



*Turtle Mountain Library Enhancement Project*



**Turtle Mountain Band of Chippewa Indians  
Native American Library Services Enhancement**

**ABSTRACT** (1 page)

The Turtle Mountain Band of Chippewa Indians (lead applicant) is a federally recognized Tribe that is currently operating a Basic Native American Institute of Museum and Library Services grant within a **Tribal Promise Zone**. Turtle Mountain will actively partner with the tribally-appointed Turtle Mountain Community College to enhance the services of the Turtle Mountain Library, which was designated as the official tribal library in 1998.

The two-year preservation, perpetuation, and access project will directly advance the operation of the Turtle Mountain Library by expanding access to information and educational resources for individuals of all ages and backgrounds within this highly-challenged, underserved rural community (44% poverty). The effort has been specifically designed to address identified tribal/community/stakeholder needs, as well as, provide digital heritage access for future generations.

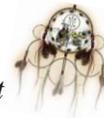
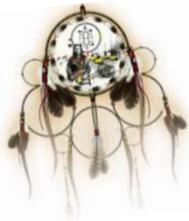
The community to be served is the Turtle Mountain Band of Chippewa Indians Reservation in the wooded Turtle Mountains and encompassing Rolette County in northern North Dakota, a mere ten miles from the Canadian border. Despite its natural beauty, this extremely geographically-isolated community suffers from multi-generational distress as evidenced by high unemployment (69.25%), insufficient education (36.92% drop out rate), and escalating crime with border drug trafficking issues. The Tribe's enrollment is 33,830 members, of which 13,764 live on or near the Reservation. Rolette County has been repeatedly named as one of the poorest counties in the United States (US) and is the poorest county in North Dakota. One-third (32.4%) of children live in extreme poverty here as compared to 10% in the US.

Based upon the needs identified in community assessment and strategic planning, the Library will work with the Sustainable Heritage Network and Oral History Centre to accomplish the performance purposes of the collaborative Library Enhancement effort: (1) digitize and migrate audio visual holdings to a stable format, (2) create item level metadata and finding aids, (3) establish and implement a safe, dependable three-tiered digital back-up and preservation strategy, (4) upload culturally appropriate material online via the Mukurtu CMS; and finally (5) conduct outreach within the community and to other interested parties to promote access and use of the digital heritage materials.

Currently, the Library's audio visual holdings are in outdated formats and showing signs of deterioration, which if not remedied will lead to a lack of access for the community. These collections contain invaluable cultural, historical and linguistic content that, if lost, would be irreplaceable.

Tangible products will include the digitized materials, the three-tiered backup system, the digital heritage materials accessible via Mukurtu CMS an online open source platform built with indigenous communities to manage and share digital cultural heritage, and a project manual describing the process to be shared with other Tribes and libraries. Anticipated outcomes, measured via survey, will include increased awareness and usage of the materials, as well as, increased knowledge of Turtle Mountain culture and heritage within a broad array of audiences.

As a result, Library staff can sustain the goals achieved during the project into the future. Finally, and most significantly, the project will allow for important Turtle Mountain cultural and historical materials to reside within the tribal community in a culturally relevant and stable format allowing for greater access and interaction with the materials than currently offered.



# Turtle Mountain Band of Chippewa Indians Native American Library Services Enhancement

## NARRATIVE (8 pages)

The Turtle Mountain Band of Chippewa Indians (federally-recognized Tribe and **Tribal Promise Zone**) and Turtle Mountain Community College (Tribal College) have developed a partnership to implement an effective United States (US) Department of Education, Institute of Museum and Library Services (IMLS) Native American Library Services Enhancement Project to directly advance the operation of an eligible Native American library to new levels of service delivery by expanding access to information and educational resources for individuals of all ages and backgrounds within this highly-challenged, underserved rural community with over 44% poverty.

**ELIGIBILITY:** The Turtle Mountain (TM) Band of Chippewa Indians is an eligible Tribe and is currently operating a Basic Native American Library Services IMLS Grant. The Turtle Mountain Tribal Council authorized implementation of this much-needed project via tribal resolution.

### 1. Statement of Need

- Briefly describe your community, including population profile, location, economy, educational levels, languages, culture, and other characteristics that you consider important.

**LOCATION:** The community to be served is the Turtle Mountain (TM) Band of Chippewa Indians Reservation and encompassing Rolette County in northern North Dakota in the wooded Turtle Mountains, only ten miles from the Canadian border. The TM Reservation is but a mere shadow of the original 11,000,000 acres of tribal lands traversed by the Chippewa. Now, the Reservation is only 46,080 acres within a six by twelve mile land base and is considered one of the most densely populated reservations in the US.



