OFFICE OF SUSTAINABILITY
CAMPUS SUSTAINABILITY FUND

Wassaja Oidag

Grant Type
Mini Grant

Application Type
Final Application

Project Manager 1 Name
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Project Manager 1 Status
Faculty

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Wassaja Carlos Montezuma Center for Native American Health

Project Manager 2 Name
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Project Manager 2 Role
Back-up

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Family Community Medicine

Requested Funding Amount

Only enter this number after completing the budget sheet, as the budget template will round up your request. Mini Grants may request $500 up to $10,000.

Year 1:
$10000

Project Name
Wassaja Oidag

Primary Project Category
Campus Life (Health & Wellbeing, Behavior Change

Secondary Project Category
Social Sustainability (including Social/Environmental Justice)

Background and Context

Please provide relevant background information about your organization/team, including your mission and/or expertise. Lay out the rationale for the proposed project, focusing on the issue that your project would address. You may also share how the project is new or how it complements, builds upon, or scales existing initiatives. This section is meant to give us more information about you and the context for the project, while the questions below provide space to go into detail about your proposal's plan and specifics.

Response:

Established in 1983, the Wassaja Carlos Montezuma Center for Native American Health ("Center") is rooted in the University of Arizona (UA)'s long-standing commitment to advancing Indigenous health, wellness, and education. The Center's mission is to "grow-our-own" by creating pathways that increase workforce capacity on Tribal lands, and by fostering education grounded in cultural humility to improve the quality of life for Native American (NA) communities. This mission is guided by principles that resonate with Tribal sovereignty, respect Indigenous governance, and promote

holistic health, wellness, and research.
The Center's Indigenous-led framework bridges Tribal Nations, both on and off the reservation, with students, practitioners, and community members. The Center's structure includes four key subunits that together form the foundation of its programs and initiatives:
1. Indigenous Health Pathways and Wellness
2. Indigenous Social Justice
3. Indigenous Health, Wellness, and Research
4. Indigenous Healthcare Workforce, Professional Development, and Engagement
Additionally, the Center's work is guided by a Tribally-led Advisory Board, comprised of representatives from eight local Tribes and one non-local Tribe, as well as partnerships with UA students, departments, programs, and community.
The proposed project will provide needed infrastructure to support future program needs in the space west of the Wassaja Center building (e.g.: developing a garden space for traditional foods and medicines). This mini-grant will offer basic infrastructure, which is a crucial step to facilitate our existing programming and empower the community to focus on nurturing the garden and traditions. If given the privilege to receive the mini-grant, it will allow us to achieve the critical first step in a series of projects leading to collaborative efforts with local Tribes to enrich the student experience with teaching and community traditions. This project is intended to be the functional testing for larger initiatives with local Tribes and on Tribal lands/communities
The Wassaja Oidag project will enhance student engagement and work together with local Tribes to gain a wealth of knowledge not taught in conventional classrooms. This learning platform will increase environmental quality both on and off campus, strengthen community well-being, and advance a culture of sustainability off and on campus. Together, these partners share a vision of Indigenous healing, environmental stewardship, and cultural continuity.
The rationale for this project builds upon existing Wassaja Center initiatives that integrate health, culture, spirituality, and environment as interdependent dimensions of Indigenous well-being. The collaboration exemplifies how cross-institutional partnerships can amplify Indigenous-led solutions, scale proven initiatives, and ensure that the work remains Tribal-driven, culturally legitimate, and sustainably designed for future generations.

Project Description

Please provide a thorough description and explanation of your project. Be explicit in what your team is proposing. What will your project's outcomes be and how will you achieve them? Outcomes should be specific, measurable, achievable, realistic, and timely.

Response:

We will install a high-efficiency drip irrigation system and rainwater harvesting infrastructure using traditional O'odham land-stewardship practices timed with the July–August monsoon (O'odham New Year). The goal is to create an off-grid garden that can be implemented on and off Tribal lands. A Solar controller and rainwater harvester will be purchased with these funds to set the needed foundation to implement the Wassaja Oidag. We will install a solar controller that can rain-gauge, so it turns off when it rains on site. Work will include shaping the land for water retention, rehabilitating soil, and maintaining native food and medicinal plants used in community healing and

