

COLLECTION ASSESSMENT OF THE DIGITAL RECORD REPOSITORY
CONTAINING THE OFFICIAL RECORDS OF THE
GILA RIVER INDIAN COMMUNITY

by

Tammie T. Morago

Copyright © Tammie T. Morago 2020

A Thesis Submitted to the Faculty of the

DEPARTMENT OF AMERICAN INDIAN STUDIES

In Partial Fulfillment of the Requirements

For the Degree of

MASTER OF ARTS

In the Graduate College

THE UNIVERSITY OF ARIZONA

2020

THE UNIVERSITY OF ARIZONA
GRADUATE COLLEGE

As members of the Master's Committee, we certify that we have read the thesis prepared by Tammie T. Morago, titled "Collection Assessment of the Digital Repository Containing the Official Records of the Gila River Indian Community" and recommend that it be accepted as fulfilling the dissertation requirement for the Master's Degree.



Stephanie Carroll Date: 11/20/2020



Ronald L. Trospen Date: 11/20/2020



Berlin Loa Date: 11/20/2020

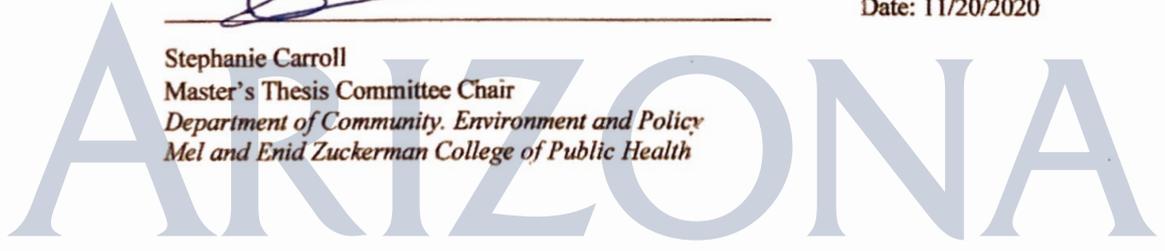
Final approval and acceptance of this thesis is contingent upon the candidate's submission of the final copies of the thesis to the Graduate College.

I hereby certify that I have read this thesis prepared under my direction and recommend that it be accepted as fulfilling the Master's requirement.





Stephanie Carroll Date: 11/20/2020
Master's Thesis Committee Chair
Department of Community, Environment and Policy
Mel and Enid Zuckerman College of Public Health



ACKNOWLEDGEMENTS

I would like to acknowledge the support and guidance I received from the members of my thesis committee, without whom this thesis would not have been possible. To Stephanie Carroll, I thank you for being a patient, supportive, and strong guiding force as the Chair of my committee. Thank you for agreeing to head my committee from the beginning of this journey. I also extend my appreciation to Ronald L. Trosper; your Native Nation Building course propelled me to seriously pursue this project and provided the necessary understanding for the work presented here. I am also grateful for Berlin Loa agreeing to serve on my committee. From our first conversation about this project, your enthusiasm and support helped it come to fruition. I sincerely thank each of you for your time and intellectual contributions to my development as a scholar.

This work was not done alone and there are more people I would like to acknowledge for their contributions. First, I would like to acknowledge the Gila River Indian Community Council Secretary, Shannon White, for her unwavering support, objective input, and professional courtesy. I appreciate our honest discussions about the record keeping practices and our shared hope of improving it. These discussions nurtured a germane idea and helped develop it into a research project. I would also like to acknowledge Linus Everling and Robert Keller for supporting my educational goals and encouraging me to complete my program. I would also like to acknowledge Thomas L. Murphy, who reviewed several drafts of my proposal and provided guidance where it was needed. The members of the Gila River Indian Community Education Standing Committee; Terrance Evans, Arzie Hogg, Charles Goldtooth, Regina Antone-Smith, and James De La Rosa, were instrumental in reviewing and approving the research proposal. I would also like to thank Director Isaac Salcido and his staff at the GRIC Tribal Education Department for their role in submitting this project to the Education Standing Committee. Other individuals in my network that I would like to recognize are Angelica Mesa, Sheila Valenzuela, and Avery White. Through our conversations, your contributions influenced and impacted the design of this project and echoed why it needed to be completed. Most of all, this project would not be possible without the support and permission of the Gila River Indian Community Council and Executive leadership. Thank you for the opportunity to contribute to the Community and for your trust and support.

Finally, I would like to acknowledge my family. To my maternal grandparents Mary and Edward, thank you for your teachings. A special thanks to my siblings Robert, Steve, and Ed, for helping me along the way. Mom and Dad, thank you for showing me how to be fierce and steadfast. I especially want to thank my husband, William T. Morago, who believed in me, encouraged me, and loved me unconditionally throughout this journey. You provided a conducive environment for me to devote countless evenings, nights, and weekends to this project. Finally, a special acknowledgment to my daughter, Amaya. Your positive spirit and hugs always cheered me on no matter what. I am truly grateful for each of you and cherish your support, love, laughter, and patience.

DEDICATION

I dedicate this thesis to my family and especially to my parents, Annie T. and Robert S. Remiro, for teaching me the value of hard work and perseverance. Mom and Dad, you were right; if it were easy, everyone would be doing it. I also dedicate it to my husband and our daughter Amaya. This would not be possible without your support. *Ahéhee'*. Thank you all.

Table of Contents

LIST OF TABLES AND FIGURES.....	7
ABSTRACT.....	8
PREFACE.....	10
INTRODUCTION.....	12
CHAPTER 1: GRIC RECORD KEEPING	16
Known Issues	19
Records and Information Quality	20
Collection Assessment	23
CHAPTER 2: BACKGROUND	25
Tribal Government Records.....	27
Tribal and Non-Tribal Archives.....	28
CHAPTER 3: PROJECT INSTITUTIONAL REVIEW	33
CHAPTER 4: METHODOLOGY AND METHODS	37
Methodology.....	37
Methods.	41
Data collection.....	46
User Survey.	48
Visual inspection of record storage area.....	49
CHAPTER 5: RESULTS	49
Potential Challenges with data collection.	50
Software, Permissions, and Equipment.	50
Document recording.	51
Missing resolutions and attachments.	52

Template and Metadata.....	53
Resolutions.....	56
Ordinances.....	60
User Survey.....	61
Document Request Form Log.....	65
Documentation Review.....	69
Job descriptions.....	69
Standing Committee Review & Routing Form.....	70
CCSO Flowchart.....	70
Public Records Request Policy.....	71
Meeting Records / Meeting Documentation.....	71
Records Management Policies.....	71
Visual inspection of record storage area.....	72
CHAPTER 6: DISCUSSION / RECOMMENDATIONS.....	73
Strengths.....	74
Weaknesses.....	74
Short-Term Recommendations.....	75
Mid-Term Recommendations.....	77
Long-Term Recommendations.....	79
CONCLUSION.....	80
APPENDIX A: USER SURVEY QUESTIONS AND DATA TABLES.....	83
APPENDIX B: EXCEL FORM USED TO COLLECT ITEM-LEVEL DATA.....	87
APPENDIX C: SUBJECT MATTER CATEGORIES USED TO CLASSIFY INDIVIDUAL RECORDS.....	88
REFERENCES.....	89

List of Tables and Figures

Tables

Table 1. The FAIR Guiding Principles (Wilkinson et al., 2016)	20
Table 2. Numbering Format used for GRIC Resolutions	52
Table 3. Name of Template used to upload GRIC Resolutions (1953-2020)	54
Table 4. Completion of Template Metadata Fields for GRIC Ordinances (1968-2020)	55
Table 5. GRIC Resolutions and Ordinances with Metadata entries in Template	56
Table 6. Completeness of GRIC Resolutions (1953-2020)	58
Table 7. GRIC Resolutions missing attachments: A review by the decade (1953-2020)	60
Table 8. Identifies how GRIC employees define <i>records</i>	63
Table 9. Number of Days to Complete Document Request Forms (n=157)	69

Figures

Figure 1. Simplified Legislative Process of the Gila River Indian Community	13
Figure 2. Life cycle of a record	18
Figure 3. What is FAIR DATA? (Association of European Research Libraries, 2017)	21
Figure 4. Scanned Image Quality of 11,347 GRIC Resolutions (1953-2020)	59
Figure 5. Who was Requesting Records from the CCSO Repository in 2017? (n=157)	66
Figure 6. What Type of Records were Requested from the CCSO Repository in 2017? (n=157)	67

ABSTRACT

This collection assessment is interdisciplinary in that it incorporates tenets of American Indian Studies with principles of Library Information Science to assess the current record keeping practices of the Gila River Indian Community, a federally recognized Indian Tribe. The purpose of the thesis is to identify the strengths and weaknesses of the record keeping practices of the Gila River Indian Community (GRIC or Community). It provides data collected from a review of the Community's digital repository of official tribal government documents. By identifying issues in the digital repository, the Community can devise a plan to improve the condition of its records. Discussed within a Native nation rebuilding and Indigenous data sovereignty framework, coupled with Library Information Science, this collection assessment will demonstrate the importance of tribes evaluating their data and collections to improve data accuracy and quality, and manage how data and information are used. This project received approval from the Community.

The effective governance of tribal government records is an example of how tribes can efficiently negotiate water rights settlements, rightly discuss accounting claims, aptly participate in government-to-government consultations, and exercise their sovereignty to its fullest ability. A tribe cannot do these fundamental acts of governance if it lacks the ability to create and maintain accurate, adequate, accessible, and complete records. As an expression of their sovereignty, tribes can establish standards of information quality to organize their government's records. By doing so, they are ensuring that their records are meaningful, intentionally created and preserved, enabling its usability into the future. In the era of Self-Determination, Native nation rebuilding is continuing to flourish in ways that tribes have not seen in prior eras of Federal Indian law and policy. By taking proactive measures and addressing the organization of government records, the Community can establish acceptable standards of information quality. The impetus for

implementing information quality standards becomes an important cornerstone for an effective governing body.

Keywords: Gila River Indian Community, Collection Assessment, Managing Tribal Government Records, Native nation building, Tribal self-determination, Indigenous Data Sovereignty, Indigenous Data Governance, Tribal archives, Improving data quality

PREFACE

Yá'át'ééh. Shí éí Tammie T. Morago yinishyé. Tóahani nishł́. Bilagáana éí bá shíshchíín. Tódichiini éí dashicheii. Portuguese éí dashinalí. Ákót'éego diné asdzáán nishł́.

My name is Tammie T. Morago. My clans are Near the Water, born for the English, my maternal grandfather is Bitterwater, and my paternal grandfather is Portuguese. This is how I am a Navajo woman. I begin by acknowledging my family and those who have come before me, as their journeys have brought me to where I am today.

Since 2007, I have been invested in the work that happens in the Gila River Indian Community (“Community”). In 2007, I was hired as a law clerk in the Community’s Office of General Counsel. My assignments routinely consisted of performing archival research of the Community’s resolutions and ordinances. It is through this process and in this capacity that I would gain familiarity with the Community’s record keeping practices. Over the years, I noticed several issues that affected my ability to perform thorough research on assigned topics. Those issues included incomplete, missing, or illegible records. In response to these issues, I created a color-coded index of the resolution listings and used the colors to help me identify records by their general content. This index helped immensely, but the root of the problem remained unchanged. The problem, as I began to understand it, was a breakdown in record keeping practices, which was occurring at multiple stages of the record creation process. To help me further understand how records are managed and archived, I amended my academic plan of study to earn a Graduate Certificate in Archival Studies and requested an extension of time to graduate. This provided very helpful insight into the management and preservation of digital records.

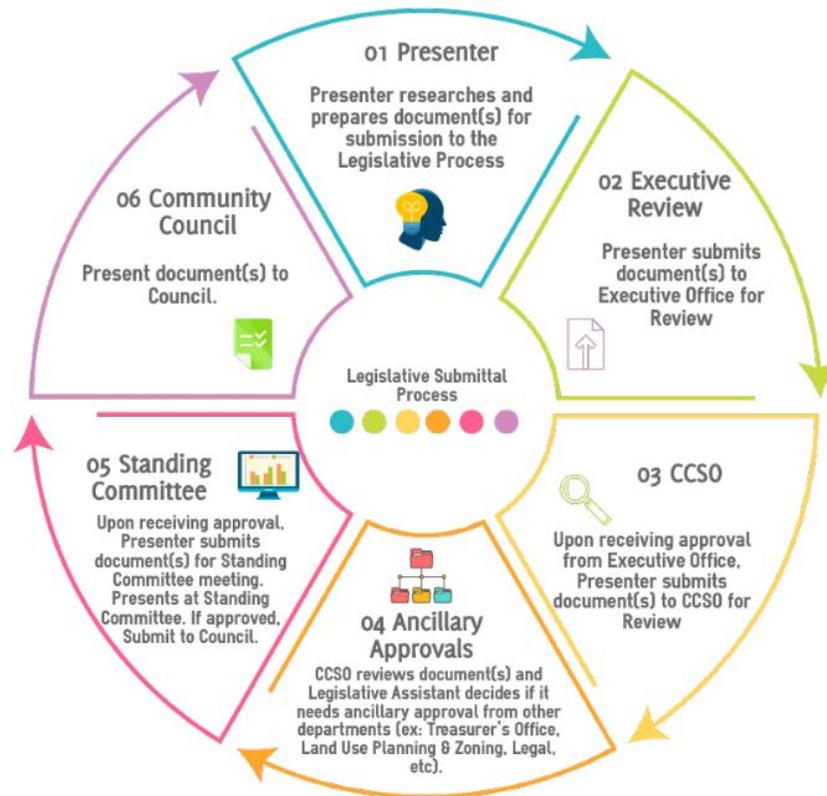
This thesis stems from observing a record keeping problem and taking steps towards resolving it. On so many levels, this work was not done alone. There are many people in my network whose collaboration made this work possible.

Introduction

The Gila River Indian Community (“Community” or “GRIC”) is a federally recognized Indian tribe and is comprised of two distinct tribes, the Pima and Maricopa Indians. These tribes existed since time immemorial. By an act of Congress, the reservation for the Community was created in 1859. By 1939, the Community was established under the Indian Reorganization Act of 1934. The Gila River Indian Community is an active and functioning tribal government. The Gila River Indian Reservation is divided into seven districts that are located south of the Phoenix metropolitan area and north of Casa Grande, Arizona.

The Community has a three-branch government: an Executive branch, with a Governor and Lieutenant Governor; a Legislative Branch (which is the governing body and also referred to as the *Community Council* or *Council*), with 17 elected council members; and a Judicial Branch, with a Chief Judge and Associate Judges (all of which are elected). The Community Council has an established process to review, approve, amend, rescind, or disapprove resolutions and ordinances. The Community Council Secretary’s Office (CCSO) is responsible for the maintenance of the records created by the GRIC legislative process. Section 4 of the Gila River Indian Community Constitution and Bylaws (1960) recognizes the duties of the Community Council Secretary as “the official custodian of all files, records, and correspondence of the Community and of the Community seal. He shall prepare all minutes, resolution and ordinances enacted by the Council and transmit required copies to the Superintendent” (p. 13). The CCSO administers and enforces adherence to the legislative process. Figure 1 presents an overview of the Community’s current legislative submittal process.

Figure 1. Simplified Legislative Process of the Gila River Indian Community



The first three steps in the legislative process involve the review of the submission. Depending on who the presenter is (GRIC department, tribal enterprise, etc.), the submission is first reviewed by the Office of the Community Manager and/or Executive Office, then by the Legislative Assistant at CCSO, followed by any ancillary review and approvals from other departments. After the review portion is completed and approved, the item can then be submitted for presentation to the appropriate standing committee(s). Upon approval by the standing committee(s), it can move forward for presentation to Council, where the item will be discussed, and approved or dispensed. There are seven standing committees (Government & Management, Legislative, Education, Economic Development, Health and Social, Cultural, and Natural Resources). Council members serve on the standing committees.

Council-approved documents are assigned a record number. This record number is used for the document's official recording by the Community Council Secretary. The Council-approved records are then scanned and uploaded into the digital repository (CCSO repository) via Laserfiche, an electronic content management software. Since the CCSO uses Laserfiche to manage and maintain the official government records of the Community Council, it is necessary to ensure that the digital records contained in the CCSO repository are complete, accurate, accessible, and preserved. Access to these records is controlled by the Community Council Secretary. Records can be accessed in accordance with the Public Records Request Policy, by submitting document request forms, or through CCSO approval to GRIC departments to access the CCSO repository. The intended users of these records are tribal departments, tribal enterprises, enrolled tribal members, outside entities, and individuals not enrolled in GRIC.

The definition of *record* I chose to use for this paper is from Cox (2001):

A record is a specific entity and is transaction oriented. It is evidence of activity (transaction), and that evidence can only be preserved if the record's content, structure, and context are maintained. Structure is the record form. Context is the linkage of one record to other records and to the originating process. Content is the data or information, but content without structure and context cannot be reliable data or information (p. 46).

When a record is missing pages, an attachment, or an executed agreement, it is not reliable data or information. When one considers records as evidence of transactions, Cox's definition echoes definitions espoused by English archivist Hilary Jenkinson, Margaret C. Norton, and T.R. Schellenberg (Cox, p. 5). For records to be added to the holdings of an archive, it must be scrutinized for selection or *appraised* to determine if it will contribute or add *value* to the archive. Duranti (1994) defined *appraisal* as "the process of establishing the value of documents made or received in the course of the conduct of affairs, qualifying that value, and determining its duration"

(p. 329). Generally, collecting institutions will examine “the relationship between the concept of appraisal as attribution of value and archival theory” (Duranti, 1994, p. 330) and develop policies that guide and support their collection management objectives. In archival science *authenticity* is “the presence in a document of all prescribed forms which enabled it to bear witness on its own” and *genuineness* “meant that the document was what it purported to be” (Duranti, p. 332). The Council-approved records can be characterized as being authentic and genuine because the legislative submittal process is consistent and administered by the Community Council Secretary. Authenticity and genuineness are important features of the records in the CCSO repository because the records are retained indefinitely.

