

## Background & Context \*

Please provide any relevant background about your organization/team including your mission and/or expertise. Please also lay out the rationale for the proposed project such as context on the issue that your project would address. This section is meant to give us more information about you, while also giving you more space below to talk toward your proposed project. Responses are limited to 3,000 characters including spaces.

We are a group of undergraduate and graduate students from the Department of Hydrology and Atmospheric Sciences (HAS). We include the project leadership (Robert Hull and Abigail Kahler) as well as other planning committee members Alcely Lau, Reza Ehsani, Sidian Chen, Hannah Haugen, Diana Zamora-Reyes, and Stella Heflin with faculty and staff support from Ty Ferre and Erma Santander, respectively. We have worked closely since mid-October to plan El Día del Agua y la Atmósfera (El Día).

El Día is a professional-quality student research symposium that marks the beginning of EarthWeek. The event is planned, organized, and hosted by students of HAS. El Dia generally attracts over 100 people, including student presenters from across the School of Earth & Environmental Sciences and College of Engineering, as well as attendees and alumni from non-profit, regulatory, and industry organizations. This symposium is the result of merging two events: El Día del Agua, established by the Department of Hydrology and Water Resources Student Association in 1990, and AIR, established by the graduate students of the Department of Atmospheric Sciences in 1999.

As in past years, this effort is primarily planned by and for students. One of our responsibilities is to secure funding, a large majority of which comes from outside our parent department, HAS. This year, we have applied for and received funding from the GPSC PODS grant and a number of private donors. In the past, student leadership of El Dia has applied for the Green Fund to help support our programming; this year we turn to the newly formulated Campus Sustainability Fund for essential financial support.

This year's El Día - titled 'Our Water, Our Air' - will explore links between hydrology & atmospheric science and pressing social challenges, with a specific focus on the arid southwest. Unlike in 2020 and 2021, we are planning for El Dia 2022 to be a fully hybrid (virtual and in-person) event with the appropriate considerations taken to ensure the safety of all participants and attendees. This year's El Día will take place on March 22, 2022 (on World Water Day) in ENR2.

El Día 2022 will expand on its traditional offerings in some meaningful ways. It will incorporate a brand-new outreach component, keynote panel, and student-run website. For the first time for the in-person conference, we have waived registration fees for all participants so that money does not present a barrier to entry for students. These elements require greater contributions of time from the planning committee and financial support than in past years.

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## Project Description \*

Please provide a description of your project. Please include information on the need your project fills and how it does so. Include objectives, an anticipated timeline, and expected impact(s). Responses are limited to 3,000 characters including spaces.

The main highlight of El Día is student research that is presented, discussed, and awarded throughout the day. Students from the undergraduate to PhD level participate in El Día by preparing oral presentations and posters. Being able to present well-crafted posters and oral presentations is an important skill for students to develop, so that they are better able to communicate scientific findings to peers and the general public. Additionally, this symposium fulfills the communication/presentation requirement for the Department of Hydrology and Atmospheric Sciences (HAS). Though last year's event was online, the total number of presenters was still one of the largest on record (approximately 40). Last year we increased our student turnout and we hope to continue this trend by continuing to innovate our offerings. In 2021, a job panel discussion from alumni and round table sessions were introduced providing opportunities for additional student involvement. To learn more about El Día 2021, visit the event website <https://has.arizona.edu/el-d%C3%ADa-del-agua-y-la-atm%C3%B3sfera>.

Attendees of El Día range from students and faculty, to industry and government professionals, and the general public. The diverse attendance provides an opportunity for all of our students to ask questions regarding their career interests, allowing them to connect their current work with the careers they aim to have in the future. In previous years the networking provided by El Día led to students with outstanding presentations being awarded monetary prizes and summer internships at local environmental consulting firms. Many HAS students have gone on to work at local companies after graduation due to the intimate connections we have created within the local community.

Two additional highlights of this year's El Día that are particularly relevant to the Campus Sustainability Fund mission include:

1. The morning keynote session entitled 'Water Security in the Arid Southwest: Structures, Science, and Solutions.' We invite three panelists who can speak to the role in which water security plays in the culture, economics, and health of the arid southwest. Panelists will be advocacy, industry, and scientific leaders with diverse backgrounds. For more information about the keynote panel, visit the student-designed event website here <https://eldia2022.github.io/people.html>.

