Medicine Spring Library at Blackfeet Community College
In Partnership with the Blackfeet Tribe

Abstract

The Medicine Spring Library at Blackfeet Community College hosts an array of media that are at a high risk of severe, irreparable degradation due to the mediums of storage, such as Betamax, VHS, DVD and other obsolete formats. Due to inaccessibility and the risk of degradation, there is a strong need for digitization to ensure that vital information contained in older formats is not lost; some items date back more than 30 years and cover topics that are relevant to research, educational, personal and political interests—underscoring the timeliness and relevance for digitization for purposes of archiving and preservation for future generations. Through a collaboration with the Blackfeet tribe and Blackfeet Community College (BCC), Medicine Spring Library (MSL) will implement a two-year project that aims to digitize, preserve, and disseminate cultural and educational information currently stored in obsolete media.

Digitization of obsolete media files inherently and drastically increases the lifespan of the content, and this will be done by using best practice and by logging metadata to make all media formats searchable via a database (Mukurtu). By digitizing old formats, the information stored on physical copies will no longer be at risk of degrading due to handling or time-related factors, and securing information in off-site cloud storage will serve to secure information indefinitely.

Additionally, the prevalence of digital media formats for library patrons will allow ease of access from any computer or compatible device, thereby increasing access for the general public to search digital resources without the need for specialized equipment (such as a Betamax player). Patrons of Medicine Spring Library pursue a variety of topics related to doctoral-level research, assignments originating from the abutting college, k-12 school projects, or general personal interest—and this project seeks to engage each of these audiences in meaningful ways. As the official archives for the Blackfeet nation, MSL serves a variety of purposes and topics so that community members and visitors have access to the information needed to carry out such endeavors. Presently, however, much of the outdated media exists as a near-hidden collection due to the relative inaccessibility and fragility of resources. Sensitive items in the Betamax format are especially prone to degradation the more they are handled, but even VHS and DVD materials can be damaged by frequent use.

Lastly, the ultimate goal of this project will be to direct relevant historical resources and data towards BCC students, high school students, and various community audiences. K-12 and college-level educators will intentionally direct students towards newly available media as a part of their curriculum, and presentations will be conducted in the local community related to timely topics of interest. Such exposure for the public and for students could serve to inspire future native nation builders seeking to contribute to future forms of tribal advocacy and advancement of educational, policy and governmental services as they progress through the educational system and make informed votes on substantive issues. Given the goals articulated here, the benefits of dissemination will be ongoing and will be projected to continue well beyond the two-year period of this grant cycle.

"Sharing Our Past"

Narrative

1. **Statement of Need:**

The Community

The Blackfeet nation is a Federally Recognized Indian Tribe located in Northwestern Montana on the Blackfeet Indian Reservation and encompasses approximately 1.5 million acres, (2,372 square miles). The reservation is bordered to the north by the Canadian border; the south by Lewis and Clark State Park; the west by Glacier National Park and the east by Cut Bank and Toole County. The Blackfeet reservation is located in the rural counties of Glacier and part of Pondera County. The Blackfeet are located on their traditional land base before the 1855 Treaty, which designated the Reservation for the Blackfeet.

Browning is the largest community on the Blackfeet Indian reservation with the smaller communities of Babb, St. Mary, Starr School, East Glacier, Seville, Blackfoot, Boarding School and Heart Butte (located in Pondera County). According to the 2011 Blackfeet Tribal Enrollment Census, there are 18,028 enrolled Blackfeet members of which 9,384 live on the reservation and 8,680 live off reservation either in Montana or out of state. According to the 2013 U.S. Census statistics on the Blackfeet Reservation there is a total population of 9,299 residents. On the reservation, the enrolled population is as follows: Ages 0-16 – 2,632; ages 17-64 – 6,137; and ages 65 & above – 530.

According to U.S. Census Bureau 2011-2015 5-year estimates, 33.3% of all families on the Blackfeet reservation have an income below the poverty level; 88.9% have a high school diploma or higher; and 14.5% have a bachelor's degree or higher. The combined factors of a remote land base, growing population, and low economic activity have produced a high unemployment rate which is estimated at 45% to 85% depending on season according to the Blackfeet Planning and Tribal Employment Rights Office.