wellness. The Wassaja Center and graduate students will coordinate students and community members who will participate in hands-on building to “grow-our-own” workforce capacity. The Wassaja Oidag will serve as a model for larger projects (e.g., Pascua Yaqui Tribe [PYT] Tortuga (Mochik) Ranch Project, an 18-acre pilot for agricultural and natural resource workforce training).
SMART Outcomes
1. Install Water Infrastructure (by Month 4).
2. Water Reduction (by Month 8).
3. Plant Stewardship: Maintain 85% survival of existing plants and add 50 new native plants.
4. Workforce Development: Train 4 students (incl. 2 graduate leads) with 200 volunteer hours.
5. Community Engagement: Host ~4 workshops reaching 50 participants.
6. Reporting (by Month 8): Produce a 10–15-page implementation report and O&M guide.
Operations (filter checks, emitter maintenance, seasonal cycles) will be embedded in student roles. Curriculum and maintenance guides will feed directly into workforce training, creating a sustainable pathway from campus practice to Tribal lands.
This plan delivers measurable outcomes while honoring Indigenous knowledge, strengthening community stewardship, and building a workforce pipeline that extends from the garden to Tribal lands and beyond.

Timeline

Please provide a timeline breakdown for the key steps in your project. The timeline can be basic, but please include anticipated timeframes for each major step, including any key dates for when certain elements must start or be completed. The timeline can be in list format.

Response:

Project Timeline
This timeline defines phases and outcomes, for the 8-month implementation plan that aligns with monsoon cycles and student and community participation goals.
Months 1–2: Design & Procurement (February–March 2026)[NH1.1]
• Bring on the graduate student, which will assist in the process of learning and creating a plan to engage and teach students interested in a deeper understanding of local Tribal traditional foods and medicine from an initial point, in the project. In all the below action items the students and Indigenous communities will be involved in building the infrastructure to sustain the Wassaja Oaidg Project.
• Conduct site assessment and finalize layout for drip zones, cisterns, and conveyance.
• Confirm partnership with the University of Arizona contractor.
• Order materials and irrigation components (tubing, emitters, tanks, filters, valves).
• Begin documenting baseline conditions (photos, soil tests, water-use benchmarks).
Months 3–4: Site Preparation & Installation (April–May 2026)
• Build the infrastructure needed to sustain the Wassaja Oaidg Project.
• Shape the land using traditional O’odham rain-harvesting techniques (swales, berms, basins).
• Rehabilitate soil and install high-efficiency drip irrigation and rainwater systems.
• Set up water harvester cistern and test water pressure and flow regulation.

• Train graduate student and community members during on-site installation.
Months 4–6: Plant Care & Community Engagement (May–July 2026)
• Launch native food and medicinal plant donation drive
• Host volunteer planting and teaching days emphasizing cultural knowledge-sharing.
• Conduct workforce training sessions on irrigation operation and maintenance.
• Continue photo documentation, tracking participation, and early growth data.
Month 7: Monsoon Optimization (July–August 2026)
• In all the below action items the students and Indigenous communities will be involved in building the infrastructure needed to sustain the Wassaja Oaidg Project.
• Conduct pre-monsoon system checks and readiness review using the installed solar monitoring system.
• Monitor soil moisture and cistern water levels during monsoon rains.
• Make flow adjustments to optimize efficiency and prevent erosion.
• Collect rainfall and usage data for water-conservation tracking.
Months 1–8: Ongoing Documentation & Evaluation (February–September 2026)
• Maintain project logbook and visual documentation for each phase.
• Track SMART outcomes: installation milestones, water savings, plant survival, and student participation.
• Conduct short surveys to assess student learning and community engagement.
Month 8: Final Reporting & Knowledge Sharing (September 2025)
• Compile and submit a 10–15-page final report summarizing methods, outcomes, and lessons learned.
• Share findings and materials with Pascua Yaqui Tribe (PYT), Tohono O'odham Nation (TON), and other relevant organizations.

Budget Narrative

Use this section to provide supplemental justification for the items you are requesting on your budget sheet. Please break down your justifications into the budget categories: Personnel or operating budget. Do not list out each expense or repeat notes made in the budget template, but instead address why the line items are being requested and the purpose they will serve, providing elaboration when necessary.
If you are requesting funding for personnel, use this section to elaborate on the position you are creating and how the budget and timeline was established for it. If you plan to hire students, describe in what capacity. Describe relevant details thoroughly (wages, responsibilities, duration of job, extent of involvement, how you will solicit/ market these opportunities etc.).
Ensure the descriptions match the line items in the budget sheet.
If matching or supporting funds are secured for the project, identify the source and amount in this section, and detail the impact of the matching funds on your overall budget.

