



2014-15 Pima Association of Governments Report

Teacher Workshops

The Arizona Water Festival (AWF) Program is supported by teacher professional development that focuses on pre and post festival lessons that lay the foundation for learning at the festival and improve retention after the event. The workshop also assists teachers in evolving their instructional practices towards a more student centered approach.

Throughout the school year Arizona Project WET worked to establish 4th grade teacher AWF workshops at school districts across Pima County. At long last our efforts have paid off. Thirty-nine teachers have committed to our 4th Grade Teacher Workshop to be held on July 2 this year. The twelve teachers attending from Vail, Marana and Tohono O’odham will provide valuable in-roads for establishing the water festival program in those districts. In addition, it has been difficult to get Amphi teachers to attend professional development during the school year. The thirteen Amphi teachers reached in this coming workshop will enable us to expand the reach of the existing Tucson Festival beyond the 18 teachers and 473 students that took part this year. Each Arizona Water Festival can serve up to 1000 students.

DISTRICT	STUDENTS REACHED ANNUALLY	NUMBER OF TEACHERS
Amphitheater School District	434	13
Flowing Wells School District	125	4
Vail Unified School District	120	4
Tucson Unified School District	94	3
Catalina Foothills School District	135	2
Diocese of Tucson	30	1
Tohono O'odham Nation	68	3
Marana Unified School District	141	5
Mesa Public Schools	35	1
Sahuarita Unified School District	30	1
Yuma School District #1	35	1
AZ South- BIE	170	2
No District (non-formal educator)	5	1
TOTAL	1384	39





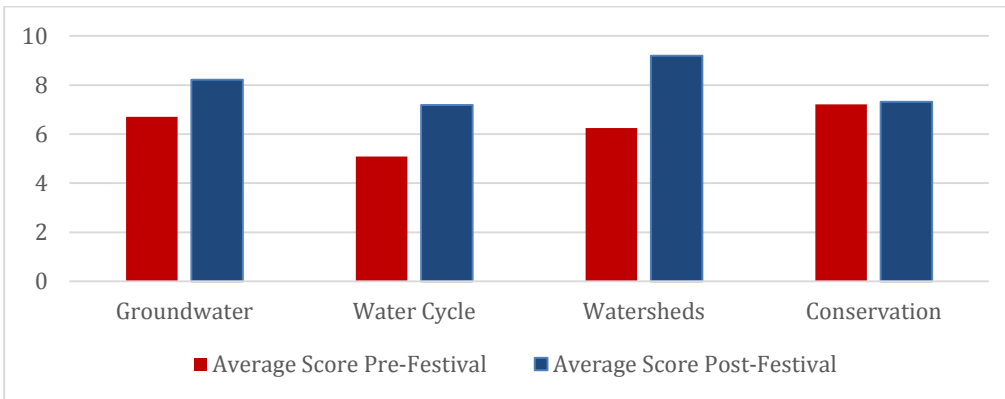
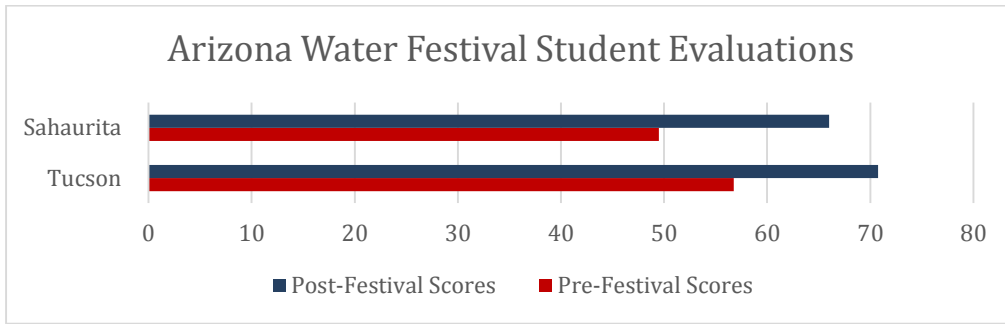
In other workshops, Arizona Project WET is expanding its reach into new districts as well. Nine teacher academies (multi-day) or workshops were held in the region over the reporting period reaching 172 teachers. By establishing a good reputation with teachers of all grade levels within a district, we are building a foundation for positive partnership with district administrators.