**PROFILE:** Despite its natural beauty, this extremely geographically-isolated community suffers from multi-generational distress; high unemployment (69.25% reported by the Bureau of Indian Affairs), insufficient education (over 30% drop out rate), poor health/nutrition (Food Desert, 40% obesity, 15% diabetes), few jobs, and escalating crime with border drug trafficking issues. The Tribe's enrollment is 33,830 members, of which 13,764 live on or near the Reservation. Tribal data reveals that 48% of the Reservation population is under the age of 21 years.

**ECONOMY/INTENSE POVERTY:** Turtle Mountain/Rolette County has been repeatedly named as one of the poorest counties in the United States (US) and is the poorest county in North Dakota. The US Department of Agriculture identifies the county as a persistent poverty area meaning more than 20% of its residents were below the poverty level in 1960, 1970, 1980, 1990, 2000, and 2010. This is one of the many reasons it was designated as a **Promise Zone** in 2016.

The Socioeconomic Mapping and Resource Topography system reveals a Community Disadvantage Index of 10, confirming the area as **one of the most disadvantaged in the US**. Over the past decade, Rolette continues to have the highest unemployment rate of any county in the State. According to Rolette Social Services, 27% of the entire State's Temporary Aid for Needy Families (TANF) caseload is in Rolette County. Forty-one (41%) of residents age 0 to 19 years are on TANF, compared to only 3.3% for North Dakota.

LIVING ARRANGEMENTS & POVERTY	TM/ ROLETTE	NORTH DAKOTA	US
Children in single parent households (0-17 yrs.)	53%	23.3%	35%
Children 0-4 living in Poverty	55.4%	18.8%	24%
Children in Extreme Poverty	32.4%	7.1%	10%

North Dakota KIDS COUNT, 2015. University of Wisconsin –Health Institute, 2014.

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The economy of the TM Reservation is very limited. Available jobs are typically in tribal government, the casino, the College/schools, Indian Health Services, and the Bureau of Indian Affairs.

**EDUCATION:** Education is another challenge for Turtle Mountain. Literacy levels, as well as, academic skill attainment is low for all populations. The North Dakota State Assessment is administered to 8th and 11th graders. The percent scoring as proficient/advanced in 2013-2014 were:

SCHOOL	READING PROFICIENT		MATH PROFICIENT	
	8 <sup>th</sup> Grade	11 <sup>th</sup> Grade	8 <sup>th</sup> Grade	11 <sup>th</sup> Grade
TMCS – 100% Native American	49.6	40.5	32.7	18.9
Dunseith – 99.9% Native American	71.4	25.0	16.7	25.0
St. John – 98.6% Native American	61.8	35.7	38.9	21.4

North Dakota KIDS COUNT reports an average ACT of 17.9 for Rolette County contrasted with 20.6 for the State. The North Dakota Department of Public Instruction 2014-2015 Adequate Yearly Progress Report finds that TMCS graduation rate was 68.89% as compared to the State average of 88.56%. The 2015 KIDS COUNT shows that 30.4% of youth ages 16-19 are not enrolled in high school, not high school graduates, and not in the labor force, compared to 2.2% for the State.

Many who do graduate and wish to attend higher education simply cannot afford to drive every day. Even for the students who do attend Turtle Mountain Community College (TMCC), more than 90% are low income. Fifty percent (50%) are first generation college students. Only 22% of graduates from the class of 2014 were ready for college reading as compared to 42% for the State, according to KIDS COUNT.

**LANGUAGE & CULTURE:** The economic challenges of the Tribe make it difficult to invest in language or cultural preservation. Culture studies and integration are one of the primary goals of the Library and TMCC. That is one of the many reasons this project is so important – there is a great appreciation for the heritage and culture, but little has been undertaken to preserve or promote it.

Traditional Midewewin values are reflected in modern culture as the Seven Teachings of the Anishinabe, which are guiding principles of life including wisdom, love, respect, bravery, honesty, humility, and truth.

English became the dominant language of the Reservation in only the last 50 years. Languages once spoken included Ojibwa, Cree and Michif. Given the early French trapper influence, intermarriages took place, thus many French family surnames, e.g. Azure, LaFromboise, and Parisien are common among tribal descendents. The Chippewa have held Pow Wow celebrations for centuries to share dances, ceremonies, and camaraderie.



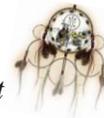
- Describe the current role of the library in the community and the services it provides (e.g., mission, goals, hours and days of operation, staffing, size and content of collection, number of registered patrons, circulation statistics, computer technology, Internet connectivity and access, public programs offered, etc.).