Response:

Personnel and Employee-Related Expenses ($6,000)
• Christina Andrews, Preceptor (PI) (In-kind).
• Annette Garcia, Project Manager (In-kind).
• Lupe Sotelo Valenzuela, $3,000

• 2-undergraduate students @ $1,500 each, totaling $3,000.
The Preceptor will be Christina Andrews, a member of the Tohono O'odham Nation, serving as faculty mentor and project lead, will oversee technical coordination, contractors, and Tribal partner (the Tohono O'odham Nation). Lupe Sotelo Valenzuela will assist with student selection, site preparation, irrigation design, rainwater harvesting, and plant stewardship under faculty supervision. Their roles include coordinating community volunteer days, maintaining field logs, collecting data for evaluation, and supporting report development. They will be employed part-time during the spring and summer phases at standard University of Arizona graduate assistant wage rates, ensuring equitable compensation. Their oversight guarantees the project remains aligned with Indigenous land-stewardship principles and the University's sustainability standards.
Supplies and Related Operations ($4,000)
Irrigation Installation: ($4k)
• Replace existing controller with a solar controller including new control wire to existing valves. ($300 retail cost)(Hunter XC Hybrid).
• Provide solar panel kit for controller ($300 retail)(Hunter SPXCH) – can be mounted on top of controller at factory or purchased separate to be located on roof etc.
• Include time for FM electrical to terminate power service.
• Provide dc latching solenoids to (2) existing valves ($25 retail cost)(Hunter 458200).
• Rain sensor mounted on roof ($50 retail cost)(Hunter Rain-Clik).
• Add (1) control valve in valve box for new raised garden beds($250 retail cost).
• Provide new drip pipe to trees in front area and existing landscape in back area (approx. 500lf).

Matching and Supporting Funds.
Wassaja Center will contribute in-kind support through faculty time, equipment use, and student mentorship, valued at approximately $5,000.

Project Feasibility and Logistics

The Campus Sustainability Fund will only fund projects that have completed the necessary work to ensure they can succeed, be completed in the grant's timeline, or have an accurate budget.
Please provide a description of the work that has been completed so far to make this project feasible. Please provide a description of the work that has been completed so far to make this project feasible. If relevant partners have been contacted/coordinated with, please identify them in your response.
For example, have you received consent or authorization to complete your project (such as from Housing and Residence Life, Facilities Management, Parking and Transportation, etc.)? If you are making modifications to campus, do you have written authorization or official quotes from Facilities Management to accurately identify the cost of labor and supplies?

Response:

Project Feasibility and Readiness
For more than a decade, the UA's Adalberto & Ana Guerrero Student Center (Guerrero) has cultivated the Wassaja Oidag, a community garden that anchors Indigenous cultural, linguistic, and healing practices. Building on this foundation, the Wassaja Center proposes an infrastructure and land-preparation phase to ensure long-term ecological and programmatic sustainability. The

Wassaja Oidag faces visible deterioration from years of limited upkeep. Weeds, damaged infrastructure, and depleted soil conditions hinder participation and productivity. With funding, we can teach students how to lay the infrastructure to transform this neglected space into a sustainable, inclusive garden that supports learning, food security, and Tribal and non-Tribal community engagement. This project is intended to be the functional testing for larger initiatives with local Tribes and communities.
The Wassaja Oidag is working with the University of Arizona's Facilities Management to strategize and complete the proposed irrigation and rainwater harvesting project at the Wassaja Center site, which already includes existing infrastructure, established native food and medicinal plants, and designated spaces for additional harvesting, presentations, and workshops. The site is secure, accessible, and managed by Wassaja Center staff, ensuring that project implementation can proceed immediately upon funding approval.
To ensure readiness, the Wassaja Center has coordinated with the following partners:
• Tonya Joaquin, Tohono O'odham Nation Medicine Person – who has committed to lead the traditional food and medicinal plants needed for this project.
• Chris Stebe, U of A Facilities Management, Planning and Design – has provided infrastructure authorization, cost validation, and connection guidance (see attached equipment quote);
The project is feasible, authorized, and ready for implementation within the grant's timeline. Consultations are completed and accurate budget estimates secured.

Environmental Sustainability Outcomes

Please provide a description of how you expect your project to advance environmental sustainability on campus. A definition of environmental sustainability is provided on our Guides and Tips page.

Response:

The Wassaja Oidag Project directly advances student learning, engagement, and skills, such as communication, Tribal knowledge, critical-thinking, and collaboration. This project also directly advances environmental sustainability through Indigenous-led land stewardship, sustainable water management, and biodiversity restoration. This project is based on traditional O'odham ecological practices. It integrates modern sustainability strategies with Indigenous knowledge to conserve natural resources and promote balance between human activity and the environment.

