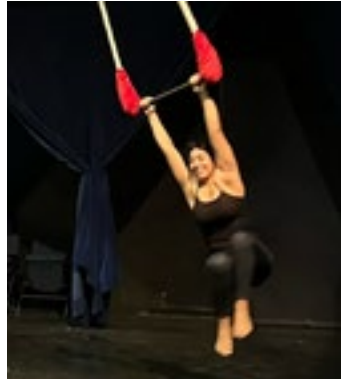


2024-25 Arts Research + Resilience Project Grants Final TRIF Report

SUBMITTED BY ELLEN MCMAHON | JUNE 20, 2025



2024-25 Arts Research + Resilience Project Grants Final TRIF Report

Submitted by Ellen McMahon | June 20, 2025

The Arizona Institute for Resilience granted the College of Fine Arts, Arts Research Office (ARO) \$95K to advance the institute's mission of supporting interdisciplinary groups, including off-campus partners, to address resilience in our natural and human communities. ARO created the **Arts Research and Resilience (AR+R)** grant program to support projects which demonstrate how the arts create new knowledge and embodied sense of interconnection foundational to individual and community resilience.

Each of the six projects funded in 2024-25 utilize transdisciplinary approaches to respond to regionally-specific issues and identifying creative solutions in the TRIF-WEES theme [Adaptable Desert Communities, Cultures, and Ecosystems](#).

[Six New Projects Blend Creativity and Community Impact:](#)

- *Artistic Expression of Original Research*, (Co-PIs: Jessica Maccaro, UC Riverside, and ARO, UA College of Fine Art)
- *The Climate Project: Trapeze Training for Resilience and Performance*, (PI: Rick Wamer, School of Theater Film and Television with consultant Chris Impey (College of Science, Astronomy)
- *The Ecology of Time: Activating Long-Term Environmental Stewardship on the Santa Rita Experimental Range* (Co-PIs: Brett Blum, Director, Southern Arizona Experiment Station and Jonathon Keats, Research Associate, College of Fine Arts)
- *El Pueblo 50: Celebrating the Living Heart of Tucson's Southside*, (Co-PIs: Rebecca Senf, Center for Creative Photography, Jacqueline Barrios, Public & Applied Humanities, Kenny Wong, CAPLA, Liz Soltero and Selina Barajas, Sunnyside Foundation)
- *Expanding Design-Based Data Visualization at the Wonder Studio at Biosphere 2*, (Co-PIs: Nicole Antebi, School of Art and Aaron Bugaj, Sr. Research Technologist, B2)
- *Ground/Water II: Water Advocacy on the Santa Cruz*, (Co-PIs: Jacqueline Barrios, Public & Applied Humanities and Martina Shenal, School of Art)

NOTABLE ACCOMPLISHMENTS (Q3)

The single most exceptional accomplishment of this program is the robust engagement these projects facilitated across the University and with diverse Southern Arizona communities.

Student Engagement, Internships, Workshops and Residencies

More than 250 students were involved within courses and in extramural activities. Projects were integrated into 6 courses and internships taught by individual project PIs across 5 colleges. Students were paid stipends for participation in workshops, internships and residencies.

Community and Civic Partnerships

A total of 17 community and civic organizations were actively involved in the co-creation of research and programming that benefited the region directly.

- Selina Barajas (Mountain Mamas)
- Borderlands Restoration Network
- City of Tucson Parks and Recreation
- El Pueblo Neighborhood Center
- El Pueblo Senior Center
- Frank de la Cruz Library
- Feng Feng Yeh (Chinese Chorizo Project)
- Loft Cinema
- Office of Congressman Raúl Grijalva
- Office of Pima County Supervisor Adelita Grijalva
- Office of City Council Member Lane Santa Cruz
- Sunnyside School District
- Sunnyside Foundation
- Sunnyside Neighborhood Association and Las Aguas
- Tohono O’odham Community College
- Tucson Water
- Unified Community Advisory Board (UCAB)

Direct Benefits-Helping Communities Thrive

Two projects *El Pueblo 50: Celebrating the Living Heart of Tucson’s Southside* and *Ground/Water II: Water Advocacy on the Santa Cruz* were designed specifically to bring direct benefits to the historically disinvested Southside community. Both projects created models for innovative arts- and humanities-based research and pedagogy for impacting sectors beyond the university.

