investment for the 2017-2018 school year:

Description	SBBC Funding	Return-on-Investment
Staffing	\$197,972	\$91,527 (Additional County in-kind)
Operational	\$20,302	\$149,743 irrigation savings \$71,667 water audit savings (actual and potential annual cost savings)
P <sub>3</sub> Eco-Challenge Awards and Ceremony		\$38,841 (secured sponsorships)
Other grants and services provided external to agreement		<ul style="list-style-type: none"> <li>- \$50,000 in grant funding to support the Junior Sustainability Stewards program</li> <li>- \$3,600 from NWF to support climate education training for teachers</li> <li>\$10,000 for landscaping and materials from various grants</li> <li>- \$3,400 deferred meeting room fees</li> <li>- \$639 Water Bottle filling station for Low Water Challenge winner – Orange Brook Elementary School</li> <li>-\$900 Smart irrigation controllers</li> </ul>
Volunteer time (NatureScape-solicited)		\$46,987 (2,014 hours @ \$23.33/hr) <a href="https://www.independentsector.org/volunteer_time">https://www.independentsector.org/volunteer_time</a>
Annual Total	\$218,214	\$467,304