Newsletter Volume 44 No. 1
April 2020

2020 CTA Spring Meeting
April 17, 2020
9:00 am

The CTA will be hosting the meeting virtually on Zoom - additional instructions and a link to the meeting will be distributed to current members via email.

Only members will be able to participate in the meeting so please renew your membership on the CTA website, if you have not done so already.

In this issue:

McKinney Falls State Park, Austin, Texas (Photo by: Tina Nielsen Spring 2019)

President's Forum

Dear CTA Colleagues,

I hope this newsletter finds you all in good heath and following recommended best practices for minimizing exposure to the coronavirus. These are some pretty uncertain times and I think our profession and larger society will be going through some changes for a while.

From this and other perspectives, our upcoming Spring meeting will be one of the most important ones that we have had in a long time. We will be reviewing and voting on a revised set of Survey Standards and revised Curation Standards. We will also have an updated set of Cemetery Standards to talk about, and an update from the Reporting Standards Committee. A lot of thought and discussion have gone into updating how our profession conducts its business, and we'll be ready to take action on a lot of that on April 17. Another reason this is an important meeting for us is that it will mark the first time the CTA has met electronically. Cancelling our face-to-face meeting was a common sense response to the current coronavirus situation and I know we'll all miss the opportunity to meet together and catch up with our colleagues. However, I'm confident that this will be something of a turning point in how our Council reaches its members, and should help create a model for future online gatherings and outreach. We'll be voting on a new budget for 2021, and have several important Committee and Agency presentations. Included here will be the annual E. Mott Davis award presentation, and two (!) Mark Denton Career Achievement Award presentations. It will also be my final meeting as President of your Council, and so it's a pretty significant event for me personally and professionally.

Schedule

About our schedule, because of the virus outbreak we had to cancel our Thursday Bayesian training, our Friday afternoon training (to have been offered by the USACE), and our Friday afternoon Social. This means that for the first time in longer than I know, our Spring schedule consists solely of the Friday morning business meeting. As I mentioned in the last email I sent out to members, we'll have a practice meeting on April 16th for those who want to be sure they understand the online Zoom platform and can successfully participate in the meeting. We'll be opening the meeting early on the 17th, and expect the meeting to conclude by noon. If you are an agency representative or a committee chair who typically makes a report, please plan ahead and be ready to participate in this format. Tina Nielsen will collect any materials you want to share with the membership if you send it to her ahead of time. You must be a CTA member of Student or Professional (which includes Principal Investigator) category to vote on any items on the agenda.

Some Agenda Items

As usual, the meeting agenda will be a full one, with lots of committee and agency updates. These updates provide a lot of information, and I know we're grateful to all agency representatives and committee chairs for being ready to share their news with us. Our current officers (Treasurer, Secretary, Newsletter Editor) have agreed to serve for another term in their respective roles, so our officer election should be perfunctory. Unless there are nominations from the floor, the plan for elections this time will be a vote by acclamation for the slate as presented. The Vice President role has another year, so Dr. Erin Phillips will continue to serve in this capacity until Spring 2021. I'll share more about the office of President below. Missi Green will finally get to rotate off of the Executive Committee as Past President, and I want to say Thank You most sincerely for your perspective and support over the last four years. Missi is an outstanding example of professionalism, collegiality and integrity, and we should all be proud to have her as a colleague and friend. I know I am.

Perhaps the most significant agenda item will involve discussion of multiple Performance Standards documents. Some significant work has gone into drafting, reviewing, and redrafting these over the past several months and even longer. For me personally, this represents something of a turning point for our profession, as these updated Standards documents will guide how professional work ought to be done for years to come. Once voted on, the Texas Historical Commission will consider whether they'll be officially adopted, thereby making them requirements for professional practice. As many of you know, required performance standards presently include survey, cemetery investigations, curation, and reporting (called "guidelines for CRM reports").