2. An outreach component asynchronous to the conference - led by student Diana Zamora-Reyes in cooperation with middle school educator Tim Malan - from early February to late April. This outreach will bridge the gap in water and climate literacy by bringing educators and University students directly together to create curricula in a pedagogical style that works for K-12 students.

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### Project Summary Snapshot \*

Please provide a short summary of your project. This summary will be used on our new website and other Office of Sustainability materials, if approved. Think of this as a hyper-concentrated summary limited to just a few sentences. Responses are limited to 800 characters (~60-100 words).

El Día del Agua y la Atmósfera (El Día) is a student-led research symposium that kicks off EarthWeek. The event is planned, organized, and hosted by students of the Department of Hydrology and Atmospheric Sciences (HAS) for the entire University of Arizona community. This year's El Día - titled 'Our Water, Our Air' - will explore links between hydrology & atmospheric science and pressing social challenges, with a specific focus on the arid southwest via: 1) student research presentations; 2) keynote panel; 3) outreach into the Tucson K-12 community.

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## Project Feasibility & Logistics \*

Please provide a description of the work that has been completed so far to make this project feasible. Have all relevant partners been contacted/coordinated with? Please identify them in your response. Have you received reasonable quotes for supplies? What research has been completed to lay the foundation for this project? Proposals that have not thoroughly pre-planned may be rejected outright. Responses are limited to 3,000 characters including spaces.

The student planning committee meets weekly to make this event happen. Standing meetings are also in place with fiscal officer Erma Santander to ensure budgetary concerns are met. Some of the work we have completed so far to make this project feasible includes:

- Creation and dissemination of an El Día theme ('Our Water, Our Air')
- Budgeting and funding coordination with GPSC PODS and private sponsors.
- Continued contact and cultivation with potential and confirmed speakers for the panel and lunch speaker session, as well as alumni interested in attending and funding the event. These contacts include on-campus resources like Karletta Chief, Ty Ferre, Kerry Shwartz, Sharon Megdal, Chris Castro, and Martha Whitaker; and off-campus resources like Janene Yazzie, Dan Henz, Sandy Fabritz-Whitney, and Marla Odom.
- Creation of a website to host virtual conference content and information that will be available for posterity and updateable for future El Dia events. This website is regularly updated by Reza Ehsani in collaboration with Terrie Thompson, who has in the past curated symposium content on the HAS website. The new website can be accessed here <https://eldia2022.github.io/>
- Announcement of El Día event via HAS and other SEES listservs in November
- Announcement of El Dia 'Photo Contest' over winter break
- Announcement of El Día outreach effort, which n=6 participants have already signed up for
- Contact and coordination with Mr. Tim Malan of TUSD over the content and direction of our outreach
- Room reservations at ENR2
- Printing and posting of El Dia conference posters in Harshbarger and other SEES department websites
- Call for Abstracts (closing Feb 11) and Registration (closing Mar 16)
- Continued participation in larger EarthWeek planning activities, including orchestrating an inter-departmental volleyball event to encourage sustainable and competitive fun
- Attendance of the UMBC (Undergraduate Biology Research Conference) to observe what a successful conference looks like in this space
- Continued and ongoing reminders to campus community to register and submit abstracts. At the time of application for CSF we have 17 abstract submissions and 27 registrations.

Logistics continue to be finalized, and we have an active project management app in which we map out those actions between now and conference time and collaborate on them. Some examples of items that still need to be finalized include (but certainly aren't limited to):

- Event details like: posting of abstracts on website; identification of presentation slots; timeline finalization; and event planning for the day of the event, ordering of merchandise, and food
- Call for faculty and staff presentation Judges (rubric exists)...

## Environmental Sustainability Outcomes \*

Please provide a brief description of how you expect your project to advance environmental sustainability on campus. Responses are limited to 3,000 characters including spaces. A definition of environmental sustainability is provided in our Spring 2022 Information.

