

Karuk Tribe

Abstract

The Karuk Tribe's 2-year **Sipnúukan Numáhyaanatih Araráhíh** (“*We fill the storage basket with the People’s language*”) Project (Project) addresses the need to enhance resource access and learning opportunities to advance the IMLS project category *Preservation and Revitalization* for the Karuk language. Our Project will expand and enhance the Tribal Libraries network with new and historic Karuk language and cultural resources; strengthen strategic partnerships between 3 tribal communities; peak youth’s learning interest with peer-produced Karuk language videos; and increase access to both physical and virtual language resources following established best practices and Karuk protocols. Project activities challenge a widely expressed, ongoing struggle: With 4 first language speakers and 10 second language speakers, the Karuk language is at a critical stage of survival.

Project goals and objectives were designed by consolidating and prioritizing needs identified in community assessments and by our formal partners, i.e. 3 Indian Parent Committees, 3 Tribal Libraries and 5 school districts located in the Karuk Aboriginal Territory; and other Project Stakeholders, i.e. Tribal youth and community members, Karuk Tribal Council, and committee members for the People’s Center, Education Dept., and Sípnuuk (*storage basket*) Digital Archives, Library and Museum (Sípnuuk). Project activities were collaboratively developed and endorsed by our strategic partners: the Karuk Language Committee (our speakers and teachers), and 3 community computer centers (the Project training sites). Intended audiences are our Tribal youth, teachers and community members.

Project timeline extends from Sept. 1, 2019 – Oct. 31, 2021. Its objectives will *Increase Public Access* to Karuk language collections and new, unique resources. 1. Intergenerational Knowledge Transfer will pair Tribal youth with Karuk language speakers to create thematic language lesson video clips. Each year, 6 local high or middle school students from 3 tribal communities will participate in 2-day workshops at their respective community’s computer center. Day 1, youth will build videography, computer and culturally-appropriate interviewing skills, then frame their “lesson” ideas. Day 2, youth will work with 2 language speakers, film and edit footage. Products include a tailored “how-to” video production manual and 6 Council approved video clips. Goal is to increase intergenerational knowledge transfer, our youth’s language learning interest, and the tech skills of both library staff and youth. Intended outcomes are improved tech and language knowledge, personal confidence in and increased use of Karuk language. Success will be measured comparing pre- and post-activity assessments. 2. Accessibility and Content Increase will add search features and additional resources to Sípnuuk collections. Each year, Sípnuuk’s collections will be enhanced by audio and video supplements to 10 K-12 and 5 language lesson plans, 3 video clips and updated “how-to” manual, and user-friendly search features to 15 additional language resources. Products also include 4 outreach publications. Goals are to enhance accessibility to and increase the content of our Karuk language resources, preserving and revitalizing our irreplaceable cultural heritage for life-long learning of generations to come. 3. Sípnuuk Upgrade will augment Sípnuuk’s site appeal and navigation. Year 1, a focus group will plan user interface improvements; and Year 2, staff will implement changes, e.g. expanding user-friendly collections categories and redesigning homepage, logos and collection pages for a fresh and culturally appropriate look. For objectives 2 and 3, success is measured by site user increase.

Demand for resources supporting tribal-led language and eco-cultural revitalization are ever-increasing, but so is the need for digital library services. Not only library funding shortfalls, but also the geographic distance to library services underscore the Karuk Tribe’s need for accessible library materials via a tribally sanctioned and controlled computer platform. Significant to this effort are the newly functioning broadband internet services for the Orleans community, funded through the Tribe’s USDA Community Connect grant. By expanding and improving our digital language collections, this Project will not only increase access to resources that some tribal members are receiving at home for the first time, but also foster interaction with and discovery through the improved digitized materials.

Narrative

1. Statement of Need. Prior to Euro-American contact, the Karuk and neighboring tribes were considered among the wealthiest people in the state of California, flourishing with sophisticated land management practices and a thriving subsistence economy that allowed for sustained use of the area's rich natural resources. Today, they are among the poorest; in a comprehensive 2016 survey of 286 Tribal households representing a total of 843 Karuk people residing within the Karuk Service Area, 34% of households fell below the federal poverty level with a reported annual household income of \$20,000 or less for a family of three (KBFSA 3, Supportingdoc1). Our three main communities are rural, underserved, and separated by 130 miles of winding, mountain roads subject to closure during winter floods, wildfires and landslides.