The Library, located on the TMCC campus, is the only public library serving the TM Reservation. The Tribal Council designated the Library as the official library of the TM Tribe in 1998. It serves as a public library for the Tribe/tribal members and as a college library. The Library's holdings include a significant number of TM Tribal historical documents and publications that support both community and college access and activities in relation to TM cultural and social heritage and tribal leadership.

The mission of the Library, as well as that of TMCC, is to provide direct community service to the Turtle Mountain Tribe along with providing comprehensive higher education services. TMCC functions as an autonomous Indian-controlled college on the TM Reservation focusing on undergraduate education, career & technical education, scholarly research, and continuous improvement of student learning.

Chartered in 1972 as one of the first tribal colleges, TMCC (organized as a 501c3) is a fully accredited tribally controlled post-secondary institution, a 1994 Land Grant college, a charter member of the American

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Indian Higher Education Consortium, and member of the ND Association of Tribal Colleges.

Current staff includes a Library Director, Library Technician, and Library assistant. The Library currently has 4,766 registered patrons. In 2017, the Library's holdings totaled 23,762 items in the collection. Sections include; Fiction, Non-fiction, Children's, Young Adults, Reference, audio books, DVD's, & periodicals, and 4,406 in the TM/Native American.

The Library is open from 8:00 AM to 6:00 PM Monday thru Thursday and 8:00 AM to 4:30 PM on Friday during the academic year and 8:00 AM to 5:00 PM Monday thru Friday during the summer. The Library provides free internet access through 12 desktop computers with limited free printing, 6 Google Chromebooks, along with free Wi-Fi access. Library patrons have access to E-readers, science calculators, and digital voice recorders. The Library also collaborates with the Rolla Public Library (an off-reservation library) to provide Library2go services (digital content for E-readers) for patrons in Rolette County, as well as providing summer reading program services.

- *Describe the purpose of the proposed Enhancement grant project as it relates to a specific need that you have identified. What specific audience(s) will the library serve with this project? (e.g., particular age groups, underserved community members, other types of target audience)*

The purpose of the TM Library Enhancement effort is to digitize and migrate audio-visual holdings in the Library to a stable format, create item level metadata in conjunction with Machine-Readable Cataloging (MARC) records and finding aids, establish and implement a safe, dependable three-tiered digital back-up and preservation plan, and upload culturally appropriate material online using Mukurtu CMS an online open source platform built with indigenous communities to manage and share digital cultural heritage.

This process will meet the needs identified by members of the TM community and Library staff and preserve the holdings indefinitely, thus safeguarding TM's digital heritage for current and future generations.

Working simultaneously to preserve and digitize these collections and make them accessible through Mukurtu CMS allows TM to make these valuable cultural and historical materials not just accessible but usable to a wide audience of stakeholders including the underserved community members within the at-risk rural, tribal area. While patrons can still access materials at the Library and online, through Mukurtu CMS, tribal members will also be able to add narratives, relate materials to create modules of content for viewing and education, and create shared groups to update and continue adding valuable knowledge to the materials.

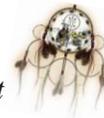
This project will serve a wide variety of underserved community members, e.g., youth, elders, tribal staff, tribal leadership, college staff and students – essentially anyone interested in TM/Native community.

- *What type of assessment was conducted to identify this need as a priority for the library? Describe the results of the assessment, including baseline data that can be used to compare with final results to determine the project's success. Why do you consider your approach to be the best solution to meet the needs of the targeted audience?*

The College, including the Library, conducted a comprehensive organizational assessment in 2013 to guide its strategic pursuit of institutional success. Based on determinations from the assessment, top priority goals were identified, including the priority to establish language/culture revitalization and preservation (languages, oral tradition and history, and creation of an enhanced collection of cultural artifacts and history). A range of needs related to the Library was noted by participants, including the digitization of the audio video materials, as they felt it was important that this important historical and cultural patrimony be preserved and made available online to reach the widest audience possible.

Based upon the needs identified in the community meeting and subsequent strategic planning, the Library conducted an assessment of the audio visual holdings and further documented the need for preservation of the collections and a more permanent means of digital storage for the significant cultural/historical information for long-term preservation and access. The assessment showed the Library has a vast number of audio visual holdings with many in outdated formats and showing signs of deterioration, which if not remedied will lead to a lack of access for the community. These collections contain invaluable cultural, historical and linguistic content that, if lost, would be irreplaceable.

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Furthermore, TM and TMCC analyzed the results of data and other community assessments that were compiled as part of the successful Promise Zone application, especially a key goal that focused on improving education and increasing the connection between Native culture, education, and community.