A discussion about records would be incomplete without mentioning provenance, which is described as, “information regarding the origins, custody, and ownership of an item or collection” (SAA Dictionary, Provenance, n.d.). Once records are in archival custody, provenance keeps the integrity of the archive intact because knowing the chain of custody for each record ensures that the information is accurate, especially when the record is utilized in research or produced during litigation discovery (Bearman and Lytle, 1985). Because the CCSO administers and enforces the legislative process, the provenance of the documents is not an issue. The oversight administered over the legislative process is well regulated and monitored. The Community’s use of and reliance upon the CCSO repository as a source of knowledge and preservation thereof, coincides with the expectation of the record’s reliability. Therefore, we must be aware of the value of an effective record keeping process and approach the management of the repository in a responsible way (Jimerson, 2006).

The effective management of digital records in a digital repository includes the creation and usage of resource description, also known as metadata. Metadata is “structured description

for information resources of any kind, which makes it a superset of *bibliographic description*” and refers to “descriptions of classes or collections of resources rather than descriptions of individual resources” (Glushko, 2016). Metadata is used to help facilitate finding, interacting with, organizing, interpreting the digital records, or maintaining resources and can be created by the author, user, by professionals, or through computational/automated means (Glushko, 2016). There are three different categories of metadata: administrative, descriptive, and structural. Metadata types are identified below:

- **Administrative metadata** includes:
 - **rights metadata** (i.e. intellectual property rights and use information);
 - **technical metadata** (i.e. technical details about the object and its instantiation like its file format, file size, and how to open, access and use it), and
 - **preservation metadata** (i.e. a log of the series of actions taken against an object in order to ensure it longevity and viability)
- **Descriptive metadata** describes a resource, its content, its identifying characteristics and its “aboutness”
- **Structural metadata** describes how the pieces of a single object fit together and how an object exists in relationship to other objects (Jaffe, n.d.)

Chapter 1: GRIC Record Keeping

Record keeping is an invaluable and essential task that is directly linked to the effective management of an organization. Firsthand, I observed how the management of records impacts an organization’s response to or engagement in decision making, particularly in a tribal government. As a paralegal, I routinely perform legal research, draft, edit, and review various legal documents, and provide support to the tribe’s in-house counsel on any civil matters that may be assigned. It is through this experience; I became very familiar with the condition of the Gila River Indian Community’s official tribal government records. Records are often requested promptly and searching for what is needed can be hindered by a myriad of issues. For example, poor scan quality can make it difficult for computational agents to identify and locate records,

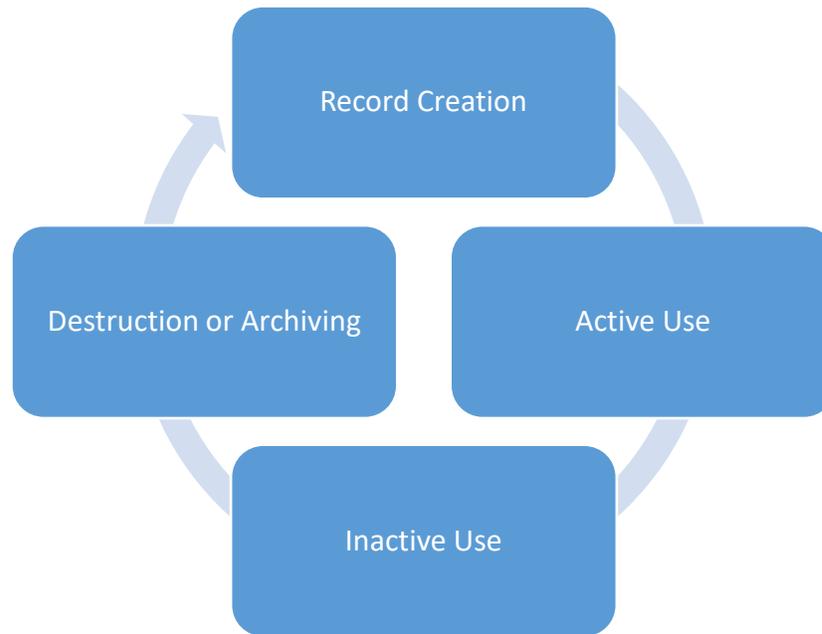
rendering text recognition features useless. Scan quality issues can occur when the paper document was illegible to begin with or when there is a lapse in quality control settings applied by the user. The lack of metadata usage also limits a record's ability to be recalled and used. Working with records in this condition inspired me to do something about these recurring issues. It was clear that the record keeping practices need to be reviewed to improve the existing system. Improving the quality of data strengthens self-determination because the knowledge that can be derived from the data are readily available for use in tribal decision making.

Beginning with Indigenous self-determination, nations can ensure their data represents their values, needs, worldview, and culture (Jorgensen, 2007; Walter and Suina, 2019). Native nations exercise their sovereignty by implementing policies, enacting ordinances and resolutions, and engaging in government-to-government negotiations. Tribes require both (1) data for governance and decision-making and (2) mechanisms to govern and steward their data, information, and knowledge (Smith, 2016; Carroll et al., 2019). I rely on the accuracy and availability of the records in the CCSO repository to perform legal research and believe that, “without adequate and timely information, communities cannot make informed decisions” (Rainie, Schultz, Briggs, Riggs, Palmanteer-Holder, 2017, p. 5).

A record's value is “the usefulness, significance, or worth that determines a record's retention” (SAA Dictionary, Record Value, n.d.). The value of a record is influenced by its life cycle, which are “the distinct phases of a record's existence, from creation to final disposition” (SAA Dictionary, Life Cycle, n.d.). The first stage is the creation of the record. The second stage is the active phase, which is characterized by the record's value. The third stage of the life cycle occurs when the record still has value but is not needed for day-to-day decision making (Bantin,

1998). When the record reaches the fourth stage, it becomes an inactive record that has long-term, indefinite, historical, and archival value (Bantin, 1998). Figure 2 presents the life cycle of a record.

Figure 2. Life cycle of a record



For example, the National Archives and Records Administration (NARA) utilizes the Electronic Records Archives (ERA) to preserve and provide access to records over the entire life cycle of government records, “from the present through the life of the republic” (Thibodeau, 2007). Not knowing when or if the republic will ever end, the life cycle of the data availability is seemingly indefinite. The traditional approach must be able to preserve any type of digital record created and as stated before, the life cycle is indefinite. Therefore, the data management plan must be “evolvable” and “scalable” and “extensible” (Thibodeau, 2007). Ultimately, the ERA system has an outer (supports lifecycle management processes for all government records) and inner system (ingest, preserve, and provide access to electronic records). This approach accepts records into the archive depending on *what* the records indicate. The NARA uses a service-oriented structure based on the Open Archival Information System (OAIS) reference model. Thibodeau’s

argument for an evolving data management plan is helpful for tribes that intend to preserve records indefinitely. A data management plan should address the following considerations and identify the individual(s) responsible for each described part:

1. What type of data will be produced?
2. How will it be organized and what standards will be used for documentation and metadata?
3. What steps will be taken to protect privacy, security, confidentiality, intellectual property or other rights?
4. If you allow others to reuse your data, how, where and when will the data be accessed and shared?
5. Where will the data be archived and preserved? (Data Management Plans [Overview], 2019)

Tribes must determine the life cycle of their records to decide what model will best suit their needs. By understanding the phases of a record's life cycle, it is easier to identify the key resources that are needed to support the management of digital records. Additionally, Indigenous data sovereignty and Indigenous data governance can include facets of the professional discipline of records management, which is “concerned with systematic planning, control, direction, organization, training, promotion, and other managerial activities related to the creation, maintenance, use, and disposition of records in properly documenting an organization's policies and transactions” (Franks and Kunde, 2006).

Known Issues

The issues I've encountered while using Laserfiche to perform research in the CCSO repository are beyond my control to fix; however, it is through this collection assessment I can identify and make recommendations to address them. Issues known to me from my experience in the Office of the General Counsel at GRIC include:

- Becoming familiar with Laserfiche through trial and error (not through software training);
- Unable to consistently find accurate and complete records;
- Records have incomplete metadata;

- Templates contain incorrect or insufficient data;
- Record is missing or missing page(s);
- Record is missing attachment(s);
- Attachment(s) requiring signature(s) are not executed;
- Attachment(s) are appended to the incorrect record;
- Poor scan quality impedes text recognition features in Laserfiche; and
- Lack of controlled vocabulary for the categorization of records.

Records and Information Quality

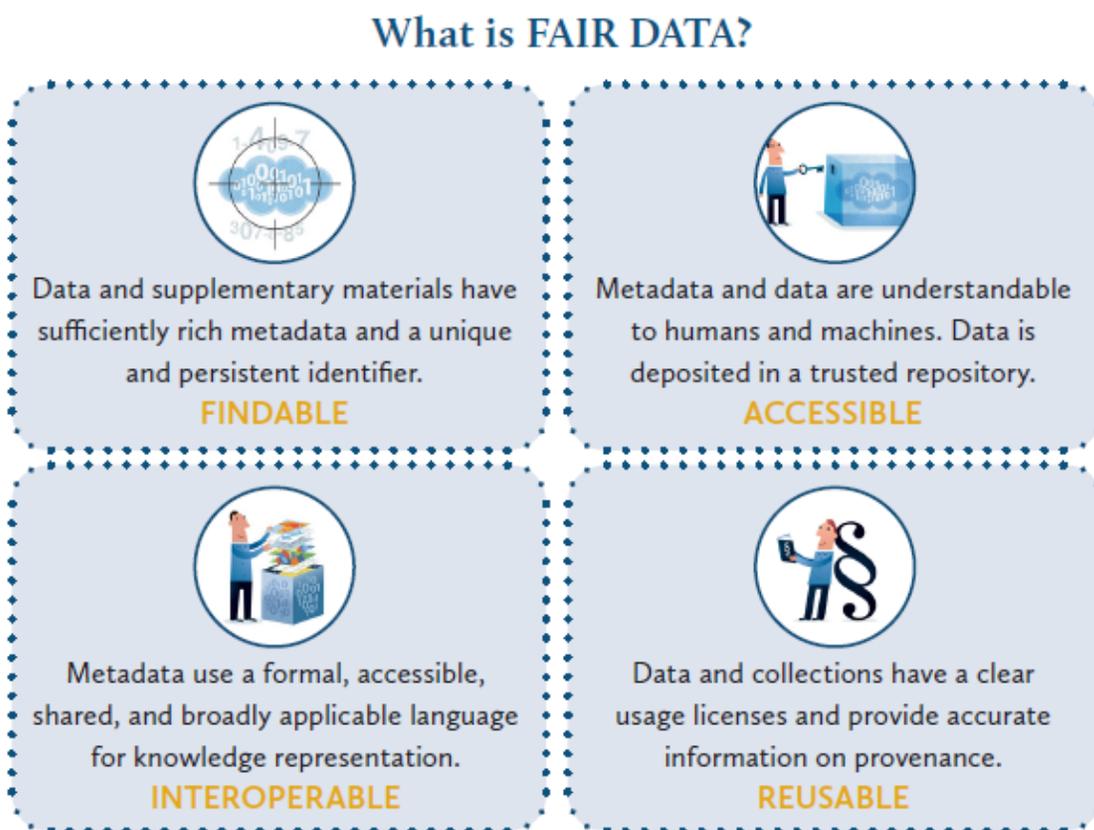
The issues identified above lack characteristics of findable, accessible, interoperable, and reusable (FAIR) data (Wilkinson et al., 2016) and when one or more of the issues identified above affects a single record, it impedes the record's FAIRness. Table 1 identifies the FAIR principles.

Table 1. The FAIR Guiding Principles (Wilkinson et al., 2016)

<p>To be Findable:</p> <p>F1. (meta)data are assigned a globally unique and persistent identifier</p> <p>F2. data are described with rich metadata (defined by R1 below)</p> <p>F3. metadata clearly and explicitly include the identifier of the data it describes</p> <p>F4. (meta)data are registered or indexed in a searchable resource</p> <p>To be Accessible:</p> <p>A1. (meta)data are retrievable by their identifier using a standardized communications protocol</p> <p>A1.1 the protocol is open, free, and universally implementable</p> <p>A1.2 the protocol allows for an authentication and authorization procedure, where necessary</p> <p>A2. metadata are accessible, even when the data are no longer available</p> <p>To be Interoperable:</p> <p>I1. (meta)data use a formal, accessible, shared, and broadly applicable language for knowledge representation.</p> <p>I2. (meta)data use vocabularies that follow FAIR principles</p> <p>I3. (meta)data include qualified references to other (meta)data</p> <p>To be Reusable:</p> <p>R1. meta(data) are richly described with a plurality of accurate and relevant attributes</p> <p>R1.1. (meta)data are released with a clear and accessible data usage license</p> <p>R1.2. (meta)data are associated with detailed provenance</p> <p>R1.3. (meta)data meet domain-relevant community standards</p>
--

The process of people and computerized systems finding, accessing, and using data leads to extracting useful knowledge from it. Implementing the FAIR principles for data management can improve internal information through enriching metadata and guiding the identification of inaccurate or incomplete records (Wilkinson et al., 2016). To complement the implementation of FAIR principles, it will also be necessary for the workforce to receive proper training to facilitate significant changes to the record keeping process and to embrace improved standards and processes. Consistent periodic training that includes all levels of management and staff, from department directors to entry-level positions, should provide a solid understanding and expectation of the Community's record keeping practices. Figure 3 provides an explanation of how each FAIR data principle contributes to the creation of useful data.

Figure 3. What is FAIR DATA? (Association of European Research Libraries, 2017)



Miller's (1996) identification of dimensions of information quality, it can provide a foundation that can be tailored to the Community's needs and goals. It is an effective list of standards that can improve the CCSO repository. The *value* of information correlates with *how* it affects its users. The Community's organization and management of its government records can be vastly improved by adopting standards that affect the quality and effectiveness of the information. Information quality standards can improve the FAIRness of data by consistently providing enriched metadata for each record. "[I]dentifying quality information involves two stages: 1. Highlighting which attributes are important; and 2. Determining how these attributes affect the customers in question" (Miller, 1996, p. 79). *Customer* identifies *who* is using the information. As it relates to this paper, the *customer* is anyone who uses the CCSO repository. This can be CCSO staff, tribal departments, Community Members, tribal enterprises, outside entities, and non-members. Miller (1996) presents ten dimensions of information quality:

- **Relevance** – The key component for information quality is whether the information addresses its customer's needs.
- **Accuracy** – Information used for different purposes requires various levels of accuracy.
- **Timeliness** – Timely information is still current; new information replaces old information.
- **Completeness** – Complete information for one person may be incomplete for another.
- **Coherence** – How well does the information hang together and is consistent with itself?
- **Format** – How is the information presented to the customer? There are two underlying considerations: what is its form and its context for interpretation?
- **Accessibility** – Accessible information is information that can be obtained when needed. This includes consideration of timeliness.
- **Compatibility** – How can the information be combined with other information and delivered to a customer? This often involves systems working together.
- **Security** – There are two aspects of security: protecting information from people (logical security) and protecting information from disasters (disaster recovery planning).
- **Validity** – Information has validity when it can be verified as being true and satisfying appropriate standards related to other dimensions such as accuracy, timeliness, completeness, and security. (p. 79-81)

Collection Assessment

Collection evaluation is the most important measure of collection development (Agee, 2005) which provides quantitative feedback for improving future collection development (Carrigan, 1996). Collection evaluation helps build a balanced and relevant collection of materials according to the information needs of the users' community. An effective way to evaluate an existing records management process is to perform a collection assessment. Collection evaluation is an important activity of collection development because the librarian will know the current status of their collections such as the strength and weakness of the collections (Agee, 2005). This collection assessment will present a broad overview of the condition of the digital collection, assess the quality of the collection by using specific criteria, identify strengths and weaknesses of the repository, and make recommendations for improvement. In this instance, the collection assessment discussed herein is tailored to the needs of the Community. Instead of a librarian, the Community Council Secretary and Community Council will know the current status of their digital repository containing Council-approved tribal government documents. The data presented here identifies which records lack FAIRness and provide guidance that includes short, mid, and long-term recommendations.

This research also discusses why it is necessary to establish standards of information quality. When standards are absent from records management systems, information quality, value, and usage suffer (Wilkinson et al., 2016). Access to inadequate, irrelevant, inaccurate, or untimely records can impact day-to-day operations, including litigation, government-to-government negotiations and tribal consultations. This assessment includes an item-level review of tribal government records using a pre-determined list of subject matter categories. The subject matter categories are akin to a controlled vocabulary and allows an additional way for records to be identified based on its content. A total of 323 unique subject matter categories were created for

this project and reflect commonly used abbreviations within the Community. The creation of this metadata will improve the record's recall, usage, and access. The templates will be reviewed for completeness and evaluated to determine whether the data fields in the template align with how the Community uses the CCSO repository and whether the existing process effectively supports the mission and responsibilities of the CCSO. The project tasks included:

1. Review and analyze the quality and completeness of the template and content of each digital record by using pre-determined criteria;
2. Assess whether the record's template contains sufficient data to determine if the template is contributing to the issues with record recall;
3. Evaluate how GRIC staff are using the Laserfiche software;
4. Review CCSO staff job descriptions to:
 - a. determine which record keeping standards are identified for managing the digital record repository; and
 - b. evaluate whether staff is required to be knowledgeable and/or trained to perform duties related to record keeping practices; and
5. Observe how environmental controls are maintained by performing a visual inspection of the workspace and by reviewing established forms, policies, and procedures.

Therefore, the goal of this research is to provide a collection assessment of a tribal government document repository. The collection assessment will include the collection of item-level data for each digital record, assess, analyze, critique, and recommend improvements to the current record keeping practices in a tribal government setting. The results of the data collection and analysis will help identify issues related to long-standing record keeping practices, allow administrators access to data that validates the need for the development of record keeping

guidelines and standards, and support the need for software training. These measures are intended to document and improve the state of the Community's digital record repository by allowing decision making based on the findings.

