

# Bosque Ecosystem Monitoring Program

Volume 7, Issue 1  
Dec 2011

*BEMP Holiday Happenings*



Artists: Keila Gutierrez &  
CB Bryan (Amy Biehl Highschool)

## OUR MISSION

The mission of the **Bosque Ecosystem Monitoring Program** (BEMP) is collaborative **long-term** ecological monitoring of key abiotic and biotic processes and characteristics to promote continued education, understanding and stewardship of the riparian ecosystem to scientists, teachers, students, policy makers and the public.

[www.bosqueschool.org/bemp.aspx](http://www.bosqueschool.org/bemp.aspx)  
edited by: Kimi Scheerer



## Activities along the River

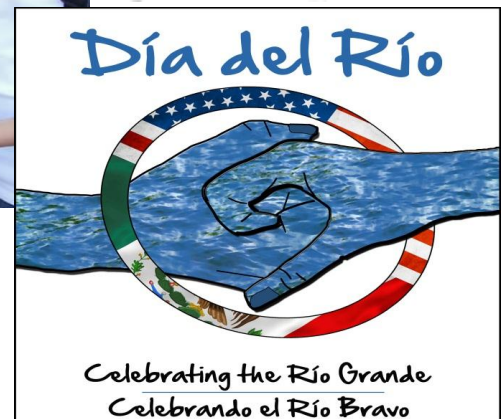
~ cold temperature times with BEMP interns & staff ~

**Artist's Statement:** The **Día Del Río** celebration allowed schools from all along the Rio Grande to come together to collect data to **monitor the current state of our river**. The piece created (left) portrays a river connected to people and nature within a circle. The circle shows a *sense of global unity* and *connectedness* as well as the concept of cycles and reoccurring processes that compose any natural ecosystem. It is important to emphasize the idea that humans are just as big a part of the environment as other living and non-living components. The main use of the color blue represents the vitality of water as the driving force of our local ecosystem and the world as a whole.



Keila works with BEMP students in the Cottonwood forests of the Rio Grande. To learn more about the annual **Día del Río** October event or to get involved contact BEMP Educator Kim Fike at [kimberly-fike@bosqueschool.org](mailto:kimberly-fike@bosqueschool.org).

Amy Biehl



"BEMP came into my life as a junior in an environmental science class at Bernalillo High School and since then, life has not been the same. I was privileged to join the team in the summer of 2010 as one of the summer high school employees and work with BEMP Co-Director Dan Shaw, (who ended up being a family friend and claims was the inspiration for my name). I guess it was just destined for me to be here. Now, I work part time while attending my first semester at UNM. I could not be more appreciative of the array of experience BEMP has provided me and the dynamic crew that always keeps things exciting!"

~ **Danny Ortwerth, BEMP Field Assistant**



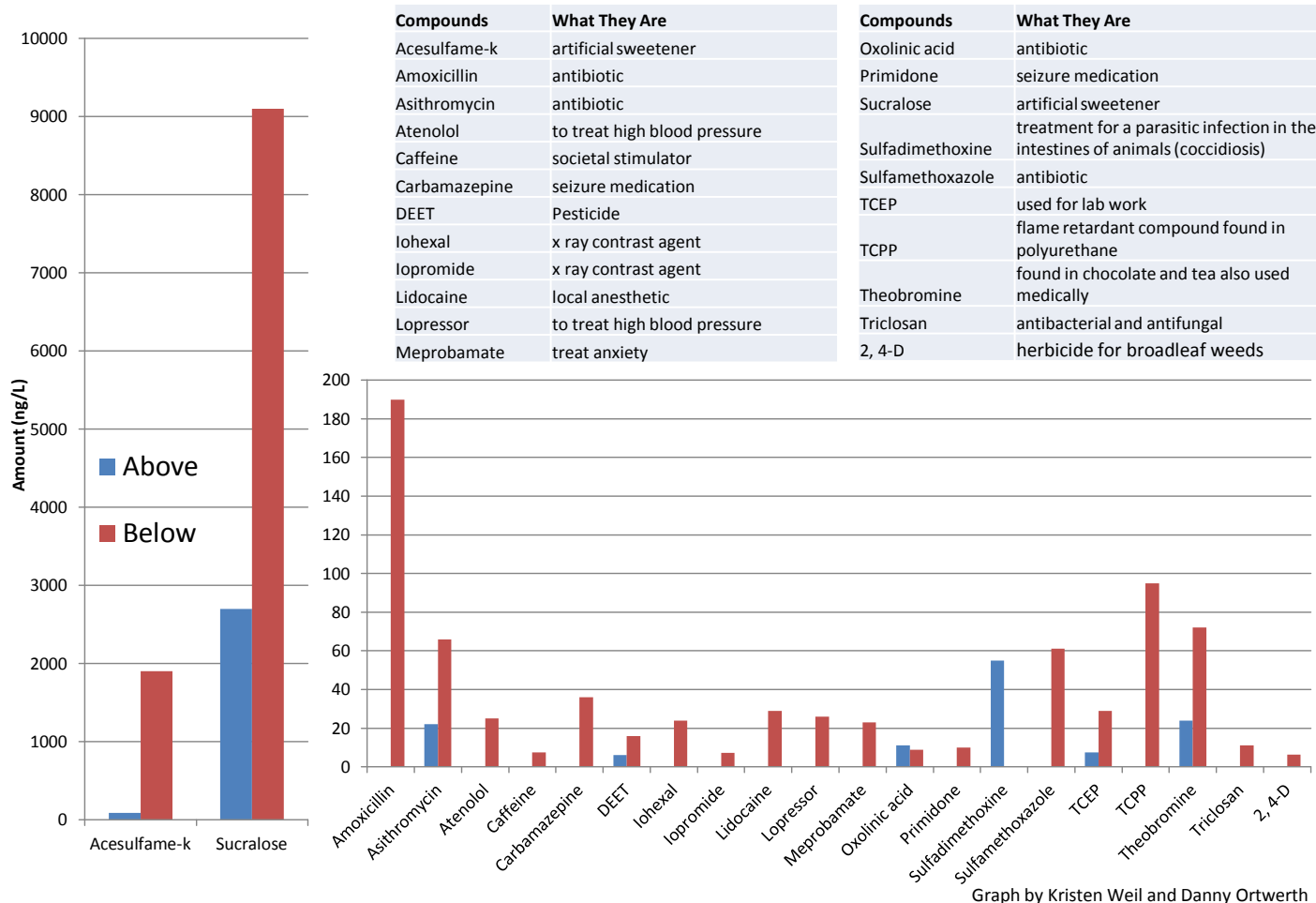
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scholarship • community • integrity