Finally, TM researched and spoke with other Native Libraries and entities that have completed similar projects to gain knowledge about lessons learned and best practices. Those assessment efforts have resulted in this innovative application that will attain significant change for the Library and community. This online innovation is especially important in an underserved rural community like TM because it is a challenge (costs too much) for low-income individuals/families to drive to the Library on a regular basis, but with digital heritage access online, they can explore, enjoy, and integrate culture resources in their daily lives. This project directly achieves IMLS agency goals and the Enhancement program priorities.

## **2. Project Design**

*Describe the proposed project's work plan. Including Clearly stated project goals and objectives*

The effort has been specifically designed to address identified tribal/community/stakeholder needs, as well as, provide digital heritage access for future TM generations.

The **Goal** of the Turtle Mountain Library Enhancement project is to meet the needs of an underserved, rural, impoverished tribal community by digitizing and preserving cultural audio visual assets and making this digital heritage accessible for interested audiences via Mukurtu CMS.

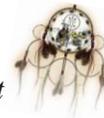
As reflected on the enclosed schedule, the project **Objectives** and **Activities** are efficient, effective, and reasonable to accomplish the Goal.

**Objective 1:** Train individuals to be hired for the project, as well as, library staff in digitization workflow creating master, access and web-ready copies, creating metadata at the item and collections level such that digitization work can continue after the grant concludes. Activity 1.1: Hire two contracted local technicians who know the community. This project has been planned with the assistance of resources from the Sustainable Heritage Network (SHN) managed by the Center for Digital Scholarship and Curation at Washington State University (funded in part by IMLS). Activity 1.2: The Team will review and update as necessary the core documents recommended by SHN for libraries including a mission statement, strategic plan, collections management plan, emergency plan, and code of ethics. Activity 1.3: A trainer from the Oral History Centre will come to TM to train staff (technicians and library staff) in the use of the audiovisual machines, the hardware and software to be used in the project, and digitizing itself. This training will take place in the first three months. The involvement of the other staff in the project lays a stable foundation for the work to continue beyond the initial project.

**Objective 2:** Transfer all cultural and historical analog audio visual resources to various digital formats for both preservation and access, including the taped reel-to-reel interview series entitled "As We Remember" that are provided by partner KEYA Radio, which were recorded in Chippewa, Mitchif and Cree languages. Activity 2.1: Purchase all required hardware and software. Some of the equipment may be difficult to acquire as it is antiquated and no longer made. Depending on availability of the equipment, the transfer of some formats may need to be contracted out. The interview tapes in Betacam SP will definitely need to be contracted out, likely to Northeast Historic Film, as we do not expect to acquire more of this format. The transfer of the materials themselves will take 18 months and will begin immediately following the three months of training. Concurrently with the training, the collections will need to be organized and prepared for transfer. Activity 2.2: Material will be digitized simultaneously in a three tiered approach creating an archival master using uncompressed WAV files which will go onto a server hard drive with a copy onto another hard drive for back-up, an access copy using MP 3 or 4 which will also go on a server, and web ready files in jpeg or similar format. For storage and back up creating a redundant system a copy of the archival master files will be loaded onto a third hard drive for storage off site in case of disaster. Finally, the entire collection will be simultaneously backed up to a Cloud-hosted service.

**Objective 3:** Create appropriate metadata for digitized materials using standard Dublin Core format and using Mukurtu Core extended metadata to allow for community input at the item level. Activity 3.1: Input

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of embedded item level metadata in Dublin Core will occur simultaneously with the digitization as it occurs in real time. This will be done by the Technicians. Activity 3.2: Updating existing and creating new finding aids completed by the Technicians in Year Two.

**Objective 4:** Upload appropriate content and metadata to Mukurtu CMS content management system for online accessibility and community engagement with the collections. Activity 4.1: In Year Two, define access to materials through culturally appropriate parameters. Any materials that need community or individual approval will be held within Mukurtu using a “strict protocol,” making it accessible only to TM Library staff until approval is defined. Activity 4.2: Update release forms. Currently only a small number of the oral history/literature recordings have release forms. In Year Two, the Technicians will obtain releases for the remainder and secure web releases from as many informants/interviewees as possible. Materials without releases will not be made publicly available. Activity 4.3: Upload all materials into Mukurtu CMS.

**Objective 5:** Promote use of the new resources through presentations, online, social media and poster sessions to both the local TM community and to the professional world of tribal archives, libraries and museums at the Association of Tribal Archives, Libraries and Museums (ATALM) conference. Activity 5.1: In Year Two, presentations on the new resources will be made utilizing existing and new forums, e.g., the Library will host presentations at least once a year on the resources. The Library website and Facebook page will also feature the new materials. Finally, presentations to the Tribal Council and other key stakeholders will be made, encouraging the use of the new materials and promoting the Library in general. Activity 5.2: Library staff will work with community members to engage with Mukurtu to add additional cultural/historical information to the CMS during Year Two. Activity 5.3: In Years One and Two, poster sessions will be made at the annual ATALM conference. Funds requesting travel to ATALM are included in the project budget. In addition, a presentation by project staff on the project and its challenges and successes will be made at ATALM in Year Two. Included will be some detail on the technical aspects of the work for institutions considering a similar project.