The Piikani language of the Blackfeet nation is one of several dialects spoken by this cultural group; other dialects exist with distinct tribes in Alberta, Canada (spoken by the Blood, Kainai, and Piikani nations), though all share linguistic, cultural and historical traits. Blackfeet Community College houses the Piikani Language and Culture Division, which serves as a preeminent force for language preservation and revitalization. Medicine Spring Library also houses resources relevant for Piikani language acquisition.

Blackfeet Community College Overview:

Blackfeet Community College (BCC) is a tribally controlled college located in Browning on the Blackfeet Reservation in northwestern Montana, chartered by the Blackfeet Tribal Business Council in October, 1974. Accreditation: NWCCU granted BCC accreditation December 11, 1985. Blackfeet Community College Board of Trustees: The board consists of five community members representing the 5 districts on the Blackfeet Reservation and the president of the

Student Congress. Admission: Everyone is welcome without regard to race, color, religion, sex, ancestry, national origin, veteran status, disability and/or not obligated to attend public school. Mission of Blackfeet Community College: The purpose of Blackfeet Community College is to provide the Blackfeet Nation and our "Universal Community" access to quality educational programs that prepare students for achievement in higher education, meaningful employment, basic skills instruction, and community education, while integrating the Blackfeet culture and language.   Programs of Study: AA Degrees: Piikani Studies; Piikani Language Studies; Education; Liberal Arts; Human Services/Behavioral Health. AS Degrees: Business; Math and Science; Health Science; Pre-Engineering; Registered Nursing. AAS Degrees: Computer Information Systems; Community Health; Licensed Practical Nursing; Piikani Studies; Construction Technology: Solar Energy Emphasis, and Electrical Technician Emphasis. Certificates: Behavioral Health Aide; General Core; Building Trades; Emergency Medical Responder (EMR)/Emergency Medical Technician (EMT). Endorsement: Behavioral Health Aide.

Current role of the Medicine Spring Library:

Medicine Spring Library functions as the Blackfeet Community College academic library and was identified in 1990 as the official location for the tribal library and official repository for the Tribal Archives by the Blackfeet Tribal Business Council. The Mission of Medicine Spring Library is to "support Blackfeet Community College's mission by providing high-quality, accessible information services to the Blackfeet Community College community members, including high-quality, accessible archival services to the Blackfeet Nation". The library not only serves the needs of the students at the college it also serves as a community library, giving the general public access to the internet, archival resources, book circulation and research assistance.

During the academic year, Medicine Spring Library is open Monday, Wednesday, and Thursday from 8:00 am to 6:00 pm; Tuesday from 8:00 am to 7:00 pm; and Friday from 8:00 am to 4:00 pm. During the summer and break periods, the library operates Monday through Friday from 8:00 am to 4:00 pm. To accommodate the needs of our students, library hours expand at mid-terms and finals weeks with extended hours of Monday through Thursday from 8:00 am to 8:00 pm with variable hours on Sunday (this amounts to four weeks per semester with extended hours). The library is closed during all college closures which include Christmas vacation, Native American Indian Days, and Heart Butte Indian Days, as well as Federal holidays.

The library boasts a total of 27,428 volumes, 2,799 of which are in the archives. We have nine computers for the public and have purchased databases including Newsbank, Credo Reference, Ancestry and Heritage Quest. We also utilize Montana State Library databases, including EBSCO Host, EBSCO car repair. We include the free National Library of Medicine databases PUBMED and Medline Plus. We have 1,135 patrons with library cards who check out 797 books a year. Fiscal year 2014-2015 saw 11,163 patrons enter the library, 54% were students, 42% were community members and 4% were college staff and faculty.

The library has a conference room open to BCC groups and activities, student groups and not for profit organizations. In the fiscal year 2014-2015, there were 250 meetings or events held in the

library with over 1,739 people attending. Regular programs include the Books and Babies reading hour, Bear River Massacre display and an Annual Art Show and Contest. We have had other special events in the past year such as book readings, kid's crafts, individual artist showings, readings to Head Start kids, and research trainings for BCC classes and individuals.