According to the California Department of Education's 2018-2019 Student Poverty data, 72% of students in our Aboriginal Territory qualify for free meals (CED, Supportingdoc1). The nominal State tax-based revenues funding our schools are cruelly insufficient to maintain adequate school infrastructure, e.g. library resources, and culturally responsive academic offerings, e.g. Karuk language. Unsurprisingly, our students' academic performance is among the lowest in the nation. Exacerbated by generations lost to genocide, illness, and Indian boarding schools, the near-complete loss of its Native tongue, material culture, and traditional knowledge and practices have rendered these communities a breeding ground for socioeconomic driven high rates of substance abuse and domestic violence.

Today, the Karuk are the second largest indigenous tribe in California. Our Service Area is rural, sparsely populated (6.87 per square mile), and located in both Siskiyou and Humboldt Counties (Supportingdoc2). The Karuk Tribe (Tribe) is comprised of 17 departments and services, including education, health and social services, child and family services, housing and energy assistance, and extensive natural resource management. Offices are located in the three main communities including Yreka (population 7,500); Orleans (650); and Happy Camp (1250), where the tribal headquarters are located. Over 50% of the inhabitants of the Orleans area, and roughly 40% of the inhabitants of Happy Camp claim Native American ancestry.

Yet despite many successful cultural revitalization efforts, the number of Karuk language speakers has not reached the critical mass for assuring survival and continues as each year goes by. With only four known 1st and ten 2nd language speakers, the Karuk people have identified a critical need to **Increase Public Access** to Karuk language resources and to inspire life-long language learning in our people. Research shows that teaching native languages helps to "bolster the identity and self-worth of Native youth by respecting the norms and culture of their families and communities," and "... the local community, including elders, engages more in the learning process when it reflects and includes key elements of Native language and culture" (NYR, Supportingdoc1).

Karuk Tribe

While there are a large number of written materials and an online Karuk Dictionary online, these are neither easy to access or navigate, nor do they produce learners who can correctly and confidently pronounce Karuk language. We have very little video of Karuk speakers, especially of groups of fluent speakers conversing together, and we have even fewer videos featuring young Karuk language learners. Inspired by success stories about how digital technology has been used to promote indigenous language learning (e.g. DR, Supportingdoc1), the Karuk Tribal community has identified “more language apps and online resources” as one of its highest prioritized needs for the **Preservation and Revitalization** of its indigenous language (Supportingdoc5).

Built with significant IMLS support, the Karuk Tribal Libraries and Archives (Tribal Libraries) have undergone extensive analog and digital development, and provide professional library services in Orleans and Happy Camp. Partnering with the Community Computer Centers of our three main Service Area communities Tribal Libraries provide access to information, education resources, and services, e.g., reference assistance, student services, workforce development, and digital literacy skills. In 2016, the Karuk Tribal Council adopted a Memorandum of Mutual Understandings between all Tribal Libraries (Supportingdoc6) to foster increased coordination, collaboration and communication, as well as develop both digital and analogue collections to meet identified content and access needs. These tribal resources have built strong partnerships with local schools, providing staff, students and caregivers with access to books, services, and culturally relevant curriculum materials otherwise unaffordable.

The People’s Center Library in Happy Camp is open Mon—Sat, 9:30 am—5 pm, and is currently staffed by a Library Technician (0.1 FTE) supervised by the People’s Center Coordinator. This library holds over 700 volumes and enjoys over 30 weekly visitors, and focuses on research and reference materials. Many of the works in the library are rare, non-circulating volumes on Karuk language and culture, but we also have a youth section, culturally relevant documentaries, and Native American Literature. Partnering with the Tribal Libraries is the Happy Camp Community Computer Center (HCCCC) staffed with Karuk Temporary Assistance to Needy Families funded Workforce Development Coordinator (1.0 FTE) overseeing the day-to-day operations. HCCCC resources include: 20 desktop computers, 3 desktop macs, 3 scanners, 3 printers (plotter, laser jet and inkjet), and 1 digital projector.