The main objective of the ongoing project, *El Pueblo 50* is to support community (re)investment at El Pueblo Center through an exhibition to celebrate the neighborhood’s 50th anniversary in Fall of 2025. TRIF funding enabled an inter/transdisciplinary team to convene in recurring meetings

(12 so far) at the neighborhood center, the hub and social infrastructure for Southside Tucson, with four consistently engaged key leaders in economic, cultural and environmental reinvestment efforts in the Southside. Additionally, a board of five co-curators -- recognized leaders in the community -- were onboarded to provide feedback. Two U of A alumni from the neighborhood were hired as exhibition designer and documentarian. Three courses offered across three colleges reached 90 students, whose work on and about the site resulted in an exhibition design and well-attended public community reviews, including a pop-up exhibition at a public library at the site. An upcoming partner meeting planned with city, county, and federal stakeholders will include invitees from seven agencies.

Groundwater II is focused on water justice advocacy efforts in the Southside neighborhood, in close to a Superfund site, focusing on remediation efforts and impacts from discharging water treated for TCE, 1,4 Dioxane, & PFAS, back into the Santa Cruz watershed. Led by co-PIs from Public & Applied Humanities and the School of Art, the project brought together undergraduate students in courses, PAH: 420: *Innovation and the Human Condition - Southside Stories of Environmental Resilience* and ART 343A: *Traditional Photographic Techniques* into collaboration with community members and organizations. Students worked with a wide array of stakeholders to co-create a publicly-engaged project that intervenes, complements, documents and amplifies the community's historic struggle to care for their water and environment. Several students attended a quarterly Community Advisory Board meeting and the project received recognition as a positive example of university engagement at a public comment meeting on a city resolution regarding TCE contamination.

Groundwater II also supported an artist-in-residence, Jessica Wolff, to develop a body of arts-based community-engaged research by participating in associated site-visits, panels and archival work. Wolff's residency exemplifies the bi-directional nature of the community-university pipeline that this project instantiated and continues to nurture-- an alumna, a Southside resident and now art teacher working in a Southside school. This trajectory reveals the rich resource of talent and creative leadership extant in our local neighborhoods and schools, and the importance of committed and iterative mentorship of students before, during and after matriculation from the university.

Building Social Connection in Graduate Education between the Arts and Sciences and Extending to the Tucson Community

Artistic Expression of Original Research developed community across STEM and ART graduate programs via a 3-day residential retreat at the Santa Rita Experimental Range field station and 3 public art show/presentations. Survey results of grad participants found increased sense of community. Visitor results at the art shows found significant increases in scientific awareness, interest, relevance, learning, understanding, and comfort talking with scientists. All participants experienced social connections, positive emotions, and a sense of community through the exhibit. Art stimulates emotions, which regulate how new information is approached and memory

is retained. Enhancing science communication not only fosters greater public engagement with science but also strengthens trust in scientific research, promotes informed decision-making, and encourages a more scientifically literate society. (details and quotes follow)

UNIQUE SUPPORT PROVIDED BY THE U OF A TO INCREASE VISIBILITY AND EXTERNAL FUNDABILITY (Q4)

Collaborative and Transdisciplinary Approaches

All projects involved multidisciplinary teams who utilized collaborative and transdisciplinary approaches enabled by the rich ecosystem of the R1 university.

One notable example, *Artistic Expression of Original Research (AEOR)*, an interactive, art-based science communication program where STEM researchers learn practices from artists and subsequently transform their research into artworks. The program organizes exhibitions, where researchers engage directly with community members about their science through their artworks. Students came from disciplines such as Astronomy and Astrophysics, Environmental Science, Planetary Science, Geography, Global Information Systems, Ecology and Evolutionary Biology, Information Science, Physics, Linguistics, Optical Sciences, Creative Writing, Illustration, Multimedia Art, and Communications and Semiotics. They learned from MFA students in the Arts and Humanities and local artists during a weekend retreat and held 3 public exhibitions. The program was managed by a graduate student from UC Riverside and mentorship was provided by ADR, School of Art faculty and High Power Computing Cluster Staff.

