

**Prescott Creeks—Spring 2005 Competitive Grant Application  
Technology Capacity Building—Arizona Community Foundation**

Submitted online <https://www.azfoundation.org>  
31 March 2005

**1. Project Name:**

Community-Building through Technological Connections

**2. Project Summary (~500 words):**

Prescott Creeks relies upon its technological systems to fulfill its mission of protecting and celebrating the Granite Creek Watershed riparian systems and associated wetlands through conservation, restoration and education. While tremendously valuable, these systems are not fully integrated to allow the organization to reach its full potential. While much of the technological infrastructure is in place, staff and workstudy students do not have the expertise or technical resources to set up and configure a server-based network that will provide centralized data storage and backup solutions, file and print sharing, shared calendars and contact lists, or remote access. Growth in the number of Board members, workstudy staff and volunteer involvement has created significant challenges with the existing peer-to-peer network. This project will also strengthen Prescott Creeks outreach efforts by replacing old equipment and supplying a needed digital projector for educational presentations in the community. We currently borrow both the equipment from the public library or local college departments. This project will support Prescott Creeks' mission by increasing the organization's capacity to educate and serve the community of Prescott, visitors and local officials about our community-based efforts. Acquisition of new technology hardware will enable Prescott Creeks to improve our programs and services that focus on providing community members with hands-on, meaningful interaction with the creeks. In addition to streamlining planning and coordination for these community-building events, the technological tools from project will be used to present hands-on project results on the Prescott Creeks website ([www.PrescottCreeks.org](http://www.PrescottCreeks.org)). Consolidation of our growing body of information will contribute to greater access to organizational resources and to a broader distribution of Prescott Creeks' institutional knowledge (both to the public and to staff and Board members). All of these benefits will lead to a strong organization with the capacity to effectively fulfill its mission. Prescott Creeks has enjoyed a 15-year history of serving the Prescott Community, and we believe this project is an important investment in the next 15 years of riparian (streamside) protection and celebration in the communities of the Granite Creek Watershed.

**3. Request Amount:**

\$10,000.00

**4. Contact person:**

Michael Byrd, Executive Director/Preserve Manager

**5. Contact telephone and email:**

Phone: 928-445-5669

Email: [MByrd@PrescottCreeks.org](mailto:MByrd@PrescottCreeks.org)

**6. Why did you choose this particular need/project?:**

After 12 years of working from coffee shops, Board and staff home-offices, and in the field, Prescott Creeks made the transition to its first public office in January of 2003. This strategic move provided more public access to the organization, a dedicated space for Board members and staff to meet and work, and a central locality for Prescott Creeks' information, records and equipment. During the move, the organization purchased its first desktop computer (our Executive Director/Preserve Manager's workstation) with grant

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funding from the Arizona Community Foundation in 2002. A 2003 grant from the Norcross Wildlife Foundation funded purchase of our second computer workstation for volunteer and workstudy student use, and a network server to provide everything from central data storage and backup solutions, to file and printer sharing, to a shared calendar and contact list.

While both grants have been tremendously valuable to the achievement of Prescott Creeks' mission, we have only implemented two-thirds of the computer systems described above. We have successfully setup and maintained the individual workstations and configured a basic peer-to-peer network, but we cannot navigate the technicalities of configuring a server-based network. The current networking capabilities within the Prescott Creeks office result in a variety of challenges and limitations that impede efficient internal information sharing, as well as effective and timely outreach to the community. Now, almost all of the Prescott Creeks data is stored on one workstation and access from other workstations is extremely limited. Additionally, each Board member, staff person, workstudy student, or volunteer can only access "his or her data" (working files, email, contact information, etc.) from only one of two workstations. This situation is an escalating challenge due to growing workstudy staff and volunteer positions with Prescott Creeks. Just last month, we added a third workstation to support our developing geographic information system (GIS). While this third computer workstation eases scheduling and productivity challenges, it does not improve the data sharing issue described above. Finally, the overall Prescott Creeks data collection is approaching 50 gigabytes in size. The only way Prescott Creeks can backup this information is by copying and compressing the data onto various workstation hard drives. While this is better than no backup system, it is a tentative solution at best. If a hard drive containing backed up information fails, the data would be lost. Ideally, an automated backup solution (external drives) could be configured and then stored off-site in a secure location such as a safe-deposit box.