The Yreka Community Computer Center (YCC) located in the Karuk Tribe’s Indian Housing Development services ca. 55 visitors Mon—Thu, 10 am—7:30 pm and Fri—Sat, 11 am —6 pm. Staffed with a Karuk Housing Authority funded Resource Development Manager (1.0 FTE), the YCC has a classroom and a computer lab with 12 computers with high-speed internet for to assist with job search, tutoring, and classes on computers, drug and alcohol abuse, and Karuk culture and language.

Karuk Tribe

The Panámnik Tribal Library and Community Computer Center in Orleans (Panámnik Center) is open Mon—Thu, noon—6 pm, and Fri—Sat, noon—5 pm. At least 20 primary, 5 secondary students, and 25 adults use the library regularly each week. Including the Computer Center, these numbers exceed 20 persons daily. The Panámnik Center does not have dedicated funding; the Karuk Department of Natural Resources' Sípnuuk staff (see below), as well as one full-time and several part-time volunteers keep this vital community service open to the public. It partners with the Humboldt County Library for bi-monthly Bookmobile services, and also offers a drop box and pickup service, as well as our newly installed "Little Free Library" – a 2018 ATALM conference raffle prize donation. Over the past five years, the library's culled collection has grown by over one thousand books and 40 films. Total volumes are over 1,450 hardbound books and more than 370 paperbacks.

Housed in the Panámnik Center and based on Mukurtu's Content Management System, the Sípnuuk Digital Library, Archives and Museum (Sípnuuk) is accessible to our widely dispersed membership and global community, and offers differential access to sensitive and restrictive cultural data. Established through a 5-year USDA Food Security Grant, multiple funding sources have enhanced its original collections (e.g. the Tribe's K-12 Curriculum and Klamath Basin food system research) with new collections (e.g. tribal family archives and other cultural heritage materials). According to Google Analytics, Sípnuuk users in nine countries visit our digital library regularly, with monthly page views peaking to 4,157 in March 2019. This virtual library resource is managed multiple-grant funded Sípnuuk Division Coordinator (0.8 FTE) and an IMLS Basic Grant funded Sípnuuk Library Technician (0.1 FTE). Organized under the Eco-Cultural Revitalization Branch of the Karuk Department of Natural Resources (DNR), Sípnuuk (*storage basket*) is one of five Píkyav Field Institute divisions (Supportingdoc7) and has become a central educational resource for our underserved communities and schools.

The Sípnuuk Advisory Committee (SAC) was formed in 2014 to develop the site from the ground up; identify collection needs; establish Tribal Council-sanctioned, culturally-embedded sharing protocols (Sípnuuk, Supportingdoc1); guide Intellectual Property policies (ibid); and provide cultural and administrative oversight and direction to Sípnuuk staff. In February 2019, SAC members recognized the need to update Sípnuuk's web design, search features and collection organization (Supportingdoc4). The SAC team includes staff from tribal departments and libraries, community representatives, cultural practitioners and Tribal Elders. Responding to the tribal community's urgent requests for Karuk language restoration, the Karuk Language Committee was formed in 2018 to guide and advance Karuk language revitalization efforts across tribal departments and communities. The KLC team convenes on a bi-monthly basis and is made up of Karuk language teachers and students, as well as two first language speakers.

Karuk Tribe

In 2018, the Píkyav Field Institute distributed a progress assessment for its culturally appropriate environmental education program to Indian parents, school staff, Tribal leaders, and local students. A total of 75 responses were collected, of which respondents either “Agreed” or “Strongly Agreed” that lessons centering Karuk culture, language and traditions and meeting the California State Standards for English Language Arts and New Science Standards are improving the students’ attendance (82%), attitude (91%) and academic performance (89%). In the open comment section, the vast majority of respondents requested more Karuk language (Supportingdoc5). The need for more Karuk language resource access has also been identified by the SAC, Karuk Language Committee, People’s Center Advisory Committee, Tribal Council, Elders and community members in numerous needs assessment surveys, meeting minutes, Strategic Plans and personal communications (Supportingdoc4&5).