Another project which could only exist in an R1 context is *Expanding Design-Based Data Visualization at the Wonder Studio at Biosphere 2*. The core objective of this on-going project is to strengthen an integrated collaboration pipeline between research inside B2 and Wonder Studio programming through data sharing, identification of common goals with research staff, coalition building, and building collaborative workflows with researchers. It is designed to address critical knowledge gaps in data visualization (representing data in accurate, interactive, and actionable ways) and enhance programs for undergraduate researchers/scholars at the Wonder Studio.

Amplification through Communications and Engagement Opportunities

Engagement opportunities are integral to arts research and often attract substantial media coverage. Engagement outcomes of these six projects include: exhibitions; live performances; film and video screenings; community show cases and feedback session of student work in progress; research gatherings; and site visits. Outcomes are also amplified through internal and external news stories and individual project websites. All TRIF supported integrative Arts Research Projects will be archived on the [Research pages](#) of the College of Fine Arts website, along with [pages for individual projects](#) and links to stand-alone sites.

Exhibitions

A number of projects included exhibitions. One notable example, the culmination of *Artistic Expression of Original Research* (AEOR) is a series of 3 exhibitions, which showcased artworks created by University of Arizona STEM graduate students to communicate their scientific findings through art. They were open to the public and located at the Arizona Astrobiology Center, the boat house at Tumamoc Hill, and Festival of Books on Campus. “*El Pueblo 50*” will culminate in a community co-curated exhibition in November 2025.

Workshops

Numerous workshops were hosted in all projects, including the Stop-motion Animation Workshop for Diana Liverman Environmental Scholars at Biosphere 2 Planning Center.

Collaborative Community Showcases

GroundWater II convened two meetings at the CATalyst Studios in the UA Main Library where students presented projects in process and prototypes to community reviewers and invited guests. The second showcase presented final projects to community reviewers and invited guests. The program booklet can be accessed [here](#), while coverage of the event can be accessed [here](#). Speakers and attendees: approximately 100. Photographs of this event can be accessed [here](#).

Digital Platforms

Most of the projects are working on stand-alone web sites. ([Stories South of 22nd](#)) showcases creative place-keeping projects including courses, exhibitions and publications initiated in partnership with the Sunnyside Foundation, leader in advocacy in Tucson’s Southside. A landing page for Groundwater II projects is currently in progress and will make key projects accessible to the public.

Gatherings

An Arts Research gathering organized by the CFA Arts Research Office provided a venue for presentations by Arts Research + Resilience Project grants recipients and Integrative Arts Research Fellows. It was also attended by members of the College of Fine Arts and Arizona Arts research communities, including Production Grants recipients, Udall Fellows, and Research Leadership Institute Fellows. This gathering facilitated productive, informal discussions about arts research (practice-based and arts-based) and related scholarship.

Presentations by cohort members addressed:

- The differences between arts research and science research and the rationale for an integrative approach.
- Arts Research project design - objectives, methods, outcomes, impact, and assessment.
- Project implementation – scaling, collaborators, partners, funding, publishing.

The feedback gathered through pre- and post-surveys reinforces the importance of arts research in building community, reaching broad audiences, and importantly, in engaging community through co-creative and mutually-beneficial partnerships.

Themes in survey responses we conducted included: rethinking what research is/can be; sharing research in art-based formats; the role of collaboration; working with communities; working with students; interdisciplinarity; and being part of a creative research cohort.

Press

UA News story about the millennium camera installed on Tumamoc Hill in 2024 spawned [hundreds of articles](#) published worldwide in art, science and environmental publications including Smithsonian magazine, BBC World News, and Hyperallergic. Some of them mentioned the cameras planned for SRER, which is the basis of the project, “*The Ecology of Time: Activating Long-Term Environmental Stewardship on the Santa Rita Experimental Range*.” We expect substantial coverage once that project is complete.