Chapter 2: Background

Tribes are sovereign nations and operate independently of each other. With the understanding that tribes are unique, each tribal government can decide the direction of their nation, with each nation finding their own way to operate their government, express their values, and pursue their business ideas (Fletcher, 2006). The Native nation-building approach to tribal self-governance relies on tribal leadership proactively engaging in the strategic development of their resources, to support self-determination activities (Cornell and Kalt, 2007). The characteristics of the Native nation building approach are:

- Native nations assert decision-making power;
- Native nations back up that power with effective governing institutions;
- Governing institutions match Indigenous political culture;
- Decision making is strategic; and
- Leaders serve as nation builders and mobilizers (Cornell and Kalt, 2007, p. 19).

Native nations are reclaiming their self-rule by employing a culturally appropriate framework for their institutions (Jorgensen, 2007). Bruhn (2014) succinctly states, "effective data governance is an important tool, both in rebuilding Indigenous governing institutions and improving Indigenous-government relationships" (p. 1). Native nation rebuilding includes topics that demonstrate empowerment through the interrelationship between cultural values, tribal leadership, sovereignty, and strategic decision-making. It emphasizes that rebuilding Native nations involves taking a proactive approach to self-governance while utilizing the strengths of the Nation as an asset. To achieve long-term sustainability and success, tribal leaders challenge colonial controls to solve problems and reclaim their Nation's history and future.

The Peoplehood Model describes the interrelationship between people, places, culture, sacred knowledge, and history; and recognizes that Native nations are inherently sovereign (Holm et al., 2003). The model finds expression through the holistic Peoplehood Matrix that reflects how knowledge is interconnected via four components: language, sacred history, ceremonial cycle, and place territory, a holistic matrix (Holm et al., 2003; Thomas, 1966). Native nations and Indigenous people have an active role in determining how knowledge is created, the context it is created within, how it is used, and what the knowledge is about (content). Knowledge and data are interrelated, interdependent, and interact; data do not exist in silos. Knowledge is valuable and exists within the context of a Native nation's sacred history (Holm et al., 2003). The Peoplehood Model and Native nation rebuilding concepts complement each other because each revolves around the unique identity of the nation, incorporates their worldview, and recognizes their inherent sovereignty. Both require knowledge, information, and data that align with the nation's governance needs.

Indigenous data sovereignty delineates tribal rights to govern the collection, management, and re/use of its data, information, and knowledge (Carroll et al., 2019; Harding et al., 2012; NCAI Policy Research Center, 2019). Data governance by Native nations enacts Indigenous data sovereignty through the policies, processes, and practices employed by tribes to control how data are collected, used, and owned; requiring that the policies align with tribal values and ways of knowing and being (Bruhn, 2014; Carroll et al., 2019; Rainie et al., 2017b; Rodriguez-Lonebear, 2016; Smith, 2016).

When a tribe is in control of their data, it correlates with improved data that has beneficial uses and results for the tribe (Smith, 2016; Walter and Suina, 2018). Purposeful and useful data for Native nations begins with tribal decision making (Holm et al., 2003; Walter and Suina, 2019).

Native nations exercise their sovereignty in relation to data by implementing policies, enacting ordinances and resolutions, and using knowledge from the data to engage in government-to-government negotiations. When high quality data are used in an appropriate setting, it is the basis for informed decision-making and planning, while enhancing accountability and compliance (Bruhn, 2014).

Appropriate data are pivotal for effective tribal governance. Council-approved resolutions and ordinances are the Community's official tribal government records and are relied upon for historical and informational content. They are a factual recount of the Community Council's actions as a sovereign nation. Resolutions and ordinances are important documents used to exercise tribal sovereignty. They embody and express the actions of the Community Council. Tribal government records evidence the interrelationship between other nations, the environment, the citizenry, other people, historical events, and future aspirations (Holm et al., 2003).

Tribal Government Records

Tribal government records contain information that is culturally, historically, socially, and/or economically significant and has evidentiary value for long-term preservation. In addition to resolutions and ordinances, the Community also produces various records that includes or relates to; legal or litigation matters, correspondence, reports, audits, budgets, evaluations/assessments, leases, land related documents, plans, grant applications, contracts, agreements, maps, economic development, tribal enterprises, water, gaming, enrollment, elections, human resources/personnel, public safety, healthcare, and education. This is not an exhaustive list, but it demonstrates the variety of records that are pertinent to the administration of governmental affairs.

After performing an exhaustive search in several academic databases, I could not find any academic, scholarly publications, or grey literature scholarly work that discusses tribal record keeping. A keyword search in Google produced a PowerPoint about a case study of the Ho-Chunk Nation's Records Management Department (Naviant.com, n.d.; Sustainable Heritage Network, 2015). The case study details how five tribal departments (Fleet, Realty, Human Resource, Law Enforcement, and Esri Integration for Zoning & Land Management) are implementing the use of OnBase, an enterprise resource planning (ERP) system, which, "removes the manual, paper-based record keeping" system and implements automation. Although this system differs and operates independently from the RMD, it is an example of how a tribal government is engaged in Indigenous data governance through records management and is the only publication I found that discusses tribal record keeping.

Tribal and Non-Tribal Archives

The Society of American Archivists (2020) Core Values of Archivists set forth the core values by which archivists are intended to perform their professional duties. These parameters can provide "institutions, communities, and individuals" with guidance for the practice and activities of the profession. Adopting a standard of professional duties would complement record management practices and services. Additionally, by investing in key staff and reference services, tribes can improve the usefulness of an organized collection. Utilizing reference services such as finding aids, staff training, and teaching the importance of preferred and/or requisite skills such as communication and organization; user needs can be identified, which improves intellectual access to information (Pugh, 1992). Archival research influenced by the assessment of patron needs, identification of users, and outreach programs improve the delivery of services and enhance patron experience. Allocating appropriate resources will help tribal governments think critically about

the organization of their repository. The skillset of staff as being knowledgeable of the content within their collections, knowing how to access it, possessing institutional or historical knowledge, and having interpersonal communication skills are factors in collection design (Duff and Fox, 2006; Pugh, 1992). The reference interview is a key part of obtaining information from the researcher and happens almost immediately, upon contact, and is why the person decided to visit the archives. The transfer of information during this conversation will provide clues on the requested research.

On the topic of tribal libraries and archives, publications detail the history of assessing the challenges related to the delivery of library and information services for Native American peoples as early as the 1970s. The assessments and studies identified ten topics in need of addressing: funding support, training and technical assistance, tribal library holdings, cooperative activities, state and local partnerships, federal policy, model programs, museum and archival services, adult and family literacy programs, and newer information technology (National Commission on Libraries and Information Science, 1992). Along with other professional organizations, the American Indian Higher Education Consortium (AIHEC) continues working on improving the Library Information Science (LIS) services to on-reservation communities by partnering with at least three tribal colleges and the US DOI's Office of Trust Records' American Indian Records Repository (AIRR) to recruit and train Native records managers through records information management programs (AIHEC Leads Tribal College Records Information Management Programs, 2018). While it is important to recognize the strides that have been made to address library services in Indian Country, managing tribal government records is not in that scope of work.

In O’Neal’s (2015) article, she utilizes Vine Deloria’s “Right to Know” call to action as the backdrop for examining the historic and current policies regarding the landscape of information services in tribal communities. Krebs (2012) also cites Deloria’s (1978) “Right to Know” call to action and performs an examination of historical and current policies regarding the landscape of information services in tribal communities, which included a timeline that demonstrated the creation of legislative measures, judicial actions, executive actions, and influential citizen-based or professional organizations actions. Although Krebs (2012) did not directly address the governance of tribal government records, she demonstrates how tribes can actively and collaboratively unify with other tribes to address issues related to archival matters in museums. Those concepts contribute to the general discussion regarding governance of tribal government records. Although the seven components that Krebs (2012) and O’Neal (2015) cite to in their articles are more related to the establishment of tribal libraries and archives or museums, they contribute to the arguments for the development of tribal government record archives because they identify antecedents of a reasonable record system. Of Deloria, Krebs (2012) recognized “that information and knowledge are critical tribal assets” (p. 177).

Archives usually specialize in content and hold concentrated information relating to a specific subject matter. Archives serve an important function in society and consist of materials created or received by an individual or group, private or public; which are preserved for its enduring historical or evidential value, “by utilizing the principles of provenance, original order, and collective control” (SAA Dictionary, Archives, n.d.). Archives also serve the real-world need of improving the effectiveness of government operations (Schellenberg, 1956). Older records are needed by a government for its work because its content is a source of important, evidential information upon which policy determinations are made (Schellenberg, 1956). Additionally,

policies provide guidance and the necessary framework for archives to function effectively and efficiently. They are “a place of knowledge, memory, nourishment, and power” (Jimerson, 2000, p. 20). Tribal archive has two meanings; it is both, the records created and permanently retained by a tribe for their enduring historical value *and* the physical repository that houses those materials (Fleckner, 1984). By proactively exercising governance over tribal government documents, the Community can transform their record keeping practices through the implementation of Indigenous data sovereignty principles. Those principles begin with the Community asserting control over how data are collected, used, and owned. By applying the FAIR principles to create findable, accessible, interoperable, and reusable data, the Community will have meaningful, valuable, complete, and accurate data that is readily available. Examples of FAIR data are negotiated agreements that contain all referenced documents, including signatures; records that are stored in appropriate locations, data that can be reused for the furtherance of projects, and records that can be found and accessed through human and computer-assisted methods. This improvement in the quality of data contributes to Native nation rebuilding because it reconnects the Community with data that is a complete and accurate record of prior decisions and actions. This internal improvement in data standards strengthens self-determination because the data leads to extracting useful knowledge that helps the Community articulate and justify the actions it takes when exercising tribal sovereignty. The Community’s involvement in managing its information will improve the condition of the existing record keeping practices. This improvement will be evident when records are consistently accurate, complete, and accessible.

It is evident that the Community, as a tribal government, creates materials and documents that need archiving. Effective tribal governments are stable, embody the values of the citizenry, and support the shared objectives of the Community (Cornell and Kalt, 2007, p. 23). When

considering Indigenous data governance and Indigenous data sovereignty in correlation with the characteristics of Native nation building, tribes can infuse leadership, culture, identity, and their unique history into increasing the capacity of their self-determination through the use of data that align with their own cultural lifeways and values (Carroll et al., 2019). Practicing Indigenous data governance with the FAIR principles of data management, findability, accessibility, interoperability, and reusability (Wilkinson et al., 2016), provides a framework for how tribes can improve internal information through enriching metadata and identifying inaccurate or incomplete records in ways that align with tribal values, rights, and interests.

When tribes control archives, they also control how that resource is used by others for research and study (Fleckner, 1984). The process of people and computerized systems finding, accessing, and using data leads to extracting useful knowledge from it. Improving the quality of data strengthens self-determination because the knowledge that can be derived from it are readily available for use in tribal decision making. The standards used to create and manage the data reflects the value it brings to the Community. FAIR data supports and positively contributes to Native nation rebuilding, but as this collection assessment will demonstrate, the FAIRness of data and metadata is limited; which potentially impedes Native nation rebuilding, governance, and self-determination. Therefore, as tribes “move” their records from paper to digital arrangement, organization, and storage, considerations need to be taken concerning digital data preservation. Just as easily and quickly as boxes can be abandoned in a dusty basement, digital files can also face the same dilemmas due to software and hardware obsolescence, inattention to information quality, or foregoing required periodic policy review. In truth, “offices which generate records frequently do not maintain them” (Bearman and Lytle, p. 19). A tribe’s collection, organization, and retrieval of government records can be vastly improved when standards of acceptable record

keeping practices are established. As Walter and Suina (2019) declare, “Indigenous self-determination relies on data self-determination” (pg. 236).

Chapter 3: Project Institutional Review

In November 2019, I began collaborating with Community Council Secretary, Shannon White, to design this collection assessment. She was instrumental in providing insight and guidance that was based on her experience working with Laserfiche, and as the custodian of the records.

Training and certification in performing ethical research was obtained through the Collaborative Institutional Training Initiative (CITI) online training program. To receive approval from the University of Arizona Institutional Review Board (IRB), researchers are required to receive training and successfully complete training on research ethics, practices, and compliance. The courses are offered through the CITI Program. From June 2019 to September 2019, I received training and successfully completed the required certifications. The courses included: Human Research – Social and Behavioral Research Investigators, Native American Research, and Social and Behavioral Responsible Conduct of Research. Conflict of Interest training and certification were also obtained.

The University of Arizona Institutional Review Board (IRB) required review of this project because it involved a specific Native American tribe, the Gila River Indian Community. In accordance with Arizona Board of Regents (ABOR) Policy Number 1-118 Tribal Consultation (2018), I knew I had to receive ancillary approval from the Gila River Indian Community. Appropriate processes were followed for obtaining tribal approval. At first, there was some confusion about how to receive approval for my research proposal. Some of the suggestions were to submit it to the Research Review Committee, but they only entertain health/medical-related

research. Other suggestions included submitting it to all seven committees and processing it as a resolution. After seeking further clarification, it became certain that the Education Standing Committee was the appropriate committee to entertain the research proposal. The GRIC Education Standing Committee was designated to oversee and make decisions regarding proposals seeking to perform education-related research with the Community. The process entailed submitting the proposal to the GRIC Tribal Education Department. The Tribal Education Department then submits the proposal to the Education Standing Committee through the legislative process. The review process for education-related research was newly established by the Gila River Indian Community in January 2019. Upon contacting the Tribal Education Department, I received a checklist and explanation regarding the submission of education-related research. The checklist clearly identified the required documents that needed to be submitted.

This research project is among the first proposals that were reviewed by the Education Standing Committee, and received approval using the new process. The research project also received approval from the Gila River Indian Community Council. Additionally, a non-disclosure and confidentiality agreement and data ownership agreement were required for this research project. The researcher also obtained appropriate approval from the Gila River Indian Community to present the data in this thesis.

On March 11, 2020, I presented the research proposal to the Education Standing Committee. They motioned to approve the research and forwarded it onto Community Council with recommendation for approval. On March 18, 2020, the Community Council approved the research proposal. After receiving approval from the Community, the research proposal was prepared for submission to the IRB. Receiving the requisite signatures needed for IRB submittal was delayed due to a breakdown in communication within the University's system. On May 18,

2020, I submitted my research application to the IRB. On May 20, 2020, I received a pre-review response from the IRB indicating that my application needed specific revisions and clarifications.

The pre-review identified areas that needed to be clarified or revised. Those areas are:

- clarifying the number of records to be reviewed,
- clearly indicating the maximum number of study participants for the survey,
- revising the recruitment process and accompanying materials,
- requesting a waiver of documentation of consent,
- clarifying how I will access the CCSO repository during the partial closure of the tribal government (due to COVID-19),
- clarifying how the review of the job descriptions will not be linked to specific individuals,
- clarifying how this research contributes to the American Indian Studies scholarship,
- clarifying data ownership, and
- revising the vulnerable populations appendix to complement the changes related to the recruitment process and materials.

I immediately contacted the Community Council Secretary and Deputy General Counsel to seek their direction. The revised recruitment process was amended to have the Community Council Secretary send the survey invitation to the study population. The recruitment materials were edited to support this specific change. Similarly, each issue was reviewed and resolved. On June 16, 2020, I submitted the edited documents to the IRB, and received approval to proceed with my research on June 19, 2020. Since there were edits to the research proposal after receiving approval from the Community, I submitted the amended research proposal as an update to the Education Standing Committee. The Education Standing Committee approved and accepted the updated materials on July 29, 2020.

After reviewing approximately 3,500 digital records, I noticed an issue with the subject matter categories. The categories were too broad. For example, in my original research proposal, *water* was a single category. I prepared a plan to amend the subject matter categories in response to a pattern that emerged from the records. In particular, the way the Community addressed *water* related matters was more specific and deliberate (i.e. Managed Aquifer Recharge, Groundwater, Water & Resources, canal, irrigation, well, well-monitoring, well rehabilitation, etc.). The subcategories described specific actions that are unique and justified the need to amend the subject matter categories. By tailoring the data collection subcategories to reflect the content of the records, I was transforming the existing data into FAIR data. To accurately identify the content of the records, I revised the existing list of categories to include additional (new) and recurring subjects (see Appendix C). The revision to the categories was completed after consultation with and the assistance of the Community Council Secretary. Because I strongly believed that this change would be beneficial to the outcome of the collection assessment, I submitted the request to amend approved research.

On August 26, 2020, I presented the proposed amendments to the Education Standing Committee. They discussed and approved the requested amendments. On September 3, 2020, I submitted the request to amend approved research to the IRB. The IRB approved my request to amend the project on September 14, 2020. Following approval, the data collection points in the Excel spreadsheet were updated to reflect the approved amendments. The completed records were reviewed, and the content was updated to reflect these changes in the affected records. Although the process to receive approval for this project took longer than I anticipated, it demonstrates adherence to the Community's established process for reviewing and approving education-related

research. It also denotes their participation in and commitment to research that will advance their self-determination.

Chapter 4: Methodology and Methods

Methodology. Researchers should clearly articulate their underlying assumptions for research (Mitroff and Bonoma, 1978). The research paradigm comprises of several building blocks: axiology, ontology, epistemology, methodology, methods, and sources (Brown and Dueñas, 2019). I chose to undertake this project because after a decade of working with records that had varying degrees of completeness, it was time to begin the process of addressing the long-standing record keeping practices that contribute to the condition of the CCSO repository. Much like the process I would use to locate missing records, I began by collaborating with key individuals within GRIC to raise the idea of this collection assessment. This work exemplifies the collective efforts and contributions of many staff members who have provided some form of feedback on what they envision for the Community's record keeping. It reaffirmed my position that we (GRIC employees) all contribute to creating, managing, and ensuring the quality of the Community's data.

