

# Bosque Ecosystem Monitoring Program

Black Institute for Environmental Studies at Bosque School

[www.bosqueschool.org/bemp.aspx](http://www.bosqueschool.org/bemp.aspx)

May 2014: Bounding through Spring!

## 2014 Congress Events

~ A celebration of our adventures in the field ~



Students learn about predators and prey with Vince Case at the Sandia Mountain Natural History Center station.



The Zoo to You's Mimi Glover shares armadillo factoids and fun with Rio Rancho Cyber Academy students.



Sid Price with Avian Ambassadors has been a part of the congress for more than four years!

Each year BEMP celebrates a year of data collection with two congress events: a 7-12<sup>th</sup> grade event in conjunction with the NM Department of Game & Fish's Watershed Watch at El Rancho de las Golondrinas and a 4-6<sup>th</sup> grade event on the Bosque School Campus. What a stellar way for our BEMPer's to connect and reflect. A huge **THANK YOU** to our community educators and interactive stations, which included the following partners:

Albuquerque Open Space  
Albuquerque Water Utility Authority  
Avian Ambassadors  
CUIDAD Soil & Water's Rolling River  
El Rancho de las Golondrinas  
Frog Watch  
Gavilán the Hawk  
NM Herpetological Society  
Sandia Mountain Natural History Center  
Zoo to YOU

At the 4-6<sup>th</sup> grade event students rotate through 15 or 30 minute stations taught by community partners and BEMP staff. These stations include, 1) a BEMP data presentation overviewing our cumulative data and 2) Porky the Ambassador, taught by Dan Shaw and Bosque School wildlife students.

In contrast, at our 7-12<sup>th</sup> grade event at the Golondrinas, students both rotate through teaching stations AND present their experiences to each other. Peer teaching and presenting is a great final skill set AND makes for a fun day where students can integrate with other youth that monitor the bosque. This day of education is in partnership with River Source - <http://riversource.net>.



# Congress continued...



Science Coordinator Jennifer Schuetz shares these pictures as she moved through the day's events...

*Left:* Students rotate through presentation stations sharing the scientific and artistic learning experiences they encountered. Students work in groups and often focus on one aspect of the team presentation

*Center:* Students observe and record information about the local Golondrinas pond. Data includes water chemistry components like pH, dissolved oxygen, temperature AND macro-invertebrates.

*Right:* BEMP education and field assistant Matt Leister (far right) works with students to wear waders and take samples. Every year there is at least ONE soaker and LOTS of smiles. ☺

## Welcome Home Otters!

**First Graders learn how to make the river safe for otters during BEMP's 2014 Otter Days.**



BEMP welcomed nearly 250 Albuquerque first graders to the 2014 Otter Days on April 9<sup>th</sup> and April 29<sup>th</sup>. Children came from Mitchell Elementary, Montessori of the Rio Grande, Cien Aguas International School, Dolores Gonzales Elementary and Bandelier Elementary. Dan Shaw's Wildlife and Conservation Biology students organized fun activities for the children focused on the otter - its habitat, adaptations, what it eats, and how to make the Rio Grande safe for otters to come back. These included a hike along the bosque, "draw an otter," "otter's lunchbox," and "dress an otter," where Bosque High School students dressed a child in a waterproof poncho, whiskers, goggles and more in front of their friends.

Bosque School choir director Mrs. Hart and her students treated the kids to a performance of the opening anthem from Disney's *Frozen*, before the kids sat down to their picnic lunch in Sanchez Park. The first graders also loved playing near the duck pond and in and around Bosque School's face sculptures. They saw turtles, a porcupine, and a cooper's hawk and each classroom took home a copy of *Porky's Quest*, Lauren Bennett's illustrated book about the porcupine in the Rio Grande bosque. Throughout the event, Dan Shaw and his students reinforced the message of "scoop the poop" and other ways to keep the river clean, all so the children can someday say, "welcome home otters!"

## March Teacher BEMPshop... like a workshop, but BEMP-ier!



BEMP held an educator workshop early this March, with 11 educators from along the valley coming to Bosque School to share and learn. Our workshop included: a BEMP data overview from Dr. Kim Eichhorst (BEMP Co-Director) that highlighted local trends and impacts, a hike to and picnic lunch along the Rio, Hydrology 101 and a teacher 'Field Trip' to Alameda Open Space to see the San Juan Chama Drinking Water Diversion Dam! BEMP works with over 50 teachers each year from throughout New Mexico, striving to engage, educate and create our future stewards. Thanks for your time and energy BEMP teachers!

