WUA Education Overview and Update

Program overview and updates

Our education program reaches nearly 20,000 students each year, and has won two national awards: The Water Environment Federation (WEF) Public Education and Outreach Award and the National Association of Clean Water Advocates (NACWA) award for Public Information and Education.

Read more about our awesome programs below, or just sign up right here for:

Puppet Show (grades pre-K to 1st) • In-Class Activity (grades 1-3, and 5-12) • 4th Grade Trip to the River • Reclamation Tour (5th grade & up!)

In-person learning opportunities include:

General information about all of our in-person programs

Or just jump directly to each activity:

Free in-class puppet shows for K-2

Free Hands-On Classroom Presentations for 1-3rd and 5-12th grade

Free 4th grade trip to the river!

Wastewater Reclamation Tours

Online learning opportunities include:

Take a virtual tour of our drinking water or wastewater treatment plants.

Videos of Lessons and Puppet Shows

Online Curriculum

- Walk in the Woods
- Additional Educational Resources

Puppet Shows pre-K through 3rd

This year's puppet show is "Turtles from Outer Space"

Hands-on experiments and presentations for 1st-3rd, 5th through 12th

ELEMENTARY SCHOOL PRESENTATIONS

Grade 1 – H.2.Grow Students play a game in which they move drops of water from underground, up the roots of plants, through the stem, out of the leaves and into the clouds. When enough water has collected in the clouds, it rains. Find the activity guide with standards covered here.

Grade 2 – Water Year 'Round: Students solve the riddle, *"Which season am I?"* Each clue shows a phase of water that students link to sounds of percussion instruments. Find the activity guide with standards covered here.

Grade 3 – Incredible Journey: Students roll the die and move through the water cycle, collecting colorful beads to make their own bracelets along the way. Find the activity guide with standards covered here. We have created Informational Text about plant adaptations to supplement this lesson, which comes with vocabulary words and questions. It is also available in Spanish.

Grade 4 – Click here to learn about the RIO Field Trip for all Albuquerque area fourth grades.

Grade 5 – Leaky Faucet: Students learn how little fresh drinking water we have on earth. They measure and calculate how much water is wasted in a leaky faucet. Find the activity guide with standards covered here. We have created Informational Text about the water available on earth to supplement this lesson, which comes with vocabulary words and questions. It is also available in Spanish.

MIDDLE SCHOOL PRESENTATIONS

Grade 6 – The Water-Energy Connection: Students must supply water and electricity to their town. They'll quickly discover that they can't get electricity without water, and they can't get water without electricity. Our movie, *The Power Couple* is a good introduction or summing-it-up resource. Find the activity guide with standards covered here. We have created Informational Text about power generation for Albuquerque to supplement this lesson, which comes with vocabulary words and questions. It is also available in Spanish.

Grade 7 — Mighty Macroinvertebrates: Students will use math and sampling techniques to simulate a bioassessment. Using a net to scoop up colored beads that represent macroinvertabrates, they determine the relative health of their water sample. Find the activity guide with standards covered here. We have created Informational Text about pollution in the river and dogs to supplement this lesson, which comes with vocabulary words and questions. It is also available in Spanish.

Grade 8 — Go with the Flow: Using trial and error, students determine the height they must build their reservoir so that water will flow to homes upon demand Find the activity guide with standards covered here. We have created Informational Text about how evaporation affects water storage to supplement this lesson, which comes with vocabulary words and questions. It is also available in Spanish.

HIGH SCHOOL PRESENTATIONS

Biodiversity is Grand: What are invasives? Why are are our cottonwoods in peril? Cover your bosque board to learn how our decisions impact the future biodiversity of NM. Find the activity guide with standards covered here.

Pollution Detective: Students use pH paper to search through their plot of dirt to find the source of groundwater pollution. If it's out of sight, should we keep it in mind? Find the activity guide with standards covered here.

What Scientists Do with Number One and Number Two — Students fill their plastic cup toilet with wastewater and figure out how to clean it. After they separate water, trash, and sludge, they learn what Albuquerque's Wastewater Treatment Plant does with each. Micrographs and videos of our microscopic workers cleaning water are always a big hit! Find the activity guide with standards covered here. Take a digital tour of the wastewater plant as a way to introduce the lesson or review.

4th grade Field Trips

We pay for the buses,
and frequently provide chaperones.

We bring Albuquerque area fourth graders to the river!!

Free Field Trip for all 4th Grades in the area!

