



# Working Water

Youth Engagement through Exhibits and Programs

## New Mexico Water Conference 2024

November 5, 2024

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# What's on Today?

**Hello & Welcome!**

**Intro to Explora and X Studio**

Explora overview

X Studio overview

**STEM in the Burque Exhibition**

What is it?

How did it develop?

How did water exhibits develop?

Introduction to water exhibits

**Programming Partnerships**

# Explora and X Studio

## Explora Key Facts

- Serves over 380,000 people each year, including more than 110,000 students from across NM engaging in education programs, reaching 95% of school districts
- Provides 20,000+ free memberships to low-income families annually
- Serves 6,000 students through spring and summer camps
- Serves 15,000 people through Family Science Nights - contract with APS Title I schools
- Serves 2,200 teachers through over 50 professional development workshops



# Explora and X Studio

## X Studio Key Facts

- Houses:
  - Exhibits gallery
  - Makerspace
  - Tech lab
  - Mentor corners
  - Multipurpose classrooms
  - Teen lounge
- 22,000 teens served since opening in Feb 2023
- 6,400 attended design and fabrication workshops in Makerspace
- 2,600 attended digital media and music production programs and open hours in Tech Lab
- 1,200 attended SEL program activities
- 25 - 35 high school students participate in Career Pathways Initiative intern program



# STEM in the Burque

## What is it?

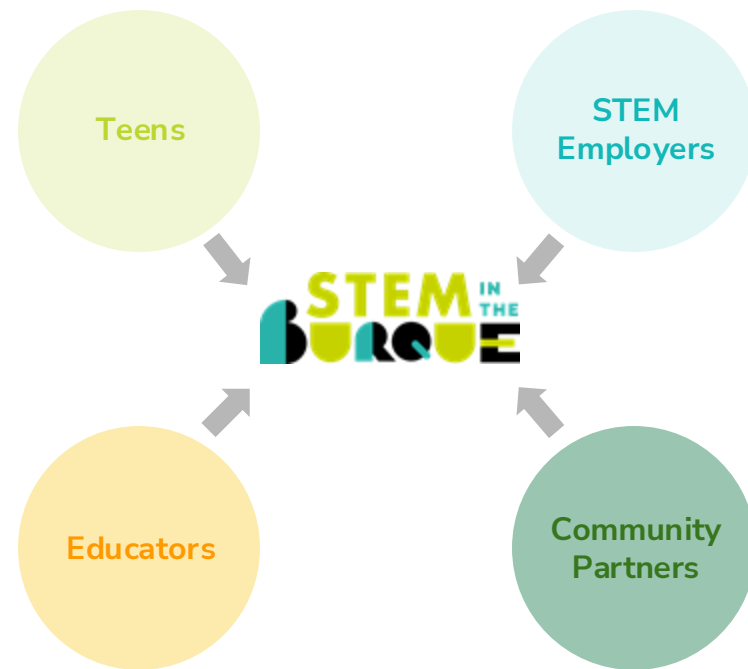
- An immersive exhibition highlighting STEM activities in Albuquerque, co-created by Explora, local teens, and ABCWUA and other STEM employers
- Aims to: 1) increase awareness of the STEM research and practices taking place in Albuquerque; 2) empower youth to solve tomorrow's problems through STEM; and 3) develop local teens into future STEM leaders
- Features 14 brand-new, hands-on exhibits, including **9 based on water resource management**, along with STEM professional spotlights



# STEM in the Burque

## How did it develop?

- Listening to the community:
  - 25+ community conversations
  - 6 listening sessions with teens, STEM employers, and local educators
  - 12 “empathy interviews” with teens
- Active participation by teens, STEM employers and professionals, and educators throughout design, prototyping, and fabrication
  - Frequent feedback sessions with teens and educators
  - Regular meetings with community partners and subject-matter experts
- Continuous effort to gain and maintain buy-in from teens, employers, and staff
- Utilization of external exhibit developers to support in-house team and an external evaluator



# STEM-B Water Exhibits

## How did they develop?

Kicked off in Jul 2019 followed by two design charrettes and many sessions

### Three Themes

1. Water resources and distribution
2. Water treatment
3. Conservation and stewardship

### Seven Focus Areas

1. Aquifer Storage and Recovery (ASR)
2. Reuse
3. Watershed protection
4. Water storage
5. Groundwater and surface water protection
6. Water treatment and distribution
7. Wastewater collection and treatment

### Key Narrative

Everyone has a role to play in the work of ABCWUA, and NM's water treatment and resource management - What's yours?



