

# Bosque Ecosystem Monitoring Program

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Outside is AWESOME!



Has spring sprung??

## OUR MISSION

The mission of the Bosque Ecosystem 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.htm](http://www.bosqueschool.org/bemp.htm)



## The Urban Flood Demonstration Project

Christian LeJeune, the former BEMP Education Outreach Coordinator, is now working full-time in the UNM Biology Department as a Research Scientist with the Urban Flood Demonstration Project (UFDP) funded by the U.S. Army Corps of Engineers. The UFDP is made up of an interdisciplinary team of scientists, researchers and environmental modelers with an interest in better understanding the ecological functioning of the Middle Rio Grande. The part of the project Christian is working on is in the vicinity of the Abq. Drinking Water Diversion Dam, located just south of the Alameda bridge in Albuquerque.



The 600-foot-long adjustable height bladder dam will divert water as a part of the San Juan Chama Drinking Water Project.

Christian's role in the project is to manage 16 groundwater wells installed with pressure transducers at four BEMP monitoring sites which bracket the Diversion Dam. These transducers are set to record groundwater levels every 15 minutes and are then matched with United States Geological Survey river stage height (which are also recorded every 15 minutes). This information assists in the analysis of surface-water/ground-water interactions in this stretch of the Rio Grande bosque.

In addition, Christian and Civil Engineering graduate student Isaiah Pedro have been examining soil structures and properties associated with each well to better understand how soils affect groundwater levels, infiltration rates, and bank storage. Finally, this research will help to determine if changes in groundwater levels have any measurable effects on site vegetation.

Preliminary analysis of groundwater well monitoring show that there is a direct relationship between water table levels and river stage height, with a general lag effect observed at most wells. In other words, when a flood pulse increases discharge in the river, it is followed by a rise in the water table. How quick the water table rises is a partial function of the soil structure associated with each well. Groundwater well data analysis also show that wells closest to the river banks have a more rapid response to changes in river discharge.

♦ Photo and article by Christian LeJeune! ♦

## BEMP PROGRAM UPDATES

- ♦ bookmark our website: <http://www.bosqueschool.org/bemp.htm>
- ♦ turn the page learn a little more about LTER's Schoolyard series
- ♦ looking for nature fun AND fashion – turn to page 3
- ♦ don't forget to mark down those "Important Dates" on the back page

# Cirriculum Corner

## My Water Comes from the Rocky Mountains

The Institute of Arctic and Alpine Research, an affiliation of the University of Colorado at Boulder, made BEMP students aware that they could have a chance to become a published illustrator.

*My Water Comes from the Rocky Mountains* will be the second edition of the first book in the Long-Term Ecological Research (LTER) Schoolyard series. The mission of LTER Education is “to promote learning about long-term ecological processes and the earth's ecosystems”. Participating students had a chance to read through the early edition of the next book and create their own visual masterpiece of what water means to them and their community!

**THANK YOU** and **GOOD LUCK** to participating teachers and students from:

**Rio Grande Elementary:** Mrs. Madden's & Mrs. Baca's 2<sup>nd</sup> grade classes and Mrs. Montgomery's 5<sup>th</sup> grade class

**Dolores Gonzales Elementary:** Mrs. Lazar's 4<sup>th</sup> grade class

**Bosque School:** Dr. Lester's, Mrs. DeRosear's, & Mr. Konrad's 6<sup>th</sup> grade classes

♦ to learn more check out: <http://schoolyard.lternet.edu/> ♦



Rio Grande Elementary 2<sup>nd</sup> grade students Carlos Flores (above) and Adrianna Carlson (below) read through the first edition book and work on an illustration entry respectively.



**Bad joke of the newsletter – Q. Why couldn't the flower ride his bike?**

**A: Because he lost his petals!**

Get an AWESOME resource:

- ♦ the next **Bosque Education Guide (BEG) workshop** is Friday, March 30<sup>th</sup> (you get a FREE BEG)  
*Contact:* Rio Grande Nature Center State Park @ 505.344.7240 to sign up!

GRANTS for Conservation & Restoration:

- ♦ \$25,000-\$250,000 matching funds from Fish & Wildlife Foundation Program (# 66115),  
[www.nfwf.org/guidelines.cfm](http://www.nfwf.org/guidelines.cfm)  
*Deadline:* April 1<sup>st</sup>, 2007 and September 1<sup>st</sup>, 2007

Cool Programs for FREE:

- ♦ Hawks Aloft, Inc. (HAI) – Birds of Prey Program (K-12) & Living w/ the Landscape (4-5<sup>th</sup>)  
*Contact:* HAI Educators – 505.828.9455

Eco-Hero's for a WICKED PRIZE:

- ♦ \$2,000 awards for Gloria Barron Prize for Young Heroes: [www.barronprize.org](http://www.barronprize.org)  
*Deadline:* April 30<sup>th</sup>, 2007





# CALENDAR CONTEST

Have your students create a masterpiece  
of what BEMP means to them, your  
school, or the community!