We believe that our event - in particular this year's keynote theme around water security in the arid southwest - fills an important niche with respect to environmental sustainability outcomes. The 'keynote' session will be entitled 'Water Security in the Arid Southwest: Structures, Science, and Solutions.' We invite three panelists with experience in the ways water security affects the culture, economics, and health of the arid southwest. Panelists will be advocacy, industry, and scientific leaders with a diverse set of backgrounds. This panel will be moderated by HAS student Mekha Pereira.

Below is the blurb announcing this event:

"For Arizona and the Arid Southwest, securing water for people and nature is a non-trivial challenge with ties to the interactions of climate, infrastructure, and history. That challenge has been amplified recently by Tier 1 shortage declarations from the Colorado River and COVID-19. Yet 'water security' means different things to the science, advocacy, and industry leaders who use the term. As panelist Janene Yazzie of Sixth World Solutions states: "Our challenges are so complex. Our histories are so complex, and our solutions need to mirror that... informed by the limitations and types of relationships that exist within our ecosystems." What does securing water mean, how do 'we' go about it, and where do scientists fit in? Yazzie is joined by Sandra Fabritz-Whitney of Freeport McMoRan and Terri Sue Rossi of Arizona Department of Water Resources to ask these questions in the keynote event for the University of Arizona Department of Hydrology and Atmospheric Science's annual conference, EL DÍA DEL AGUA Y LA ATMÓSFERA. Please Join - attendance is free!"

Frank conversation surrounding resiliency, balance, and interconnectedness from diverse perspectives is needed surrounding water in our state, in particular given our state's peculiar aridity leading to water scarcity, and its ties to ongoing settler-colonialism. We invite high-profile, open-minded speakers from very diverse backgrounds to have this conversation - most likely landing on different and conflicting definitions of what a sustainable (or water secure) future looks like. We believe this type of conversation is unusual in general in academia, but in particular in the Department of Hydrology and Atmospheric Sciences with its focus on computational modeling and general appeal to engineering-types. The potential reach to industry, academia, and regulatory entities is definitely well beyond the so-called "sustainability choir", and has the potential to change hearts and minds about the life-giving resource that we study.

By supporting El Dia, CSF supports essential discourse on the understanding (or lack thereof) of sustainability issues that are deeply rooted in the science that this community does.

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## Social Sustainability Outcomes \*

Please provide a brief description of how you expect your project to advance social sustainability on campus. Responses are limited to 3,000 characters including spaces. A definition of social sustainability is provided in our Spring 2022 Information.

We believe that this conference's goals of connecting individuals from diverse academic backgrounds to one another and celebrating achievement are in line with the Social Sustainability goals of CSF. Specifically, this conference promotes connectivity and participation between students who - especially in a time of COVID - may struggle to find opportunities to share in human activities with one another. More concretely, our goal is to have a more inclusive and diverse El Dia than in the past. We admit that this is a challenge given systemic inadequacies of this department and academia in general with regards to Diversity, Equity, Inclusion, and Justice (DEIJ).

-Part of that is by playing an active role in the EarthWeek goal of promoting Indigenous knowledge in science (e.g. Janene Yazzie is a Dine entrepreneur, community organizer and human rights advocate from the Navajo Nation).

-Another part of that is by promoting gender diversity - our keynote panel features three women speakers; in the past this position has mostly been filled by white men.

-Thirdly, we look to implement peer-judging for the first time into the El Dia award rubric. In the past, post-docs and professors have judged student presentations, sometimes harshly. We believe that by focusing authority away from its conventional gatekeepers, we begin to break down systemic barriers.

-Finally, we believe that the financial support ensures the continued existence of El Día so that what we create this year can be built upon next (just like what was created last year was built upon this year). We believe that support of long-term efforts on campus (even in the form short-term mini-grants) falls within the CFS definition of 'socially sustainable'.

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## Student Leadership & Involvement \*

Please provide a brief description of how you expect your project to benefit students on campus regarding the creation of leadership opportunities or student engagement. What leadership opportunities exist within your proposal? If you plan to hire/ or involve students, please describe in what capacity. For example, if you plan to hire students, create an internship, or seek student involvement, please describe relevant details thoroughly (wages, responsibilities, duration of job, extent of involvement, how you will solicit/ market these opportunities etc.). Responses are limited to 3,000 characters including spaces.