School District	Number of Teachers	Number of Students Reached
Tucson Unified School District	63	6225
Amphitheater Unified School District	30	2337
Marana Unified School District	12	573
Sunnyside Unified School District	6	499
Sahuarita Unified School District	8	483
Flowing Wells Unified School District	9	359
Vail School District	7	345
Round Valley Unified School District	3	310
Baboquivari Unified School District	2	190
AZ South- BIE	2	170
Catalina Foothills School District	3	163
Griffin Foundation School District	2	125
Tanque Verde Unified School District	1	100
Continental Elementary School District	1	100
San Simon School District	1	30
Window Rock Unified School District	1	0
Other	21	9695
TOTAL	172	21704

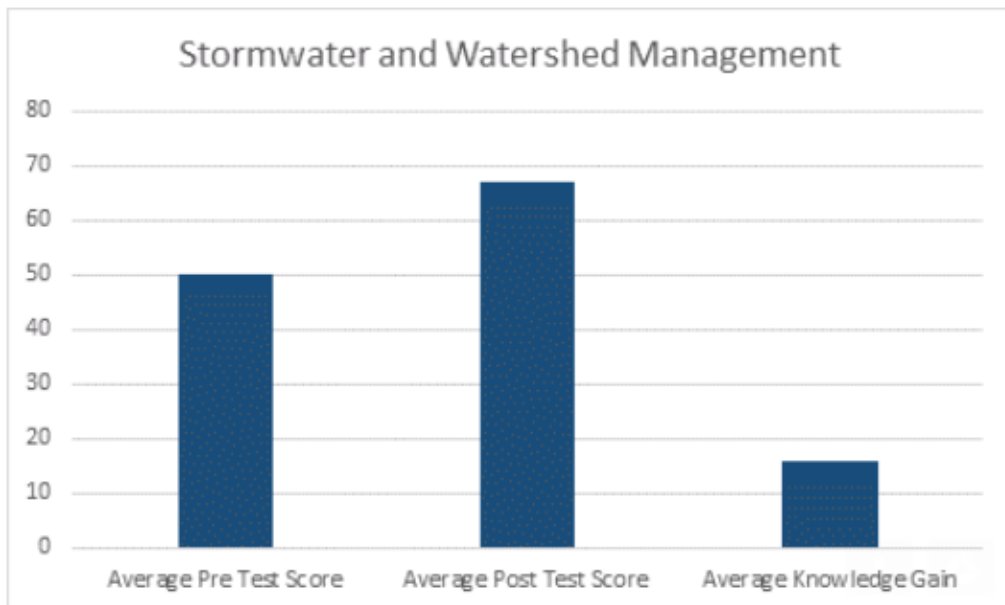
Arizona Water Festival Events

The two Arizona Project WET Water Festivals in Pima County were a huge success. The two festivals served the communities of Tucson in the Amphitheater School District and the towns of Sahaurita and Green Valley. Pima Association of Governments funding helped us to sustain these festivals while working to establish new festivals in the county. These festivals provided hands on water education for a combined total of **917 fourth grade students, 37 fourth grade teachers, and were facilitated by 48 trained adult volunteers**. However, the Water Festival is not just a fun day at the park. Through pre and post festival learning assessments, we know that fourth grade students who participate in the festival unit show clear knowledge gains in all areas. These Pima County students showed an **average of 17% knowledge gain** after taking part in the Arizona Water Festival (AWF) program. The graphs below show student performance in key areas.





More specifically, APW measured the following knowledge gains: 29 % in students identifying as a watershed manager, 13 % in knowing that picking up trash helps manage the watershed, 15 % in knowing that picking up pet waste is a watershed manager's job and 24% in understanding that everyone is responsible for managing the watershed.





In addition to facilitating real knowledge gains about water, the AWF program also serves to bring together community leaders. Along with PAG, other festival sponsors included the Freeport-McMoRan Foundation and Tucson Water.

Sweetwater Wetlands and Groundwater Classroom Presentations

As part of the City of Tucson program, APW Water Educators facilitate groundwater flow model in-classroom presentations as an integral part of the curriculum for Tucson (TUSD) and Flowing Wells School Districts (FWUSD) at the 3rd and 6th grade level. Groundwater is the least understood and least taught part of the water cycle. The interactive classroom presentation ensures that students understand that: groundwater is a system within the water cycle, water is between the grains of sand and gravel, groundwater moves because of gravity, and groundwater is important because it is part our water supply. The table below lists non-TUSD and FWUSD presentations that were given in the county.