In addition to consolidating and prioritizing the language preservation and revitalization needs identified by all the aforementioned stakeholders, we considered our existing resources. Among our *strengths* number Sípnuuk, the Tribe’s online digital repository for cultural heritage materials; newly functioning broadband internet services in Orleans; a strong collaboration with UC Berkeley Linguistics Dept. who have a wealth of Karuk Language resources (human, online and unpublished); a small but active group of language teachers in all three Tribal communities; staff experience in video production and online uploading; and formal partnerships between the Píkyav Field Institute and our local schools (Supportingdoc3). Our *weaknesses* are not only the limited number of Karuk speakers and accessible language resources, but also the Tribal capacity to update, digitize and catalog existing materials, not to mention create new language resources and facilitate Service Area-wide learning opportunities. In effect, the overarching goal of our proposed Project is to **preserve and revitalize** our language by **increasing Public Access** to Karuk language collections and new, unique resources.

This Project is particularly timely: not only has both the need and demand increased for resources supporting tribal-led language and eco-cultural revitalization, but also the need for digital resource library services. With funding-depleted, non-existent, and/or vanished analogue community and school library resources, the emphasis placed on and need for digital library and other online resources has increased – both requiring further professional development of our tribal staff. Furthermore, the geographic distance between service areas underscores the value of having accessible library materials via a tribally sanctioned and controlled computer platform. Significant to this effort are the newly functioning broadband services to the Orleans community, funded through the Tribe’s USDA Community Connect grant. These services will be expanded through the Klamath River Rural Broadband Initiative (KRRBI) funded by a substantial California Public Utilities Commission grant to the Karuk and Yurok Tribes. Sustaining and expanding our digital collections will not only provide access to information to tribal members receiving faster internet connections at home for the first time, but also foster interaction with and discovery through the digitized materials.

Karuk Tribe

2. Project Design. From Sept. 1, 2019 – Oct. 31, 2021, our Project will *Increase Public Access* to Karuk language collections and new, unique resources with three objectives.

1. Intergenerational Knowledge Transfer will pair Tribal youth with Karuk language speakers to create thematic language lesson video clips. Each year, 6 local high or middle school students from 3 tribal communities will participate in 2-day workshops at their respective community's computer center. Day 1, youth will build videography, computer and culturally appropriate interviewing skills, then frame their "lesson" ideas. Day 2, youth will work with 2 language speakers, film and edit footage. Products include a tailored "how-to" video production manual and 6 Council approved video clips. Goal is to increase intergenerational knowledge transfer, our youth's language learning interest, and the tech skills of both library staff and youth. Intended outcomes are improved tech and language knowledge, personal confidence in and increased use of Karuk language. Success will be measured comparing pre- and post-activity assessments of changes in knowledge, behavior and condition, e.g. existing vs. learned language knowledge and use (both following workshop trainings and at Project end), and probing the veracity of our assumptions: Are Tribal youth inspired to learn language when modeled by their peers? Do they learn more from these online-accessible video "shorts" than from pre-Project existing online resources? Does more online Karuk Language presence increase Tribal self-esteem?

2. Accessibility and Content will add search features and additional resources to Sípnuuk's Karuk Language and K-12 Nanu'ávaha (*our food*) Curriculum collections as the Mukurtu platform has been improved to split PDF files by pages and render them more searchable for all users, and added a Karuk language dictionary feature. Each year, these collections will be enhanced by user-friendly search features and new language resources: language audio and video components will be linked to at least 10 existing K-12 Nanu'ávaha and 5 content-aligned Araráhíh – Karuk Language lesson plans (e.g. Supportingdoc9), as well as 15 additional language resources. Sípnuuk will also house the 3 Project youth-produced video clips and updated "how-to" manual. Products also include 4 outreach publications. Goals are to enhance accessibility to and increase the content of our Karuk language resources, preserving and revitalizing our irreplaceable cultural heritage for life-long learning of generations to come. Success will be measured comparing pre- and post-Project assessments of changes in knowledge, behavior and conditions, e.g. Do you currently access Karuk language learning materials online? If yes, from where and what kind of materials? What are your top three "go-to" site-choices and why?