Examples of Recent Local News Coverage

Eric Swedlund, “*Public & Applied Humanities Students Relate Southside Stories of Environmental Resilience*,” College of Humanities - University of Arizona, May 9, 2025, humanities.arizona.edu/news/public-applied-humanities-students-relate-southside-stories-environmental-resilience

Sunnyside Foundation Newsletter, “*UA Classes Centered on El Pueblo Center Continue This Semester*,” Noticias del Barrio: The Latest from the Sunnyside Foundation, February 14, 2025, mailchi.mp/sunnysidefoundation/noticias-del-barrio-gives-week-mini-grants-and-more-news-18248684?e=053deeb916

OPERATIONAL CHALLENGES AND NEW DIRECTIONS IN RESPONSE (Q5)

The program is growing in the right direction. These will be areas of focus in the future.

Funding and Support

- Identify large-scale extramural opportunities from foundations and private partnerships.
- Seek multi-year financial commitment from the university to ensure continuing ethical and mutually beneficial relationship with community partners.

Building Collaborations

- Articulate the role of arts research in other research domains and vice versa (especially in the context of new federal funding constraints).
- Develop relationships across disciplines and departments as a pathway to identifying prospective co-PI's.
- Expand funding opportunities to incorporate a variety of collaborators that would bring a wider set of skills and technologies into performative artistic expressions.

- Create a sustainable model (without dependence on internal funding) for continuation and build-out of arts-integrated research.

Writing & Publishing

- Pair arts-based researchers with scholarly publishing background with practice-based faculty with studio and performance methods to amplify impact.
- Provide mentorship and guidance for producing peer-review articles on arts research.

Arts Research Definitions & Role(s)

- Consider the relationship between arts research and scientific research in terms of kinds of questions asked and a common interest in the unknown.
- Explore the role of arts-based research to decentralize institutional authority by prioritizing lived experience, creative interpretation, and community voices.
- Continue to demonstrate how arts research can challenge dominant epistemologies while still maintaining methodological rigor, specifically, ways that arts researchers navigate the tension between artistic intuition and the expectations of empirical research frameworks.

ENABLED INDIVIDUALS (Q6)

Workforce Contributions

Data on workforce development is not available because most of the students engaged in these projects were undergraduates. However, two students have secured employment based on their experience with the Wonder Studio. Danielle Hunt, who participated in the first Moving Science residency, was hired by Biosphere 2 to create animated sequences for their K-12 education web tour, and Sela Margalit was hired as an animation intern at AZPM.

Professional Development, Courses and Skills

Undergraduate student professional development and research outside the classroom included: *The Climate Project* (10 student internships), *Wonder Studio* (11 student residencies), *Moving Science* (5 student residencies) and *Ground/Water II: Water Advocacy on the Santa Cruz* (2 student internships and 1 alumnus artist-in-residence).

Professional Development and Preparation

The Climate Project: Requiem for Change enabled 10 students to integrate new knowledge about climate change into their embodied theater practice. TRIF funding provided training in aerial trapeze, physical theater creation, ensemble development and directing, leadership and collaboration to 10 students. These new skills will contribute to their capacity to work in the field and will be showcased in the continuation of a multi-year physical theatre research project, with performances scheduled for Fall of 2025. PI Rick Wamer writes,

“The training necessary to create the physical endurance and capacity to shift the body’s weight and adjust in motion on trapeze with other ensemble bodies in play develops a resilience capacity within the actors to make immediate performance adjustments. This same capacity for resilience is actively transferable when responding to upcoming human caused climate change challenges. The precarious balance and use of the body in Trapeze artistry, and the expression of the art as an embodiment of resilience are strong metaphors for the delicate balance of nature in this time of the Anthropocene. The student artists carry this adaptability into their academics, their social relationships, and their approaches to dealing with life stressors.”