This project is a new endeavor for TM, no preliminary work or project has previously been supported by IMLS or other agency. TM intends to use procedures that adhere to accepted practices and standards. TM has considered the key technical details and included the Digital Products Form. Please see attached.

- *Articulate your specific project questions, conceptual design, and processes for your project framed within the context of Section A.1.*

The main project question is, "How do the Tribe, College, and Library best serve the needs of the community as stewards of cultural and intellectual resources?" The Library keeps its stakeholders at the forefront of its mind when designing activities. In this case, community members indicated they wanted two simultaneous actions to occur – preservation of the holdings and access to them. Therefore, the design embraces those key needs.

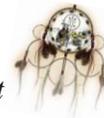
Research led TM to best practices in the field and the experiences of other grantees who are pursuing similar efforts. Finally, TM will conduct community meetings and outreach annually to promote the project and to inform stakeholders about the progress and outcomes of the project and gather their input via survey and commentary.

The age and status of many of the holdings verify the urgency of the situation as many are endangered items that prohibit excessive handling or are audio video for which digitization is the only method of long-term preservation due to instability of the medium and vanishing replay equipment.

- *Describe your conceptual framework, what type of data you will gather to track progress and outcomes, and how it will be analyzed, interpreted, reported, and managed.*

*“Libraries are society’s stewards of cultural and intellectual resources. For libraries to continue fulfilling their stewardship role, they will have to approach preservation in a new way... Preservation must be considered at the highest levels of the institution and reconceived in the digital environment.”* - The State of Preservation Programs in American College and Research Libraries: Building a Common Understanding and Action Agenda, Deanna Marcum, President, Council on Library and Information Resources, 2002.

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The TM Library understands its role in these important activities and stands ready to undertake this important work for this Native American, underserved rural community. The concept for the TM Library Enhanced project is straightforward to convert the physical format of material into a digital, electronic format. The physical format will be appropriately preserved and the digital format will be used to enhance access by a broad variety of audiences. This approach has been endorsed as an accepted preservation option by the Association of Research Libraries and the American Library Association. The Library's hope is that by making the digital heritage collection available in an open and innovative way, that knowledge about TM history and culture can thrive.

The project framework incorporates a series of strategies that includes adherence to accepted standards and best practices,<sup>1</sup> as well as, the commitment of the Tribe, College, and Library to establish policies and the capacity to maintain the original physical materials and digital products for the long-term. The strategies will include, but not be limited to: (1) Assessment of collection components and property rights and decision on standards, (2) Selection of materials and quality control for preservation and digitization, (3) Prioritization of materials, (4) Preparation of originals for digitization, (5) Metadata collection and creation, (6) Actual digitization and creation of collections and quality control, (7) Proper archiving of materials, and (8) Submission of digital resources to repositories and delivery systems. This process will be accompanied by training, management, quality control, ongoing evaluation, and intellectual property rights management.

Data will be collected, analyzed, interpreted, reported, and managed to track project progress and outcomes, including but not limited to, **general project records**: development of procedures manual, records of the strategies set forth above, written decisions on standards, logs of preparation activities, and written quality control procedures to be monitored; **digitization records**: logs of items to be digitized as compared to actual progress, quality control monitoring, appropriate metadata development of digitized items, and assessment of proper repository/storage processes; **preservation records**: logs of items and quality monitoring of their storage post-digitization; and **access/promotion records**: tracking of access points for digital resources, e.g., online, electronic catalogue, and tracking of actual usage along with logs of community meetings, presentations at ATALM and other activities.

### **3. Impact**

- *Describe the intended performance goals and benefits of this project for the library or archive fields:*

The TM Library Enhancement project (*please see goals and objectives above*) directly addresses the "indicators of successful projects" set forth by IMLS including expanding services for learning and access to resources in a variety of formats for individuals of all ages; improving coordination/partnerships between libraries and entities for the purpose of improving services; providing training to enhance the skills of library workforce and advance the delivery of services; and targeting services to individuals of diverse backgrounds, especially those in underserved communities including those living below the poverty line.