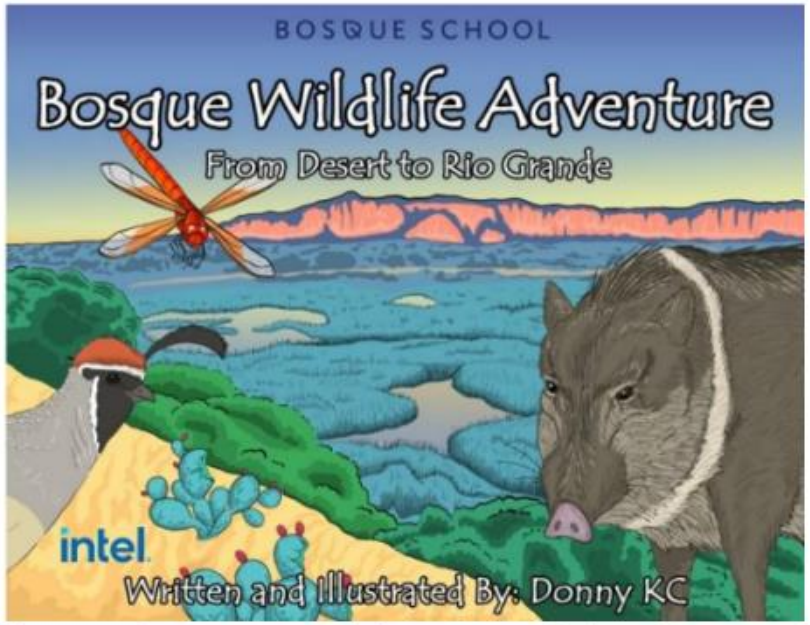
We want everyone to be a good steward of our water resources. That's why we are dedicated to taking all APS fourth-grade classes on a field trip to the river. There is no cost to teachers or schools. The Water Authority provides free roundtrip bus transportation for area fourth-grade classes. We do not supply lunches or water.

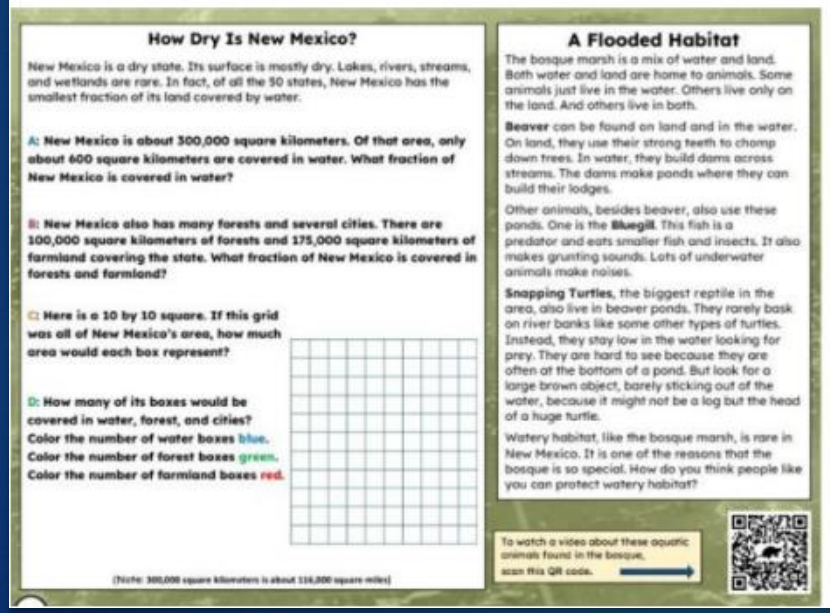
Our education coordinator assigns a date to each school. **Please register here** so we have your current contact information, and can provide your students with the valuable experience of going on this award winning field trip!

The RIO Field Trip takes place at either The Rio Grande Nature Center or The ABQ Botanic Gardens. Each class has a Water Authority guide who leads the class in three activities that come with standards.

- *Albuquerque Waters* teaches students about where the water in the rivers and aquifers comes from. Students learn how precious our water is, here in the desert.
- Students learn about Cultural Water Use, NM history, and how we use virtual water to make everything we use or consume.
- Everybody's favorite, is the hike in the bosque.

About ¼ of the students we take didn't know the Rio Grande was part of the city, and about ½ have never been to the river.





How Dry Is New Mexico?

New Mexico is a dry state. Its surface is mostly dry. Lakes, rivers, streams, and wetlands are rare. In fact, of all the 50 states, New Mexico has the smallest fraction of its land covered by water.

A: New Mexico is about 300,000 square kilometers. Of that area, only about 600 square kilometers are covered in water. What fraction of New Mexico is covered in water?

B: New Mexico also has many forests and several cities. There are 100,000 square kilometers of forests and 175,000 square kilometers of farmland covering the state. What fraction of New Mexico is covered in forests and farmland?

C: Here is a 10 by 10 square. If this grid was all of New Mexico's area, how much area would each box represent?

D: How many of its boxes would be covered in water, forest, and cities?
Color the number of water boxes blue.
Color the number of forest boxes green.
Color the number of farmland boxes red.

(Note: 300,000 square kilometers is about 116,000 square miles)

A Flooded Habitat

The bosque marsh is a mix of water and land. Both water and land are home to animals. Some animals just live in the water. Others live only on the land. And others live in both.

Beaver can be found on land and in the water. On land, they use their strong teeth to chomp down trees. In water, they build dams across streams. The dams make ponds where they can build their lodges.

Other animals, besides beaver, also use these ponds. One is the **Bluegill**. This fish is a predator and eats smaller fish and insects. It also makes grunting sounds. Lots of underwater animals make noises.