The survey, cemetery investigations, and curation documents will be published in this newsletter, so take time to go through them and make note of comments. Please bear in mind that no one should expect each of these to be perfect, but that a lot of work has gone into drafting them. Like last spring, I know we'll have some engaged discussion about all of these documents, but please consider this: These revised (or new) standards are the result of a year (or more) of thoughtful, considered dialog involving several of your CTA colleagues who volunteered to participate in these ad hoc committees. Our members (you) raised these topics, and what is presented has been drafted with thought and care. Together they reflect our goal of improving the quality of work done in our state without posing undue burdens in terms of cost, delay, or technical requirements. I want to extend a very special Thank You to Dr. Jodi Jacobson, Chair of the Standards and Guidelines Committee, for her work in heading up this long effort and to the many others who have contributed to this process.

Closing

Clearly, this meeting and the months following will be something of a new experience for all us. We're all watching local, state, and federal governments to see what actions are recommended to keep our communities safe and moving forward, and to see whether regulations that require our professional services are lifted, temporarily suspended, or rolled back. Many of the projects that require archeological consultants are deemed "critical" or "essential" and have to do with infrastructure improvements. But the requirements and good practices for keeping our team members safe from needless exposure to the virus will undoubtedly affect many of us, and will probably mean some people loose access to billable work. As one way of helping support our professional community at this time, the CTA has posted safe work policies issued by a couple of companies (Terracon and SWCA) on our website. We invite others to share similar or other resources that our industry can refer to in order to continue working as safely and productively as we can during this time.

Looking back over the last four years, it has been deeply gratifying to serve as CTA President. Our

Council has seen a lot of changes and developments over this time and this growth is directly attributable to our members. Our membership is larger than ever (we have 176 members as of today!), and the Executive Committee routinely explores how to provide meaningful benefits to our professional community. So far these have come in the form of professional trainings and development material, and have been provided at no cost beyond CTA membership.

In terms of our financial status, we have significantly strengthened and improved the process by which our annual budgets are put together, evaluated, and presented to the membership. Together with a minor adjustment in membership categories, this has helped ensure that our annual revenue remains strong and capable of supporting all of our proposed activities as well as numerous contributions across the archeological network in Texas. These include student research grants, contributions to Texas Beyond History, numerous public outreach grants to help museums sponsor and host community events each fall, scholarships that help minority students attend the annual TAS field school, and more.

I'm very proud of some of the initiatives that have come from the surge in member engagement over the past few years. Two outstanding examples are the Lost Cemeteries Initiative created and driven forward by Andrea Burden, and the Texas Landowners Outreach Initiative, inspired by Dr. Eric Schroeder. Our Council actively supports the path-making work of Dr. Andrea Roberts of Texas A&M University, who is recording and documenting post-emancipation Freedom Colonies across the state. Initiatives and collaborations like these (and others that will come about in the future) will help record and preserve important elements of our state's cultural heritage.

At your request, the CTA has almost completely rebuilt its digital presence, moving to the Wild Apricot web platform and membership management service. This transition wasn't especially easy for all of us, but it allows each of you to manage your own membership and contractor listing registration and renewal, and it allows your Executive Committee to more effectively and efficiently communicate with you. Along the way, you may have noticed sustained improvement in our overall digital/social media communication practices. All of this growth and development is attributable to Dr. Catherine Jalbert, the new site archeologist at Varner Hogg and Levi Jordan state historic sites, and she deserves enormous recognition for her hard work and contributions to our Council.

As President for the last four years, it has been an honor to work alongside so many devoted and creative people, especially the current and former CTA officers. It is enormously gratifying to see people willing to volunteer their time and energy for the benefit of our professional community. Four years is a long time for our Council, and I think it's important that others have an opportunity to help contribute to the sustained and future growth and development of the CTA. Dr. Todd Ahlman, Director of the Center for Archaeological Studies, has expressed his interest and willingness to serve as President, and I know he will do an excellent job at continuing the trajectory of growth and development that we have enjoyed in recent years. He has already provided significant support by making all the arrangements to host our upcoming online meeting, and I look forward to doing what I can to support his initiatives and agenda over the next two (or more) years.