Specific Need:

Recently, the Blackfeet tribe voted on a water compact resolution that defined the amount of water the tribe would have rights to, dove-tailing with policies from the U.S. government and the state of Montana. Far from merely a current issue, the history of this resolution goes back decades and has implications about how water has been historically processed on the Blackfeet nation and about obstacles that have been encountered/overcome in relation to this topic. A vote on such a profoundly important issue highlights one example of the critical need for digitizing, increasing access and disseminating historical perspectives into the local community. For this and many other issues, tribal citizens would benefit from perspectives that simply inform their understanding of various issues, and by encouraging the public and BCC and k-12 students to engage with such material, they will seek a purposeful inquiry that relates not only to topical interests, but historical perspectives addressed through the lens of previous generations of the tribe—and perhaps their own family members. Increasing the materials that students can explore also aims to offer a form of purpose behind many learning objectives at various levels of study. For the public, once digitization is complete, the information will be curated in such a manner that informative presentations can be provided in order to broaden awareness of historical context in relation to timely contemporary events.

The wealth of knowledge and information gathered in various audio/video formats is abundant in Medicine Spring Library, and reflects events, speeches and presentations at BCC and in the surrounding community. For more than 25 years, the college recorded almost every speaker and special event held, numbering over 2,000 media items. As one can imagine, this has amassed a large store of oral history covering topics ranging from natural resource management and language preservation to cultural and historical topics. These items include many formats such as DVD, VHS, Mini-DV, Betamax, U-max, ½" VHS, and many different types of film. Obsolete as many of these formats are, currently only a small handful of library patrons use the collection due to its obscurity, and the set-up time and need for specialized equipment (VCR, DVD player, Betamax player, etc.) serve as obstacles on the amount that these resources are utilized, even though many are highly valuable for academic research topics and public interest.

The grant would make these videos available to a wider audience through digitization, and in doing so increase the flow of topically relevant information. The public school system would be able to use the stories for research projects. Though local k-12 educators currently use library services for projects, these items are currently unavailable for any off-site patrons. The amount of time to access obsolete media likewise places an obstacle in front of in-library users. As another example of need, many educators specifically want to include the Bear River Massacre in their curriculum, and a wealth of information exists on this topic within this category, but because of the nature of the material in the library, they do not have reasonable access for students to engage with these materials. A digitized collection on a database would allow such

student projects to develop, and access would increase to in-class devices capable of internet connectivity.

This project represents the three main goals of IMLS as well in that 1) the learner is a the center of engaging experiences, 2) the library serves as the community anchor on various levels, and 3) digitization of obsolete materials reflects proper stewardship of nearly inaccessible resources and promotes the use of technology for ease of access within the Blackfeet community.

Assessment:

In survey conducted in June, 2015 by the Medicine Spring Library, there are several strands that stand out as relevant for this project. The first is that survey respondents indicated a dearth of cultural material available from 1900 to modern day, and they also mentioned that materials in the archive room (where obsolete media is housed) is difficult to use. In terms of usage, faculty and administrators indicate that they typically use digital media accessible via the internet rather than using any of the physical collections. They also would like to see promotion of library materials so that faculty, administration and students know what materials are available. By digitizing, cataloguing metadata, and making such information searchable in a database, all of these articulated needs can be met.

2. **Project Design:**

Goals:

Goal 1: Digitization of obsolete media
Goal 2: Identification of metadata
Goal 3: Dissemination of media to Blackfeet community and interested parties

1. Digitization	Advertise for library technician and intern positions
	Hire staff members
	Train newly hired staff members on best practice in digitization
	Purchase equipment
	Secure Betamax process outside of Medicine Spring Library
	Technician and interns begin digitization of all other materials under the guidance of the library director
2. Identification of Metadata	Roles are devised for the library director, library technician and interns to begin sorting through the materials and identifying metadata
	Library technician balances roles between digitization and direction of metadata collection
	Interns direct efforts toward video review and metadata collection
	Library technician and director oversee the process of metadata collection and integration into Mukurtu
3. Dissemination	Database goes live onto the library website
	All Blackfeet Community College staff and faculty are informed of the newly available materials in the pre-academic-year orientation schedule
	Teachers and faculty are briefed on the material content and how this can be integrated into learning curricula at each level