The project will not only bring those intended performance goals/benefits to the TM community, but it will also (1) establish high quality digital print/electronic media without loss of quality, which can be easily generated at a low cost; (2) more actively engage the community in describing and preserving TM materials; (3) allow for more effective sharing of digital collections; and (4) foster ease in digital usage of materials, e.g. photographs, both for print and for converting to other types of media, e.g., video. For example, just imagine how much more engaging youth book reports will become once these materials are available for their use.

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<sup>1</sup> Anike, Luke and Igwenagu, Chinelo, Digitization in Research for Cultural, Commercial and Scientific Development (2017). American Based Research Journal, February 2017.

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- *What results do you want to see at the end of the project period? In other words, what new knowledge, skills, attitudes, or behaviors do you expect to see in your audience? How will it specifically benefit the individuals or groups that you have served?*

Through the implementation of the goal and activities outlined above, the primary results will be the preservation at industry standard levels of audio and visual collections and access for stakeholders and community members to historical and cultural TM tribal materials. Secondly, the content will be enriched and the primary records enhanced by using Mukurtu CMS allowing community members to add cultural narratives and tribal knowledge to the records. Thirdly, with greater access to the collections, those who watch or listen to the digitized material will develop increased knowledge of TM history and culture via oral histories. Finally, as these collections highlight a breadth of cultural practices and knowledge a greater appreciation for TM cultural continuity will come to fruition.

The Turtle Mountain project will implement outcome-based evaluation, to evaluate the project during its course and at its conclusion through written surveys and informal focus groups as well as through technical evaluation by outside audiovisual experts.

The public will participate in ongoing surveys regarding the value and quality of the resources. Project staff will make any appropriate adjustments to the work as needed and update the process manual document. At the conclusion of the project, community members will be brought together in a focus group to discuss the completed work, its accessibility quality and the scope of content in the recordings.

Ongoing quality control measures are part of the digitization workflow. These will be documented using Excel spreadsheets and will be reviewed by the digitization trainers and staff. After each four-month interval during the grant cycle, the digitization workflow will be assessed and adjustments made if necessary.

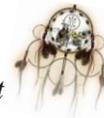
The learning outcomes flow from the staff effectively communicating with community members and those located off the reservation. The learning outcomes are as follows: (1) Learners will gain increased knowledge and appreciation for Turtle Mountain culture and history. (2) Learners will be able to utilize digital materials via varied information systems. (3) Learners will be able to better evaluate and add to cultural material after viewing or listening to digitized materials. (4) Learners will acquire the ability to access materials via enhanced finding aids to improve their informational literacy.

The performance indicator for the project's learning objectives is increased usage of significant historical and cultural materials both during the digitization process and after the completion of the grant's cycle. More users utilizing the digitized material will help ensure that the learning outcomes are met. This will be measured via the number of patrons who use the material online and those that request copies to be made on CD and DVD. This can be compared to a baseline of usage prior to the implementation of the grant. The target for meeting these performance indicators is a 50% increase in usage of the digitized collections compared to their current use. Additional target measures include 75% positive response in skill improvement among staff trained, along with reports indicating percent of selected materials effectively digitized, and the number of items uploaded into Mukurtu CMS.

Evaluation will also include the count of visitors to the Library web page pre/post inclusion of the digital heritage collection, as well as, responses on a brief questionnaire asking visitors to rate their knowledge pre/post of the digital collection and TM heritage. The project will also track outreach conducted at community events, including schools, community centers, tribal programs, and annual professional conferences.

- *For projects that involve building digital collections, software, or other technology products, in addition to the above criteria, evidence that the project demonstrates interoperability and accessibility in its broadest context and potential for integration into larger-scale initiatives.*

The Library will serve as a gateway and leader to collect, maintain, digitize, and preserve cultural heritage for all tribal members, the community, and a broad array of audiences. This Library Enhancement project demonstrates interoperability and accessibility in its broadest context in every step of its purpose and



plan of work, as set forth above. The Tribe, College, and Library recognize the import of the materials to be digitized and made available, which is why this is a key priority.

And while larger-scale initiatives are certainly a potential, their main focus for the next two years is to preserve and establish accessible products for the eventual integration into other efforts.

#### **4. Communication Plan**

- *Describe the project's communication plan. Include information such as the following: Description of the audiences you plan to reach and how you will reach them. Plans for community building and/or audience engagement via discussion, involvement, collaboration, or adoption. Means to measure audience engagement and outcomes. Staff assignments for outreach, promotion, and dissemination.*

The project will primarily reach members of the TM community, along with others interested in TM history and culture. The Library Director will lead staff in developing and conducting ongoing communication/outreach to the community and others in the field throughout the project lifecycle.