Installing a drip irrigation system will dramatically reduce potable water use and runoff by capturing and reusing rainwater according to seasonal cycles. These systems align with the University of Arizona's climate adaptation goals by promoting drought-resilient landscapes and reducing dependence on municipal water. The central control system, or efficient standalone alternative, will optimize solar irrigation timing based on weather, minimizing waste while supporting plant health. This approach models responsible water use in an arid ecosystem and supports long-term sustainability and climate resilience and adaptation.

The project improves soil structure and fertility through traditional techniques—such as type of soil, berms, and mulching—that increase water infiltration, reduce erosion, and build organic matter.

This project will diversify and expand the garden's native food and medicinal plants, which will require less irrigation than non-native species and serve as living classrooms for students from all different backgrounds to learn about sustainable desert agriculture and ethnobotany.

Environmental sustainability at the Wassaja Oidag is inseparable from cultural continuity. The project connects students, faculty, and community members to ancestral practices of growing, harvesting, and using native plants for food and medicine, ceremony, and wellness. A living classroom will provide for training, workshops, and community events to educate about sustainable water use, soil health, and climate stewardship, ensuring this knowledge is passed forward to the next generation. Students will gain firsthand experience in sustainable, arid land management, thus building future environmental leaders rooted in Indigenous values of reciprocity and respect for the land.

The project's outcomes extend beyond the campus garden. It will grow our future agriculture leaders and preserve Tribal knowledge. Additionally, data on water use, plant survival, and soil health will inform future Tribal and campus sustainability projects, including the San Xavier Co-Op Farms on the Tohono O'odham Nation, as well as Pascua Yaqui Tribe's Tortuga (Mochik) Ranch initiatives. By demonstrating how Indigenous knowledge and scientific innovation can coexist, the Wassaja Oidag Project offers a scalable model for other desert communities facing water scarcity, ecological stress, and climate adaptation.

Social Sustainability Outcomes

Please provide a description of how you expect your project to advance social sustainability on campus. A definition of social sustainability is provided on our Guides and Tips page.

Response:

The Wassaja Oidag Project advances social sustainability by integrating Indigenous knowledge, education, and community partnership into a teaching hub for students. This project is rooted in the O'odham principle of himdag, the way of life that teaches respect, balance, and reciprocity. Through engagement with the Tohono O'odham Nation, the project brings together Students and community to share resources, knowledge, and responsibility. Each partner plays an active role, from building the infrastructure needed for the student's living classroom, to reinforcing shared stewardship and collective action toward building a sustainable future for the next generation.

Social sustainability begins with capacity-building, not only when it comes to infrastructure, but also when it comes to human-capacity-building. The project provides a living classroom with hands-on training for students, who will learn from local Tribes irrigation design, soil management, data collection, and rainwater harvesting techniques. Guided by faculty and community mentors, students gain leadership experience in sustainable land use while participating in a real-world example of environmental justice. These experiences will prepare Students for future roles in Tribal governance, environmental policy, public health, and law and policy.

The Wassaja Oidag serves as a space for healing connecting spiritual, physical, and ecological wellness. The native foods and medicinal plants grown here are not only vital to biodiversity but also to the linguistic and cultural practices that restore balance within Indigenous communities. This balance establishes and preserves harmony among people, culture, animals, and the environment.

By centering student and Indigenous-led decision-making, the project models equity in sustainability, ensuring that historically marginalized voices guide how environmental resources are managed and shared. The living classroom activities will be free and open to students and community members, with outreach focused on Native American and first-generation college students. Indigenous knowledge is crucial in the fight against climate change. This equitable student living classroom access ensures the benefits of sustainability when it comes to sharing learning, wellness, and community connection.

The project's outcomes extend beyond the physical site. The relationships formed among students, faculty, and Tribal partners create a sustainable social network that supports future projects such as the Pascua Yaqui Tribe Tortuga (Mochik) Ranch initiative and the San Xavier Co-Op Farms on the Tohono O'odham Nation. This collaboration demonstrates how academic institutions can work with Tribal communities, ensuring that sustainability remains both community-led and culturally and linguistically grounded.

Student Leadership & Involvement

Please provide a description of how your project will benefit students on campus regarding the creation of leadership opportunities or student engagement. What leadership opportunities exist within your proposal? If you plan to seek student involvement, include relevant details thoroughly and how you will solicit/ market these opportunities.