Ground/Water II: Water Advocacy on the Santa Cruz students worked with a diverse array of tools that enabled them to pose critical questions for further inquiry based on close observation in and of the environment. Experimenting with various image-making techniques, they learned how to build a deep attunement to phenomena where inquiry might be nurtured. This sensibility was contextualized within a design-thinking framework that demanded real-world applications of their learning. All these skills are essential in the toolkit for today’s professionals who must operate with transparency, flexibility and ease in collaboration, while also showing evidence of personal accountability, rigor and excellence in their final deliverables.

Courses Integrated and Transferable Skills

Four courses taught by individual project PIs across 3 colleges.

ART 343A: Traditional Photographic Techniques (16 students)

Skill sets: students worked with a diverse array of tools that enabled them to pose critical questions for further inquiry based on close observation in and of the environment. Experimenting with various image-making techniques while in the field, including polaroids, sketches, 360 degree images, digital photography and rubbings, they learned how to open pathways to observe phenomena where inquiry might be nurtured.

PAH 420: Southside Stories of Environmental Resilience (50 students, BA in Public and Applied Humanities) (50 students)

Skill set: design thinking, case study analysis, interview, visual literacy, archival research, site visit and analysis, community-engaged storytelling, spatial ethnography, photo, and audio and video documentation. Also image co-creation, co-curation, digital publication, web/graphic design, Story Mapping and other participatory mapping, prototyping, preparing and delivering prototype pin-ups for professional and community reviewers, exhibition design and planning.

SBE 301: Sustainable Built Environments: Introduction to Design Thinking (30 students, BA in Sustainable Built Environments)

Skill set: Problem solving: how to use design thinking to conduct engaged and site-specific research with historically disinvested communities. Then interpret key cultural and infrastructural assets through multimedia interventions that reflect these assets back to community members.

ARC 405: Interdisciplinary Design Studio Commemorating El Pueblo 50 for the BA in Design Arts and Practices (10 students)

Skill set: case study research; site visit, mapping and analysis; design thinking, architectural modeling and testing, preparing and delivering pin-ups for professional and community reviewers. Problem solving: observing, listening, and reflecting to connect social and cultural uses of space with their physical and material organization, thinking creatively to define opportunities, imagine possibilities, and test ideas for creating and sustaining vibrant places by shaping the built environment. The class focuses on El Pueblo Center to apply their explorations and support community (re)investment at a unique hub and social infrastructure for Southside Tucson.

PUBLICATIONS (7/1/24-6/30/25) (Q7)

A key aspect of research in the arts and humanities, making it particularly impactful in the social sphere, is the wide range of ways it is published (made public) from the scholarly to the performative. See examples in answer to Q4 .

Scholarly Publication (from an Arts and Resilience project funded in 2023-24)

DiCindio, C., Green, J., & Keats, J. (2025). Envisioning Climate Futures: Applying CreativeVoice as a Research Method in Community Art Workshops. *International Journal of Education through Art*, 21(1), 113-129. https://intellectdiscover.com/content/journals/10.1386/eta_00183_1

Other

Forthcoming: publication of a companion book to the interdisciplinary projects on the Rillito River, *Ground/Water: The Art, Design and Science of a Dry River* by Ellen McMahon, Beth Weinstein and Ander Monson (UA Press), to highlight the recent interdisciplinary research projects that further contribute to the overarching narrative of resilience in and around the Santa Cruz River.

POSITIVE IMPACT ON THE UNIVERSITY AND REGIONS AND COMMUNITIES WE SERVE (Q8 +Q9)

The TRIF funding granted to the College of Fine Arts Research Office in 2024-25 supported 2 new programs (AR+R grants and Integrative Arts Research Fellowships) catalyzing 15 collaborative projects, which merge research and engagement with positive impact on colleagues and communities across the university and in the state of Arizona.

QUOTES (Q10)

Quotes from students, faculty PIs and community members voice the benefits of the projects made possible by this generous funding.