Snapping Turtles, the biggest reptile in the area, also live in beaver ponds. They rarely bask on river banks like some other types of turtles. Instead, they stay low in the water looking for prey. They are hard to see because they are often at the bottom of a pond. But look for a large brown object, barely sticking out of the water, because it might not be a log but the head of a huge turtle.

Watery habitat, like the bosque marsh, is rare in New Mexico. It is one of the reasons that the bosque is so special. How do you think people like you can protect watery habitat?

To watch a video about these aquatic animals found in the bosque, scan this QR code.

- Last year we added a preparatory visit before the field trip which has increased our presence from less than 1,000 students presented to per month to more than 2,000 students presented to each month.
- We gave a copy of a book about the bosque to each 4th grade class going on the river field trip.
- The updated version with pages we have customized will go to press as money from Intel is released. This will produce copies to 4th graders for the next 2 years.

Reclamation Tours

We added a new clay animation tour video as supplemental material

Have You Ever Wondered How We Clean Wastewater?

Then this Tour Is for YOU!

Would you like to take your students on a field trip they won't forget? For grades 5th grade and up, you can bring them to the Southside Wastewater Reclamation Plant (SWRP). We clean approximately 50 million gallons of wastewater every day, but most of us never stop to wonder about what it takes to accomplish that. Our employees work:

- to ensure public and environmental health,
- to maintain good water quality of the water we put into the river, and
- to reclaim a portion of our water resources for re-use.

During the two-hour tour, students will do more than just hear about how we clean Albuquerque's wastewater, they'll see it. We look under the microscope at a drop of activated sludge to see the microorganisms that clean the water. We walk the plant following the path of the wastewater as it is cleaned. At the end of the tour, standing on the banks of the Rio Grande where the cleaned water is released into the river, we discuss current wastewater issues.

Tours are approximately two hours long, cover about 2 miles, and stairs are involved. We can accommodate up to 40 students per tour. There is no cost for the tour, but we do not provide transportation to or from SWRP.

This fantastic clay animated tour of our facility by Sharon Sivinski is a great way to prepare or review the trip!

Click here to schedule a tour.

ADDITIONAL RESOURCES

Take the virtual tour of our drinking water or wastewater treatment plants. Learn more about the history of sanitation here.

Questions? Call Jeff Tuttle at (505) 289-3027 or email jtuttle@abcwua.org

Coming to a Summer near you..

Play the Rio Rally! Collect stickers, as you go on quests around our city! Besides earning a point for a quest, you can earn points if you take a city bus, walk or ride a bike to your quest, and drink tap water from a reusable water bottle! It takes less water when you conserve anything, because water is involved in the production of everything!

You can make stickers into a gameboard, or put them on a metal water bottle and use a magnetic player token to move it a sticker space each time you drink up all the good water from your water bottle! Yes, our tap water is so good we keep winning the President's Award for Superior finished water quality, and more!

The Rio Rally will be played **June 20th through July 12th, 2026**. Get started by going to any city library, the Botanic Garden, or the Zoo, the NM Natural History Museum, Explora, anddThe National Atomic Museum

Bring your Rio Rally Explorer's patch to the Zoo and the Botanical Garden (one time for each group of 4) during the game for a discounted rate of $3.00 per person!, Then collect your sticker from the Zoo and Botanical Gardens and Aquarium!

Winners of the Rio Rally will receive rebates from the Water Authority, a family pass to the Natural History Museum, and other prizes! Most importantly, just playing you can learn and act on ways to help our river!

Developing:

- Additional clay animations for conservation applications and Surface Water
- Bear Canyon Tour
- Surface Water Plant Tour

And…

The collaborative work with Bosque School has led to other Developing work:

A curriculum of place with a place

A Field & Community Science Building

A Gateway for teaching civic engagement through bosque research & investigating nature

The Antidote for Despair is Action

Doing our part, not to give our children a dry river inheritance.

Teaching agency and stewardship through hands-on field science.

Creating a future for a healthy environment, economy, & community.

A Field & Community Science Building Will Be:

- A gateway for over 7,500 students a year to learn how water is the life blood of the three-legged stool of a healthy environment, economy, and human community. We will draw from our 30-year experience of having engaged more than 100,000 New Mexican students in field science.
- A partnership with the Albuquerque Bernalillo County Water Utility Authority (Water Authority) to host all 5,800 Albuquerque fourth grade students to have a hands-on environmental field session along the Rio Grande and in its riverside forest, launched each day from dedicated classrooms to support that program.
- A refugia, in partnership with the US Fish and Wildlife Service to raise the endangered Rio Grande Silvery Minnow to serve as a learning lab with aquaria for students to help raise endangered fish for release to the wild by area students, including those from the Water Authority program
- A site for high school students from throughout the region to participate in science that matters beyond the classroom through field research opportunities and lab work in partnership with the University of New Mexico Center for Stable Isotopes and its Fish, Floodplains, & People program.

CSI

The University of New Mexico

BOSQUE SCHOOL

CEBRIN Field and Community Science

WATER AUTHORITY