Thank you very much for your involvement in and support for CTA. I look forward to "seeing" you (from a safe social distance) on the 17th!

Jon Lohse

Spring 2020 Agenda

Registration – 8:30 am

Call to Order – 9:00 am

Announcements

Approval of Minutes, Fall 2019 Meeting

Officers' Reports
President (Jon Lohse)
Past President (Missi Green)
Vice President (Erin Phillips)
Secretary (Scotty Moore)
Treasurer (Eric Schroeder)
Newsletter Editor (Tina Nielsen)

Agency Reports
Texas Historical Commission (Brad Jones)
Texas Parks and Wildlife (Michael Strutt and John Lowe)
Texas Department of Transportation (Scott Pletka)
Texas Archeological Research Laboratory (Jonathan Jarvis)

Standing Committee Reports
Auditing (Mark Denton)
CTA Communications (Catherine Jalbert)
Contractors List (Erin Phillips)
Curation (Marybeth Tomka)
Governmental Affairs (Nesta Anderson)
Membership (Katie Canavan)
Multicultural Relations (Mary Jo Galindo)
Nominating (Bill Martin)
Public Education (Todd Ahlman)
Standards and Guidelines (Jodi Jacobson)

Ad Hoc Committee Reports
Texas Private Lands Heritage Preservation Partnership (Eric Schroeder)

Old Business

New Business

Meeting Adjourns – 12:00 pm

Note: *Agenda is subject to change prior to the Spring Meeting*

Vice President's Report

By: Erin Phillips

I am looking forward to being able to see folks in mid-April at our Zoom meeting. So much has happened in the last few months in planning for our spring meeting and then shifting it to online with the onset of COVID-19 in our area.

Plans for the fall meeting have also changed. The hotel in Houston decided to book a larger group during our contracted dates for the TAS meeting. This meant that the TAS meeting committee had to come up with some other options. The ultimate decision was to move the meeting to the following weekend (Halloween weekend). Unfortunately, it means that I will be unable to attend as I have been already committed to the Southeastern Archaeological conference (SEAC) in Durham, NC that same weekend. I will miss seeing you all terribly, especially in the absence of an in-person spring meeting. Nonetheless, I am still actively planning the 2020 CTA Career Social. The local arrangements committee postponed our in-person meeting at the hotel a couple of weeks ago for safety reasons, but we continue to communicate via email. Hopefully I'll have some further updates about our progress on April 17th.

Secretary Report

By: Scotty Moore

Hello all,

I'm sorry that I won't be able to see everyone in person at this year's Spring meeting, but it gives us an opportunity to try out the Zoom online meeting platform, which could be great for encouraging collaboration between members in new and exciting ways. One great benefit of Zoom is that we can record the entire meeting, and those folks who wouldn't have been able to attend in person will be able to view the entire thing. I'll work with Catherine and the Executive Committee to make sure that the recording is available to everyone via the CTA website in the coming weeks. Of course, I'll still maintain a written record of the meeting in compliance with our bylaws.

As of the last week of March, we have 174 members with 44 contractor listings, 41 Principal Investigators, 74 professional archeologists, 9 students, and 6 retirees. This total is down from 194 total members at this same time last year, though I realize that lots of people wait until the Spring meeting to renew their membership and that we've all been thrown for a loop by the COVID-19 situation. Keep in mind that the website is open 24/7 to access and change your membership information. If you have any issues or questions, please don't hesitate to reach out to me or to Catherine Jalbert and we can help get things figured out.

One issue that I have encountered, albeit infrequently, is that some folks aren't sure as to whether they belong in the "Professional Archeologist" or "Principal Investigator" category. I completely understand this confusion, especially if your formal work title is something like "Staff Archeologist" or "Director of Laboratory Analysis". As our esteemed Treasurer, Dr. Eric Schroeder, recently and succinctly put it: "if you pull permits, you are a Principal Investigator". Here again, I'm happy to help anyone that needs clarification on any of the membership categories and how to switch your membership between them.