## Compounds Found in Rio Grande Above and Below the Wastewater Treatment Plant on June 27<sup>th</sup>, 2011



## Water Testing ah la Treatment Plant

~ by Kristen Weil, BEMP Field Assistant ~

Curious to find out what **chemical compounds** are floating down our mighty Rio Grande, BEMP took water samples at two different spots in the river as it flows through Albuquerque. The first sample was taken upstream of the drinking water diversion dam in order to capture what is in the river water before it enters our drinking water system. The second sample was taken downstream of the Southside Water Reclamation plant. This wastewater treatment plant cleans water that has been used by the city and then releases it back into the river. We sent the samples to a lab that tested for **80 different chemical compounds**, including those found in *pharmaceuticals, sunscreen and pesticides*.

Above is a graph of all the compounds that were found in the river above and below the wastewater treatment plant. Only **eight compounds** were present in our sample of the river *before* it is diverted into the drinking water system. *Below* the wastewater treatment plant, however, there were **20 compounds** present in the water at the time the sample was taken. The most abundant compounds were artificial sweeteners (sucralose and acesulfame-K) and an antibiotic (amoxicillin). As these compounds were not present in the river above the wastewater treatment plant, it can be inferred that they are a result of how the water is used in the city of Albuquerque. Some of these compounds may get into the water after being ingested by humans or animals and then excreted. These compounds do not get taken out of the water at the treatment plant and, as a result, they are released into the river and float downstream. To see a list of all the chemical compounds that were tested for that were not detected in the samples, visit BEMP's website at [www.bosqueschool.org/BEMP.aspx](http://www.bosqueschool.org/BEMP.aspx).

## Bernalillo County Bachechi Property OPEN to the Public



Located at 9521 Rio Grande NW, the newly opened *Bernalillo County Open Space* Bachechi property highlights 27 acres of public land adjacent to the City of Albuquerque Alameda Open Space. Construction, which started in fall of 2010, helped to create additional recreation trails AND environmental education opportunities along the riparian corridor. Land use includes: equestrian parking, xeric and native landscaping, a pecan orchard, a Bachechi Family memorial rose garden and expanded wetlands and agricultural fields to attract migratory water fowl.

In early November, team BEMP met with Bern. Co. Open Space Coordinator Colleen McRoberts to install a mini teaching BEMP site (1 well, 1 precipitation gauge, 1 leaf litter bin & 1 pitfall trap) next to the brand new Environmental Education building. To our delightful surprise, Bern. Co. Parks & Recreation Dept. Planning Manager Clay Campbell and his family (including Rio Grande Nature Center BEMP site rep & Wilson Middle School teacher Mary Erwin) stopped in to help finish installing the site.

~ see pictures to left ~



So far, this 2011-2012 School Year

**2,425**

...students, teachers, community members, college interns, research partners, parents, agency professionals, festival attendees, tribal representatives & government leaders...  
have been

**BEMPin' it Up!**

**Crawford Symposium Tuesday, Feb. 28<sup>th</sup> at Bosque School**

For more info, please contact Colleen Seager at [colleen.seager@bosqueschool.org](mailto:colleen.seager@bosqueschool.org) or 505.898.6388.