District	Grade Level	Teacher Names:	Number of Classes:	Number of Students (total):
Baboquivari	6th	Diana Rea	4	68
Continental	6th	Ken Kratzer, Billie Gilmore	2	43
Continental	6th	Mrs. Larimer	2	51
Charter	6th	Ariadne Mohr-Felsen	2	51
n/a	College	Jenny Pena	1	8
	College	Teresa Scotland	1	9
Amphi	High	Chris Gabriel	2	40
Catalina Foothills	3rd	Bhola	3	72
Charter	3rd	Ramirez, Vaswani, Maddock, Nadiger,	4	100
Charter	3rd	Bianco, Schumacher	2	26
Sunnyside	3rd	Miss Lindburg, Mr. Villa, Miss Campbell and Miss Ber	4	98
Sunnyside	3rd	Victor Rodriguez Angela Soto Ms. Choffin Ms. Larter	4	120
		25	31	686





Another intervention offered by the APW Water Educators is the Sweetwater Wetlands Water Festival, an event designed to synthesize students' conceptual understanding of the water cycle and water supply. The Sweetwater Festival consists of lessons on the Water Cycle, Water Conservation and Watersheds, which have been adapted from the Arizona Water Festival model. In the fourth lesson, Tucson students tour the wetland and try to understand its' importance. The table below lists classes outside of TUSD and FWUSD that took advantage of the Sweetwater Festival.

Date:	Name of School:	District	Number of Students (total):	Number of Teachers:
10/8/2014	CHET-SE Homeschool group	Pima County - Private	32	1
10/16/2014	Happy Trails	Pima County - Private	10	2
11/20/2014	Adventure School	Pima County - Private	38	2
2/18/2015	Red Rock Elementary	Red Rock	39	2
4/13/2015	Castlehill Day	Pima County - Private	26	4
4/17/2015	Academy Adventures Midtown	Pima County - Charter	40	4
5/8/2015	Summit View	Sunnyside	85	4
Totals			270	19

The school on the Pasqua Yaqui Nation is within TUSD and takes advantage of these programs every year.

Events

Arizona Project WET supports county-wide community and education events and when possible facilitates learning with interactive teaching tools. The table below lists the events that APW water educators participated in this reporting period.





Event Name:	Districts Reached	Date:	How many students did you reach?	How many adults (including teachers)?	Length of Event hours
Wetlands & Wildlife Teacher Workshop	Pima County	11/1/2014	0	14	2.5
Arizona STEM Adventure	Vail, Sahuarita, Sunnyside, Marana, Amphi	11/14/2014	319	40	5.0
Pima County Teacher Workshop	Pima County	11/15/2014	0	15	2.5
Rattlesnake Ridge Science Night	Marana	11/18/2014	100	50	3.0
Pascua Yaqui Tribe Education Night		1/14/2015	7	7	1.5
Vail Science Night	Vail	1/22/2015	111	57	2.5
Ted Walker Youth Day	Pima Co.	1/29/2015	899	150	5.0
Sahuarita Water Festival	Sahuarita	2/6/2015	444	45	5.5
Expanding Your Horizons	Sahuarita	3/7/2015	19	2	4.0
Marana SciTech Event	Marana	3/7/2015	59	114	7.5
Future Innovators Night-SARSEF	Pima County	3/11/2015	160	72	4.5
Festival of Books - Science City	Pima County	3/14/2015	3000	2572	19.0
SWWL Discovery Journey	Amphi	4/1/2015	26	4	3.0
SWWL Discovery Journey	Amphi	4/3/2015	36	4	3.0
Spring Fling	Pima Co.	4/12/2015	61	25	6.5
Girl Scouts - imagine engineering	Pima County	4/19/2015	48	10	8.0
Earth Day-Marana Elementary	Marana	4/22/2015	254	12	4.0
Discovery Journey at Sweetwater Wetlands	Amphi	4/30/2015	18	4	2.5
STEM Festival - Tucson Hebrew Academy	Pima County	5/3/2015	246	180	4.5
Totals			5807	3377	94.0