The Peoplehood Model demonstrates how Native American knowledge, “is the understanding of how things are interrelated and are continuously interacting” (Holm et al., 2003, p. 20). An inherent right of Native nations is to govern their people, resources, and lands, and the concept of Indigenous data sovereignty extends these rights to control data (Carroll et al, 2019; NCAI Policy Research Center, 2019; Rainie et al., 2019). The axiology of this collection assessment is rooted in the belief that Indigenous nations control their data and they have the final say about how the data are created, collected, used, maintained, and accessed. Instead of choosing a positivist approach that favors mainstream or Western knowledge systems for “knowledge acquisition and dissemination,” Indigenous data sovereignty “deliberately repositions control of

data back to Indigenous peoples” (Carroll et al., 2019, p. 4). When Indigenous data sovereignty is recognized as the right of the Indigenous peoples, tribes not only own their data, they also control how it is collected, interpreted, used, and repatriated (Carroll et al, 2019, Rainie et al., 2017b; Rodriguez-Lonebear, 2016).

The long-standing impacts of settler colonialism on tribal data systems have had detrimental and deliberate effects on the value of collected data, whose interests and priorities it reflects, how it is used, interpreted, analyzed, and controlled (Bruhn, 2014; Rodriguez-Lonebear, 2016, Snipp, 2016). In some instances, the United States used data to perpetuate and justify federal policies of assimilation, forced removal, relocation, boarding schools, and to disrupt/erase Indigenous knowledge; forcing Native nations to rely on external data that did not resonate with their values (Carroll et al., 2019).

The ontological position I’ve taken is that the creation of Native American knowledge and data occurs within an appropriate context and the condition of records in a tribal government setting ought to be complete, reliable, accurate, and reflect the values of the Native nation (Jorgensen, 2007). Therefore, the completeness and accuracy of the CCSO repository is determined by the standards and policies enacted by the Community. By recognizing and understanding that the Community controls how data are created, collected, used, reused, accessed, and maintained, the governance of that data is an expression of tribal sovereignty, more specifically, Indigenous data sovereignty. For the historical, current, and future existence of Native nations, it is imperative that data is governed with responsibility and forethought (Jorgensen, 2007). The Community has an active, reactive, and proactive role in data governance. From an epistemological standpoint, when the Community applies data governance practices, the Community determines *what is* knowledge and *how* knowledge is acquired. Indigenous data

consists of knowledge and information related to the tribe (collective) and its citizens (individuals) including culture, land and the environment, and data about people (Carroll et al., 2019; Nickerson, 2017). *Knowledge* is then represented by the content, format, accuracy, availability, and completeness of the data. Effective data governance practices in Indigenous communities correlates with the creation of and access to reliable data, which underlie sound decision-making (Jorgensen, 2007; Smith, 2016).

To complete this collection assessment, I used qualitative case study methodology (Baxter and Jack, 2008) to evaluate the Community's record keeping practices. By using a variety of data sources, a case study provides tremendous insight into an issue and its supporting processes (Agee, 2005; Baxter and Jack, 2008; Carrigan, 1996; Peersman, 2014). It offers different ways to gather data from different sources and review them collectively to shed light on issues affecting the collection. Unobtrusive measures were also used to perform the item-level review of the (archival) digital records in the CCSO repository. The data sources I will use for triangulation include a user survey, an item-level review of digital records, and content analysis to review existing policies, flow charts, and job descriptions. Content analysis provided an unobtrusive, nonreactive, objective and neutral way to obtain quantitative information from various forms of communications (Marshall & Rossman, 2003). By identifying and examining the overall record keeping practices of the Community, the findings and data present the condition of the CCSO repository. My motivation to perform this collection assessment is multi-faceted. As an employee of the Community who relies on the data in the CCSO repository, I have a vested interest to improve the condition of the Community's record keeping practices by supporting the Community's Indigenous data governance, and to bring awareness to a framework that supports the Community's creation, usage, maintenance, and preservation of its data. The completion of this

collection assessment also contributes to scholarship in American Indian Studies as an academic discipline.

This section also outlines an analytical framework for demonstrating the relationship between Native nation rebuilding, tribal self-determination, and Indigenous data sovereignty. This framework consists of several dimensions, including: identifying the records that are considered unFAIR data; obtaining feedback from Laserfiche users that demonstrates their desire for software training and indicates how they use Laserfiche; reviewing existing policies and CCSO job descriptions for the inclusion of archival standards for the preservation of tribal government documents; reviewing the effectiveness of the templates used for record ingest; reviewing the flow charts for the legislative process; and visually observing the current environmental controls within the CCSO wing of the GRIC Governance Center. Identifying dimensions for the assessment helps address important data gaps and ensures the collection of necessary information (Peersman, 2014).

Analytical outcomes will be used to answer questions such as:

- How many records are missing pages?
- How many records are missing attachments?
- How many records have incomplete metadata?
- If requiring signature, how many attachments are not executed?
- How many attachments are appended to the incorrect record?
- How many records have poor scan quality?
- How are GRIC staff using Laserfiche?
- Do GRIC staff want Laserfiche training?
- Do CCSO job descriptions specify any record-keeping standards or training requirements?

- Are the current environmental controls sufficient for the preservation of archival materials?

The central argument is that long-standing issues affecting the CCSO repository should be articulated in GRIC policies that address the acceptable quality of data. The failure to address these issues will undermine the Community's inherent self-determination by allowing the continuation of unFAIR data to be created and added to the CCSO repository. By analyzing the data from this collection assessment, the Community Council and Community Council Secretary will have valuable data that can inform strategic decision making. For instance, by reviewing the existing policies and flow charts in relation to the number of resolutions that do not have executed agreements attached; I can identify where the legislative submittal process falls short in conveying the responsibility of the Presenter to submit the executed documents to the CCSO.

Methods. A mixture of quantitative and qualitative methods were used in this collection assessment. The qualitative method was used to include data "generated in non-numeric form" to add context to the qualitative data (Hammond, 2020, p. 155). Quantitative data were analyzed to demonstrate the spread of response to questions and to produce tables that indicate frequency of what is being measured (Hammond, 2020). Using a mixture of both methods I present and explain patterns that emerge from the analysis of the data.

The collection assessment was divided into three broad sections. Section one focused on the item-level review of the digital files in the CCSO repository. Based on my familiarity of the general condition and content of the records, I prepared a list of criteria to use when evaluating each record. This created a standard for collecting data and provides the ability to make qualitative and quantitative analyses to demonstrate the issues affecting the repository. This process was the most appropriate method because the categories could be tailored to what the Community deals with on a regular basis. Other systems like the Library of Congress (LOC) catalog did not

complement the needs of the Community because the organization used by the LOC system was inherently different from the Community's existing practices.

By applying iterative coding, the commonly entertained content was transformed into subject matter categories used to identify the records. It allowed the collection of subject specific data that is necessary for valid and reliable qualitative research (Mills et al., 2010). The process of iterative coding recognizes that “the interplay between elements of the research, such as that between design and discovery, or among data collection, preliminary analysis, and further data collection, are examples of an iterative approach in qualitative research” (Mills et al., 2010, p. 503). Iterative coding provides “flexibility...that meets the needs of the research design, data requirements, and analysis methods in response to new information that is collected” (Mills et al., 2010, p. 503).

This collection has an index of the resolutions, which includes the resolution number, resolution title, and enactment date. The index is the closest thing to a finding aid, but the index lacks pertinent information that would describe the records in the collection. The CCSO repository is searchable by keyword or by navigating specific folders and selecting specific files. A controlled vocabulary for this collection does not exist. The data from each digital record is presented in the list below, along with an explanation of why it was collected:

- **Resolution/Ordinance number** – The collection of this information allows the record to be identified and recalled. It is the primary way of identifying the attributes assigned to each record after it is reviewed. The resolution/ordinance number is the first field of data that is collected. It is the most efficient way to organize the data because each record is assigned a unique record number after it is approved by Council. Data in this field will be typed in as it appears on the record. This field is not a drop-down menu.

- **Enactment date** – This information appears on the Certification page and memorializes the date the record received Council approval. Data in this field will be typed in as it appears on the record. This field is not a drop-down menu.
- **File Format** – Several different file types can be uploaded into Laserfiche and in order to set standards related to information quality and software obsolescence, it is helpful to know the file types that are present in the CCSO repository. Data in this field is selected from a pre-determined list of choices and appears as a drop-down menu.
- **Resolution/Ordinance type** – This field collects information about the intent of the record. For example, it identifies whether the record is amending, rescinding, or enacting a new action. Data in this field is selected from a pre-determined list of choices and appears as a drop-down menu.
- **Scan/Image Quality** – Information is collected about the visual appearance and scan quality of the record. Some records are illegible or have other visual blemishes. By identifying a record as “Poor Print Quality” or “Scanned at angle,” staff can review the physical (paper) file to determine if rescanning the document will improve the quality of what appears in the CCSO repository. Data in this field is selected from a pre-determined list of choices and appears as a drop-down menu.
- **Resolution/Ordinance Review** – This review determines the completeness of the record. In addition to ensuring that the record contains each enactment page, it also checks for references to attached material(s). For example, if the record makes a reference to an attachment, the record is reviewed to determine whether the attachment is appended to the record or not. Data in this field is selected from a pre-determined list of choices and appears as a drop-down menu.

- **Attachment Type** – This field collects information about the type of document that is attached to the resolution/ordinance. Examples of attachment types used in this assessment include MOU, Term Sheet, Organizing Documents (Charter, Bylaws, Articles of Incorporation), Policy & Procedure / SOPs, Agreement, and Legal Description. Data in this field is selected from a pre-determined list of choices and appears as a drop-down menu.
- **Attachment Review** – This review indicates the completeness of the attachment. For example, this field identifies whether an attachment is missing, unexecuted, or is a draft version. Data in this field is selected from a pre-determined list of choices and appears as a drop-down menu.
- **Template Name** – The CCSO has several templates available to upload records into Laserfiche. The data collected can help identify records that have been uploaded using the incorrect template type. For instance, resolutions are generally uploaded using the CCSO template, but a few are uploaded with the Agenda template. Data in this field is selected from a pre-determined list of choices and appears as a drop-down menu.
- **Template Fields Completed** – The CCSO template contains fields labeled: Document Type, Year, Title, Document #, Adoption Date, Notes, Amended, Document Amended, Rescinded, Document Rescinded, Originating Department, Approved, and Signed. Because metadata is helpful when recalling digital records and issues with record recall is present in the CCSO repository, it is important to know which records have templates that are incomplete, partially completed, and completed. Data in this field is selected from a pre-determined list of choices and appears as a drop-down menu.

- **Template Year** – This is a metadata field that identifies which year the resolution/ordinance was enacted. Incorrect and incomplete metadata affects how records are recalled. Data in this field will be typed in as it appears on the record. This field is not a drop-down menu.
- **Cross-Reference** – This field indicates if the record is referencing another resolution or ordinance. This field helps link records within the repository. Data in this field is selected from a pre-determined list of choices and appears as a drop-down menu.
- **Cross-Reference Citation** – This addresses a commonly encountered research question, where the researcher is seeking information related to a single record or specific subject matter. Data in this field will be typed in as it appears on the record. This field is not a drop-down menu.
- **Subject Matter** – This field contains 323 unique categories, which were created using iterative coding. The subject matter categories can organize the records by selecting specific vocabulary. By identifying the content of each record and attributing up to four subject matter categories to it, it improves the efficiency of finding records related to a specific subject. My original approved research was approved on June 19, 2020 and included 174 categories and after reviewing approximately 3,500 records, it became apparent that the categories were insufficient to label the records because the category was too broad, or one did not exist. After receiving ancillary approval from the Community, I submitted an amendment to approved research to the IRB and received approval on September 14, 2020. Data in this field is selected from a pre-determined list of choices and appears as a drop-down menu.

- **Legislative Review** – This field was added during the amendment to approved research and the data collected in this field indicates whether the Legislative Assistant reviewed the documents during the legislative submittal process. As an added level of security, the Legislative Assistant stamps each page of the submitted record to indicate that the documents were properly presented before the committee and Council. When the document is authorized for Council submission, the Legislative Assistant reviews the submittal to ensure that all pages are stamped. This process prevents presenters from swapping out pages with ones that did not receive proper review. Data in this field is selected from a pre-determined list of choices and appears as a drop-down menu.

Data collection. The documentary analysis involved obtaining data from existing records and documents. A review of these items can reveal information about specific practices and processes used by the Community. This review did not require interaction or contact with other staff, the study participants, or personnel. All data collected from this assessment were returned to the Gila River Indian Community.

Digital record review. An item-level review of each digital record, limited to Council-approved resolutions and ordinances stored in the CCSO repository via Laserfiche, was performed. Data from these digital records were collected using pre-determined criteria that approved by the Gila River Indian Community Education Standing Committee and Community Council for this project. The objective of the digital record review was to evaluate, identify, and determine the completeness of the records maintained in the CCSO repository. Data collection for the digital records occurred from June 19, 2020, to October 8, 2020.

Review documentation related to the management of records. The document review was limited to CCSO staff job descriptions, forms, flowcharts, policies, and the document request log. A review of these documents provides an understanding of the existing record keeping practices. I reviewed the documentation described below within the data collection period of June 19, 2020, to October 8, 2020.

CCSO Job Descriptions. The redaction of the job titles from the job descriptions removed the risk of identifying employees. A review of the job descriptions assessed how record keeping practices are defined and assigned and identified whether record keeping practices are included in staff duties. The job descriptions were obtained from the Community Council Secretary.

Document Request Form. A review of the document request forms provides information on the number of requests submitted to the CCSO, identified the type of the record requested, calculated the amount of time it took to complete the request, and determined the completion rate of submitted requests. This data will help the Community understand how the CCSO repository is used.

Standing Committee Review, Routing Form, and CCSO Flowcharts. A review of these routing forms provided an overview of the existing legislative process. This will demonstrate how records and the submitting department or entity navigates the process. Understanding how the record keeping practices are articulated and presented to the public may reveal strengths and weaknesses of the existing process.

Policies related to record keeping practices. The policies can include, but are not limited to preservation plans, retention schedules, destruction policies, data back-

up, emergency plans, collection management, building maintenance (environment), storage (physical and/or digital) space, security and access to the digital repository, housekeeping, and conservation treatment. A review of these document types can provide an understanding of the framework that guides the record keeping practices.

User Survey. The voluntary online survey collected quantitative and qualitative information. The survey consisted of ten questions that were presented as either multiple choice or likert scale. Its distribution was limited to current GRIC employees that are over 18 years of age, who have authorization to use Laserfiche, and provided consent to participate in the survey. There are approximately 20 departments that have a repository established in Laserfiche. The distribution list contained 551 members. The software used to design and host the survey is Qualtrics. Qualtrics is a cloud-based platform used to create web-based surveys to collect and analyze participant responses. Because the survey can provide feedback regarding views that might criticize aspects of record-keeping practices or training, it is necessary to maintain the anonymity of the respondents.

The PI is aware of perceived and potential negative impact(s) that respondents may be subjected to when providing honest feedback about their experience(s) with record-keeping practices while using Laserfiche. Appropriate steps were taken in the survey design to protect the identity of the respondents by allowing the responses to remain anonymous. The survey results did not link any potentially personal identifying information to the survey responses. The online survey comprised of ten multiple choice questions, with the first question seeking consent from the respondent. The second question asked if the respondent uses Laserfiche. This question was presented to confirm whether the respondents met the criteria to be an eligible participant in the

survey. The survey was online for four weeks, beginning on September 8, 2020, and closed on October 6, 2020. This method was chosen because the survey can be distributed to a specific population and can provide a framework to:

1. Assess how GRIC employees are using the Laserfiche software to manage and access records;
2. Assess how familiar GRIC employees are with using the Laserfiche software;
3. Provide feedback on whether GRIC employees indicated if Laserfiche training is needed; and
4. Determine how GRIC employees define records.

Visual inspection of record storage area. This aspect of the collection assessment observed factors related to the physical storage and maintenance of records, and included identifying how temperature is regulated, which pest prevention measures are in place, observed building maintenance, housekeeping, and possibly review corollary existing and supporting policies. On October 15, 2020, I visited the CCSO wing at the Governance Center, in Sacaton, Arizona.

Chapter 5: Results

The data collection period spanned June 19, 2020, through October 8, 2020. As of October 8, 2020, there were 11,347 digital records in the resolution folder and 252 digital records in the ordinance folder. Of the 11,347 digital records in the resolution folder, there are 63 digital records that are scanned compilations of multiple resolutions as one single document. The presentation and discussion of the resolution-related findings will include the 63 digital records that are scanned compilations of multiple resolutions as a single document. There were no concerns related to the provenance of the records in the CCSO repository. Control is limited to the CCSO staff members that have authorization to upload records into the CCSO repository. This collection is organized, maintained, and managed by the Community Council Secretary.

Records in this collection are arranged by record type (resolutions and ordinances), which are stored in their own respective folder. Within each folder, the records are organized by the year it was approved by the Community Council. The Resolutions folder contains 65 subfolders for the years 1955 through 2020. The Ordinances folder contains 45 subfolders for the years 1968 through 2020. The records were organized in ascending numerical sequence as they are approved by Community Council. Each record in the repository was reviewed at item-level.

Potential Challenges with data collection. In the spring of 2020, the novel coronavirus was beginning to spread and resulted in a global health pandemic. COVID-19 caused unforeseen challenges with the design of this collection assessment. Out of an abundance of caution and for the preservation of health and welfare, the Governor of the Gila River Indian Community issued a series of Executive Orders that permitted a partial tribal government closure. A large portion of the tribal government's workforce transitioned to working from home or physically going to work on a rotating schedule. One facet of this assessment that may have been affected is the online survey of GRIC employees that use Laserfiche. More will be discussed in the User Survey section.

Software, Permissions, and Equipment. Laserfiche is a software application designed to automate business processes, provide secure document storage, and digitize information. It provides full-text search and retrieval, allows administrators to restrict access to specific folders or documents, and is capable of digital automation of business processes. Laserfiche can perform workflows, records management, and create forms. Laserfiche Client 9.2 was used to access the digital records in the CCSO repository. Authorization to have this software added to my work laptop was permitted by the Office of General Counsel. Authorization to access the CCSO repository was granted by the Community Council Secretary's Office. I have permission to

browse, read, see annotations, and see through redactions. I am not authorized to make changes to the records, upload records, or remove them.