3. Sípnuuk Upgrade will augment Sípnuuk's site appeal and navigation. Year 1, the SAC will have formed a five (member) focus group to strategically plan Sípnuuk's user interface improvements; and Year 2, staff will implement changes including but not limited to reformatting the Sípnuuk home page to be more reflective of Karuk Culture; expanding user-friendly overview of collections by "categories"; and modifying logos and collection pages for a fresh, appealing and contemporary look.

Karuk Tribe

In a collaborative effort to address the aforementioned language preservation and revitalization needs, a number of stakeholder groups have helped in the planning and final design of this Project proposal over the past two months, including the SAC, Karuk Language Committee, People's Center Advisory Committee, and Education Committee (Supportingdoc4). The overwhelming majority of these Project stakeholders agreed that our youth respond more positively to short, "fun" and contemporary digital products (see Digitalproducts).

3. Impact. The overarching goal of our proposed *Sipnúukan Numáhyaanatih Araráhíh* Project is to **preserve and revitalize** our language by **increasing Public Access** to Karuk language collections and new, unique resources. As the geographic distance between our Service Area hubs challenges wide-spread access to analog material and learning opportunities and our language speakers "age-out," the Tribe has chosen guiding Project objectives, activities and products to reach our intended sub-goals.

1. Intergenerational Knowledge Transfer will increase knowledge transfer between Tribal youth and elders, interest of our younger generation to learn the Karuk language, and the technological skills of workshop-participating youth and Project staff. We want to see greater language learning interest and measureable increase of language and cultural knowledge, which we expect will lead to greater positive Tribal identity/confidence. Our progress hereto will be measured comparing a representative number of completed pre- and post-activity assessments of changes in knowledge, behavior and condition, e.g. existing vs. learned language knowledge and use (both following workshop trainings and at Project end), and using assessment data to guide Project activity modifications, judge unforeseen negative impacts or risks, and evaluate this objective's activities in meeting its intending goals.

2. Accessibility and Content will enhance accessibility to and increase the content of our Karuk language resources. Digital resource access is key, and our intended goal here is to improve the Sípnúuk site in such a way that our target audience will more likely use it to further their language learning aspirations. We want to make learning the Karuk language, a life-long undertaking, a little easier. We want new learners to feel more confident in practicing and speaking the language, as they can listen to the pronunciations and word cadence in their own homes and schools. Progress hereto will be measured comparing pre- and post-Project assessments of changes in knowledge, behavior and condition, whereby the emphasis here will be placed on changes in behavior: Have you accessed any Karuk Language materials online in the past three months? Have you learned any new words or phrases? Have you used any of this new knowledge in the past three months? If yes, how confident did you feel using (scale rating). Potential risks include publicizing culturally sensitive materials and add mispronounced sound bites to language resources: however, as per our established protocols, new resources are first uploaded to our secured folder: Karuk Needs Review. Here, possible conflicts will be identified by our Tribal reviewers.

Karuk Tribe

3. Sípnuuk Upgrade will augment Sípnuuk's site appeal and navigation in order to increase the number and satisfaction of users. For both objectives 1 and 2, we will measure our progress through caring baseline and end of Project Googleanalytics data with the assumption that an increase in visits represents greater user approval. In order to avoid potential risks, such as misrepresenting the Tribe's culture or offending its membership, all changes to the website will be vetted through the SAC and, if advised, sanctioned by the Tribal Council.

6. Communications Plan. Information and progress about the "Araráhíh" Project will be shared with the Native American library community at large in various ways. Updates will be given at the NW California Tribal Libraries Network meetings. Locally we will provide monthly updates at our Karuk Tribal Council Meetings, which are globally available upon Council approval through our online website (www.karuk.us). The Project Director will provide at least (4) articles promoting the Project and informing on its upcoming activities through the Karuk Newsletter, which is distributed to our Tribal Members. These articles will also be submitted to two (2) local newspapers. Furthermore, the Karuk Tribal Libraries and Sípnuuk will participate in the SHN; project staff will attend the annual ATALM conference to report on our project.