The Arts Research Gathering

“The [Arts Research Gathering] caused me to reflect on arts research itself—in terms of how “creative” practice fits within the larger U of A models of research—and to be amazed by the breadth and depth of what other faculty in the CFA are doing. Given the usually hectic pace of the semester, such a chance to reflect, and think about research—one’s own and others—was refreshing and inspiring,” Anonymous Post-Survey Quote, Arts Research Gathering, Spring 2025

Artistic Expression of Original Research | Graduate Student Participants

“I enjoyed using principles of art and artistic elements and motifs to reframe the story of my research into something more narrative and evocative. I found a freedom in working outside the bubble of my field and outside my typical tools.”

“Best was definitely the community. It was amazing getting to know people there, and feeling safe experimenting and doing weird stuff.”

“I loved learning macrophotography and have found the challenge of learning it to be very exciting. Using this medium as a means to communicate my research has become essential. I used the products of my artistic expression during my qualifying exam presentation and my departmental seminar presentation.”

“Using art to communicate my research was the best part, as it gave me the opportunity to break down and simplify some of my research concepts into an artistic piece. The best part of it was that the visitors now had a better understanding of some of the concepts in my research and I do not think there was a negative part about it.”

“The most important take away is that any form of Art is an essential part of our lives. No matter our scientific background or prospects, there is always a way of communicating our work through an artistic form and this is special. Arts help us express ourselves and even more importantly, with this retreat, express our research through an artistic medium to the public.”

“Life changing retreat!!! Seriously this was definitely an unexpected highlight

of my year, so props to everyone that made it happen. To be honest I considered backing out since I didn't know anyone else, but I am so happy I attended. The absolute best part was the group of people. I think it was the perfect number of folks and a great mix of people to get to know over the few days. It felt like summer camp for grad students. Location was gorgeous, food was amazing. I seriously learned so much jam packed in such a few days. I really appreciated the format of the multiple "lectures" from a variety of artists that are so skilled in what they do.

Artistic Expression of Original Research | Visitors to Art Showcases

"Loved getting to interact with the artists and hear from them how the art ties to the research they are actively conducting. The longer, more fluid discussions were super rewarding and drove a lot of ideas."

"It made me feel more interested in science!"

"It was gratifying and interesting to learn about people's research and maybe more so their PhD experience (and research) through a creative medium"

"Absolutely loved the bridge between art and science. As a middle school science teacher I feel like this exhibit reminds me of my own understanding of higher level science concepts as story, imagery, feeling and the best way to

"I felt as though I found myself with a group as passionate about the intersection of science and art as I am."

"Valued as a scientist and artist"

"I really felt the dynamicity between art and science and being a lover of both, I felt represented and intrigued."

"I felt like it was easier to understand what the students are working on even though I had already been presented with some of the information. This just made it easier to take in."

"I loved how all of the artists were there to explain their work and especially how diverse the mediums used were. It was cool being able to look through their creative methods of presentation!"

"I wish information about science was presented this kind of way more often, permitting us (in the community) to visualize it and speak to the researchers."

El Pueblo 50

“This makes me so happy - its shows me that the university cares.” (attendee at instructors’ table at Dia del Niñez celebration, El Pueblo Park)

“A sense of place also means a sense of pride. A sense of wonder, too, and attitude is important. Those of us that are from the Southside—22nd Street down—we’re more maligned than appreciated. ‘Don’t go down there unless you’re getting Sonoran hot dogs and leave right away’—that stereotype, and that misinformation, haunts us. It suppresses the way people see our community. So there’s an attitude, a kind of a chip on the shoulder, from people on the Southside. And that attitude is also what motivates us, our actions, and helps us create positive results.” US Congressman Raúl Grijalva

“It was that consciousness and political awareness of what the Southside was becoming...The murals were emblematic of the community’s awakening, of making sure that people were not just politicized but civically active on the decision making of the community...” (Raúl E. Aguirre, El Pueblo 50 community co-curator)

When thinking of this center, I get emotional too, because I remember sitting, in middle school or high school, in this area. My mentor Lorraine Lee...a very strong advocate here, especially in these neighborhoods, and she’s the one that planted the seed of urban planning in my head. I remember her... watching her speak at a leadership conference with Chicanos Por La Causa... And just seeing her, you know, care so passionately about this community really got me thinking—Well, what am I going to do when I grow up?”(Selina Barajas, El Pueblo 50 community co-curator)