I hope that you and your loved ones remain safe during this weird time and I look forward to seeing everyone in Houston in October. If you haven't been to Houston recently, there are several great new beer gardens in the western part of the city that I'm happy to introduce people too!

Thanks,
Scotty

Treasurer Report

By: Eric Schroeder

I am pleased to report that the financial stability of the CTA is strong, due to the steady increase in our numbers and the generosity of our membership and the companies we work for who have all been sharing the wealth during the recent boom times. This has allowed us to meet all our financial obligations with a surplus to spare. It is this surplus that I would like to address later in the report, but the status of our accounts as of March 27, 2020 is as follows:

Business Checking	$26,860.14
Investment Savings	$18,926.67
Scholarship Fund	$ 9,130.72
Total	**$54,917.53**

This last January we closed the books and computed the actual expenses for 2019, compared this figure to the budget numbers, and although we anticipated a $157.00 budget surplus for the year, we actually ended up with $5,228.80 surplus. This surplus trend has continued from the previous year (2018) and it looks like it is due largely to our overly conservative membership projections against our actual numbers, and the decision to offset the cost of the Fall Meeting Career Social with the purchase of company booths. Last year we approved the 2020 budget with a surplus of $1,454.00 and even though we subsequently approved pursuing the private landowner partnership initiative (to be discussed later in the newsletter), I fully anticipate a budget surplus to be posted for 2020 when the actuals get posted.

This information was taken into consideration in the formulation of our 2021 budget (**see page 19 of the newsletter**). The budget committee met virtually and projected a 1.8% increase in Principal Investigator membership purchases over the 2020 budget, while the numbers of all other membership categories and contractor listings remained the same. All this equates to a projected 1.8% increase in membership and a very minimal increase in revenue (0.4%) over 2020. All expenses from the 2020 budget were carried over into 2021, and the Executive Committee reviewed and approved the 2021 budget at our meeting in March with a deficit balance of $397.50.

CTA Investment Opportunities

The second item I would like to discuss with the membership is the management of our funds. As far back as I am able to document, which is about a decade, CTA has kept its funds exclusively in money market accounts that have earned on average 0.01% interest per year. Yes…that's right…a 100th of a percent. This is poor money management because our money is not even keeping up with the rate of annual inflation, which averages about 3.22% per year. So, although it would seem that we are saving

money, the fact of the matter is, if you bother to do the math, we are losing money, as the buying power of our dollars is diminishing exponentially in relation to the money we actually earn in interest. To illustrate, I pulled together the following chart that details our average account balance adjusted for inflation.

As the chart shows, the delta between what we think we have against the value of what we have represents a **loss of $1,528.63 for 2019**. CTA has been around since it initially formed in 1977, and in my opinion if we expect it to be around for another 40 years, we need to start making some smart decisions about our money by taking a moderate amount of risk and investing in the market. Yeah…I know…the stock market is a bit volatile right now, and we probably ought to wait until we get through the current crisis to allow things to stabilize a little bit before we go handing our money out to Wall Street. But keeping in mind with what Wall Street investors say, "the best time to buy is when the market is down", the time to invest is soon, and I suspect that by late summer or early fall, we need to make a move. I think the best course of action to keep the risk low is to seek out investments that are mostly comprised of bonds, or if we are willing to take a more aggressive strategy we can invest in a mutual fund that is mostly bonds, but with a few stocks thrown in. I personally invest with Vanguard because they have the lowest fees in the industry, and I looked up a few products they have online that are low to moderate risk and picked out a few to demonstrate what I mean.

2019 Account Balances Adjusted for Inflation

Account	2019 Average Ledger Balance	Interest Earned	Total	Rate of inflation	Loss in Value	Value Adj for Inflation
Business Checking	$19,409.19	$2.26	$19,411.45	0.0322	$625.05	$18,786.40
Investment Savings	$18,925.74	$3.77	$18,929.51	0.0322	$609.53	$18,319.98
Scholarship Fund	$9,130.27	$1.86	$9,132.13	0.0322	$294.05	$8,838.08
		What we think we have	$47,473.09		The value of what we have	$45,944.46

Of course there is a lot of information to digest when choosing investments, but to illustrate I highlighted a few statistics (see chart at bottom of page). I chose to show you the 10-year average return on investment because in the unlikely event we decide to pull the plug on the organization within the next five years, we need to look at the long term. And I also chose to include the return since inception for the same reason and to show the long-term performance of the product.

