



COLORADO RIVER ALLIANCE

## **Proposal to Austin City Council**

September 2, 2014

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### **Request**

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The Colorado River Alliance respectfully requests that the City fulfill Austin Water's unpaid 2014 commitment of \$40,000. Additionally, we request that the City maintain an annual recurring commitment at \$40,000, beginning in the 2015 budget, potentially through the Social Services Contracts Request for Applications (RFA).

Funds will be used to support the Mobile River project and other youth education programs, allowing the Alliance, and project partner Austin Water, to provide free water resource educational programming to 13,000 Austin youth and community members each year.

### **Mobile River Project Overview**

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In partnership with Austin Water and Austin Independent School District (AISD), the Colorado River Alliance will quadruple the target number of youth reached annually by launching the Texas Colorado River Mobile Learning Experience (Mobile River Experience).

Modeled after a successful example in Harris County, the Texas Colorado River Mobile Learning Experience will function as a water science museum on wheels, bringing high quality STEM education to 8,000-10,000 middle school students throughout central Texas each year.

Students will visit the Mobile River Experience, a 40 foot gooseneck trailer, the inside fitted with museum-grade interactive exhibits and activities (see attached mockup). From high-tech exhibits, such as an interactive computer game allowing students to control water flow through a watershed system, to low-tech exhibits where students track the movement of water during the treatment process, each exhibit will be clearly tied to both the Texas Essential Knowledge and Skills (TEKS) and real world scenarios as encountered by professionals within fields of STEM. The Alliance will work directly with project funders to integrate real world problems and scenarios as experienced by funding company professionals.

The Texas Colorado River Mobile River Experience will travel to various middle school campuses, where it will be housed in the school parking lot for a few days, ensuring all 7th graders on campus cycle through. The River Experience will then travel to the next school campus.

### **Need Statement**

It is critical that our future leaders and workforce adopt a clear understanding of our limited water resources and the impact we have on these resources. The Colorado River is the City of Austin's ONLY source of municipal water, providing over 1 million Austinites with clean, abundant drinking water and providing millions of gallons of water each day to Austin businesses, industry and manufacturing. With an ongoing historic drought and a population projected to double by 2040, Texas is on course for a serious water crisis. The Texas Water Development Board (TWDB) expects demand for water by municipalities, farmers and industry to increase by 27% between 2000 and 2060. The consequences to the state economy of inadequate water supply would be devastating. The TWDB estimates businesses and workers could lose \$116 billion by 2060 and local and state governments \$9.8 billion through tax losses.

From engineering projects, like the City of Austin's Water Treatment Plant Four, to high tech firms like Samsung that use water to remove waste heat produced by computer electronics, millions of companies in the fields of science, technology, engineering and math (STEM) impact global and local water quantity and water quality. To ensure long term sustainability of our water resources, it is imperative that today's youth gain both an understanding of the "STEM" of

water and secondly, the skills needed to be pioneers and innovators, thus entering these professions as advocates for best practice use of our limited water resources.

### **Project Goals & Objectives**

Following the guidance of the President's Council of Advisors on Science and Technology, the Colorado River Alliance has developed the Mobile River Experience as an innovative approach to addressing the four key areas of focus for STEM education: 1) Ensure a STEM-capable citizenry; 2) Build a STEM proficient workforce; 3) Cultivate future STEM experts and; 4) Close the achievement and participation gap.

Modeled after STEM education best practices, the Mobile River Experience provides a curriculum driven by problem solving, discovery and exploratory learning, actively engaging students in real world situations in which they must find solutions (problem-based learning).

Each year, working directly with Austin Water and Austin Independent School District (AISD), the Mobile River project will bring this innovative STEM experience to more than 5,000 seventh grade students in AISD. In addition, the Alliance and Austin Water plan to reach an additional 3,000 to 5,000 seventh grade students through expanded partnerships with surrounding area schools, including Round Rock, Pflugerville, Del Valle, Manor, and Eanes school districts, and private schools. Programs will be provided at no cost to school or students, ensuring that they reach our most at-risk student populations.

### **Long Term Project Objectives**

1. A workforce of professionals in STEM fields who are highly knowledgeable of water quality and water conservation needs for a sustainable water supply.
2. Communities with an increased knowledge and respect for water resources.
3. A healthier Colorado River watershed.
4. Reduction in water use within the Colorado River watershed.

### **Short and Medium Term Project Objectives**

1. Student knowledge of water conservation practices increased through participation.  
Measurement: 90% of participants show an increase in water conservation knowledge at the conclusion of the program.
2. Student knowledge of water quality factors increased through participation.  
Measurement: 90% of participants show an increase in water quality knowledge at the conclusion of the program.
3. Students increase their water-conserving behaviors post Mobile River Experience.  
Measurement: 85% of participants report practicing one or more water conserving activities as a result of the program.
4. Water in Austin and central Texas is conserved.  
Measurement: 1 million gallons of water are saved each year as a result of the efforts of participating students.
5. Student interest in STEM professions related to water is increased.  
Measurement: 80% of participants show an increase in interest level at the conclusion of the program.
6. Student confidence level in solving STEM problems (related to water) is increased.  
Measurement: 80% of participants show an increase in confidence at the conclusion of the program.