# Water 2120 Game *Co-developed with Electric Playhouse*

## Water Resource Managers Unite!

Problem-solve real world scenarios and experience the world of water resource management in this interactive game.

Based on **Water 2120**, the Water Authority's 100-year water plan, the game challenges you to optimize the use of existing water supplies rather than seeking new sources, and create your own sustainable 100-year plan while learning about conservation, our water supply, and the career pathways available.

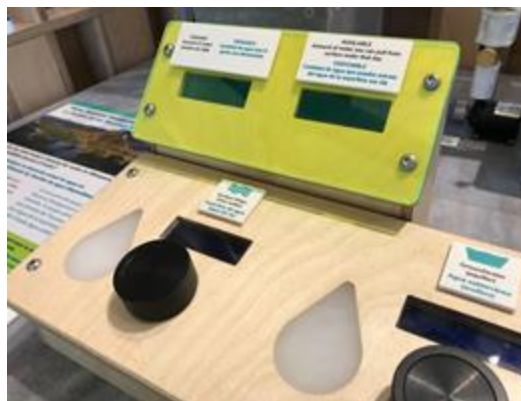


# Water Resource Distribution

**Do you like a challenge? Try a 150-mile real-world engineering puzzle!**

Practice your problem-solving skills by balancing all the parts of this sample system to predict and provide the daily water supply for Albuquerque.

Imagine you are a team member at the Water Authority. Your job is to figure out how much water will be needed on a daily basis from sources including the Rio Grande and groundwater.



# Water Bar *Treatment - Filtration - Biodegradation*

Clean and safe drinking water is important for our health and wellbeing.

See how the Water Authority transform ground water, river water, and sewage water into drinking water.



# Water Conservation

## Water is a precious resource.

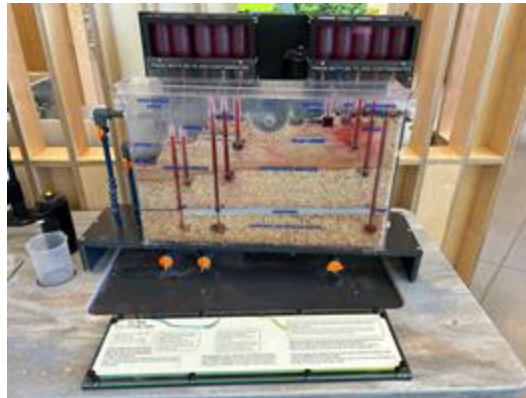
There's a lot you can do today to launch a career in water conservation. Your personal choices have positive ripple effects! See how your everyday decisions can make a difference in reducing and reusing water.



# Aquifer

Did you know you are standing on top of a little known but totally essential part of our lives, which we all need to protect?

Meet the Rio Grande Aquifer system. Spanning 70,000 square miles underground along the Rio Grande Valley, it collects and protects a portion of our drinking water for us.



# Refugium

What do you call a microenvironment designed to be the perfect home for an endangered species? A refugium!

In Los Lunas, NM, scientists from the Office of the State Engineer, Interstate Stream Commission are maintaining a refugium for the Rio Grande Silvery Minnow, one of the most endangered fish species in the country. See how a refugium works.



# Programming Partnerships

## SNL Water Power

- Co-developed family-science style activity kits, which have been facilitated across New Mexico:
  - Isleta Pueblo Environmental Fair
  - Summer programs with Zuni Youth Enrichment Program
  - Placitas Public Library
  - Neighborhood events in Uptown
  - Meet a Scientist events at Explora
- Collaborated on teacher professional development.
- See SNL articles about the partnership:



## UNM CWE

- In partnership since 2020 to host summer camps for middle school students, utilizing the STEM in the Burque water exhibits at X Studio.
- Collaborating on program activities at four area schools. Students have the opportunity to visit labs at UNM, drive a robot to collect water samples, and visit the Bosque with researchers.



**Questions?**

# Thanks!