Currently, efficiency of any organization is increasingly dependent upon technology. Prescott Creeks relies on its computer workstations for day to day operations and projects including: project planning and management, accounting, volunteer and membership coordination, watershed monitoring data storage, newsletter development and publication, website development, communication internally and externally, as well as for the preparation of grant proposals like this one. In addition to the work described above, Prescott Creeks makes regular PowerPoint presentations to community groups and conferences as varied as the Prescott Paddle America Club, the Arizona Association of Floodplain Managers-Arid Regions Conference, the Yavapai Hill Homeowners Association, the Bioneers Conference (Prescott College-satellite host), Aztlan Lodge, and many presentations to schools and colleges each year. Internally, the need for presentations is equally strong. In the past six months, presentations were made to the Board of Directors, the Prescott Creeks Advisory Board, various committees and working groups, and to the Watson Woods Riparian Preserve Technical Advisory Committee. Currently, Prescott Creeks borrows a digital projector from Prescott College or the Prescott Public library, but with the high demand for presentations, a digital projector of our own would have little downtime.

### **7. How does it support the mission of the organization?:**

This project will support Prescott Creeks' mission by increasing the organization's capacity to educate and serve the community of Prescott, visitors and local officials about our community-based efforts "to protect and celebrate the Granite Creek Watershed riparian systems and associated wetlands through conservation, restoration and education." A foundational element of Prescott Creeks' work involves educating these audiences about the ecological importance of these systems, and about the role humans have played in their degradation over the last century. The Arizona Riparian Council estimates 90% or more of Arizona's original riparian habitat has been lost or severely degraded since the early 1800's. With 75% of Arizona's wildlife depending on healthy riparian areas, one comes to realize what a significant loss this constitutes.

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Bearing this in mind, we might come to view riparian corridors as the livelihood of our landscape. Rather than focusing effort on the assignment of blame for these losses, Prescott Creeks proactively addresses riparian issues with the concepts of preservation, restoration and celebration of the remaining riparian resources. Watson Woods Riparian Preserve was established in 1995. The Prescott CreekWatch Network was established in 1999. And in 2002, our Watershed Monitoring program was launched to assess the ecological health of the local landscape with the involvement of diverse community, state and federal representatives. (More information about Prescott Creeks' work is available at [www.PrescottCreeks.org](http://www.PrescottCreeks.org).) Providing community members with hands-on, meaningful interaction with the creeks is another important component of Prescott Creeks' work, yet this work requires a significant amount of planning and coordination-much of which relies upon the use of computers and technology. Additionally, to adequately support the mission of Prescott Creeks, various forms of technology facilitate telling the story of our watershed and our programs and projects. Just two examples of how technology is integral to the work of Prescott Creeks' watershed protection and celebration include: 1) As part of our Creek Observation project, over 50 volunteer observers were recruited, trained and managed using spreadsheets and databases. During the project, data collection forms were developed and distributed electronically, and once they were returned to the office, workstudy students and volunteers entered handwritten data into the computer. Finally, all observer information was combined into a cohesive narrative and "published" as the full-color Creek Observation Guide. It was then presented to CreekWatch Network members as a tool to help them learn about "their" creeks and to prioritize activities and projects. 2) Ecological restoration for Watson Woods Riparian Preserve is much the same as the example provided above. Baseline inventories of the Preserve's flora and fauna were collected and will be entered into a GIS database (funded through the Arizona Water Protection Fund grant #04-122) for analysis and interpretation. With the combined skills of staff, technical advisors, volunteers and with subcontractor, Prescott Creeks will use the technological tools of server-based networked computers, databases, GIS, and digital projections to view, ask questions of, and understand the various data representing the ecological systems at the Preserve. The primary technological outcomes from the Preserve project will include a restoration model described in a "published" plan, interpretive signs & displays, and as presentations to community groups and elected officials. Technological tools from this grant funded project will also be used to present results from this and other projects on the Prescott Creeks website.