### **Project Measurement**

To evaluate and document project success, the Alliance will utilize several project measurement tools, including:

- Student pre-and post- tests, conducted to quantify knowledge gained, interest level and confidence level.
- Student post- assessment, administered approximately one month after program participation, will evaluate behavior changes in water use in the home and long term knowledge transfer.

- Teacher evaluations and educator observations, collected to ensure high satisfaction ratings.

### **Project Partners**

This project would not be possible without the support of community partners. The Colorado River Alliance will lead project development including; program delivery, outreach, training, administration, fiscal management and funding, evaluations and reporting. Austin Independent School District (AISD) will participate in curriculum design to ensure materials and lessons align with Texas Essential Knowledge and Skills (TEKS) learning standards for middle school students. In addition, AISD will serve as the pioneer school district for implementation of the program and assist with school outreach and program evaluation. Lastly, Austin Water will provide partial financial, human and technical resources for program implementation and sustainability.

### **Funding Partners**

To date, the Alliance has raised over \$500,000 in funds for the Mobile River Experience. Major funding partners include: Samsung, Impact Austin, Texas Pioneer Foundation, Austin Water (inkind), 3M, Burdine Johnson Foundation, Applied Materials, CH2M HILL, Atkins, Hershey Foundation, and BAE Systems.

## Mobile River Project Funding Detail

FUNDING SOURCES	
Samsung	150,000
Impact Austin	101,000
Texas Pioneer Foundation	93,000
Austin Water InKind	81,250
CH2M HILL	50,000
3M	40,000
Burdine Johnson Foundation	15,000
Applied Materials	10,000
Atkins	10,000
Hershey Foundation	3,000
BAE Systems	2,500
<b>City of Austin Request (FY14- \$40,000, FY15 - \$40,000, to continue)</b>	<b>80,000</b>
<b>TOTAL</b>	<b>\$ 635,750</b>

USES		
	CAPITAL	ANNUAL OPERATING
Design & Fabrication	255,000	10,000
Printing & Postage	7,500	7,500
Custom Trailer	90,000	-
Truck	50,000	-
Wrap/Banner	8,800	-
Supplies	25,000	15,000
Insurance		7,500
Food & Beverage		500
Travel & Mileage		10,000
Volunteer Training & Expenses		5,500
Teacher Training		5,500
Evaluation		5,000
Miscellaneous	5,000	5,500
Staffing		65,000
Occupancy Costs		67,500
<b>TOTAL</b>	<b>\$ 441,300</b>	<b>\$ 204,500</b>
	<b>PROJECT TOTAL</b>	<b>\$ 645,800</b>

## **Austin Water – Colorado River Alliance Partnership Overview**

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- 2009** Alliance and Austin Water began working together on educational programs, including the Alliance’s Family Water Festival
- 2011** Austin Water and the Alliance began discussions of developing a program as partners
- Austin Water provided \$5,000 in support of program development
- 2012** Austin Water and the Alliance officially signed a Memorandum of Agreement; Purpose: Jointly develop a middle school program to achieve missions of both entities, and to complement elementary aged programs of both entities
- The Alliance immediately reached out to AISD; together the three entities developed a project that was feasible, manageable and met all partner’s needs, contributions (in kind and monetary) were agreed upon by all parties
- Austin Water provided \$40,000 and agreed to provide in kind support for printing, transportation, etc; with the general understanding that the support would continue for the lie of the project
- 2013** Austin Water and the Alliance officially signed a renewal Memorandum of Agreement; Austin Water funding of \$40,000 continued
- The Alliance, Austin Water, and AISD allocated significant financial and human resources towards the development of the project, identified as: Texas Colorado River Mobile Learning Experience (Mobile River);
- The Alliance secured substantial funding support from the community on behalf of the partnership - Impact Austin: \$101,000, Samsung: \$150,000
- 2014** With a Task Force in place (including Austin Water, Samsung, AISD, Alliance Board members, additional community members and content experts), the formal project timeline was set and MuseWork design firm was selected via rigorous RFP process
- Mobile River exhibits have been designed to reinforce Austin Water and the greater City of Austin’s messaging and direction
- At Austin Water’s request, an invoice for \$40,000 and a draft renewal Memorandum of Agreement was developed and submitted to Austin Water in March of 2014;
- In May of 2014, Austin Water informed the Alliance that the financial support was denied due to budgetary cuts however in kind support was still promised
- To date the draft Memorandum of Agreement has not been returned to the Alliance
- Projected Project Expenses incurred by the Alliance in 2014 and 2015: \$560,000; please see attached