The Climate Project

“I have never experienced the type of creative agency and participation in working on a production.” (Thalita Passos Pontes Pimentel DeAndrade, student ensemble member)

“I have been working closely with Rick and his team over the past 6 months to create my first short documentary. The level of artistry and professionalism from this ensemble is truly one of a kind ... !” (Clinton Willis, student documentary film maker, TFTV)

“Mainly, my response here has to do with expanding the students (and evolving my) understanding of research when done within an arts practice context, where the making of the art, is the research inquiry process. The

impact on the ten students, has been quite exciting to witness, and to hear them begin to express how the making of art can be the expression of questions they are tackling in their own interests and concerns can be instruments of research embodied in artistic expression.” Rick Wamer, PI “The Climate Project”

GroundWater II

“We want to expose what’s been going on in Tucson for many years and what’s still going on with these wells. The highlight for me was seeing these wells, going out into these neighborhoods and meeting the families who are still dealing with this problem.” (Jack Carpenter, PAH 420 student)

Liz Soltero, CEO of the [Sunnyside Foundation](#), said the organization is grateful to have such a strong and reciprocal partnership with Barrios and her students, who demonstrated care and respect in their projects. “This has been a truly great experience,” she told the students during their final presentations. “The work that you are engaging in and focusing on has so much impact in our lives. Every time we talk with students, I share that this isn’t just an assignment, this is our lives. At the Sunnyside Foundation, we feel honored to engage in this way and have an exchange of ideas about the community we love.”

[Marla Franco](#), Vice President for Hispanic Serving Institution (HSI) Initiatives, said uniting students and community partners in collaborative and innovative projects benefits everyone. “These are the types of experiential, hands-on learning opportunities that are deeply rooted in community needs and desires that I only dream of happening,” she said. “Often it needs only a little seed money and an expression of belief in people. Our faculty and students activated this in ways we never thought possible. This epitomizes what happens when you dream big and bring your expertise and passion to the table.”

Yolanda Herrera, co-chair of the Unified Community Advisory Board, Tucson International Airport Area Superfund Site, and president of the Sunnyside Neighborhood Association, said she enjoyed engaging with the students and observing how their projects developed. “I’m really impressed and motivated and inspired by all the students’ work,” Herrera said. “You are the solution of our future. Never forget that. And always remember, clean, safe water is life.”

ADDITIONAL INFORMATION FROM ORIGINAL PROPOSALS

1. Ground/Water II: Water Advocacy on the Santa Cruz,

Co-PIs: Jacqueline Jean Barrios, Public & Applied Humanities (COH) and Martina Shenal, Photography, Video & Imaging, School of Art (CFA)

A transdisciplinary project that engages research faculty from Public & Applied Humanities and the School of Art as Co-PI's, alongside community stakeholders, students, and representatives from Tucson's water advocacy initiatives. Research objectives center on water justice advocacy efforts in the Southside, close to the Tucson International Airport Superfund site, focusing on remediation efforts and impacts from discharging water treated for TCE, 1,4 Dioxane, & PFAS, back into the Santa Cruz watershed. Undergraduate students in courses, PAH: 420: Innovation and the Human Condition - Southside Stories of Environmental Resilience and ART 343A: Traditional Photographic Techniques, will work with Co-PIs, graduate research assistants, to collaboratively create a set of briefs that make use of the tools of spatial visualization, interpretation, and visual storytelling, to design a publicly-engaged project that intervenes, complements, documents and amplifies the community's historic struggle to care for their water and environment.

2. Expanding Design-Based Data Visualization at the Wonder Studio at Biosphere 2,

Co-PIs Asst. Prof Nicole Antebi and Sr. Research Technologist Aaron Bugaj.