Anyway, I'm not asking the membership to decide on which one of these to buy now, but I at least think we should assign a committee to look in to this further, maybe seek out a financial advisor, and have a recommendation to the membership by the fall business meeting.

Product Name	10-year Average Return	Return Since Inception	Risk Level
Vanguard Total Bond Market Index Fund Admiral Shares (VBTLX)	3.58%	4.38% (11/21/2001)	Low (all US Bonds)
Vanguard Target Retirement Income (VTINX)	5.82%	5.37% (10/27/2003)	Low to Moderate (70% bonds, 30% stocks)
Vanguard Life Strategy Moderate Growth Fund (VSMGX)	8.06%	7.69% (09/30/1994)	Moderate (40% bonds, 60% stocks)

Newsletter Editor Report

By: Tina Nielsen

Hi Everyone-

Similar to last Spring, this is another very important CTA newsletter issue. The standards and guidelines and curation committees have worked very hard to revise the standards and guidelines documents based on comments and feedback received from the membership at the last Spring meeting, and get these documents ready for final review and vote by the membership. The three revised standard and guidelines documents up for vote at the Spring 2020 meeting include:

1) Intensive Terrestrial Survey Guidelines
2) Standards for Identification of Cemeteries and Unmarked Graves
3) Guidelines and Standards for Curation

Some of these are lengthy documents, so I encourage you all to review them well before our CTA business meeting on April 17th and come prepared with any questions and/or concerns. The documents are included at the back of this newsletter (starting at page 44) and are also posted as stand-alone pdfs on the members-only section of the CTA website.

One additional item up for vote is a Bylaw change that addresses the composition of the curation committee (see the curation committee update on page 12 and the proposed Bylaw change on page 18). This Bylaw change is also posted on the members-only section of the CTA website.

One final item (that I will also bring up at the meeting) is a request for all committee chairs to start submitting updates/reports that can be included in the newsletter; over the years this has been very inconsistent. We hear committee reports at our business meetings; however, some members are unable to attend and have to wait until the meeting minutes are posted in the next newsletter if they want to see what each committee has been working on. On that same note, agencies are also always welcome to submit updates to be included in the newsletter.

On a more personal note, I hope everyone is staying sane and healthy during this COVID-19 situation. When I start getting a little stir crazy I like to go outside for a walk around the neighborhood and pretend I am at places like McKinney Falls State Park (pictured on the cover of the newsletter). This park is currently closed to the public, but some parks are still open if you need a break from isolation – just please be safe and maintain appropriate physical distancing in whatever activities you do!

Looking forward to seeing you all (virtually) at the Spring meeting in a few weeks!

