

**Broward Schools/NatureScape Broward Environmental Partnership Agreement  
Return on Investment  
July 2016 - June 2017**

This past school year (2016-2017) saw implementation of the fifth year of the current 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 agreement 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 Fifth 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 2017, encourages, recognizes, and rewards schools, teachers, students, administrators, and volunteers for their efforts in addressing the challenge.
- Irrigation Service evaluations resulting in actual water savings of over 68,000,000 gallons of water annually and over \$250,000 in annual cost savings.\*
- Water audits conducted at two Broward schools identified \$45,502 worth of potential annual cost savings that could be made by retrofitting/replacing various fixtures within the schools and, in addition, save over 4,000,000 gallons of water annually.
- The development of new curriculum resources for teachers to utilize in presenting Climate Change science education and Water Resources Management to students.
- The completion of six Habitat Connectivity landscapes on school campuses to support wildlife and enhance tree canopy.

During the past year of program implementation, reimbursement paid to Broward County for delivery of program services per the terms of the Agreement averaged \$53,205.50 per quarter for a total annual cost of \$212,822. Funding provides for the dedicated support of 2.5 FTEs and program operational expenses (e.g., print materials, office supplies, vehicle expenses, etc.).

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

- 1 FTE – Delivering environmental programming and teacher training (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 funds that would be incurred annually in the absence of changes made as a result of irrigation evaluations.*

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.)
- Water Planning Program Manager, EPCRD (Robert Rudolph)
- NatureScape Outreach Coordinator, EPCRD (Rose Bechard-Butman)
- NatureScape Irrigation Service Coordinator, EPCRD (Robert Wanvestraut)
- Administrative Support, EPCRD (Andrew Tucker/Carole Wilschke/Norma Ellison)
- GIS/Technical Support, EPCRD (Katie Leis)

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, 51 teachers, and 520 facilities managers. These include classroom and outdoor programs, teacher in-service training, Habitat Steward training, facility maintenance training, and the Facilities Servicepersons' Conference.
- 92 Irrigation system evaluations conducted at 38 schools to achieve a total water savings of 68,149,425 gallons of water. Along with this, an estimated annual additional cost savings of \$254,619 derived from irrigation system evaluations and associated reductions in energy and water usage.
- \$111,444 in grant awards and other funding and in-kind services secured by Broward County on behalf of the Broward School District, including:
  - \$35,899 in cash and in-kind prizes to support the P<sub>3</sub> Eco Challenge awards and ceremony.
  - \$38,590 for 1,700 hours of NatureScape-solicited volunteer time to assist with environmental programming and school landscaping improvements and projects.
  - \$36,955 in grant funding for landscape improvements at 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 volunteers for school projects, a return-on-investment (ROI) of 122.91% 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 2016-2017 school year:

<b>Description</b>	<b>SBBC Funding</b>	<b>Return-on-Investment</b>
Staffing	\$192,206	\$60,107 (Additional County in-kind)
Operational	\$20,616	\$254,619 irrigation savings \$45,502 water audit savings (actual and potential annual cost savings)
P <sub>3</sub> Eco-Challenge Awards and Ceremony		\$35,899 (secured sponsorships)
Other grants and services provided external to agreement		<ul style="list-style-type: none"> <li>- \$36,955 for landscaping and materials from various grants</li> <li>- \$2,100 deferred meeting room fees</li> <li>- \$639 Water Bottle filling station for Low Water Challenge winner – Orange Brook Elementary School</li> </ul>
Volunteer time (NatureScape-solicited)		\$38,590 (1,700 hours @ \$22.70/hr) ( <a href="https://www.independentsector.org/volunteer_time">https://www.independentsector.org/volunteer_time</a> )
Annual Total	\$212,822	\$474,411