Activities including presentations and the annual community meetings will engage stakeholders as the Director describes the project, provide updates on the project's progression, and share digital materials with the audience. During these presentations, the audience will provide feedback via surveys that will allow staff to adjust the project as needed to meet the needs of the community. In addition, using Mukurtu CMS the Library will be able to create "community groups" directly through the CMS inviting community members to engage with the materials.

As the project progresses, the Library Director will submit press releases to local newspapers discussing the project's progress. Outreach will be measured via sign in sheets at presentations, comments on social media, and subsequently measured usage of digitized audio/visual materials. The Director will reach the professional audience with her attendance and poster presentation at the annual ATALM conference.

Additionally, the Library will make reasonable attempts to communicate lessons learned and project results to other audiences beyond the community and standard professional audiences by making materials accessible via the World Wide Web, which allows equal access to the widest range of users from any location providing them a powerful opportunity to learn about TM culture and heritage, as well as, the methods utilized by the project itself.

- *Plans for technical documentation where applicable*

The project will produce a technical digitizing manual documenting digitization procedures for use of staff and for continued training of future staff members. This can also be made freely available and shared with other tribal and non-tribal institutions through the Sustainable Heritage Network website. The Director will announce its availability to the ATALM mailing list, Native American Archivists Roundtable, the TCLI listserv, and the American Indian Library Association listserv.

#### **5. Sustainability**

- *Describe how the applicant will continue to support the project, its results, and/or new models that are created beyond the grant period.*

Sustainability of the project is centered on the partners' continued commitment to the perpetuation of TM history and culture. As the official TM library there is a strong commitment to maintain cultural materials for future generations. The project has been structured to develop, maintain, and enhance the Library's infrastructure to support sustainability through components such as staff training, technology infrastructure, and quality control. TMCC intends to maintain the project's activities and benefits beyond the grant period and is committed to long-term digital stewardship of these important resources.

It is also believed that the project will build on this initial effort by bringing in additional collaborators in the future both within the community and with others interested in preserving Native heritage. This effort has been designed to form a strong base that will lead to systemic change within the Library/College/Tribe in regard to preserving and sustaining digital heritage for future generations.



**Turtle Mountain Band of Chippewa Indians  
Native American Library Services Enhancement**

**SCHEDULE OF COMPLETION** (2 pages)

The Schedule of Completion reflects each major activity identified in the TM application narrative:

YEAR ONE SCHEDULE												
	Oct 2017	N	D	Jan 2018	F	M	A	M	J	J	A	Sept
<b>Year One: Oct 1, 2017- Sept 30, 2018</b>												
Turtle Mountain notified of award by Sept 30, 2017!												
Financial Assistance Award signed and returned to IMLS.												
TM Grants Clearinghouse staff prepares paperwork and establish infrastructure.												
Circulate notices for Technician to be hired and conduct hiring procedures.												
Director leads orientation and planning for project/Year One.												
MILESTONE: Staff hired and oriented to Enhancement implementation goals.												
MILESTONE: Staff trained in best practices for digitization and storage.												
Staff establishes technology and infrastructure and test pilot activities.												
Sixth month report due.												
Staff transfers document and audiovisual resources to digital formats.												
Staff properly backs up and stores digital materials using the three-tiered approach												
Staff creates appropriate metadata for digitized materials.												
Staff uploads appropriate content/metadata to Mukurtu CMS.												
Staff promotes use of new resources.												
Meet with partners.												
Team analyzes Yr One ongoing implementation data and activities.												
Year One report due.												

*Turtle Mountain Library Enhancement Project*



YEAR TWO SCHEDULE												
	Oct 2018	N	D	Jan 2019	F	M	A	M	J	J	A	Sept
<b>Year Two: Oct 1, 2018- Sept 30, 2019</b>												
Director leads planning for Year Two.												
Staff transfers document and audiovisual resources to digital formats.												
Staff properly backs up and stores digital materials using the three-tiered approach.												
Staff creates appropriate metadata for digitized materials.												
Staff uploads appropriate content/metadata to Mukurtu CMS.												
Staff promotes use of new resources.												
Sixth month report due.												
Meet with partners.												
Team analyzes Year Two ongoing implementation data and activities and develops written plan for sustaining digitization efforts.												
Year Two report due.												
<b>MILESTONE: Reports evidence success of Library Enhancement project!</b>												

## 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.

Turtle Mountain (TM) holds copyright to most of the materials to be digitized. The material for which TM does not hold copyright we have a workflow in place in the grant period to secure permissions. The majority of the content will be available for viewing online through Mukurtu CMS.

**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.

The audio and visual materials digitized will be accessible through the Library's content management system using Mukurtu CMS. Mukurtu CMS allows the digitized materials to be protected, for viewing only to TM staff.