	Students explore materials related to research projects
	Presentations are prepared and conducted for the general public in the Blackfeet community
	Presentations take place at national conferences to support sharing of best practices and impacts

3. Impact:

This project can be broken down into basic parts, each with sub-goals that will be described below. Stated briefly, the first stage and over-arching goal of this initiative is to take obsolete materials and digitize them. Once they are digitized, Medicine Spring Library will integrate the digital files into a searchable database to open access and awareness to the public. The next stage will be dissemination, which will occur in the second year of the program, and this will engage educators in the Blackfeet community at both BCC and the k-12 systems to enrich curricula for research projects. Additionally, presentations will be planned in this second year to discuss the scope of the project and to provide topical discussions that appeal to public interest. Detailed planning for each of these phases is broken down as follows:

1) Digitization of obsolete materials: MSL will devote staffing to completing the process of digitization. The library director will oversee a part-time employee who will be charged with conducting primary duties relating to digitization. A specific part of this process will be sending sensitive materials that are too specialized for digitization within BCC to an external source to ensure that materials are not damaged and that they can be preserved in the digital format.

2) Integration of digitized media into a database: Additionally, two interns will support the digitization process, primarily in regards to processing metadata that will later lead to search functions within a database. One intern will be a BCC student, and another intern will be a community elder. In balancing the age differences in these roles, there will be a broadened layering of representation in data processing, as student and elder perspectives may support informing the digitization and metadata collection processes in unique ways. This is a critical stage for not only opening access to the public, but for categorizing each of the materials into the multiple categories (speaker name, topics covered, location, etc.) that future students and researchers would have an interest in.

3) K-12 education integration: Awareness of this project will be raised within the local school district by directly integrating newly digitized media into an already existing curriculum with a research component. This way, educators will not need to "start from scratch" in terms of devising a project, but rather they will merely enrich a project that is already developed. Given that educators have already expressed a need for this information to be made more available, this is a best-fit, seamless dynamic that will bolster the educational quality of student research at this level.

4) BCC research integration: Additionally, faculty members at BCC will engage in this project to enrich already established research projects. Students as well as faculty have expressed a desire

to research the topics contained in this collection, so once again enhancing research options on Blackfeet history and culture at this level will appeal to both faculty and student inquiries.

5) <u>Public presentation integration</u>: Broadly speaking, the public will also have direct access to the digitized resources. In addition to this access, MSL will work to curate materials during the second year of this project in order to prepare and conduct community presentations tailored to public interest. Intentional, planned presentation of library resources will inform tribal citizens of historical contexts related to various issues. As with any presentation given about tribal issues, however, the focus will remain on information sharing rather than persuasion or taking sides, just as has been the case with all past events at MSL and BCC.

6) <u>Doctoral researcher access</u>: Researchers typically reach out to BCC in order to initiate the research process. As such, MSL will work with researchers on a case-by-case basis in order to provide access and familiarize with the resources that may be relevant to their research.

<u>Knowledge, Skills, Attitudes and Behaviors</u>: At the end of this project, the largest result is to see the library gain an enhanced ability to deliver critical historical context to tribal and community members in a seamless manner. These goals also aim to accomplish a stronger public awareness of recent history in order to inform personal, educational and political decision-making processes. Digitization of these resources allows such information to become open so that the public can learn about critical historical events that happened in the previous few generations, and for students specifically, this project will help to enrich research projects in a manner that empowers the student inquiry process and that provides students with additional knowledge of Blackfeet history and research skills to apply later in their educational journeys. Broadly, this project fosters development of future native nation builders and tribal advocates who graduate and pursue educational and professional opportunities with confidence in their knowledge about tribal history—as well as their place in the present. For the library and the college, this grant further centralizes these institutes of learning as authorities of history, culture, language and tribal affairs, all appropriate roles given that MSL is the official archives of the Blackfeet nation. The long-term benefit of this project is that digitized material will be utilized essentially in perpetuity, and the library will be far more capable of providing resources to the intended audiences. The events taking place in year two of this grant will be informative for the following years, as the library will continue these community and educational interactions using these materials well into the future; such engagement is not possible without digitization.