7. Sustainability. The Project's sustainability is given with the newly acquired video production skills of both tribal staff and youth. The new and enhanced Karuk language learning materials will allow for and inspire life-long learning. Beyond the funding period, the Sípnuuk Digital Library will continue to exist digitally and the training provided will enable staff to continue to preserve and enhance the search features of language materials as their time allows. The facilities and equipment to sustain these projects belong to the Karuk Tribe and will continue to be used for these activities. The database will continue to be monitored through the Karuk Tribe People's Center, in conjunction with the Karuk Research Advisory Board and SAC, and will be sustained by tribal IT beyond the funding period. Improving the accessibility of our cultural heritage materials will benefit the greater community, will continually promote language learning and cultural heritage exploration, and ultimately promote Karuk cultural and language preservation and revitalization.

Supporting Documentation

1. References
2. Karuk Service Area
3. Agreements/MOU
4. Proposal Planning Activities
5. Assessments
6. Letters of Support/Commitment
7. Organizational Chart
8. Support Services and Supply Quotes

Schedule of Completion

Year One													
Objectives	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1. Intergen. Knowledge Transfer	Identify KLS Post RFP	Recruit Youth Contract KLS	Final. Manual										
			O		HC		Y						
2. Accessibility and Content Increase			5 K-1, 5 language lessons, 5 additional lang. supplements					3 Videos	5 K-1 lessons, 10 language supplements				
3. Sipnuuk Upgrade		ID Focus Grp.	Focus Group	Plan Sipnuuk Upgrade with Focus Group, taking advantage of improved Murkurtu platform								Finalize Plan	
Project Coordination	Assess. Draft GoogleAnaly. ATALM conf.	Approv. Req. Tribal Coun.	Activity Ass. Orleans		Activity Ass. Happy Camp	Interim Report	Activity Ass. Yreka	Purch. Order Gift Cards			Data Analysis	Interim Report	
	Attend and Facilitate Project Stakeholder Meetings, including school staff, various Advisory Committees, Tribal Council, Indian Parents, Tribal Youth Council, etc.												
HC=Happy Camp O=Orleans Y=Yreka KLS=Lang. Speaker	Planning		Language/Videogr. Workshop		Outreach Publication/ Present.		Meetings		Language Resource Uploads		User-Interface Modificat.		

Schedule of Completion

Year Two												
Objectives	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1. Intergen. Knowledge Transfer												
2. Accessibility and Content Increase	5 K-1, 5 language lessons, 5 additional lang. supplements						3 Videos	5 K-1 lessons, 10 language supplements				
3. Sipnuuk Upgrade	Redesign Homepage			Expand collection categories & search features				Reformat collection pages, logos, and icons				
Project Coordination	ATALM conf.	Activity Ass. Orleans	Activity Ass. Happy Camp		Activity Ass. Yreka	Interim Report		Purch. Order Gift Cards	Contracts Closure	DVD Distrib. Data Analysis	GoogleAnaly. Data Report	Final Report
	Attend and facilitate Project Stakeholder meetings, including school staff, various Advisory Committees, Tribal Council, Indian Parents, Tribal Youth Council, etc.											
HC=Happy Camp O=Orleans Y=Yreka KLS=Lang. Speaker	Planning		Language/Videogr. Workshop		Outreach Publication/ Present.		Meetings		Language Resource Uploads		User-Interface Modificat.	



DIGITAL PRODUCT FORM

Introduction

The Institute of Museum and Library Services (IMLS) is committed to expanding public access to federally funded digital products (e.g., 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. 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

All applications must include a Digital Product Form.

- Please check here if you have reviewed Parts I, II, III, and IV below and you have determined that your proposal does NOT involve the creation of digital products (i.e., digital content, resources, assets, software, or datasets). You must still submit this Digital Product Form with your proposal even if you check this box, because this Digital Product Form is a Required Document.

If you ARE creating digital products, 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.