## Study Trip FUN with ABQ Sign Language Academy



This March BEMP worked with the **Albuquerque Sign Language Academy** for our first partner study trip adventure! In collaboration with the US Forest Service, we had 32 students hiking the bosque with binoculars and learning about our ecosystem with help from feisty school interpreter Carolina Quinones-Suarez. Thank you *Caro*... it was great to work with you! ☺ Utilizing the red light on the 'beepers', students of all hearing abilities were able to determine depth to the shallow groundwater table for UNM's Biology Department. It was a new and exciting day for educators Kimi Scheerer and Kelly Steinberg... stop in the

BEMP office to learn the signs for porcupine, water, BEMP and even scat (Kimi's favorite)! Learn more about the Abq. Sign Language Academy at: [www.aslacademy.com](http://www.aslacademy.com).

## BEMP Summer Programs at Bosque School



BEMP Education is re-launching our summer programming in conjunction with Bosque School's new am/pm scheduling. Educator Kelly Steinberg will be leading 6 weeks of eco-programming for students ranging from 1<sup>st</sup> through 8<sup>th</sup> grade. *Dates include:*

- June 2-6<sup>th</sup>: Bosque Biology Bonanza (7-8<sup>th</sup> grade)
- June 9-13<sup>th</sup>: Outdoor Leadership (7-8<sup>th</sup> grade)
- June 16-20<sup>th</sup>: River Kids (4-6<sup>th</sup> grade)
- June 23-27<sup>th</sup>: River Kids (1-3<sup>rd</sup> grade)
- July 7-11<sup>th</sup>: Bosque Biology Bonanza (4-6<sup>th</sup>)
- July 14 -18<sup>th</sup>: Weird & Wacky Wildlife (4-6<sup>th</sup>)

To learn more about additional sport and academic programming, prices and scheduling, visit:

<http://bosquesummer.asapconnected.com>

# UNM Department of Biology

## Mentors AIMS Science Fair Winner



Jarek Kwiecinski, a 9<sup>th</sup> grader at Albuquerque Institute for Math and Science (AIMS), studied soil microbial activity for his science fair project under the leadership of UNM Department of Biology Drs. Christina Takacs-Vesbach, Marcy Litvak and Robert Sinsabaugh and Ph. D. candidates Eva Robinson and Daniel Warnock. He specifically looked at adding amendments to soil that improve soil quality and habitat, allowing for increased microbial growth with improved carbon use efficiency, better carbon retention in biomass and less CO<sub>2</sub> respiration. This is important because in the face of increased CO<sub>2</sub> emissions, controls on large natural CO<sub>2</sub> sources need to be better understood.

In the Central NM regional science fair, Jarek was selected as regional representative to the Intel International Science and Engineering Fair in Los Angeles, CA May 11-16, 2014 and won several significant awards, including first place in senior division Environmental Science and seven special awards, with cash prizes totaling about \$1000.

Jarek won FIRST place in the Senior Environmental Sciences Category in the state competition with an award of \$150 and a NM Biotechnology and Biomedical Association award consisting of an all-expense paid trip to the BioGENEius Challenge, an advanced science research competition for high schoolers, held in San Diego, CA in June.



Jarek was introduced to these Biology Department researchers via **Jennifer Schuetz**, BEMP's Science Coordinator and adjunct faculty in the department. Two years ago Jarek and his classmates monitored a BEMP site in Albuquerque. After getting to know Jarek through his school, Jennifer mentored him in his science fair project last year.

**Congrats Jarek, Team BEMP is so very PROUD of you! 😊**

**THANK YOU THANK YOU THANK YOU**  
to those that sponsor BEMP

Albuquerque Community Foundation ♦ Bernalillo County Open Space ♦ Bosque School ♦ Greater Rio Grande Watershed Alliance ♦ Goodman Family ♦ LANL Foundation ♦ McKee/Crawford Foundation ♦ Middle Rio Grande Conservancy District ♦ McCune Foundation ♦ Mid Rio Grande Stormwater Quality Team (AMAFCA; Bernalillo County Open Space; City of Albuquerque; CUIDAD Soil & Water Conservation District; NM Dept. of Transportation; SSCAFCA & the Town of Bernalillo) ♦ National Science Foundation's Schoolyard Education Program at UNM's Sevilleta Long Term Ecological Research Site ♦ New Mexico Association of Soil & Water Conservation Districts ♦ Sandoval County ♦ U.S. Army Corps of Engineers ♦ U.S. Bureau of Reclamation ♦ USDA Forest Service



BOSQUE SCHOOL



### 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.*

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