The task of uploading a record into Laserfiche is performed by an authorized CCSO staff member. A Canon Image DR-G1100 is the scanning equipment that is currently used. It is a desktop type sheet fed scanner, and capable of scanning front, back, and duplex. The optical resolution of the scanner is 600 dpi. When the original (paper copy) is ready to be scanned, the staff member determines where the file is saved, which template to use, what data to enter into the template, and can view the scan image before it is uploaded into the CCSO repository. The image quality settings can also be adjusted by the staff member. Although letter-size paper (8 ½ x 11) is commonly used, sometimes adjustments need to be made to accommodate legal-size paper (8 ½ x 14).

Document recording. The numbering scheme for resolutions was slightly different in earlier records, beginning with 1953, when the numbers continued to ascend throughout several years. From 1953 to about 1964, the resolution number ascended from 293 to 1088, with the two-digit year correctly correlating with the enactment year. Beginning in 1965 through 1968, the number “reset” to one and ascended during the three-year span, up to 587. Beginning in 1969, the format changed again and reflects the format that is currently used, which is GR- first resolution of the year starts with number one-last two digits of the year, with each year “resetting” to one.

The current numbering format for Council-approved resolutions and ordinances is recognized as: GR- begins with number one each year-last two digits of the year. Since 1969, the format for numbering resolutions was established and remains unchanged to date. To provide more clarity, Table 2, below provides a chronological timeframe depicting the format used to record GRIC resolutions.

Table 2. Numbering Format used for GRIC Resolutions

Year enacted	Resolution Number	Description of Numbering Format used
1953	GR-90-53	This is the only record scanned in from 1953. The next record is from 1955.
1955	GR-293-55	Beginning with this record, each subsequent record was numbered and ascended to 1088. It wasn't until 1965 that the resolution number "reset" to 01.
1964	GR-1088-64	
First resolution enacted in 1965	GR-01-65	Beginning in 1965, the resolution numbering was "reset" to start with number 1, and each subsequent record was numbered and ascended to 587. It wasn't until 1969 that the resolution number "reset" to 01.
First resolution enacted in 1966	GR-139-66	
First resolution enacted in 1967	GR-265-67	
First resolution enacted in 1968	GR-417-68	
Last resolution enacted in 1968	GR-587-68	
First resolution enacted in 1969	GR-01-69	This is when the current numbering format started, where each year starts with resolution number 01.
First resolution enacted in 1970	GR-01-70	

Missing resolutions and attachments. By 1939, the Gila River Indian Community was established under the Indian Reorganization Act of 1934. However, there are no digital records in the CCSO repository that indicate the existence of Council-approved resolutions from 1939 to February 2, 1953. Provided that the Community Council was actively creating official tribal government records during that timeframe, this indicates that approximately 14 years of records are missing. Another gap in the digital records spans from February 2, 1953 to July 7, 1955. The timeframe of this gap is one year, 5 months, and 5 days.

By applying what appears to have been the numbering scheme during that time, it is possible that resolutions ascending to GR-90-53 existed at some point and amounts to approximately 89 records that are missing. Using that same logic, the gap between GR-90-53 and GR-293-55 suggests that approximately 203 records could be missing. It is possible that the

physical records are in the possession of the Community and have not been scanned into the repository yet or that the records have been lost, misplaced, or destroyed. This finding will require additional research that is beyond the scope of this assessment. Of the records that have been scanned in, there are a total of 68 resolutions that are missing. These records are not counted with the ones reported in the paragraph above. When these digital records are opened, the image of a blank paper with the words “Missing” will appear.

The physical file of the 762 resolutions that are missing attachments should be researched. If the attachment(s) are available, they should be uploaded into Laserfiche. If they are unavailable, CCSO should develop a plan to work with Department Directors to see if any of those records can be located. Additionally, a plan to obtain executed copies of agreements that were passed by Council should be prepared. There are 1,287 resolutions that have unexecuted attachments. By identifying incomplete records, the Community can prepare a plan and prioritize which tasks to undertake. For instance, knowing which digital records are missing pages, CCSO staff will know which physical files to research. Upon comparing the digital and physical files, the CCSO staff can begin by updating the Notes field with when and how the issue was researched and resolved.

Template and Metadata. When a Council-approved record is ready to be scanned into the CCSO repository, an authorized CCSO staff member selects the template and is provided the opportunity to enter metadata. There are four templates that can be used to upload records, and they are identified as CCSO, General, Agenda, Other, and None. The most frequently used template for resolutions was the CCSO template. It is my assumption that the appropriate template used to ingest resolutions and ordinances into the CCSO repository be limited to the CCSO template. It does not appear to be an accurate choice to use the General, Agenda, or no template when ingesting records via Laserfiche. To improve the FAIRness of the metadata, it is necessary to select the

appropriate template for the record type because the accompanying metadata fields will be available to accurately describe the digital record. Table 3 presents the number of times each template was selected to upload/ingest a GRIC resolution into Laserfiche.

Table 3. Name of Template used to upload GRIC Resolutions (1953-2020)

Template Name	Frequency	Percent
CCSO	11,111	97.92%
General	75	0.66%
Agenda	158	1.39%
None	3	.03%
Total	11,347	100%

The CCSO template contains 13 fields labeled: Document Type, Year, Title, Document #, Adoption Date, Notes, Amended, Document Amended, Rescinded, Document Rescinded, Originating Department, Approved, and Signed. The metadata fields for resolutions in the years 1953 to early 2008, are partially completed. However, starting with resolution GR-26-08 and extending through 2019, the metadata fields were mostly incomplete. The incomplete metadata affected approximately 3,221 resolutions from 2008 to 2019. Beginning in 2020, the metadata was entered on most of the resolutions. The metadata in approximately 2,461 records (from 2011-2020) identify the Year as 2010, instead of the actual year the resolution was passed. Resolutions from 1953 through 1964, approximately 731 records, all had the template year entered as 1965. The resolutions in 1965 are properly marked with the correct year (1965) and the subsequent years properly correlate with their year of enactment.

Ordinances passed from 1968 to about 1973 had incomplete metadata fields in the template; ordinances passed from 1975 to early 2008 mostly had complete metadata; and the metadata fields for ordinances approved later in 2008 through 2020 were mostly incomplete. Table 4 presents data related to the completion of metadata fields in the templates associated with

Ordinances. The years of enactment are grouped together based on the completion of the template metadata. It is important to highlight this occurrence because the Community's records were initially scanned into Laserfiche around 2007-2008 by non-CCSO staff that were hired to perform this specific task. It is my understanding that after the ingest of records into the CCSO repository in 2007-2008, the responsibility to upload records into Laserfiche was assumed by the CCSO staff. It is unclear whether, at that time, CCSO staff received any training regarding how records are ingested into the repository.

Table 4. Completion of Template Metadata Fields for GRIC Ordinances (1968-2020)

Ordinance Enactment Year	Completion of metadata fields in Template
1968-1973	Incomplete
1975- early 2008	Mostly Complete
Late 2008-2020	Mostly Incomplete

Among both record types, staff almost always did not complete the fields in the template. For example, even though there is a metadata field that could cross-reference records, such as when a resolution/ordinance rescinds a previously enacted resolution/ordinance, it is highly unlikely that the metadata for both records would contain cross-referenced information that links the records. Table 5 presents the number of GRIC resolutions and ordinances that had metadata enriched templates. The data indicates that the completion of metadata fields occurs more frequently with ordinances than it does with resolutions. By comparison, resolutions are also enacted much more frequently than ordinances. The data below confirms the number and frequency of records that contribute to unFAIR data.

Table 5. GRIC Resolutions and Ordinances with Metadata entries in Template

Template contains metadata	Count of Resolutions with Metadata	Percent of Resolutions with Metadata	Count of Ordinances with Metadata	Percent of Ordinances with Metadata
Yes	14	0.12%	142	56.35%
No	3,221	28.39%	103	40.87%
Partially	8,112	71.49%	7	2.78%
Total	11,347	100%	252	100%

Additional subject matter categories may need to be created to identify topics that do not currently exist. Data for records that did not have subject matter categories were identified in the cross-reference citation portion of the form. This allowed for the manual input and identification of these records. An example of categories to consider adding to the controlled vocabulary include: Boys and Girls Club, Urban Members, Ira Hayes Park, Mental Health/BHS, CAAG (Central Arizona Association of Governments), Permanent Water Fund, Bureau of Land Management, Conservation, Per Capita Trust Termination, Reclassify – Rezone, THPO (Tribal Historic Preservation Office), Water Settlement Fund, Historic Preservation, Entertainment, Sacred Site/Traditional Cultural Property, Enrollment – Insufficient Blood Quantum, Enrollment – Dual Enrollment, Removal from Office, and Permanent Irrigation Easement.

Resolutions. This is a collection of digital records, including information about the digital items in the organizing system. Laserfiche software is used as the organizing system for the digital records. The original files are print documents. Digital scans of the documents were made to create this digital collection and are saved in (.TIFF) and (.PDF) format. The digital records follow a predictable life cycle with a useful life. However, the record’s value can improve when the metadata is entered by the creator. Laserfiche uses interactive commands to allow the user to select digital records by keyword search or document recall by record number. Beginning with resolutions GR-140-19 and continuing into 2020, the file size of the records that were mostly text

(as opposed to maps or graphics) significantly increased, causing the record to open very slowly. This could be a result of the scanner settings when it was loaded into Laserfiche.

Extrinsic dynamic: The record properties are separated into three tabs: General, Document, and Rights.

- General properties included the following fields: Document location, Date created, Last modified, Created by, Owner, and Metadata properties consisting of the Template Name and Tags Assigned.
- Document properties included the following fields: Number of pages, Version controlled, Checked out by, Full-text indexed, Volume, and Electronic Document properties consisting of File size, Extension, Last modified, Type, and File path.
- Rights properties indicated the Effective rights for the Laserfiche user. These settings are controlled by CCSO.

Incomplete resolutions contribute to a breakdown in record accuracy and completeness. It also takes a lot of concentrated searching to locate missing documents. The Table 6 presents data on the completeness of the attachments appended to the resolutions. The two resolutions (both from 1998) that are “Unauthenticated” have very poor print quality and are illegible. Those that are “Blank” do not have attachments.

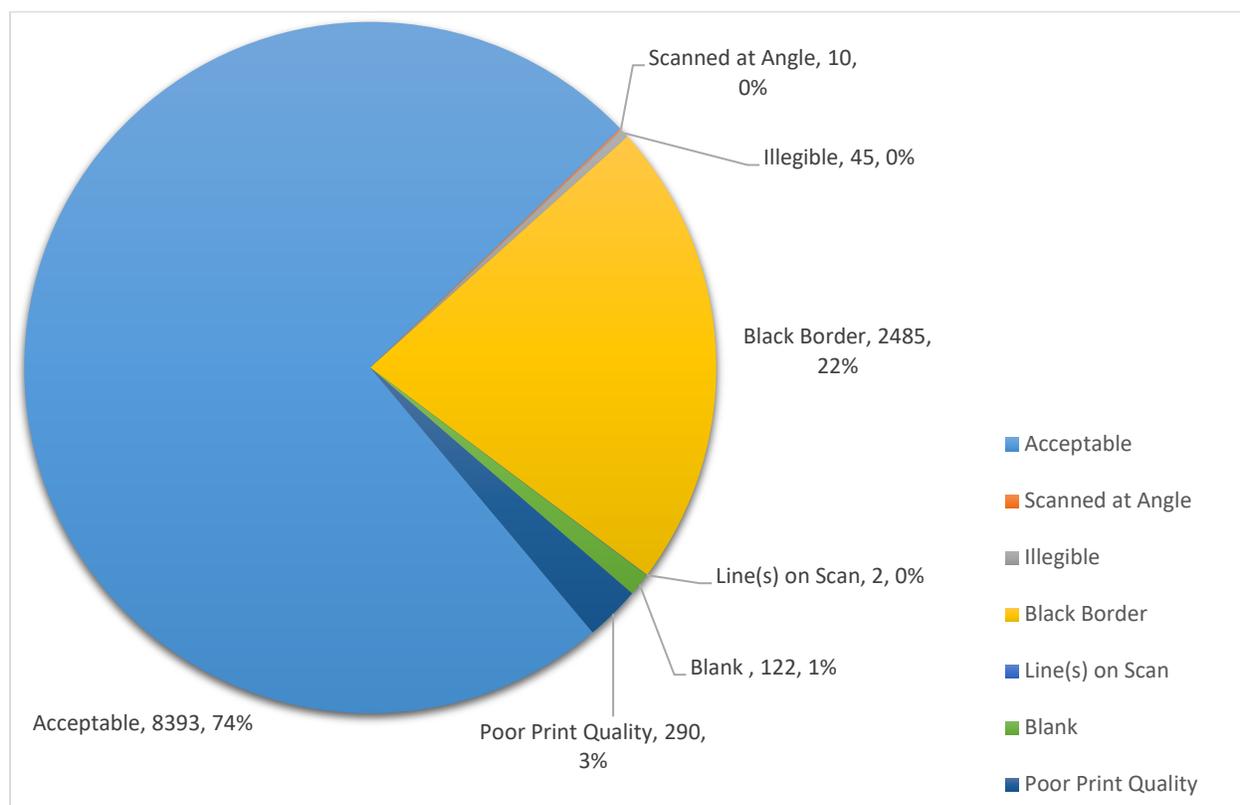
Table 6. Completeness of GRIC Resolutions (1953-2020)

Condition of Attachment	Count	Percent	Notes
<i>Complete</i>	4,341	38.26%	The number of resolutions that included the referenced attachments
<i>Incomplete</i>	2,135	18.81%	The number of resolutions did not include the referenced attachments
DRAFT version	25	0.22%	The number of resolutions that had <i>only</i> the draft version attached
Missing Attachment	762	6.72%	The number of resolutions that were missing attachments altogether
Missing Signature(s)	1,287	11.34%	The number of resolutions, where the attachment was missing at least one signature
Missing some pages	23	0.20%	The number of resolutions that have attachments with missing pages
Unauthenticated	2	0.01%	*The number of resolutions that are unauthenticated because the records were illegible. A determination could not be made regarding whether the attachment(s) were appended to the correct resolution
Unrelated	36	0.32%	The number of resolutions that have attachments that are appended to incorrect record
<i>(blank) – no attachments</i>	4,871	42.93%	The number of resolutions that do not have any attachments at all
Total Complete and Incomplete	11,347	100%	

Resolutions were reviewed for their image quality and of the 11, 347 resolution reviewed, 75% of them were considered acceptable (see Figure 4). An acceptable scan indicates that the record does not have any blemishes, has proper page orientation, and the text is clear (not blurry). Records that have a black border around them are attributed to scanning issues at the time of ingest. This can occur when the paper size was not properly adjusted when the document was scanned. For example, if the scanner is set to scan a legal-size page, but the actual document to be scanned is on a letter-size page, a black border can appear around the document where the scanner did not detect an image or text. The black border on some documents is large and on others, it is present but not as pronounced, and affected 22% of the records in the CCSO repository. Documents that

have poor print quality (3%) were marked as such because the text was blurry. The visual presentation of the data indicates the scan quality of the resolutions.

Figure 4. Scanned Image Quality of 11,347 GRIC Resolutions (1953-2020)



Note: Resolutions that were categorized as “Blank” included digital records that are scanned compilations of multiple resolutions and records that were identified as “missing” or “VOID” when opened.

Of the resolutions that are missing attachments, Table 7 presents the number of resolutions by the decade. To help understand when resolutions were missing the most attachments, the data in Table 7 demonstrates the existence of this issue. Although each decade indicated the existence of resolutions with missing attachments, the data identified that approximately 47.11% of the total occurrences happened during the decade of 2000-2009. The table includes the number of resolutions enacted during each decade and compares it to the total number of resolutions missing

attachments. The resulting percentage indicates the rate of incomplete records that are missing attachments.

Table 7. GRIC Resolutions missing attachments: A review by the decade (1953-2020)

Decade the Resolutions were Enacted	Total Number of Resolutions Enacted during the Decade (<i>m</i>)	Total Number of Resolutions Missing Attachments (<i>n</i>)	Percentage of Resolutions Missing Attachments by Decade (<i>n</i>/762)	Percentage of Resolutions Missing Attachments by total number Enacted during Decade (<i>n</i>/<i>m</i>)
1953-1959	344	19	2.49%	5.52%
1960-1969	1,119	88	11.55%	7.86%
1970-1979	1,430	68	8.92%	4.76%
1980-1989	1,668	109	14.30%	6.53%
1990-1999	1,744	102	13.39%	5.85%
2000-2009	2,321	359	47.11%	15.47%
2010-2019	2,591	16	2.1%	0.62%
2020	130	1	0.13%	0.77%
TOTAL	11,347	762	99.99%	

Ordinances. Like resolutions, this is a collection of digital records, including information about the digital items in the organizing system. Laserfiche software is used as the organizing system for the digital records. The original files are print documents. Digital scans of the documents were made to create this digital collection and are saved in (.TIFF) and (.PDF) format. The digital records follow a predictable life cycle with a useful life. However, the record's value can improve when the metadata is entered by the creator. Laserfiche uses interactive commands to allow the user to select digital records by keyword search or document recall by record number.

Extrinsic dynamic: The record properties are separated into three tabs: General, Document, and Rights.

- General properties included the following fields: Document location, Date created, Last modified, Created by, Owner, and Metadata properties consisting of the Template Name and Tags Assigned.
- Document properties included the following fields: Number of pages, Version controlled, Checked out by, Full-text indexed, Volume, and Electronic Document properties consisting of File size, Extension, Last modified, Type, and File path.
- Rights properties indicated the Effective rights for the Laserfiche user. These settings are controlled by CCSO.