Response:

Students participating in the project—both graduate and undergraduate—will gain hands-on experience in climate adaptation, soil restoration, rainwater harvesting, and native plant propagation. In the living classroom, students will learn and create sustainable solutions for climate change and adaptation base on an Indigenous restoring balance system. Through the installation and maintenance of the irrigation system, students will apply classroom knowledge from environmental science, public health, engineering, and Indigenous studies to a living, community-based context. Workshops and volunteer days will also engage a broader student audience, offering opportunities for reflection, mentoring, teaching, teamwork, and skill development in sustainability leadership supported by Indigenous knowledge. Students will document their personal growth and learning experience with the project, adding what worked, what did not work, and how this experience can be better. Student will capture this learning experience through photo essays, stories, infographics, social media, song, and art. Students will assist in community workshops both on and off campus to experience and promote traditional ecological knowledge. Students will learn from this project cultural significance of native plants, sustainable food systems, cross-culture understanding, reconciliation, community building, and fostering a deeper connection to the land and their well-being. These experiences will foster ownership, accountability, and long-term engagement with

sustainability initiatives on campus.
Recruitment and Outreach.
Students will be recruited through Wassaja Center, College of Medicine, Guerrero Center, and campus networks such as the Native Soar and Native American Student Affairs (NASA) office. Announcements will be made by word of mouth, distributed via university listservs, student newsletters, social media, and direct invitations to sustainability and Indigenous student organizations. Emphasis will be placed on recruiting Native American, first-generation, and underrepresented students to ensure equitable access to leadership opportunities.
Legacy and Leadership Development.
Students learn about leadership through Indigenous-led community-centered, decision-making, collaborative problem-solving, community building, cultivating sustainable practices, and cultivating a deep connection to the land and each other.
Upon completion, students will present their findings through a campus showcase and contribute to a written Operations & Maintenance (O&M) guide that documents lessons learned. This guide will serve as a legacy document for future cohorts, helping sustain the project beyond the grant period and reinforcing student-to-student mentorship.

Education, Outreach, and Behavior Change

What opportunities does this project provide for members of the campus/community to learn about sustainability? How will your project educate the campus community and/or incorporate outreach and behavior change, particularly those who are not currently engaged with sustainability or environmental work? Please provide a description of how you expect your project will communicate its impacts to the campus community.

Response:

The project will provide numerous opportunities for students and the broader campus community to learn through hands-on learning about climate resilience, water conservation, environmental adaptation, traditional agriculture, and biodiversity restoration, while also serving as a living classroom for cultural learning, community building, and research. Workshops led by Wassaja Center faculty, graduate students, and community partners will cover topics such as:
• Solar drip irrigation installation;
• Rain-water harvesting;
• Traditional O'odham land-stewardship and monsoon preparation cultural practices;
• Native Food Sovereignty and medicinal plant cultivation and their role in ecosystem and community health.
• Ecology and conservation on desert land

To reach individuals who may not yet be involved in sustainability initiatives, the Wassaja Oidag will host volunteer days, public planting events, traditional healing, and open-house demonstrations. Materials will be shared through word-of-mouth, listservs, social media, flyers, and classroom announcements to ensure broad participation. Events will intentionally welcome those new to environmental work, showing that sustainability is accessible, culturally inclusive, and community-driven.

Behavior Change and Lasting Impact.

Behavioral change will be encouraged through Student active participation and experiential learning. Students will directly engage with Indigenous-led sustainable practices, using hands-on activities to better understand ecosystem health. Students will learn to collect rainwater, prepare soil, and maintaining native plants from the desert. Students will witness tangible results of conservation efforts. Students will create informational signage to be placed around the garden to provide ongoing education on water cycles, Indigenous agricultural techniques, and the importance of native species, plants and animals. By seeing sustainability embedded into daily campus life, participants are more likely to adopt and advocate for eco-conscious behaviors in their own spaces.

The Wassaja Oidag Project outcomes will be shared through:

• A digital photo journal and blog hosted on the Wassaja Center website, documenting each project phase;

• Student-led presentations at campus sustainability and cultural events;

• Collaboration with the University of Arizona Communications Office to highlight achievements through newsletters, social media, and the UA News platform.

These communication efforts will ensure transparency, visibility, and continued inspiration for the campus community. The project's integration of Indigenous knowledge, student leadership, and sustainability science will not only change behaviors but also shift perspectives, helping students and the community to recognize that Tribal environmental stewardship and cultural respect are inseparable components of a sustainable ecosystem for our future generations.