

Rock Detaining Structures

Expected Data Type

Describe the type of data (e.g. digital, non-digital), how it will be generated, and whether the data are primary or metadata.

- **Research examples include: lab work, field work and surveys.**
- **Education examples include: number of students enrolled/participated, degrees granted, curriculum, and training products.**
- **Extension examples include: outreach materials, number of stakeholders reached, number of activities, and assessment questionnaires.**

Our data will be primary and a mix of non-digital and digital. It will emanate from field and lab evaluations of our experiments and will include quantitative estimates of plant traits and demography. Additionally, we will have data from public surveys (collected at workshops and field days) on stakeholder perceptions/reactions toward project outcomes.

Data Format

For scientific data to be readily accessible and usable it is critical to use an appropriate community-recognized standard and machine readable formats when they exist. If the data will be managed in domain-specific workspaces or submitted to public databases, indicate that their required formats will be followed. Regardless of the format used, the data set must contain enough information to allow independent use (understand, validate and use) of the data.

Data will be collected in the field and in the lab on paper data sheets. Within one week of data collection, data will be input into a computer format such as Excel. Data sheets will also be scanned and retained on computers as Adobe PDF. Paper surveys collected at workshops and field days will be scanned into a Gornish lab computer and saved as Adobe PDF.

Eventually, there will be recommendations to stakeholders (producers, public agencies, policy makers and consumers) to support science-based decision-making. Specifically, recommendations for “best practices” for species choice in vegetation management design and deployment for land managers and livestock managers who live in Southern Arizona. Interactive web-based platforms developed by UArizona IT services will allow stakeholders to review information and make decisions based on location and management priorities.

Data Storage and Preservation

Data must be stored in a safe environment with adequate measures taken for its long-term preservation. Applicants must describe plans for storing and preserving their data during and after the project and specify the data repositories, if they exist. Databases or data repositories for long-term preservation may be the same that are used to provide Data Sharing and Public Access. Estimate how much data will be preserved and state the planned retention period. Include any strategies, tools, and contingency plans that will be used to avoid data loss, degradation, or damage.

Paper data sheets will be kept in a fire proof safe in the Gornish lab. Electronic data will be stored on the PI's and Co-PI's computers and ultimately stored in long-term infinite back-up on Cloud storage at the University of Arizona. Cleaned up project data and summaries of survey data will be uploaded to the project website for free use and re-distribution with appropriate references and in accordance with University guidelines and Internal Review Board policies. Storage on the project website will ensure long-term use and the capacity to continuously update information.

Data Sharing and Public Access

Describe your data access and sharing procedures during and after the grant. Name specific repositories and catalogs as appropriate. include a statement, when applicable, of plans to protect confidentiality, personal privacy, proprietary interests, business confidential information, and intellectual property rights. Outline any restrictions such as copyright, confidentiality, patent, appropriate credit, disclaimers, or conditions for use of the data by other parties.

All data will be readily available and stored in manuscripts (on-line) as tables, figures, conclusions and recommendations for exploring next steps. The PI, Co-PIs and project Master's student will participate in several scientific conferences and will deliver data as oral and poster presentations. As manuscripts are published, data will be available for other researchers, livestock producers, and land managers. Lessons learned and best practices will be shared initially online on the project website and on other relevant sites (e.g. eXtension). The processes and results developed from our work will be disseminated locally, nationally and internationally by publication in appropriate journals, newsprint, TV and radio. Personnel at land management agencies and land owners can use scientific data developed by investigators to inform management programs. We do not anticipate any restrictions relative to copyright, confidentiality, patents, appropriate credit, or conditions for use of the data by other parties. It is particularly important that there be no disclaimers about the veracity of the data/results.

It will be critical to continue to share data after the period of the grant. Investigators, having pursued this topic of inquiry during the funded period, will continue to work after the project has ended by finding other sources of funds to continue the research. We plan to include graduate students and undergraduates in all phases of the project. Eligible undergraduates interested in this work will continue with us as graduate students, thereby continuing the life of the project. Data collected will be provided in all venues as delineated above.

Roles and Responsibilities

Who will ensure DMP implementation? This is particularly important for multi-investigator and multi-institutional projects. Provide a contingency plan in case key personnel leave the project. Also, what resources will be needed for the DMP? If funds are needed, have they been added to the budget request and budget narrative? Projects must budget sufficient resources to develop and implement the proposed DMP.

PI Gornish will ensure implementation of all data management. If key personnel can no longer sustain their commitment to the project, other investigators will be sought as replacements.

Planned Research Outputs

Dataset - "Erosion Bag"

Erosion Bag dataset

Planned research output details

Title	Type	Anticipated release date	Initial access level	Intended repository(ies)	Anticipated file size	License	Metadata standard(s)	May contain sensitive data?	May contain PII?
Erosion Bag	Dataset	Unspecified	Open	None specified		None specified	FAIR Data Principles	No	No