1. BEMP masterpiece size = 8 1/2" x 11"
2. submit art to Education Coordinator Kimi Scheerer at Bosque School by **Friday, March 30th**  
4000 Learning Road, NW  
Albuquerque, NM 87120
3. come to our BEMP Student Congress to find out who the winners are and get your *new* BEMP calendar (complete with BEMP monitoring dates and nifty BEMP factoids)
4. there are 12 months every year... that's 12 chances to win!

## Nature Bracelet

**Concept:** Have fun exploring local plant life and create a fashionable wearable bracelet!

**Age:** Try them all!

**Materials:** paper plates  
roll of clear packing tape  
6 inch sections of yarn  
hole punchers

**Where:** natural area, school grounds, backyard...

**Activity:** Hand out a paper plate and an 8 inch piece of packing tape to each student. Have them roll about 1/2 inch of both the cut (short side) edges under to create a sticky bracelet "pallet".

Once all students have a sticky pallet ready, take the opportunity to teach about the different plants in the area (native, exotic or ornamentals) and allow students to collect leaf, twig, bud or flower samples from the ground to place on their bracelet.

Once students have finished their masterpiece cut a second piece of tape to cover their artwork, pull off plate, trim away any paper residue, punch holes on each side and lace yarn through to tighten around wrist!



♦ activity presented by Kimawio Harrison, UNM BEMP bosque internship (408L/508L) student ♦



## No Child Left Inside!

Get involved with the *New Mexico Outdoor Education Initiative*.  
Let's work together to get our kids, teachers, and communities outside!

<http://outdoor.riversource.net>



# Fire in the bosque!

Update by Dr. Kim Eichhorst



**Belen BEMP site:** A & G tubs are gone and part of B vegetation transects (rebar) gone due to the new road to the river that fire fighters put it in to battle the fire. The south well is melted and the west well is a bit charred, but still functioning. Light ground fire went through most of the site.

**Valencia Forest BEMP site:** Pretty much toasted, with the exception of the A tub, the G line pitfall traps and one singed but okay litterfall tub F. All wells and rain gauges melted, but vegetation rebar are okay.

**Valencia Cleared BEMP site:** The cleared site acted as a perfect staging area for fire fighters to effectively fight and stop the fire... it did not burn!

## Participating Schools & Student Groups

APS School on Wheels

Bandelier Elementary

Bel-Air Elementary

Belen High School

Bernalillo High School

Bosque School

Cottonwood Valley Charter School

Creative Education Prep Institute

Dolores Gonzales Elementary

Duran Elementary

East Mountain High School

Harrison Middle School

High Desert Home School

Holy Ghost Middle School

Hoover Middle School

Hubert Humphrey Middle School

Horizon Academy

Jimmy Carter Middle School

John F. Kennedy Middle School

La Cueva High School

Los Lunas High School

Los Ranchos

Montessori of the Rio Grande

Monte Vista Elementary

Montezuma Elementary

Ohkay Owingeh Comm School

Pueblo of Santa Ana

Rio Grande Elementary

Sandia High School

Sierra Vista

South Valley Academy

Tohatchi High School

Tohatchi Middle School

Washington Middle School

Wingate Elementary

Zia Schools



## BEMP Student Congress

WHERE: Bosque School

4000 Learning Road NW

SE corner of Coors & Montano

TIME: 10:00am – 1:30pm

WHAT: come share your BEMP experiences and meet other teachers/students/professionals that participate in BEMP

WHO: participating schools, and reps from – Abq. Biopark, US Fish & Game, Petroglyphs National Monument, the US Army Corps of Engineers, Middle Rio Grande Conservancy, Soil and Water Conservation Districts, Rio Grande Nature Center, & Sevilleta NWR

For more information contact Kimi Scheerer at  
Bosque School: 505.898.6388 or

[ksche@bosqueschool.org](mailto:ksche@bosqueschool.org)! Also check out our website  
at: <http://www.bosqueschool.org/bemp.htm>



## IMPORTANT DATES

March 20<sup>th</sup> – BEMP Monthly Monitoring

March 26-30<sup>th</sup> – APS & Bosque School Spring Break

April 3<sup>rd</sup> – Youth Conference on the Environment

*South Broadway Cultural Center- Abq.*

April 17<sup>th</sup> – BEMP Monthly Monitoring

**April 27<sup>th</sup> – BEMP Student Congress**

April 30<sup>th</sup>-May 3<sup>rd</sup> – BEMP pitfall trapping

May 12<sup>th</sup> – Santa Ana Environmental Fair

May 15<sup>th</sup> – BEMP Monthly Monitoring

# THANK YOU

to those that sponsor the BEMP program

Albuquerque Community Foundation ♦ Bernalillo County  
♦ Bosque School ♦ Education Foundation of America ♦  
McKee/Crawford Foundation ♦ Messengers of Healing  
Winds Foundation ♦ Middle Rio Grande Bosque  
Initiative/U.S. Fish and Wildlife Service ♦ National Science  
Foundation's Schoolyard Education Program at UNM's  
Sevilleta Long Term Ecological Research Site ♦ New Mexico  
Association of Conservation Districts ♦ PNM Foundation  
Classroom Innovation Grant ♦ Sandoval County ♦ Thomas  
Nichols ♦ U.S. Army Corps of Engineers Bosque Restoration  
Program ♦ U.S. Bureau of Reclamation ♦ 7 Bar Foundation