Student leadership is at the heart of this event. Students - not faculty - with some assistance from staff create this event from the ground up, and nearly all of it is volunteer work. We hope this is apparent to the reader based upon the responses in earlier sections. This year, for the first time, the Department of Hydrology and Atmospheric Sciences allocated a sum of money (\$3,000) to support some of the senior members of leadership in this group. In addition to the students mentioned in the first section of this proposal, this event will require many more volunteers taken from the ranks of presenters and attendees in the department. We do this based upon the principle of fairness - if you get something out of an event, then you must give something back in return in the form of your time.

However, we do not seek funds from CSF to support any students for El Dia 2022.

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## Education, Outreach, & Behavior Change \*

Please provide a brief description of how you expect your project will communicate its impacts to the campus community. How will your project educate the campus community and/or incorporate outreach and behavior change? How are you reaching beyond the "sustainability choir?". Responses are limited to 3,000 characters including spaces.

El Día this year facilitates education and outreach in a number of ways. On the most fundamental level, it is a touchstone event for University students to teach other students about their work, and share with community members who are in attendance. This is connected in an essential way to behavioral change - we are inspired to be better by the good work of others.

In past years, El Día has hosted student presenters not only from other departments and universities but also from community schools. This year's event is no different, as middle school teacher Dr. Constantinos Manoli returns with a cohort of 7th and 8th grade students from St. Cyril of Alexandria School to present student research at El Día for the second year in a row. Click here to see the presentation from 2021 <https://has.arizona.edu/climate-change-comparison-among-oral-and-measured-histories-natural-phenomena-tucson-arizona>

In addition, this year's El Día will facilitate education, outreach, and behavior change via the outreach effort held asynchronously to the event that is led by Diana Zamora-Reyes:

-The project proposed here seeks to bridge the gap in water and climate literacy by bringing educators and University students directly together to create curricula in a pedagogical style that works for K-12 students. Specifically, four teams of 3-4 University students meet bimonthly with the support of K-12 educators to achieve the following goals: 1) promote scientific inquiry in classrooms; 2) become improved science educators, communicators and collaborators; and 3) exchange knowledge of cutting-edge and local hydrology, mining, and atmospheric science with K-12 educators. All of this by crafting student-centered lessons to be delivered in middle school classrooms. This project had a trial run in Spring 2021, where Diana helped lead a team of 12 undergraduate and graduate students from the Department of Hydrology & Atmospheric Sciences (HAS) that volunteered in conjunction with three partner middle schools to create novel lessons around groundwater, surface water, and climate change reaching over 200 middle schoolers. Last year's effort came together as a lightweight proof-of-concept experiment in a time of COVID and uncertainty. With the help of the CSF, this year's effort at bridging the gap will be bigger, better, and built-to-last.

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## Timeline

We understand that for some Mini Grant projects, having a deadline of June 30th, 2022 is not enough time. Should you feel that your project cannot be completed and closed out by this date, please provide a thorough explanation as to why your project requires a project timeline extension. Timeline extensions will be granted on a case-by-case and limited basis. Responses are limited to 3,000 characters including spaces. This questions is optional, please omit if not relevant to you.

We believe that all of the funds requested will be spent well before the deadline of June 30th, 2022. The expenses associated with the event should be entirely spent by April 1, approximately one week after the conclusion of the event.

Our primary concern is getting money early enough to cover the operating expenses described in our proposal. We believe if we are able to receive the funding requested sometime before the final week of February, we should be able to cover event expenses as hoped for.

As a final comment, I would like to ask the reviewers of this proposal to please strongly consider funding our project in full. Without the support requested, we will likely need to make significant changes to the event and/or secure funding from alternative sources, such as a post-facto registration fee.

Please don't hesitate to reach out to us if you have any questions or concerns about the event and our Mini Grant application!

Thanks for your time and thoughtful consideration - Quinn

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## Project Budget \*

Please provide a completed project budget using our Budget Template. The template can be found here: <https://arizona.box.com/s/5wmduso6tz27pyskc822tknf6pxr002y> Using the link, click "Download" at the top right corner and it will download as an Excel Sheet. You will need to sign into Box if you haven't used it prior. Please save your Excel sheet as: Project Name\_Budget Template



El Dia\_Spring 20...

This form was created inside of University of Arizona.

Google Forms