**4-7 pm dinner included**



Hello all, I am Morgan McNabb, a sophomore majoring in Wildlife Science at **New Mexico State University**. I am the new BEMP intern at Mesilla Valley Bosque State Park (MVBSP). MVBSP is New Mexico's 34<sup>th</sup> state park. Along with the park's Heritage Educator LuAnn Tafoya, we have teamed up to bring students and classes out to experience the parks wildlife, habitats, and of course to BEMP it up!

Since the site installation in June we have had many classes come out to the park. Our goal is to find a class to come out once a month to complete *monthly monitoring* with me. I am excited to be a part of the BEMP team and look forward to learning so much more.

Learn more about Mesilla Valley Bosque State Park at:  
[www.emnrd.state.nm.us/PRD/mesillavalley.htm](http://www.emnrd.state.nm.us/PRD/mesillavalley.htm)





# Welcome...

to the BEMP community!



## Welcome to BEMP Rio Rancho Cyber Academy!

A **BEMP-a-reff**ic welcome to Sue Thorstensen & her RRCA 6<sup>th</sup> graders! Sue and her students will be monitoring the Badger BEMP site this 2011-2012 school year.

### Participating Schools & Student Groups

Albuquerque Biopark	Kewa Middle School
Abq. Institute of Math & Science	La Academia de Esperanza
Armijo Elementary	La Cueva High School
Bandelier Elementary	Los Lunas High School
Bernalillo Middle & High School	Montessori of the Rio Grande
Bosque Farms Elementary	Mountain Mahogany
Bosque School	Navajo Elementary
Cottonwood Valley Charter School	NM Museum – Young Explorers
Dolores Gonzales Elementary	New Mexico State Parks
Earthforce: Summer of Service	North Star Elementary
Escuela Luz de Mundo	Ohkay Owingeh Comm School
Georgia O’Keeffe Elementary	Pueblo of Santa Ana
Harrison Middle School	Rio Grande Elementary
Holy Ghost Catholic School	Roots & Shoots
Hoover Middle School	Sandia Vista Elementary
Hope Christian School	School on Wheels Alternative HS
Infinity High School	Sevilleta National Wildlife Refuge
John Baker Elementary	Van Buren Middle School

### New Mexico Watershed Watch / BEMP Partners

Cimarron High School, Cochiti School, Desert Academy, East Mountain High School, Espanola Valley High School, Santa Fe Prep & United World College



## IMPORTANT DATES

Dec 19-20<sup>th</sup> – **BEMP monthly monitoring**

Dec 19-30<sup>th</sup> – APS Winter Break

Jan 17-20<sup>th</sup> – **BEMP monthly monitoring**

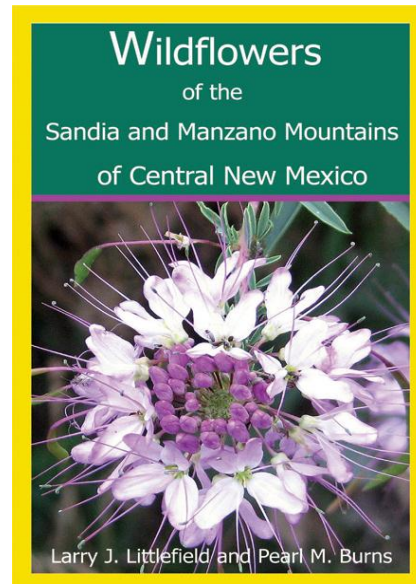
Jan 24<sup>th</sup> – **Green** Trails Sustainability Conference

- Bosque School 4-7pm
- for middle & high school students

Feb. 10-11<sup>th</sup> – Sevilleta NWR jackrabbit survey

Feb. 21-24<sup>th</sup> – **BEMP monthly monitoring**

- February is **CHEESE** in the field month!



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*Native Plant Society of New  
Mexico presents*

### *Wildflowers of Central New Mexico*



This wildflower guide, by authors Larry Littlefield & Pearl Burns, is intended for wildflower enthusiasts, hikers, and tourists. The book's 200 species are arranged first by flower color, then by common name and finally by scientific name.

<http://npsnm.unm.edu>

# THANK YOU

to those that sponsor BEMP

AMAFCA, Stormwater Quality Team ♦ Albuquerque Community Foundation ♦ Bernalillo County Open Space ♦ Bosque School ♦ Captain Planet Foundation, Inc. ♦ Educational Foundation of America ♦ Goodman Family ♦ McKee/Crawford Foundation ♦ Messengers of Healing Winds Foundation ♦ Middle Rio Grande Bosque Initiative/U.S. Fish and Wildlife Service ♦ Middle Rio Grande Conservancy District ♦ National Science Foundation's Schoolyard Education Program at UNM's Sevilleta Long Term Ecological Research Site ♦ New Mexico Association of Soil & Water Conservation Districts ♦ New Mexico Forest & Watershed Institute at Highlands University ♦ Norcross Foundation ♦ PNM Inc. ♦ Sandoval County ♦ U.S. Army Corps of Engineers ♦ U.S. Bureau of Reclamation ♦ USDA Forest Service ♦ Wal-Mart Foundation ♦ 7 Bar Foundation