4. **Communications Plan:**

<u>BCC Faculty</u>: Targeted BCC faculty will be tapped early on in order to establish integration into the curriculum. They will plan for curricular integration specifically in a research project utilizing newly digitized resources on Blackfeet culture and history. Other faculty will be given a presentation at the All Staff Orientation held the week before registration begins for the Fall Semester after the first year of this grant. This presentation will cover the basics of what the project is, what materials are available online, and how to use the content management system. All staff and faculty will be able to sign up for one of the two workshops if they want a more hands-on experience learning how to use the system.

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BCC Students: As a primary audience for this project, BCC students will work with materials according to their faculty instructors. As participants in a specific, research-based course of study, they will engage with the digitized materials intentionally as a part of their coursework. Students not attending these classes will have access to these materials, and the library will conduct presentations in classes across campus throughout the year in order to provide the students with an awareness of the newly available resources and instructions on how to access them. From there faculty may provide the option to utilize these resources in their courses of study, but students will also be able to use them for any personal inquiries.

K-12 Teachers: Targeted k-12 teachers will be tapped early on in order to establish integration into the curriculum, particularly for those already conducting research processes with their classes. They will plan for curricular integration specifically in a research project utilizing newly digitized resources on Blackfeet culture and history. Other faculty will be given a presentation at the All Staff Orientation held the week before registration begins for the Fall Semester after the first year of this grant. This presentation will cover the basics of what the project is, what materials are available online, and how to use the database.

K-12 Students: As a primary audience for this project, k-12 students will work with materials according to their teachers. As participants in a specific, research-based course of study, they will engage with the digitized materials intentionally as a part of their class assignments. Students not attending these classes with these targeted teachers will still have access to these materials, and the library staff will conduct presentations in classes throughout the year to provide the students with an awareness of the newly available resources and instructions on how to access them.

Community: The primary form of community engagement will be through directed presentations on specific themes as they develop the second year of this project. These presentations will be planned in a responsive manner based on archival material to be digitized. Community members will be encouraged to attend such events in order to learn about various topics as well as to engage with other people in this community setting. Additionally, such presentations will be introduced with the project details and basic instructions on how to access them via the library website. Additionally, basic library information will be covered that reinforces the awareness that the library exists for the whole community and not just for the college students and faculty.

Library Staff: The library staff will possess the duties and responsibilities related to conducting communication to the various audiences for this project, and will take on all aspects of planning and project development in order to keep the quality of service and engagement high for the intended audiences. Additionally, the library staff will attend the Association of Tribal Archives, Libraries and Museums conference in October 2018 to relay the scope and impacts of this project to a national audience in order to contribute to and solicit feedback on best practices for digitization projects and community engagement with similar resources.

In all events targeting broad audience, assessments will take place to gauge audience members in attendance, and their engagement will be assessed using a five-point Likert scale to measure knowledge gained about the topic covered, whether the information was relevant to the intended
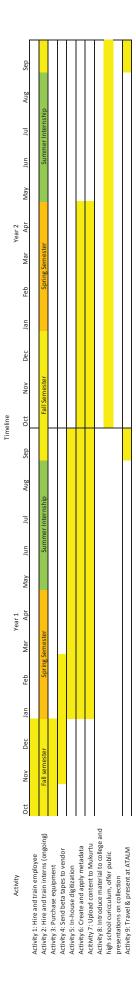
topic, a rating of how satisfied with the event overall, and a space for comment about the event; this assessment will be distributed and collected at the end of each event, and feedback will be used to augment plans for future events.

For other educational initiatives involving faculty and teachers coordinating student research projects, assessments will be collected from the instructors relating to research topics covered, number of students in the courses, and usefulness of the newly available materials for research purposes at each educational level.