TM has ownership to a portion of interview recordings. It will attempt to secure releases but until then, they can only be accessed by Library staff. Internet access to the materials for which TM does not have copyright will also need to be established through a release specific form.

**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.

Many of the oral histories were recorded years ago, and while there are some release forms from the participants for the original recordings, it will not make these publicly available on the Internet once digitized until the release forms are secured. Releases for web use must be obtained from all interviewees. Any information pertaining to a sensitive topic will be only for in-house use and will be accessed via Mukurtu CMS using Mukurtu's "strict protocol" allowing limited password protected access.

## 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.

The digital content created for this project will be from the original analog sources:

Audio: Cassette Tapes approximately 70,000 Minutes; Reel to Reel approximately 1,000 interviews

Video: VHS approximately 85,000 minutes; Betacam SP 500 tapes (this format will be contracted out for digitization).

**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.**

Two PCs with the following components: multi TB internal HDD, Intel i7 CPU, USB 3.0 ports X1, Osprey 260e Video Capture Card  
Audio Software: Audacity - and - Video Software: Adobe Premiere Elements  
Storage devices for tiered back up/preservation: (Primary) Storage Server: NETGEAR ReadyNAS 3220 RN322124E - NAS server - 48 TB; (Secondary)Tape backup: HP StoreEver 1/8 G2 Tape Autoloader Ultrium 6250 or high quality equivalent  
Unitrends 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 File formats planned: Preservation: .mov, .wav Access: mp3, mp4  
Video .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)  
Audio: .wav: 96000 khz with 24 bit depth. .mp3: 128Kbps

**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).**

Quality control starts with analog playback device. All analog devices will be cleaned according to manufacturer specifications before beginning the project and then based on manufacturer recommended intervals based on "playing time" when possible moving forward. The first file converted of every material type will be compared against the analog master to ensure the specification identified (both Archival and Access) in the project plan produces a file of high enough quality to faithfully render the content moving forward. After this has been confirmed the personnel primarily responsible for the conversion will be responsible for the first quality control (QC) check. A second QC check will be done by other project personnel on a weekly basis. This check will consist of ensuring that the digital file faithfully represents the analog master but also is being given appropriate metadata and stored (and backed up) to the appropriate file locations. This will be facilitated by a workflow that requires completed converted files be moved off the local conversion workstation to the primary storage 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 a minimum of three digital copies that will be fixity checked on an every other month basis. The primary copy for the archival digital assets will be a locally hosted storage server that will be purchased using grant funds and managed by our local IT staff. The locally hosted storage server will be backed up to industry standard LTO tape and will serve as the second copy. The third copy will be stored in an Amazon Glacier instance. All metadata (technical and descriptive) 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.

The fixity checks will be done primarily on the locally hosted storage server considered the primary copy, but fixity checks will also be performed on files that are pulled from LTO tapes and Amazon Glacier storage for comparison. This will also have an added bonus of ensuring that all backups are viable.

The College president has committed to ongoing support of the project as a regular part of archival activities. When the time comes for migration to new servers or new media, funding from our Title III program will be used for this purpose. Title III funding will also support the ongoing costs for Cloud backup. Finally, the finding aids produced and revised during the project will be entered into the Northwest Digital Archives database, which is a shared database.

**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 Excel and then imported into the target Mukurtu CMS 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 metadata.

Most of the VHS recordings have been cataloged in MARC, these will be updated and cross-walked into DC and ingested into Mukurtu CMS. For audio collections, some finding aids exist. After the digitization process, new finding aids will be created and existing ones updated based on the updated content analysis. The basic audio metadata will come from the finding aids first and then item level metadata will be created using Dublin Core and batch uploaded into Mukurtu CMS.

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

The metadata will be preserved within Mukurtu CMS but will also be preserved in Excel Spreadsheets with CSV surrogates in the same directory structure as the Digital Assets they describe.

**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 Northwest Digital Archives, and through that mechanism we will try to share metadata with 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).

This digital content will be managed by Mukurtu CMS and backed up using a tiered preservation storage strategy (primary, secondary and tertiary). Some of this content will be openly available to all audiences via the Internet and will be made available on CDs/DVDs for a nominal fee for those who do not have Internet connections. Depending on the interviewees' wishes, some content may only be available in-house. For access to this material, only a networked computer with audiovisual software would be needed. For the content with public web access, the only requirement will be a computer with a fairly modern 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.

n/a

## **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.

n/a

**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.

n/a

### **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.

n/a

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

n/a

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

n/a

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

n/a

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

n/a

### **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.

n/a

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

n/a

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

Name of publicly accessible source code repository:n/a

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.

n/a

**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?

n/a

**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).

n/a

**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.

n/a

**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).

n/a

**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?

n/a

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

n/a

**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?

n/a