User Survey. The Management Information Systems (MIS) Department provided an email distribution list of GRIC employees who are authorized to use the Laserfiche software. Because the tribal government shutdown due to COVID-19 was extended multiple times, the survey distribution date was delayed until the latest timeframe possible, in anticipation of an eventual return to work. Unfortunately, the partial tribal government shutdown extended through the end of October 2020. On September 8, 2020, the Community Council Secretary sent an email invitation on my behalf to the GRIC employees in the distribution list to invite them to participate in a voluntary online survey.

After the first email was sent, a total of 34 employees responded to the invitation and participated in the survey. Two weeks later, on September 22, 2020, a follow up email was sent to the distribution list to remind the recipients that the survey will close on October 6, 2020. After the second email was sent, an additional 51 employees responded to and participated in the survey. The total number of employees that participated in the survey is 73. A total of 12 respondents

indicated that they do not use Laserfiche. When participants select “I do not use Laserfiche” the survey is designed to terminate.

Overall, 85 participants consented to participate and responded to the survey. The return rate of the survey was 15.4%. It is possible that GRIC employees did not receive the invitation to participate because the email was sent to their work email address. With employees directed to work from home, it’s possible that many employees do not have laptops and use desktop computers as their workstations. This would limit a significant portion of the population from accessing the survey link while it was still active. The partial tribal government shutdown prevented certain employees from physically reporting to work and a small number of GRIC employees use laptops as their primary way to perform their duties. This portion of the assessment provides insight into how GRIC staff use Laserfiche and whether they would like to receive Laserfiche training. Because the user survey is anonymous, it is not possible to identify respondents and their responses. The responses to the User Survey can be found in Appendix A.

GRIC employees were presented with a multiple-choice question to ascertain how they define *records*. Table 8 presents the responses of GRIC employees when asked what records are, with each presented choice representing an acceptable definition of *records*. By beginning with an understanding of how employees define records, future training and training materials can help establish what records mean to the Community, identify why they are important and provide examples of how they are used to inform decision making.

Table 8. Identifies how GRIC employees define records

Records are:	Count of Responses	Percentage of Responses
Are vital to an organization's continued existence	6	8.22%
Have informational, historical, evidentiary, and/or continuing value	9	12.33%
Require effort to maintain	5	6.85%
Impact future decision-making	5	6.85%
All of the above	61	83.56%
Total	73	100%

The survey also ascertained what GRIC employees thought the Laserfiche software does. GRIC employees indicated that Laserfiche provides centralized records and content storage (38.36%), tracks versions of documents (17.81%), uses templates and metadata to provide access to digital records (16.44%), provides business process automation and workflow (10.96%), and 52.05% indicated that they thought Laserfiche performed all of the aforementioned functions. Each available choice represented functions that Laserfiche can perform and the responses indicate not only how GRIC employees use the software, but their knowledge of other available functions. A majority of GRIC employees (53.42%) indicated that they were somewhat familiar with using Laserfiche. Several indicated that they were extremely familiar (13.70%) or very familiar (23.29%). A few indicated that they were not so familiar (9.59%). GRIC employees also reported that if searching for a record in Laserfiche, the likelihood s/he would find the correct record quickly is likely (57.53%), neither likely nor unlikely (35.62%), or very unlikely (6.85%). This data demonstrates a wide range of software familiarity and ability to use the software among GRIC employees and supports the need for software training.

GRIC employees that participated in the survey reported to use Laserfiche to access records (73.26%), manage records (52.33%), or provide technical or software support by identifying issue(s) and resolving (9.30%). The multiple-choice options for this question included an option for those that do not use Laserfiche (15.12%). Because the list of potential participants was obtained from the MIS Department, it was assumed that each GRIC employee whose name appeared on the list is authorized to use Laserfiche as a function of their job duties. Because some employees indicated that they do not use Laserfiche, it may be necessary for MIS and the affected departments to review the list of authorized Laserfiche users to update it. Additionally, GRIC employees indicated the frequency they access Laserfiche as the following: every day (38.36%), a few times a week (12%), a few times a month (12%), about once a month (7%), less than once a month (7%), once a month (5.48%), and never (4.11%). This data presents a wide range of use among Laserfiche users and demonstrates how frequently the software is used to perform job duties.

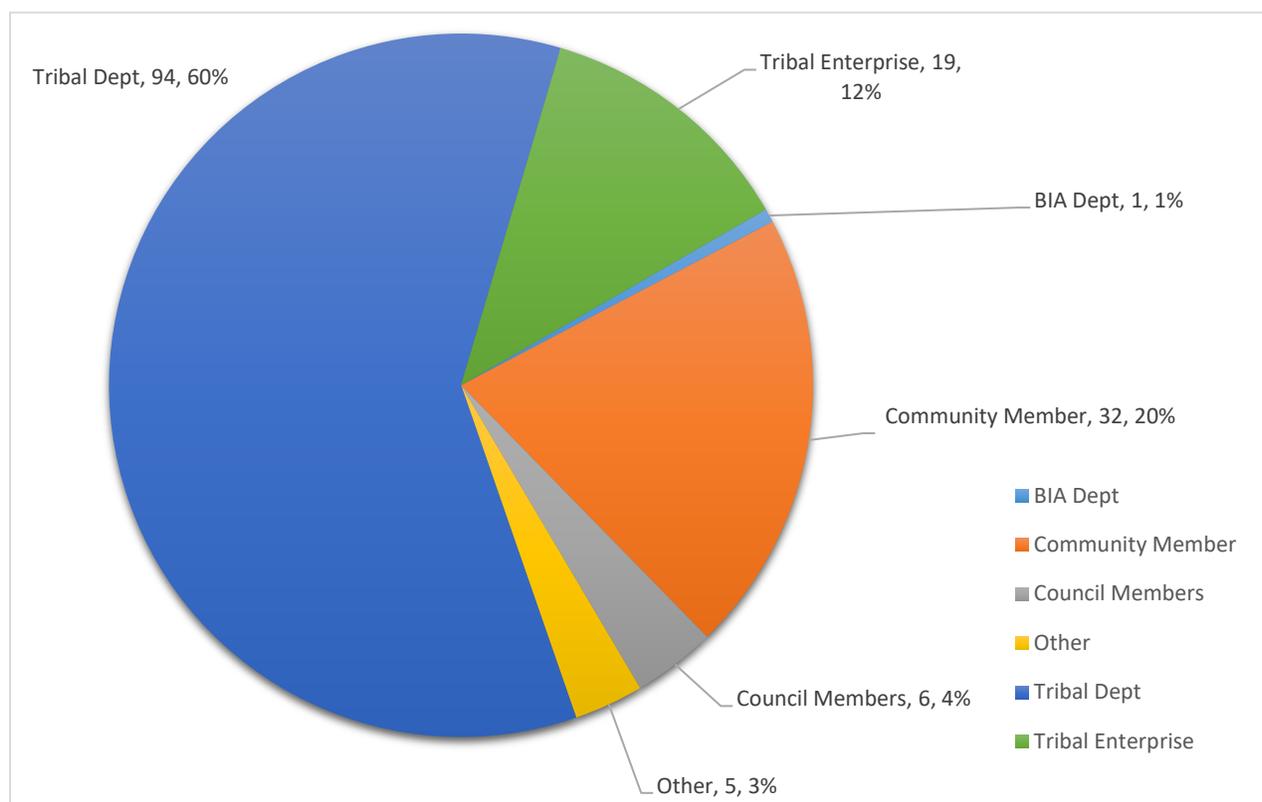
GRIC employees also reported their satisfaction with using Laserfiche for record management/access as satisfied (50.68%), slightly satisfied (16.44%), neither satisfied nor dissatisfied (20.55%), slightly dissatisfied (6.85%), or very dissatisfied (5.48%). The self-reported satisfaction among Laserfiche users can help the Community identify specific needs in relation to software usage or training. When asked if GRIC employees received Laserfiche training, 65.75% indicated that they did not receive training and 34.25% indicated they did receive training. A resounding 94.52% of GRIC employees indicated that they would be interested in receiving Laserfiche training, with only 5.48% indicating otherwise. The lack of training may be an underlying factor affecting software familiarity and satisfaction in its usage, however, the willingness of GRIC employees to participate in training indicates a workforce that is motivated

to learn. Among other things, software training can impact an employee's productivity, decrease software frustration, increase job satisfaction, boost engagement and knowledge retention, create a baseline of product knowledgeability, and improve an employee's comfort level with utilizing the software.

GRIC employees were also asked about how they would seek assistance with how to use Laserfiche. They were presented with six options and the ranking of the responses (from first choice to last choice) indicated that employees would contact MIS Help Desk, ask a co-worker, contact department director, attend Laserfiche training, try to find answers by searching online, and stop using Laserfiche. This data suggests that GRIC employees are actively trying to obtain assistance from all available resources before s/he stops using Laserfiche. This feedback also supports the need for Laserfiche training of GRIC employees.

Document Request Form Log. When a researcher needs to request a document from the CCSO, a document request form is completed and submitted to the CCSO receptionist, at which point it is time and date stamped. It collects contact information about the researcher, categories of the type of document requested (Constitution & Bylaws, Code Book, Code Section, Resolution, Ordinance, and Action Sheet(s)). The CCSO Document Request Form (2018) indicates that, "every attempt will be made to have the document(s) available within 1-5 business days." The document request form appears to have been last reviewed in May 2018. Figure 5 presents data on who was requesting records from the CCSO repository from January -December 2017. This data identifies who is accessing the records, provides information on the frequency of their requests during calendar year 2017, and provides an example of the repository's purpose and scope.

Figure 5. Who was Requesting Records from the CCSO Repository in 2017? (n=157)



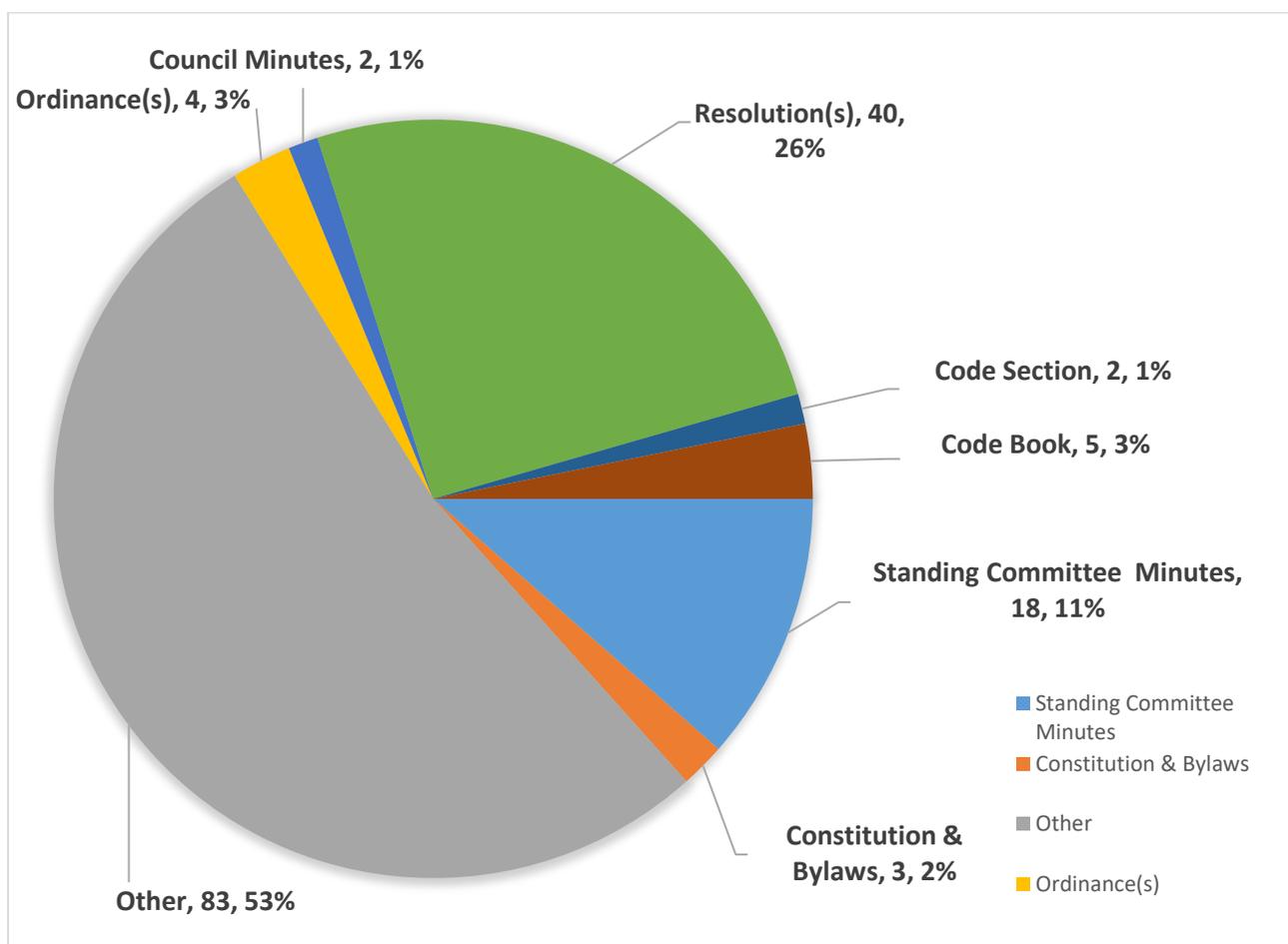
Note: A total of 157 document requests were recorded for 2017. The “Other” category includes non-Community law firms and non-member individuals.

An electronic log of the document request forms (DRF) were reviewed. It was provided in an Excel spreadsheet and contained data for the calendar year 2017 (January – December). This review provides information on the number of requests submitted to the CCSO, identifies the subject matter of the requested document(s), identifies who is making the request, calculates the amount of time it took to complete the request, and the demonstrates the completion rate of the submitted requests.

Because the CCSO provides services directly to Community departments, entities, Community members, the public, and federal, state, or other agencies, the CCSO staff relies on Laserfiche to complete the document requests. Collectively, this data identifies how the CCSO repository is used. It is important for the CCSO and Council to know who is accessing the CCSO

repository and the type information that is requested. Figure 6 presents the data on the type of records that were requested from January – December 2017. This data indicates how the repository is used and provides an example of the repository’s purpose and scope.

**Figure 6. What Type of Records were Requested from the CCSO Repository in 2017?
(n=157)**



Note: A total of 157 document requests were recorded for 2017. The “Other” category of record type included: motions, resignation related documents, action sheets, departmental reports, agendas, committee member listing, land inventory, proclamations, bylaws, EBT minutes, and Code of Conduct related documents.

Tribal departments and the public are common groups that request records. From my experience, I can posit that the CCSO staff rely on the digital repository to fulfill the requests. From my experience working with CCSO, if the repository does not have the requested records, staff will perform research in the physical files stored in their library. Further analysis would be

needed to identify why certain documents exceeded the 1-5 business timeframe. There was insufficient data to explain why some document request forms took more than two weeks to complete. Questions that can help elicit this information include: Were the records difficult to locate? Was enough information provided on the document request form? Was too much information being requested? For instance, a request might indicate “All resolutions approving rights-of-way and/or easements in District 3.”

From my experience performing research in Laserfiche, search requests that are too broad can take an inordinate amount of time to complete. This is where a reference interview would be helpful. A reference interview is a discussion between the requesting party [researcher] and the CCSO staff [archivist] designed to, “determine the researcher’s information needs and purpose (*SAA Dictionary, Reference Interview*, n.d.).” By performing a reference interview before research is performed, it provides direct interaction with the researcher and can clarify a vague or ambiguous document request and improve the search results.

Table 9 presents the data regarding the number of days it took for CCSO staff to complete the document request forms from January – December 2017. This data can help the CCSO identify any delays in providing the requested records within an acceptable amount of time, identify which record requests took longer to complete, and provide feedback on how record requests are processed. The completion of document requests is a direct service the CCSO provides to GRIC departments, tribal enterprises, federal and state entities, and the public.

Table 9. Number of Days to Complete Document Request Forms (n=157)

Days to complete	Same day	1-5 days	6-10 days	11-15 days	16-32 days	33+ days	-7 to -14 days*	Not marked as complete	Voided
Number of Requests Completed	54	48	12	8	15	6	3	10	1
Percent Completed in Time Frame	34.3%	30.5%	7.6%	5%	9.5%	3.8%	1.9%	6.3%	0.6%

*The completion date in the spreadsheet was dated before the submittal date, possibly owing to human error when the spreadsheet was updated.

Documentation Review. For this portion of the assessment, I reviewed job descriptions, Document Request Form, Standing Committee Review & Routing Form, CCSO Flowchart, and the Public Records Request Policy.

Job descriptions. I received and reviewed seven different job descriptions to identify if any record keeping experience, training, or education is required experience prior to employment. All seven job descriptions did not mention Laserfiche as a Required Knowledge, Skill, and Ability. Five out of seven job descriptions reference software knowledge (MS Office products). One job description identified ID point database program, Maxxess Security, and Badging hardware/software, in addition to MS Office products.

In the Essential Functions portion of the job descriptions, one job description in particular stated, “Set-up and maintain all files,” “Thoroughly understand computer hardware and software used by the department, and ability to maintain accurate records and prepare reports” but there was no reference to any department standards or policies. This same job description indicates “records management” in the Distinguishing Features of the Class, but again, no standards or policies are referenced. Records management was not defined as paper based, digital, or born digital items.

Standing Committee Review & Routing Form. This form was obtained from the GRIC intranet. This form initiates the process for getting documents submitted for the legislative process and is limited to the following document types: resolutions, ordinances, 638 Contract/Grants, Archaeological Licenses, Memorandum of Agreement/Understanding, Homesite Agreement/Assignment, and Other. It is a two-page fillable form that captures information related to the document(s) that will be presented to a standing committee. The form has multiple boxes where the reviewing department can identify the reviewer, provide comments, indicate whether it is approved or not approved to continue moving through the legislative process, date, name and signature. The form identifies four departments as reviewing departments: Law Office, Contracts Management, Finance-Accountant, and Land Use Planning & Zoning. However, depending on the subject matter of the submission, the form and submitted documents may need to be reviewed by one or more departments. The form does not indicate when it was last reviewed, modified, or updated.