The majority of materials digitized, created or re-purposed will be owned by the Karuk Tribe. For those items belonging to Karuk tribal community members, we will secure property status through our established policies and forms, including Deeds of Gift, Protocol with Agreement for the Intellectual Property Rights of the Karuk Tribe: Research, Publication and Recordings to provide internal Karuk access. This will affect those materials and images that may be externally owned. When this is not possible, we will seek permissions to provide internal Karuk access through the copyright holder. However, by using Mukurtu CMS, we will be able to maintain tight control over materials that have copyright or IP constraints. We consider public access to be its own cultural protocol, and materials that are covered by this protocol will be rights cleared or simply not available for public viewing and access.

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 Karuk Tribe will assert full or partial ownership as stated in our Protocol with Agreement for the Intellectual Property Rights of the Karuk Tribe: Research, Publication and Recordings. For these digitized images and audio recordings, we will provide Tribal-wide access as stipulated by Karuk Tribal protocols, regulated by our Enrollment Department and enabled through a Mukurtu CMS. Differential access is also possible through the Mukurtu CMS platform, e.g. for families wishing to limit access to their own family, or THPO-restricted culturally sensitive data. Conditions of use will be an agreement not to share digital images with ineligible parties, nor reproduce them unless otherwise specified. These terms of access and conditions are justifiable in the light of the many years of expropriation of Karuk Intellectual Property.

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.

Yes, whereby privacy concerns could be redefined as Karuk Tribal codes and values. Created products will all be reviewed by the Karuk Tribal Council prior to publication; any product involving privacy concerns will be protected through our Mukurtu CMS platform, which has built in mechanisms to safeguard private, or culturally sensitive materials. Should Tribal members wish to digitize images of culturally sensitive materials, such as Karuk language materials documenting the religious formulas known only to the Fatavaanaan (priest) or other religious leaders, these matters will be brought before the Karuk Resources Advisory Board (KRAB), which serves to make decisions on culturally sensitive materials. It is presumed that these occurrences will be few, yet should they occur and the KRAB decide to approve digitization and uploading onto the Mukurtu CMS platform, we will limit access through password protection to those eligible to view.

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 the format(s) you will use.

Images- photographs, prints, negatives, slides. Movies- original film or video transfers to digital video format. Audio- tapes, cds or other recordings transferred to digital audio format. Documents- Physical, printed documents scanned or word processing documents (MS Office) converted to PDF.

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.

2 iMac stations and monitors, 2 Epson V850 Scanners, Lightroom, Halide, 5 iPads and personal iPhones, Agisoft Photoscan, StoryCorps audio recording kit with professional Marantz digital recorder, A-D converter, S-Video cable Male-to-Male 3 ft, Stereo RCA audio cables, Male-to-Male 6 Ft, Laptop Cooling Pad, Time Base Corrector, CRT Monitor, USB Floppy Disk Reader Drive, 3.5", Composite Video/Stereo audio RCA M-M, VHS-C adapter, S-VHS deck, DV deck (a lot of this equipment is soon to be purchased through a funding from IMLS MemoryLab Network grant # LG-95-17-0079-17.

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).

For digitization, we will follow best practices for enduring file formats, following the advice of the Sustainable Heritage Network and other resources recommended through Memory Lab Network. For example, images will be rendered as TIFF files, with full resolution JPEG surrogate derivatives for distribution. Movie files will be rendered in resolution that meets the original format as closely as possible, and web versions (H.264, and potentially H.265 codec, an emerging standard), will be produced for distribution. In every case, consistent metadata will accompany the files, and where possible, will be embedded.

B. Workflow and Asset Maintenance/Preservation

B.1 Describe your quality control plan. How will you monitor and evaluate your workflow and products?

The Sípnuuk Digital Library, Archives and Museum (Sípnuuk), the digital repository and access-point for the integrated Karuk Digital Libraries, is committed to providing long-term storage to all deposited content by applying best practices for data management and digital preservation while also acknowledging the complexities involved in preserving digital information. Quality control, fixity checks, assessment guidelines and assurance standards are all part of the workflow protocols established in previous IMLS, e.g. staging document/data uploads for internal review, categorization and restriction level determination prior to public accessibility. Further guidelines will emerge through participation with the SHN, Memory Lab Network and California Revealed.

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).