### **8. How will you use these technology funds to strengthen the effectiveness of your organization?:**

The technology funds requested in the proposal will strengthen Prescott Creeks' effectiveness by consolidating a growing body of digital information currently stored in multiple locations. This will allow for greater distribution to community members as well as Prescott Creeks' staff and Board members. The data will be secured with implementation of an automated backup solution to two externally mounted hard drives (rotated on a schedule). Furthermore, configuration of a server-based network within the Prescott Creeks office will allow for greater access to organizational information and resources. With the current configuration, 80-90% of our data resides on the Executive Director's workstation hard drive. This is no longer efficient with the addition of four Prescott College workstudy students, multiple volunteers, seven Board members and three advisors all needing access to the data and hardware - often simultaneously. With a server-based network, Board members, staff or volunteers will not only have access to the main Prescott Creeks files, but to their individual files (emails, personal project files) from any workstation on the network. This will enable them to work independently and more efficiently. The server-based network will also be configured with a Virtual Private Network (VPN) firewall that will allow predetermined individuals to securely access Prescott Creeks' data from remote locations. Remote access will be of particular benefit to Board members working independently from their home offices, or for staff when working with subcontractors outside the office. The following situation might serve as an apt example: Bridget Reynolds

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and Karlyn Haas of Fountainhead Design provide numerous in-kind graphic design services to Prescott Creeks. There have been many instances where staff worked with a designer at the Fountainhead Design office and images or text materials were needed from the Prescott Creeks hard drive. With the current network arrangement, staff had to physically travel to the Prescott Creeks office, move the needed file to media, such as a CD-R or memory key, and then return to the Fountainhead office. With the VPN, the data or image file can be retrieved almost instantaneously from the workplace (provided there is an internet connection available). With a variety of users in various positions (paid staff, Board members, students and volunteers), a VPN will also allow authorized users to access files during weekend and evening hours when the office is closed.

With the strong demand for presentations, funding for a new mobile computer and digital projector will strengthen Prescott Creeks outreach efforts. Additionally, this hardware will allow staff and Board members to review a variety of information (from membership records, to accounting, to monitoring data) at the same time. Education of this sort cannot be accomplished any other efficient manner.

Finally, Prescott Creeks' Executive Director has been with the organization for almost 10 years and much of the institutional knowledge resides with him only. While this is a natural occurrence for such a long-standing employee, it is critical to distribute the organization's institutional knowledge to a broader group. If he were to leave unexpectedly or fall ill, our existing network configuration provides primary access to the Executive Director, with access to others being difficult, if not impossible in many cases. Allowing easy, yet secure access to Board members and others will empower them to investigate, explore and learn independently from our existing records. This capability, coupled with other deliberate efforts, will infuse others with Prescott Creeks' institutional knowledge.