CCSO Flowchart. A flowchart labeled “Standing Committee and Council Agenda Material Submittal Process Flow Chart” was obtained from the GRIC intranet. The flow chart identifies seven steps, which begin with the Presenter and ends with a box labeled as Approval. This flowchart identifies the steps in each box, with specific instructions for the Presenter (ex. Identifies number of hard copies needed, submission of the electronic document, and timeframes/deadlines). The flow chart sufficiently identifies the required steps and deadlines to get documents to the standing committee and Council, however, it does not identify the steps or timeframes/deadlines the Presenter should take if the document needs to be executed. For example, if a contract is approved by Council, it will need to be signed. Once it is signed, ideally, the Presenter should submit a copy (digital and/or paper) to the CCSO and identify which resolution it is appended to.

Public Records Request Policy. This document was obtained from Community Council Secretary. It is identified as Resolution GR-127-11 and was enacted on September 7, 2011. This policy identifies what is considered a public record, a confidential record, the level of access granted to the requesting party, a procedure for processing the request, authority to deny a request, and identifies a timeframe of 15 days to complete the records request. In certain circumstances, the policy allows the Council Secretary to extend the time needed to complete the request. This policy does not indicate periodic review.

Meeting Records / Meeting Documentation. This policy was obtained from Community Council Secretary and is titled, “Council and Standing Committee Meeting Records and Material Documentation.” It begins with identifying the different document types for Council and standing committees. The document types are described in detail and include how the document is produced, where the physical record is stored, where the digital file is stored, identifies the software used for the identified document type, and references applicable policies. While this policy discusses records at a broad level, there is no discussion about how individual files will be cared for. There is no discussion about if and how digital files are backed up. There is no discussion about how digital files will be migrated to prevent hardware and/or software obsolescence. This policy does not indicate periodic review.

Records Management Policies. This document was obtained from Community Council Secretary. It is identified as Internal Policy & Procedures for the Community Council Secretary’s Office. It begins with a statement of commitment to “effective records management and retention.” It also identifies the document types this policy applies to (digital, paper, audio cassette, video recordings, and other forms of media). The archiving section provides guidance on document storage, provides timeframes, restricts removal of paper records from library (unless

permission is obtained in advance), and indicates that, “Documents archived in the records management system are meant to be maintained/archived indefinitely, unless otherwise stated in the Records Retention Policy.” (pg. 2). There is no discussion about if and how digital files are backed up. There is no discussion about how digital files will be migrated to prevent hardware and/or software obsolescence. This policy does not indicate periodic review.

Visual inspection of record storage area. The Governance Center is the physical location of the tribal government offices (headquarters) of the Gila River Indian Community, and located in Sacaton, Arizona. The building was built around 2006-2007. It is a brick building with a main entrance, lobby, Council Chambers, and is designed with four wings. It is presumed that the building has a HVAC system that heats, ventilates, and cools the entire building. The CCSO occupies one of four wings of the building. The building is regularly maintained, with no evidence of broken windows or doors. There was no evidence of water stains on the ceiling tiles. In the CCSO lobby, the office space is clean, organized, and devoid of any signs of pests. Two main doors connect the hallway to the CCSO lobby and is the point of entry for visitors and the public. These doors have an electronic entry pad that is programmed for authorized employees to enter during non-business hours.

Beyond the lobby, there are several offices. The office space is also clean and organized. The library, where the physical records are stored is clean and organized. In the corner, along the wall, there were several boxes stacked three high, containing archival documents from different Council years, which are currently being accessioned. There was no evidence of pests or integrated pest management (glue/sticky traps). There is a computer, monitor, keyboard, computer mouse, and scanner on the small table in the library. The scanning station allows authorized CCSO staff

to upload the documents, without the documents leaving the room. The visual inspection occurred on October 15, 2020.

Chapter 6: Discussion / Recommendations

This collection assessment produced information on specific issues that affect how the Community manages its own data. The identification of strengths and weaknesses are areas that provide the Community Council with direction for improvement, which can change existing record keeping practices while addressing data quality issues. Indigenous Peoples are acting in sovereign ways when they undertake and make informed decisions to address data challenges (Smith, 2016). This assessment provides perspective and direct experience on working with the CCSO repository.

The recommendations below are intended to provide guidance on the next steps in record governance, and are presented in short, mid, and long-term goals. This tiered approach groups similar tasks together by the anticipated amount of commitment needed to complete them, including consideration of the amount of resources (time, personnel, planning, and cost) needed to achieve each goal. The identified goals can set a plan into motion, where the Community uses the data obtained from this assessment to make strategic decisions that directly affect all aspects of tribal sovereignty and record keeping practices, including data sovereignty and data governance. By taking an active role to review the findings and recommendations, the Community can address the longstanding issues that have plagued the CCSO repository.

The work that needs to be completed directly correlates with the improvement of individual records, defining a framework of acceptable record keeping standards (through policy creation), and appreciating the impact of having FAIR data when it is needed. By taking control of how data are created, monitored, accessed, and used, the Community is addressing the heart of how it exercises tribal sovereignty. Records are often at the root of all the work that is pursued and

performed. We rely on them to engage in consultations, negotiations, agreements, assessments, education, health care, land use, planning, business, audits, and litigation. By achieving FAIR data, the Community benefits from the improved state of record keeping practices and cements a reputable position that is made possible through Indigenous data sovereignty and data governance.

Strengths.

- The Community recognizes the need to understand, identify, and address long-standing record keeping practices that contribute to the lack of FAIR records. The Community's support to change the existing process is a recognized strength.
- The consistency in the numbering scheme makes records (resolutions and ordinances) quickly identifiable and organized. Resolutions and ordinances are stored in separate folders, which are organized chronologically by the year.
- There is a well-defined process for the submittal of documents to the standing committees and Council.
- There are existing policies that provide a framework of record keeping practices; but these policies need to be reviewed and updated periodically to ensure that they support the Community's data sovereignty and data governance goals.

Weaknesses.

- The Council Secretary position is equivalent to the director-level of a Community department. It is an annually appointed position by Community Council. Currently, there are no existing plans that identify how the CCSO will maintain continuity of established record keeping practices in the event of a change in leadership of the Council Secretary position. Creating a plan that addresses this issue will stabilize the department against unforeseen disruptions affecting established record keeping practices.

- The CCSO routing flow chart does not address the steps a Presenter is responsible for after a record receives Council-approval. For those records that have attachments that need to be signed, a process needs to be created, which holds the Presenter responsible for obtaining the required signatures and submitting an executed copy of the attachment to the CCSO.
- CCSO job descriptions do not emphasize experience in record management practices or standards.
- Lack of information standards for record keeping practices and management. For instance, defining consistent scan quality (TIFF vs. PDF, minimum number of DPI, scan in color or black and white, and image quality control) is an optimal place to begin.
- Lack of a controlled vocabulary to use for creating metadata for the records as they are ingested into Laserfiche.
- Templates are not consistently completed.

Short-Term Recommendations.

- *Immediately Update Flow Charts for the Legislative Submittal Process.* The flow charts should include any additional steps the Presenter needs to take when an attachment to a Council-approved resolution needs to be circulated for signature (executed) and remitted to the CCSO for archiving. By changing the flow chart to include additional steps for the routing of post-Council approved documents, the Presenter will have a clearly articulated and identified process to follow. This process should include the remittance of executed documents to the CCSO within an acceptable timeframe. When this change is implemented, the ingest of new records should have fully executed agreements attached to

the digital surrogate in the CCSO repository. This immediate change will address the problem of missing executed attachments by establishing a clearly identified process.

- *Review and Revise Existing Training Materials.* Although the Bylaws of the Community state that it is the Community Council Secretary's responsibility to maintain these records, many people contribute to the record making process. Any training related to the creation, maintenance, access to, control of, and preservation of official tribal government documents needs to emphasize that the records will be preserved indefinitely. Documents submitted through the legislative process are on their way to becoming official tribal government records. The words, "official tribal government records" needs to be used in training materials to assign value to the records.
- *Create Shared Responsibility.* All GRIC employees need to be aware that they contribute to the accuracy, completeness, maintenance, and preservation of official tribal government documents. Record management is a shared responsibility of all GRIC employees. There is a need to demonstrate to all GRIC departments that record-keeping requires assistance and participation of all employees.
- *Create a Plan to Train All GRIC Staff on Record Keeping Practices.* Provide periodic training that includes all levels of management and staff; from department directors to entry-level positions. The training should be consistent and provide a solid understanding and expectation of the Community's record keeping practices. Investment in the development of the workforce by offering periodic training can transform the culture and attitudes towards record keeping practices. By including all levels of management and staff in the training, the Community is sending a clear message that effective record keeping is a shared responsibility.

- *Develop Environmental Controls.* Continue practicing good housekeeping and maintaining an organized work environment. The Governance Center appears to be well maintained, as there were no signs of broken doors or windows, no water stained ceiling tiles, and temperature is centrally controlled. These observations contribute to the long-term storage of physical records.
- *Identify Laserfiche Resources.* Research, identify, and provide Laserfiche-created resources to GRIC employees who are authorized to use Laserfiche. Resources can include Laserfiche user guides or instructions on how GRIC employees can create a (free) Laserfiche Aspire account. Laserfiche offers free online support through Laserfiche Aspire. GRIC employees can access Laserfiche Aspire to view short training videos and to get information about how to perform certain tasks. Additionally, the Laserfiche User Guide is an online, interactive, and searchable resource.
- *Revise Job Descriptions.* The CCSO job descriptions should be revised to reflect how the CCSO uses and relies on Laserfiche. Identifying the record management techniques and standards that are acceptable to CCSO should also be articulated. Job descriptions could be amended to include record keeping technique and standards. This change can help justify the need to prioritize training for CCSO staff.

Mid-Term Recommendations.

- *Create a plan for CCSO departmental success that addresses continuity and staff turnover.* The GRIC Constitution (1960) indicates that the Community Council Secretary position is a Council-appointed position with a one-year term. Each year, individuals seeking to serve in the capacity of Council Secretary must submit their application indicating their candidacy for that office. Knowing that there is a potential for an annual turnover in the

Council Secretary position, a plan should detail how the department will continue managing the record keeping process without disruption. The plan can identify which unappointed CCSO staff position(s) will be responsible for providing in-department training related to standardized record keeping processes. For instance, upon appointment of a new Council Secretary, s/he will receive training on the established record keeping processes.

- *Create Controlled Vocabulary.* Creating a controlled vocabulary, as a list of commonly used acronyms and subject matter can enrich the metadata of each record. This step supports making data FAIR.
- *Review and Revise Existing Policies.* Review existing policies to reflect the goal(s) or actual process of effective record keeping. The policies should be periodically reviewed to identify and address any changes in process, software, hardware, data migration, preservation, and maintenance issues. Plans should be made to support the development of preservation planning, policy creation, disaster planning, environment management, and justify the allocation of funding/resources. Make record preservation and maintenance a priority.
- *Review Laserfiche Template.* Review the Laserfiche templates to determine if the fields need to be changed to support the data and preservation needs of the Community. The CCSO template has 13 fields and on average, when metadata was entered into the template, only five of them are used. Revising the template with fields that are a better fit for how the records are used would aid in record recall. This will tailor Laserfiche to suit the needs of the Community. Laserfiche has a feature that can generate a report of the metadata on documents in a particular folder (*Metadata Reports*, n.d.). Correcting the data entered for

the Year for the resolutions during 2011-2020 will be an accurate reflection of when it was passed.

- *Redistribution of User Survey.* The Community should consider redistributing the user survey to obtain feedback from all GRIC employees that have authorization to use Laserfiche. This can help the Community identify and understand the needs of those that use the software.
- *Laserfiche Training.* Create a plan for providing Laserfiche training by identifying the different needs of the Laserfiche users. The GRIC employees that voluntarily participated in the online survey indicated that if Laserfiche training was offered, they would attend. By being proactive with training staff, the daily technical assistance required to support employees who use Laserfiche to manage and access records should decrease. For example, record managers may need different training from those that solely access records. Training should be offered to existing employees and to new employees.

Long-Term Recommendations.

- *Identify the Community's future use of Laserfiche.* Create a plan that supports the anticipated usage.
- *Create a Plan to Obtain Missing Attachments.* Create a plan that addresses how missing attachments will be obtained. Will departments be asked or required to participate? Will a list be sent to the departments? What steps need to be taken before adding an attachment to the CCSO repository? Will CCSO staff compare the physical and digital files to resolve any issues? Update the metadata by identifying and recording the action(s) taken in the appropriate template field (i.e. Notes).

- *Create a Plan that addresses missing records.* How will records be researched? If records are obtained from another collection (ex. BIA, NARA, or other archive), can the record be added to the CCSO repository? If so, how will the record(s) be validated/authenticated before it is included in the CCSO repository? Update the metadata by identifying and recording the action(s) taken in the appropriate template field (i.e. Notes).

Conclusion

FAIR data supports and positively contributes to Native nation rebuilding, but as this collection assessment demonstrates, the FAIRness of data and metadata is limited; which potentially impedes Native nation rebuilding, governance, and self-determination. Setting standards of information quality is an important first step for an organization to take if *value* is placed upon the information and how it is maintained, collected, used, or archived. Concerning their tribal government records, Native nations can implement standards to establish a baseline allowing them to designate an agreed upon level of information quality, access, and control. Approaching data in this way is an example of Indigenous data sovereignty. If the tribe's records are required for production, the tribal government can proceed with meetings, negotiations, and consultations confidently knowing that they are aware of the extent and status of their records regarding the subject matter at hand. In the era of Self-Determination, Native nation rebuilding is continuing to flourish in ways that tribes have not seen in prior eras of Federal Indian law and policy.

By taking proactive measures and addressing the organization of tribal government records, the Community can establish acceptable standards of information quality. The impetus for information quality standards becomes an important cornerstone for an effective governing body. By recognizing the deficiencies of the repository and making efforts to replenish it with

FAIR data, the Community is governing their records. The Community can actively refurbish their archives by regaining control over their records, through obtaining access or collecting copies of their records (from other reputable collections) to add to their repository. In this way, the Community can actively govern their tribal records. They act upon an issue that needs prioritization and correction. The movement of communities towards looking after their own records is possible. This collection assessment provides valuable knowledge obtained from the data and validates the existence of issues present in the CCSO repository.

Improving information quality through a variety of ways supports the self-determination of the Community and produces high quality data that is usable and valuable. Quality data adheres to well-articulated and acceptable digital curation standards. For instance, the International Organization for Standardization (ISO, 2017) 23081 establishes an internally accepted standard for *Metadata for Records* and adopting a standard like this would apply a consistent requirement to each tribal government record that is added to the repository. The metadata is useful for organization as well as access and recall, which would complement an electronic records management system. ISO 15489 (n.d.) establishes the framework used to create, capture, and manage records and works in tandem with ISO 23081. With consistent and acceptable standards in place, the CCSO repository will see marked improvement, which has a direct effect on the service that GRIC departments provide to the citizens of the Gila River Indian Community.

Additionally, the AIHEC partnership with the tribal colleges and the AIRR is a way to help Indigenous nations improve nation rebuilding work that stems from the development of their tribal records management, research, and data analysis capabilities (AIHEC Leads Tribal College Records Information Management Programs, 2018). The collaborative partnership and training opportunities will help cultivate a group of culturally sensitive professionals who have a vested

interest in developing the tribe's collection. When working with tribal archives, there are a multitude of challenges that arise from the diversity of formats, description and arrangement, and professional development and training (Roy and Alonzo, 2003). From training and retraining staff to understand and apply new record keeping standards, and updating the digital records with appropriate metadata, these changes will take time. With the Community proactively supporting the preservation of records, these changes will come to fruition. Seeking ideas and input from a diverse group of collaborators, that includes department directors, legal researchers, and legislative staff will help the Community ascend to the next step.

Appendix A: User Survey Questions and Data Tables

The results of the User Survey are attached herein. The User Survey was distributed via email to 551 GRIC employees who were identified by the GRIC Management Information System (MIS) Department, as being authorized to use Laserfiche software as a function of their job duties. The survey consisted of ten multiple choice and ranking questions.

Q1 - How do you use Laserfiche? Check all that apply.

Answer	%	Count
Provide technical or software support by identifying issue(s) and resolving	9.30%	8
Manage (add, delete, or create) records	52.33%	45
I do not use Laserfiche	15.12%	13
Access (locate, research, or retrieve) records	73.26%	63
Total	100%	86

Q2 - In your opinion, what does the Laserfiche software do?

#	Answer	%	Count
1	Provides centralized records and content storage	38.36%	28
2	Provides business process automation and workflow	10.96%	8
3	Uses templates and metadata to provide access to digital records	16.44%	12
4	Tracks versions of documents	17.81%	13
5	All of the above	52.05%	38
	Total	100%	73

Q3 - How would you rate your familiarity with using Laserfiche?

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How would you rate your familiarity with using Laserfiche?	1	4	2.59	0.84	0.71	73
#	Answer	%	Count				
1	Extremely familiar	13.70%	10				
2	Very familiar	23.29%	17				
3	Somewhat familiar	53.42%	39				
4	Not so familiar	9.59%	7				
5	Not at all familiar	0.00%	0				
	Total	100%	73				

Q4 - How satisfied are you with using the Laserfiche software for record management /access?

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How satisfied are you with using the Laserfiche software for record management/access?	1	5	2	1.22	1.48	73
#	Answer	%	Count				
1	Satisfied	50.68%	37				
2	Slightly satisfied	16.44%	12				
3	Neither satisfied nor dissatisfied	20.55%	15				
4	Slightly dissatisfied	6.85%	5				
5	Very dissatisfied	5.48%	4				
	Total	100%	73				

Q5 - On average, how frequently do you access records in Laserfiche?

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	On average, how frequently do you access records in Laserfiche?	1	7	2.79	1.89	3.56	73
#	Answer	%	Count				
1	Every day	38.36%	28				
2	A few times a week	16.44%	12				
3	About once a week	9.59%	7				
4	A few times a month	16.44%	12				
5	Once a month	5.48%	4				
6	Less than once a month	9.59%	7				
7	Never	4.11%	3				
	Total	100%	73				

Q6 - If you search in Laserfiche for a record, what is the likelihood that you will find the correct record quickly?