Funds will support finishing the documentary film, Moving Science, which explores the role of animation and data visualization in resilience science and will serve as a call to action for viewers. Sites include: NASA Scientific Visualization Studio, RISD Nature Lab, and Caltech's Data Visualization Lab. Co-PIs will expand expertise in visualizing and interpreting complex data, a skill that is foundational to advancing interdisciplinary resilience research at UA. by enrolling in the New School Infographics and Data Visualization certificate program. These activities will better position Wonder Studio for integration into broader impacts grant proposals including NIH, NASA, NSF funding opportunities and for extramural opportunities: Nielsen Foundation's Data for Good Grant, Simons Foundation, Heartland Foundation, Osprey Foundation as well as provide direct benefit to UA student workforce development through new instructional training in data visualization.

3. The Ecology of Time: Activating Long-Term Environmental Stewardship on the Santa Rita Experimental Range,

Co-PIs: Brett Blum, director, Southern Arizona Experiment Station (SRER), Jonathon Keats (DCC, UA College of Fine Arts)

Two millennium cameras created by artist and experimental philosopher Jonathon Keats will be installed on the grounds of the Santa Rita Experimental Range in collaboration with Southern Arizona Experiment Station. Visitors will be invited to contribute a visual representation or textual description of what they expect to see in the Santa Rita in the year 3125. SRER will collect these materials, archiving them together with the repeat photography already underway– the project complements and expands upon the more-than-hundred-year history of repeat photography in the region. The shift in perspective encouraged by the cameras is intended to bolster adaptable desert communities, cultures, and ecosystems and to foster leadership in resilience, goals that are consistent with the mission of AIR's TRIF/WEES Initiative themes. In 2023, supported by an AIR Resilience Grant, Keats installed a single millennium camera at the midpoint of Tumamoc Hill. A University of Arizona News story about the camera garnered media attention globally, with hundreds of articles and interviews in venues ranging from the Arizona Daily Star to the BBC World Service. Coverage continues to this day.

4. The Climate Project: Trapeze Training for Resilience and Performance,

PI Rick Wamer (CFA- Theater Film and TV), with consultant Chris Impey (COS)

This grant supports a professional aerial theatre artist to train up to 10 student/actors May 19, 2025 – June 27, 2025, and for video documentation, in preparation for the continuation of a multi-year physical theatre research project, The Climate Change Project (performance supported by the school of TFTV scheduled for Fall of 2025.) This process will empower a resilience in collaborative devising of physical theatre among the participants that exposes climate change issues, seeks solutions, and encourages and inspires audiences to do the same. The training necessary to create the physical endurance and capacity to shift the body's weight and adjust in motion on trapeze with other ensemble bodies in play develops a resilience capacity within the actors to make immediate performance adjustments. This same capacity for resilience is actively transferable when responding to upcoming human caused climate change challenges. The precarious balance and use of the body in Trapeze artistry, and the expression of the art as an embodiment of resilience are strong metaphors for the delicate balance of nature in this time of the Anthropocene.

5. El Pueblo 50: Celebrating the Living Heart of Tucson's Southside

Co-PIs: Jacqueline Barrios (COH), Rebecca Senf (CCP) with Kenny Wong (CAPLA), Liz Soltero (Sunnyside), Selina Barajas

El Pueblo 50 is a community co-curated public exhibition documenting and presenting the

stories of Southside Tucson resilience. It is an extension of the integrative arts research project, Documenting Resilience in Tucson's Southside, sustaining the impact of ongoing arts research with and at El Pueblo, a historic hub of Southside reinvestment and advocacy.

6. Artistic Expression of Original

PI: Jessica Maccaro UC, Riverside), oversight by Ellen McMahon (ADR, CFA)

"Artistic Expression Of Original Research" (AEOR) is a program at the intersection of informal STEM education, professional development, science communication, art, and trans-disciplinary collaboration and community building. AEOR invites STEM graduate students to a day 3 retreat to engage with various art forms guided by expert artists across mediums from poetry, animation, fashion, music, abstract art, mixed media, and so much more. This culminates in a series of exhibitions where STEM graduate students showcase their original research and data through their artistic medium(s) of choice. They present their original art in a poster session style, where they can speak face to face with community members about their work. Through translating their science into art they can not only communicate science in a new way but also understand it in a new light. Besides simply clarifying facts, they discover what their science means to them and their community.