### **9. Describe the use of the funds in detail. Give specific steps, timeline and costs:**

This yearlong project (approximately July 2005 through June 2006) will have a total cost of \$19,067 and will involve five main steps. STEP #1: Occurring within one month of funding (Jul/Aug 2006), Prescott Creeks will consult with a network professional to conduct an assessment of existing systems and needs. While much of this work has already occurred in preparation for this request, a follow-up consultation will occur when funding is awarded and available. Professional consultation does not carry a fee. Matching staff time valued at \$200. STEP#2: Occurring within two months of funding (Aug/Sep 2006), Prescott Creeks will upgrade its existing internet service with CableOne.net from the "Residential Plus" service to the "Small Office" package. Reasons for upgrading our Internet service include: a constant IP address (helpful with the VPN) and built in domain hosting for PrescottCreeks.org. Internet service cost valued at \$756. Matching funds from other grants valued at \$444. STEP#3: Within four months of funding (Oct/Nov 2006), Prescott Creeks will purchase additional hardware to update and augment the existing network server. The network server is nearly two years old and will require several upgrades to fulfill the identified needs of centralized data storage and backup solution, file and print sharing, shared calendar and contact lists, remote access, etc. Additional hardware needed includes: upgraded RAM, a second hard drive ("mirrored" to the first), a USB 2.0 PCI controller, two 120 GB external USB hard drives for data backup, PCI card/controller for data transmission to a CalComp 36" plotter, flat panel monitors for the network server and 2nd workstation, and a Snapgear SME530 VPN firewall. Network cabling will be installed as necessary. Current estimates for Standard Network Engineer labor to setup and configure the network as described are for 12 hours at \$90/hr. totaling \$1,080. Hardware cost total: \$2,820. Matching hardware valued at \$5,900. STEP #4: Within four months of funding (Oct/Nov 2006), Prescott Creeks will purchase a new mobile computer (to replace our existing four year old model) and a digital projector to use for PowerPoint presentations in the community and for internal presentations. The mobile computer will also be valuable for conducting out-of-the-office work. Estimated hardware cost valued at \$5,344. Matching staff or volunteer time for at

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least four presentations during the project valued at \$400. STEP#5: Within five months of funding, a training session for network users and maintenance staff (Prescott College workstudy student) will occur. As part of the installation and configuration, the Network Engineer will train applicable users to function in the new network environment. Network Engineer training cost included with setup and configuration. Matching staff and volunteer time valued at \$1,748. TOTAL REQUEST: \$10,000. TOTAL MATCHING: \$9,067. A detailed project budget can be obtained by going to [www.PrescottCreeks.org/ACFprojBudget.pdf](http://www.PrescottCreeks.org/ACFprojBudget.pdf).

**10. Is this the total project cost? If not, please indicate whether matching funds will be sought or if they have been secured:**

Matching funds for this project will come from two main sources: existing hardware and staff/volunteer time as described above in question #9. Secured funding from two main sources (the Norcross Wildlife Foundation and the Yavapai County Community Foundation-Fund for the Environment) allowed the purchase of the network server, associated accessories (uninterrupted power supply, etc.), and two workstations. The balance of the matching funds will arrive as in-kind services from Prescott Creeks' staff, Board members, workstudy students and volunteers.

**11. How do you see your organization sustaining this effort? If this is a one-time project, please describe why:**

In many respects, this is a one-time project. Purchase of hardware and its configuration will establish the new systems necessary for Prescott Creeks to accomplish the goals and objectives set forth in this proposal. Ongoing management and maintenance of the system is a recognized indirect cost. A significant portion of the matching funds identified is approximately 25% of Prescott Creeks' Information Technology Administrator position. This workstudy position, made possible through Prescott College, is responsible for managing and maintaining the organization's computer systems, network and website. It is also important to note that several reviewers commented on the significant hardware costs associated with this request. With new technologies being developed at an ever-increasing rate, it is a challenge to stay current. As such, we believe the purchase of computer and network hardware is a relatively long-term investment; the organization strives to purchase equipment that will provide service for many years. An example of this commitment to enduring equipment is the main printer Prescott Creeks employed until last fall. The main printer for all our in-house printing needs was a Hewlett Packard LaserJet 4L. Manufactured in 1993, this printer belonged to the Executive Director while he was a Prescott College student, and served Prescott Creeks for almost ten years. We hope the equipment from this project will provide the same longstanding service.

**12. How will you evaluate the success of this project?**

Primary evaluation of this project will be the successful accomplishment of the outcomes described in question #9. The project will be determined to be successful if the server-based network is established with centralized data storage and backup solution, file and print sharing, shared calendar and contact lists, remote access; all staff and at least 75% of the Board members learn to function in the server-based network environment; and four staff/volunteer presentations are made during the project.