5. Sustainability:

Preservation Summary: After the first year of this project focused on digitization and database creation, MSL will be poised to engage the Blackfeet community in the second year (and beyond) utilizing previously unavailable materials to a wide array of audiences. The second year will focus on testing community engagement and effectiveness of educational presentations and projects with college students, k-12 students, and community members, measuring the impacts as they develop. The end result of this will be that MSL will be primed to continue disseminating often-times crucial information aimed at informing tribal citizens in an attempt to bolster the decision-making processes and contribute to tribal sovereignty and self-determination. After the second year of this program, MSL will have the resources and capacity to continue disseminating the information to educational and public entities in a manner that is consistent with its mission and vision—and those of the college and of the tribe. Without the initial phase of digitization, however, no dissemination can be carried out easily of the obsolete media resources given the obstacles and limitations described above. It is only through this project that these materials—and the ideal benefits associated with their dissemination—can reach the hands of several audiences on the Blackfeet nation and surrounding public and educational communities.

The interns and part-time staff position will not be funded beyond the scope of this grant. Their primary roles will be to digitize the materials (within the first year), collect metadata for searchable functions in a database (through year two), and prepare materials for dissemination to the community. Once the core digitization and metadata roles have been accomplished, MSL will have the capacity to continue disseminating these materials to the public indefinitely using projected library staffing.

Timeline

Activity	Year 1												Year 2											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Activity 1: Hire and train employee																								
Activity 2: Hire and train interns (ongoing)		Fall semester			Spring Semester			Summer Internship						Fall Semester			Spring Semester			Summer Internship				
Activity 3: Purchase equipment																								
Activity 4: Send beta tapes to vendor																								
Activity 5: In-house digitization																								
Activity 6: Create and apply metadata																								
Activity 7: Upload content to Mukurtu																								
Activity 8: Introduce material to college and high school curriculum, offer public presentations on collection																								
Activity 9: Travel & present at ATALM																								

DIGITAL PRODUCT FORM

Introduction
The Institute of Museum and Library Services (IMLS) is committed to expanding public access to federally funded digital products (i.e., digital content, resources, assets, software, and datasets). The products you create with IMLS funding require careful stewardship to protect and enhance their value, and they should be freely and readily available for use and re-use by libraries, archives, museums, and the public. However, applying these principles to the development and management of digital products can be challenging. Because technology is dynamic and because we do not want to inhibit innovation, we do not want to prescribe set standards and practices that could become quickly outdated. Instead, we ask that you answer questions that address specific aspects of creating and managing digital products. Like all components of your IMLS application, your answers will be used by IMLS staff and by expert peer reviewers to evaluate your application, and they will be important in determining whether your project will be funded.

Instructions
You must provide answers to the questions in Part I. In addition, you must also complete at least one of the subsequent sections. If you intend to create or collect digital content, resources, or assets, complete Part II. If you intend to develop software, complete Part III. If you intend to create a dataset, complete Part IV.

PART I: Intellectual Property Rights and Permissions

A.1 What will be the intellectual property status of the digital products (content, resources, assets, software, or datasets) you intend to create? Who will hold the copyright(s)? How will you explain property rights and permissions to potential users (for example, by assigning a non-restrictive license such as BSD, GNU, MIT, or Creative Commons to the product)? Explain and justify your licensing selections.

A creative commons license, with the attribution-non commercial-no derivatives conditions, will be created in the name of Blackfeet Community College. Users will see the creative commons icon that can link them to the CC web-page that defines what restrictions mean. In order to protect the cultural nature of the video we do not want to allow others to profit off of, or change in any way the content on the videos.

A.2 What ownership rights will your organization assert over the new digital products and what conditions will you impose on access and use? Explain and justify any terms of access and conditions of use and detail how you will notify potential users about relevant terms or conditions.

Blackfeet Community College will retain the ownership rights for the digital products created. Based on recommendations from elders, some material may have a permission layer added to it. There is the possibility of culturally sensitive material being digitized, in order to preserve information from aging video media. The Mukurtu content management system has a layer that allows the addition of permissions that will alert potential users about any restrictions in access to content.

A.3 If you will create any products that may involve privacy concerns, require obtaining permissions or rights, or raise any cultural sensitivities, describe the issues and how you plan to address them.