Sípnuuk will preserve the content, structure and functionality of the files through migration to newer formats or other preservation strategies, where feasible. Sípnuuk, with the assistance of Kanopi Studios and powered by Mukurtu CMS, will provide basic services including secure storage, backup, management, and fixity-checks. Organizational funds are committed to the long-term sustainability of the digital assets.

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).

Mukurtu CMS has defined Mukurtu Core, based on Dublin Core, EXIF, and influenced by several other standards, including MARC, CIDOC-CRM, RAD and EAD. Through participation in the SHN, Memory Lab Network and California Revealed it is anticipated that an emerging best practice grounded in standards for digital materials will provide guidance beyond the already substantial, and indigenous focused metadata already embodied in Mukurtu CMS.

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

Metadata associated with digital assets is considered essential and part of the records. In Mukurtu CMS, these are called 'digital heritage' items. In digital library parlance, complex digital objects. Our strategy is to render 'born archival' materials that maintain their metadata throughout the lifecycle of production, including version control and authorship.

Throughout the project, during the training periods, metadata and the Karuk cultural protocols will be reviewed and updated as needed. All of this effort will be documented in version control documents to accompany the digital library.

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).

Mukurtu CMS provides widespread discovery of digital content, managed through cultural protocols and community group memberships in the CMS. Several capabilities, including xml feeds and csv outputs are available. User management will be handled by Karuk tribal members who receive training on Mukurtu CMS.

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).

The Karuk Aboriginal Territory has limited access to the Internet and cellular service. However, the digital library will be connected to the Internet, and the Karuk Tribe is continuing to build out access to broadband services to the recently underserved Orleans community through grants received from USDA Community Connect and the California Public Utilities Commission. The digital library will thus be housed and managed on the cloud-based service Pantheon.io with an address sipnuuk.karuk.us, a platform-as-a-service (PAAS) that runs on RackSpace servers worldwide. Some materials will be made publicly available. Others will be managed and shared with specific families, researchers and individuals, including members and descendants of the Karuk Tribe. All materials will be made available, depending on access protocols, through modern browsers.

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.

Karuk Tribe Official Website - <http://www.karuk.us>

Sipnuuk Digital Library, Archives and Museum - <https://sipnuuk.karuk.us/> (formerly sipnuuk.mukurtu.net/)

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.

We do not plan to create software in this project. However, we do plan to implement Mukurtu CMS as a core platform for sharing and managing our content.

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.

LibraryWorld for the physical cataloging of materials (does not function for our digital content). The catalog module "provides for the creation and updating of catalog and holding records. You can import records from standard MARC format, hand enter records, or pull records from one of many online resources, including our Z39.50 connection to the Library of Congress (from LibraryWorld site)." We also use PastPerfect software for our museum holdings.

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.

Mukurtu CMS is based primarily on Drupal, an internationally supported and developed open-source platform. Mukurtu CMS is also open source under a GPL license. This platform will form the basis of our Sípnuuk Digital Library, Archives and Museum infrastructure, the repository and access-point for our digital library. Mukurtu CMS runs on a L/M/W AMP stack - Linux/Mac/Windows + Apache, MySQL and P

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

The Sípnuuk infrastructure, the repository and access-point for our digital library, will be based on Mukurtu CMS, running locally on our server in the Karuk Department of Natural Resources (DNR), and in the cloud on the Pantheon.io with support through Kanopi Studios, which runs Mukurtu CMS as a PAAS (platform-as-a-service).

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

None. The central design principle for Mukurtu CMS is to "do no harm" to digital heritage content. All metadata and media stand alone, and can be exported at any time from the system as plaintext (CSV) files and archival media. Furthermore, all metadata and media will also be stored external to the content management system in a secure file system on Karuk Tribal land.

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

Robust documentation is a core deliverable of this project, from the planning stage, training program, production, through to dissemination and long-term cultural and digital heritage preservation planning that extends beyond the grant term. This is not a software project. We will leverage technology to support our core mission of extending education, training and employment opportunities for our people.

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

None.

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:

N/A

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.

We have Deed of Gift forms , which are digitized after signing and kept in an administration folder on Sipnuuk.

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:

N/A

URL:

N/A

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

N/A