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	If you search in Laserfiche for a record, what is the likelihood that you will find the correct record quickly?	1	3	1.49	0.62	0.39	73
#	Answer	%	Count				
1	Likely	57.53%	42				
2	Neither likely nor unlikely	35.62%	26				
3	Very Unlikely	6.85%	5				
	Total	100%	73				

Q7 - Below are a few examples of the choices that you can make when seeking assistance about how to use the Laserfiche software. Please rank your responses from 1 to 6, with 1 as the first choice and 6 to indicate the last/least likely choice.

		Ranking of Choices from 1 to 6, with 1 as the first choice and 6 to indicated the last/least likely choice					
#	Question	1	2	3	4	5	6
1	Contact the Department Director/Manager or designee (includes office manager)	8.22%	20.55%	19.18%	20.55%	20.55%	10.96%
2	Contact the Management Information Systems (MIS) Help Desk	26.03%	19.18%	21.92%	13.70%	12.33%	6.85%
3	Ask a Co-worker	26.03%	27.40%	24.66%	10.96%	6.85%	4.11%
4	Stop using Laserfiche	6.85%	2.74%	4.11%	16.44%	12.33%	57.53%
5	Try to find answers by searching online (i.e. Google, Laserfiche website)	17.81%	12.33%	12.33%	24.66%	23.29%	9.59%
6	Attend Laserfiche Training	15.07%	17.81%	17.81%	13.70%	24.66%	10.96%
	Total Count of Responses	73	73	73	73	73	73

Q8 - Have you received any training regarding how to use Laserfiche?

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Have you received any training regarding how to use Laserfiche?	1	2	1.66	0.47	0.23	73
#	Answer	%	Count				
1	Yes	34.25%	25				
2	No	65.75%	48				
	Total	100%	73				

Q9 - If offered, would you be interested in receiving training on Laserfiche software?

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	If offered, would you be interested in receiving training on Laserfiche software?	1	2	1.05	0.23	0.05	73
#	Answer	%	Count				
1	Yes	94.52%	69				
2	No	5.48%	4				
	Total	100%	73				

Q10 - Select all that apply to complete this statement. Records:

#	Answer	%	Count
1	are vital to an organization's continued existence.	8.22%	6
2	have informational, historical, evidentiary, and/or continuing value.	12.33%	9
3	require effort to maintain.	6.85%	5
4	impact future decision-making.	6.85%	5
5	All of the above	83.56%	61
	Total	100%	73

Appendix B: Excel Form Used to Collect Item-Level Data

The graphic below is a visual representation of the form that was created for this project and used to collect item-level data. The form was created in Excel and aided in data entry. It was designed after receiving approval from the Community and incorporates each field of collected data. The only fields that allowed user-determined text are: Resolution No., Cross-Reference Citations, and Enactment Date. The other fields had pre-defined categories in their accompanying drop-down menu. This provided a standardized approach to data collection.

Enter Details							
Resolution No.	GR-1	File Format		Resolution Type		Scan Quality	
Resolution Review		Attachment Type		Attachment Review		Legislative Review	
Cross-Reference		Cross-Reference Citation		Cross-Reference Citation		Cross-Reference Citation	
Template Name		Template Complete?		Template Year	2010		
Subject Matter 1						Enactment Date	
Subject Matter 2							
Subject Matter 3							
Subject Matter 4							

Appendix C: Subject Matter Categories Used to Classify Individual Records

The list of subject matter categories that was used to classify individual records is omitted from this publication, as the author recognizes the Community's inherent discretion to release and/or disseminate it. A request to obtain this list may be submitted to the Gila River Indian Community Council Secretary's Office.

References

- Agee, Jim. (2005). Collection evaluation: A foundation for collection development. *Collection Building*, 24, 92-95. 10.1108/01604950510608267.
- AIHEC Leads Tribal College Records Information Management Programs.** (2018). *Tribal College Journal*, 29(4), 14–15.
- AIHEC: Who We Serve.** (n.d.). Retrieved April 16, 2019, from <http://www.aihec.org/who-we-serve/TCUmap.cfm>
- Arizona Board of Regents.** (2018, October). *Policy Number 1-118 Tribal Consultation*. 1-118 Tribal Consultation. <https://public.azregents.edu/Policy%20Manual/1-118-Tribal%20Consultation.pdf>.
- Association of European Research Libraries.** (2017). *Implementing FAIR Data Principles: The Role of Libraries*. <https://libereurope.eu/wp-content/uploads/2017/12/LIBER-FAIR-Data.pdf>
- Bantin, Philip C.** “Strategies for Managing Electronic Records: A New Archival Paradigm? An Affirmation of Our Archival Traditions?” *Archival Issues* 23, no. 1 (1998): 17–34. <https://digital.library.wisc.edu/1793/45860>, preserved at <https://perma.cc/JR7Z-ESGE>.
- Baxter, P., & Jack, S.** (2008). Qualitative Case Study Methodology: Study Design and Implementation for Novice Researchers. *The Qualitative Report*, 13(4), 544-559. Retrieved from <https://nsuworks.nova.edu/tqr/vol13/iss4/2>
- Bearman, D., & Lytle, R.** (1985). The power of the principle of provenance. *Archivaria*, 21, 14-27.
- Brown, M.E., Dueñas, A.N.** A Medical Science Educator’s Guide to Selecting a Research Paradigm: Building a Basis for Better Research. *Med.Sci.Educ.* **30**, 545–553 (2020). <https://doi.org/10.1007/s40670-019-00898-9>
- Bruhn, J.** (2014). Identifying useful approaches to the governance of Indigenous data. *The International Indigenous Policy Journal*, 5(2). doi: <http://dx.doi.org/10.18584/iipj.2014.5.2.5>
- Carrigan, D. P.** (1996). Collection development—Evaluation. *The Journal of Academic Librarianship*, 22(4), 273-278.
- Carroll, S.R., Rodriguez-Lonebear, D. and Martinez, A.,** 2019. Indigenous Data Governance: Strategies from United States Native Nations. *Data Science Journal*, 18(1), p.31. DOI: <http://doi.org/10.5334/dsj-2019-031>
- Constitution and Bylaws of the Gila River Indian Community, Arizona.** (1960). Library of Congress. <https://www.loc.gov/law/help/american-indian-consts/PDF/60064581.pdf>.
- Cornell, S., & Kalt, J. P.** (2007). Two Approaches to the Development of Native Nations One Works, the Other Doesn't. In M. Jorgensen (Ed.), *Rebuilding native nations: strategies for governance and development* (pp. 3–33). University of Arizona Press.
- Cornell, S., & Kalt, J. P.** (1998). Sovereignty and nation-building: The development challenge in indian country today. *American Indian Culture and Research Journal*, 22(3), 187.
- Cox, Richard J.** (2001). *Managing Records as Evidence and Information*. Quorum Books, An imprint of Greenwood Publishing Group, 88 Post Road West, Westport, CT 06881 (\$67.95). Web site: <http://www.greenwood.com/>.
- Data Management Plans [Overview].** (2019, May 31). Data Management Resources. <https://data.library.arizona.edu/data-management-plans>

- Duff, W., & Fox, A.** (2006). 'You're a guide rather than an expert': Archival reference from an archivist's point of view. *Journal of the Society of Archivists*, 27(2), 129–153. Retrieved from <https://doi-org.ezproxy4.library.arizona.edu/10.1080/00379810601075943>
- Duranti, L.** (1994). The concept of appraisal and archival theory. *American Archivist*, 57(2), 328-344. Retrieved from <http://ezproxy.library.arizona.edu/login?url=https://search-proquest-com.ezproxy2.library.arizona.edu/docview/57351012?accountid=8360>
- Fleckner, J., & Society of American Archivists.** (1984). *Native American archives: An introduction*. Chicago: Society of American Archivists.
- Fletcher, M. L. M.** (2006). The Supreme Court and Federal Indian Policy. *Nebraska Law Review*, 85, 121–185. Retrieved from <https://heinonline.org/HOL/P?h=hein.journals/nebklr85&i=129>
- Franks, P., & Kunde, N.** (2006, September-October). Why metadata matters: records managers must be involved in the development and design of metadata structures to ensure that digital records are captured, maintained, retained, preserved, or destroyed in accordance with their organization's recordkeeping requirements. *Information Management Journal*, 40(5), 55+.
- Gila River Indian Community - Community Council Secretary's Office.** (2018). Community Council Secretary's Office - Document Request Form. Sacaton, Arizona; GRIC Employee Intranet.
- Glushko, R. J.** (2016). *The Discipline of Organizing: Professional Edition, 4th Edition*. O'Reilly Media.
- Hammond, M., & Wellington, J.** (2020). *Research methods: The key concepts*. ProQuest Ebook Central <https://ebookcentral.proquest.com>
- Harding, A., Harper, B., Stone, D., O'Neill, C., Berger, P., Harris, S., & Donatuto, J.** (2012). Conducting research with tribal communities: sovereignty, ethics, and data - sharing issues. *Environmental Health Perspectives*, 120(1), 6+. Available at: https://link.gale.com/apps/doc/A278773895/AONE?u=uarizona_main&sid=AONE&xid=a72794d3
- Ho-Chunk Case Study.** (n.d.). Ho-Chunk-Case-Study.pdf. Retrieved July 5, 2020, from Navient.com website: <https://naviant.com/resources/Ho-Chunk-Case-Study.pdf>
- Ho-Chunk Nation Records Management Department.** "Document Request Form." *Sustainable Heritage Network*. (2015) Accessed 01 October 2020, Retrieved from <http://sustainableheritagenetwork.org/digital-heritage/document-request-form>
- Holm, T., Pearson, J., & Chavis, B.** (2003). Peoplehood: A Model for the Extension of Sovereignty in American Indian Studies. *Wicazo Sa Review*, 18(1), 7-24. Retrieved October 27, 2020, from <http://www.jstor.org/stable/1409431>
- International Organization for Standardization.** (n.d.). *ISO 15489-1:2016 Information and documentation – Records management – Part 1: Concepts and principles*. Retrieved from <https://www.iso.org/cms/render/live/en/sites/isoorg/contents/data/standard/06/25/62542.html>
- International Organization for Standardization.** (2017). *ISO 23081-1:2017(en) Information and documentation — Records management processes — Metadata for records — Part 1: Principles*. ISO. <https://www.iso.org/obp/ui/fr/>.
- Jaffe, R.** (n.d.). *Library Guides: Metadata Creation: 1. What are metadata?* Retrieved November 22, 2020, from <https://guides.library.ucsc.edu/c.php?g=618773&p=4306381>

- Jimerson, R.** (2006). Embracing the Power of Archives. *The American Archivist*, 69(1), 19–32. <https://doi.org/10.17723/aarc.69.1.r0p75n2084055418>
- Jorgensen, M. (Ed.)** (2007). *Rebuilding Native nations: Strategies for governance and development*. Tucson: University of Arizona Press.
- Krebs, A. B.** (2012). Native america's twenty-first-century right to know. *Archival Science*, 12(2), 173-190. doi:10.1007/s10502-011-9161-2
- Marshall, C., & Rossman, G. B.** (2003). *Designing qualitative research*. Sage.
- Metadata Reports.** (n.d.). Retrieved October 15, 2020, from https://www.laserfiche.com/support/webhelp/Laserfiche/10/en-us/userguide/default.htm#./Subsystems/client_wa/Content/PrintingExporting/Exporting_a_Contents_or_Search_Results_List.htm
- Miller, H.** (1996). The multiple dimensions of information quality. *Information Systems Management*, 13(2), 79-82. doi:10.1080/10580539608906992
- Mills, A. J., Durepos, G., & Wiebe, E.** (2010). *Encyclopedia of case study research*. SAGE Publications.
- Mitroff, I., & Bonoma, T. V.** (1978). Psychological Assumptions, Experimentation, and Real World Problems: A Critique and an Alternate Approach to Evaluation. *Evaluation Quarterly*, 2(2), 235–260. <https://doi.org/10.1177/0193841X7800200204>
- Navigating Record Group 75.** (2016, August 15). National Archives. <https://www.archives.gov/research/native-americans/bia-guide>
- National Commission on Libraries and Information Science, W. D.** (1992). *Pathways to Excellence: A Report on Improving Library and Information Services for Native American Peoples*. Retrieved from <http://search.ebscohost.com.ezproxy2.library.arizona.edu/login.aspx?direct=true&db=eric&AN=ED358858&site=ehost-live>
- NCAI Policy Research Center** (2019). *Research Policy Update: Final Rule Part 5 –Tribal Research Codes*. National Congress of American Indians, January 2019
- O'Neal, Jennifer R.** (2015) ""The Right to Know": Decolonizing Native American Archives," *Journal of Western Archives: Vol. 6 : Iss. 1 , Article 2*. <https://digitalcommons.usu.edu/westernarchives/vol6/iss1/2>
- Peersman, G.** (2014). Overview: Data Collection and Analysis Methods in Impact Evaluation, *Methodological Briefs: Impact Evaluation 10*, UNICEF Office of Research, Florence.
- Pugh, M. J. & Society of American Archivists.** (1992). Providing reference services for archives and manuscripts. Chicago: Society of American Archivists. Mary Jo Pugh by HathiTrust available at <http://hdl.handle.net/2027/mdp.39015024092804> under a Creative Commons Attribution-NonCommercial-ShareAlike http://www.hathitrust.org/access_use#cc-by-nc-sa-3.0
- Rainie, SC, Rodriguez-Lonebear, D and Martinez, A.** 2017b. Policy Brief: Data Governance for Native Nation Rebuilding (Version 2). Available at http://nni.arizona.edu/application/files/8415/0007/5708/Policy_Brief_Data_Governance_for_Native_Nation_Rebuilding_Version_2.pdf.
- Rainie, S. C. , Schultz, J. L. , Briggs, E. , Riggs, P. , Palmanteer-Holder, N. L.** (2017). Data as a Strategic Resource: Self-determination, Governance, and the Data Challenge for Indigenous Nations in the United States. *The International Indigenous Policy Journal*, 8(2). Retrieved from: <https://ir.lib.uwo.ca/iipj/vol8/iss2/1>
DOI: 10.18584/iipj.2017.8.2.1

- Redbird, D. and Bethany Redbird.** (2015, September 10). Tribal Records Management 102. Retrieved July 1, 2020, from The Sustainable Heritage Network website: <https://sustainableheritagenetwork.org/digital-heritage/tribal-records-management-102>
- Rodriguez-Lonebear, D.** (2016). Building a data revolution in Indian country. In T. Kukutai & J. Taylor (eds), *Indigenous Data Sovereignty: Towards an Agenda* (pp. 277–296). Canberra: CAEPR Research Monograph, 2016/34. ANU Press.
- Roy, Loriene, & Alonzo, Daniel L.** (2003). Perspectives on tribal archives. *The Electronic Library*, 21(5), 422-427.
- Schellenberg, T.** (1956). *Modern archives: Principles and techniques*. Chicago: University of Chicago Press.
- Smith, D. E.** (2016). Governing data and data for governance: the everyday practice of Indigenous sovereignty. In T. Kukutai & J. Taylor (eds), *Indigenous Data Sovereignty: Towards an Agenda* (pp. 117-135). Canberra: CAEPR Research Monograph, 2016/34. ANU Press.
- Snipp, M.** (2016). What does data sovereignty imply: What does it look like? In T. Kukutai & J. Taylor (eds), *Indigenous Data Sovereignty: Towards an Agenda* (pp. 39–56). Canberra: CAEPR Research Monograph, 2016/34. ANU Press.
- Snyder, D. B.** (2012). Ho-chunk nation tribal law profile. *Tribal Law Journal*, 12, 1-12.
- SAA Core Values Statement and Code of Ethics.** SAA Core Values Statement and Code of Ethics | Society of American Archivists. (2020, August). <https://www2.archivists.org/statements/saa-core-values-statement-and-code-of-ethics>.
- SAA Dictionary: Archive.** (n.d.). Retrieved October 5, 2020, from <https://dictionary.archivists.org/entry/archive.html>
- SAA Dictionary: Life cycle.** (n.d.). Retrieved October 11, 2020, from <https://dictionary.archivists.org/entry/life-cycle.html>
- SAA Dictionary: Metadata.** (n.d.). Retrieved November 21, 2020, from <https://dictionary.archivists.org/entry/metadata.html>
- SAA Dictionary: Open Archival Information System.** (n.d.). Retrieved November 21, 2020, from <https://dictionary.archivists.org/entry/open-archival-information-system.html>
- SAA Dictionary: Provenance.** (n.d.). Retrieved October 5, 2020, from <https://dictionary.archivists.org/entry/provenance.html>
- SAA Dictionary: Record value.** (n.d.). Retrieved October 11, 2020, from <https://dictionary.archivists.org/entry/record-value.html>
- SAA Dictionary: Reference interview.** (n.d.). Retrieved October 11, 2020, from <https://dictionary.archivists.org/entry/reference-interview.html>
- Thibodeau, K.** (2007). The Electronic Records Archives Program at the National Archives and Records Administration. *First Monday*, 12(7). Retrieved from <http://firstmonday.org/ojs/index.php/fm/rt/printerFriendly/1922/1804>
- Thomas, R. K.** (1966). Colonialism: Classic and Internal. *New University Thought*, 4, (pp. 37–43).
- Walter, M. & Suina, M.** (2019) Indigenous data, indigenous methodologies and indigenous data sovereignty, *International Journal of Social Research Methodology*, 22:3, 233-243, DOI: 10.1080/13645579.2018.1531228
- Wilkinson, Mark D, Dumontier, Michel, Aalbersberg, IJsbrand Jan, Appleton, Gabrielle, Axton, Myles, Baak, Arie, . . . Mons, Barend.** (2016). The FAIR Guiding Principles for scientific data management and stewardship. *Scientific Data*, 3(1), 160018.