Permissions for many of the videos are implied by the content and presenters shown. Presenters who are paid to present waive their right to filmed content, and student presenters waive their right when they sign up for classes. These videos are identified by the videographer in the credits of each video. There will be a process for creating permissions for items that are sensitive, or have persons portrayed that wish to retract permission. The content management system, Mukurtu, allows for layers of permission on an item level.

Part II: Projects Creating or Collecting Digital Content, Resources, or Assets

A. Creating or Collecting New Digital Content, Resources, or Assets

A.1 Describe the digital content, resources, or assets you will create or collect, the quantities of each type, and format you will use.

Video recordings of Blackfeet Community College events, speakers, and presenters will be created from analog to a digital format.
Video:
Beta 110 tapes x 1 hour each (avg) = 110 hours (this format will be contracted out for digitization)
VHS 87 tapes x 1.25 hours each (avg)=109 hours
DVD 267 discs x 1.25 hours each (avg)=334 hours

A.2 List the equipment, software, and supplies that you will use to create the content, resources, or assets, or the name of the service provider that will perform the work.

One PC with the following components: 1TB internal HDD, Intel i7 CPU, 8GB RAM, USB 3.0 ports x4, Osprey 206e Video Capture Card. Storage devices: Synology Rackstation rs3617xs 80TB server to server backup + Amazon Cloud Storage.

A.3 List all the digital file formats (e.g., XML, TIFF, MPEG) you plan to use, along with the relevant information about the appropriate quality standards (e.g., resolution, sampling rate, or pixel dimensions).

Digital preservation formats planned: .mov. Access: .mp4
.mov specification: H.264 encoding with a 640x480 minimum pixel dimension, 30 bit sample size with a 30 MiB/s data rate
.mp4 specification: H.264 encoding with a 640x480 minimum pixel dimension, between 4,000-4,500 kbps data rate (depending on content)

B. Workflow and Asset Maintenance/Preservation

B.1 Describe your quality control plan (i.e., how you will monitor and evaluate your workflow and products).

VHS and DVD machines will be cleaned and maintained throughout the process, according to manufacturer guidelines. The first item will be compared against the original analog master to ensure that a file is produced with high enough quality to faithfully render the content moving forward. Periodic control checks will happen after every 50 items have been digitized to ensure quality control. The metadata interns will be viewing all files, providing a quality control check beyond the technician. As metadata is added the workflow will require that digital files be moved to the server on a weekly basis.

B.2 Describe your plan for preserving and maintaining digital assets during and after the award period of performance. Your plan may address storage systems, shared repositories, technical documentation, migration planning, and commitment of organizational funding for these purposes. Please note: You may charge the federal award before closeout for the costs of publication or sharing of research results if the costs are not incurred during the period of performance of the federal award (see 2 C.F.R. § 200.461).

Digital assets created during this project will be maintained with three copies that will be fixity checked on a quarterly basis. The primary copy and the snapshot replication will be maintained by our local IT staff. The third copy will be stored in an Amazon Cloud service. All metadata created for these digital assets will be ingested into a Mukurtu CMS instance and will be the primary access point to the access copies, but will also be stored along side the archival copy. Fixity checks will be performed on the local server and the cloud server to make sure that all copies are viable. The college has committed funding to maintain support for local and cloud backup.

C. Metadata

C.1 Describe how you will produce any and all technical, descriptive, administrative, or preservation metadata. Specify which standards you will use for the metadata structure (e.g., MARC, Dublin Core, Encoded Archival Description, PBCore, PREMIS) and metadata content (e.g., thesauri).

Metadata for digital objects will first be created in an Excel spreadsheet and then imported into the Mukurtu content management system along with the digital content. The project will use Standard Dublin Core metadata terms and recommendations to structure our metadata along with creating a crosswalk for the primary MARC record. Some of the material has been cataloged in MARC, these will be updated and crosswalked to DC. New metadata will also be added to the library catalog.

C.2 Explain your strategy for preserving and maintaining metadata created or collected during and after the award period of performance.

Metadata will be preserved in the Mukurtu CMS, it will be preserved in the Excel spreadsheet with CSV surrogates in the same directory structure as the digital assets they describe. Metadata will also be preserved within the library catalog.

C.3 Explain what metadata sharing and/or other strategies you will use to facilitate widespread discovery and use of the digital content, resources, or assets created during your project (e.g., an API [Application Programming Interface], contributions to a digital platform, or other ways you might enable batch queries and retrieval of metadata).

We will strive to share our metadata through OAI harvesting (and other methods) to shared repositories wherever possible. Mukurtu CMS makes the metadata widely discoverable. We will also share metadata with the Big Sky Country Digital Network which is a service hub to the DPLA.

D. Access and Use

D.1 Describe how you will make the digital content, resources, or assets available to the public. Include details such as the delivery strategy (e.g., openly available online, available to specified audiences) and underlying hardware/software platforms and infrastructure (e.g., specific digital repository software or leased services, accessibility via standard web browsers, requirements for special software tools in order to use the content).

Digital content will be managed by the Mukurtu CMS and backed up using a tiered preservation storage strategy. Content will become available to all audiences via the Internet. Items that are deemed culturally sensitive will have permission applied to the Mukurtu files, and users will have to sign in to gain access. All of the material will be available for in-house use. Content will be available on-line through a standard web browser.

D.2 Provide the name(s) and URL(s) (Uniform Resource Locator) for any examples of previous digital content, resources, or assets your organization has created.

Part III. Projects Developing Software

A. General Information

A.1 Describe the software you intend to create, including a summary of the major functions it will perform and the intended primary audience(s) it will serve.

A.2 List other existing software that wholly or partially performs the same functions, and explain how the software you intend to create is different, and justify why those differences are significant and necessary.

B. Technical Information

B.1 List the programming languages, platforms, software, or other applications you will use to create your software and explain why you chose them.

B.2 Describe how the software you intend to create will extend or interoperate with relevant existing software.

B.3 Describe any underlying additional software or system dependencies necessary to run the software you intend to create.

B.4 Describe the processes you will use for development, documentation, and for maintaining and updating documentation for users of the software.

B.5 Provide the name(s) and URL(s) for examples of any previous software your organization has created.

C. Access and Use

C.1 We expect applicants seeking federal funds for software to develop and release these products under open-source licenses to maximize access and promote reuse. What ownership rights will your organization assert over the software you intend to create, and what conditions will you impose on its access and use? Identify and explain the license under which you will release source code for the software you develop (e.g., BSD, GNU, or MIT software licenses). Explain and justify any prohibitive terms or conditions of use or access and detail how you will notify potential users about relevant terms and conditions.

C.2 Describe how you will make the software and source code available to the public and/or its intended users.

C.3 Identify where you will deposit the source code for the software you intend to develop:

Name of publicly accessible source code repository:

URL:

Part IV: Projects Creating Datasets

A.1 Identify the type of data you plan to collect or generate, and the purpose or intended use to which you expect it to be put. Describe the method(s) you will use and the approximate dates or intervals at which you will collect or generate it.

A.2 Does the proposed data collection or research activity require approval by any internal review panel or institutional review board (IRB)? If so, has the proposed research activity been approved? If not, what is your plan for securing approval?

A.3 Will you collect any personally identifiable information (PII), confidential information (e.g., trade secrets), or proprietary information? If so, detail the specific steps you will take to protect such information while you prepare the data files for public release (e.g., data anonymization, data suppression PII, or synthetic data).

A.4 If you will collect additional documentation, such as consent agreements, along with the data, describe plans for preserving the documentation and ensuring that its relationship to the collected data is maintained.

A.5 What methods will you use to collect or generate the data? Provide details about any technical requirements or dependencies that would be necessary for understanding, retrieving, displaying, or processing the dataset(s).

A.6 What documentation (e.g., data documentation, codebooks) will you capture or create along with the dataset(s)? Where will the documentation be stored and in what format(s)? How will you permanently associate and manage the documentation with the dataset(s) it describes?

A.7 What is your plan for archiving, managing, and disseminating data after the completion of the award-funded project?

A.8 Identify where you will deposit the dataset(s):

Name of repository:

URL:

A.9 When and how frequently will you review this data management plan? How will the implementation be monitored?