Cheers,
Tina

Communications Committee Report

By: Catherine Jalbert

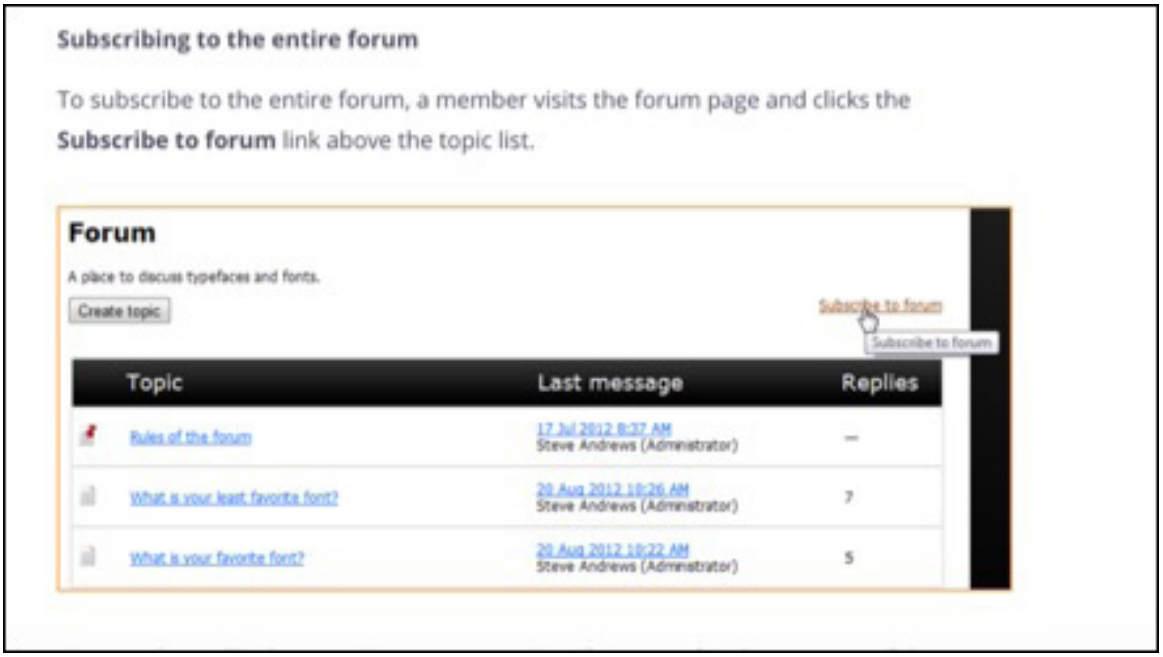
Dear Members,

Since the last time we met, the Communications Committee has continued to make improvements to the CTA website (http://counciloftexasarcheologists.org). The majority of this work has included transitioning the old PDF version of the Contractors List to an automated version (https://counciloftexasarcheologists.org/Contractors-List). Members on the Contractors List now have more control over their listings and are able to make updates as needed through their membership profiles. As a reminder, the membership dues for the Contractors Listing is a bundled fee of the Principal Investigator membership ($45) and the Contractors Listing ($150). If your membership is current and you find that you need to change your membership level from a different category (e.g., Professional Archaeologist, Principal Investigator, etc.) to the Contractors Listing, please contact me (catherineljalbert@gmail.com) and I'll help you make the switch.

Discussion Forum:

I would like to remind members that the old Yahoo Group has been replaced by the Discussion Forum under the Members Only tab on the CTA website (https://counciloftexasarcheologists.org/Discussion-Forum). All members can post to the forum and those who are subscribed will receive an email when a new post/topic has been added. **SUBSCRIPTION TO THIS FORUM IS NOT AUTOMATIC WITH YOUR MEMBERSHIP** and individual members have to subscribe themselves. I encourage all members to consider doing so for important updates, information, and news from our member community.

To subscribe to the Discussion Forum, log into the CTA website and access the Discussion Forum under the Members Only tab. Once there, click Subscribe to forum (as pictured below).



As we move forward, I would like to continue focusing on maintaining the CTA website, improving the features we already have, and exploring new features that might help us better communicate with and serve the membership.

If you have any suggestions for items you'd like to see incorporated into the website, or have any questions about the items discussed above, please feel free to email me.

Wishing you the best from a socially distant location,

Catherine Jalbert
Communications Committee Chair

P.S.: Have a Safety Plan to Share?

In response to COVID-19, several companies have developed guidelines to ensure safe working conditions for their employees both in the office (or telecommuting) and during fieldwork. In an effort to support our community during this time, the CTA is interested in providing various examples of introduced guidelines/safety plans which members might find useful in developing their own plans or using as a guiding resource. If you would like to share your company's COVID-19 safety plan to be included on the CTA website, please email it to counciloftexasarcheologists@gmail.com. Ultimately, while these guides will be available to all individuals who visit the CTA website in the shorter-term, in the future these will be stored for use/reference under the Members Only section of the website.

Curation Committee Report

By: Marybeth S. F. Tomka

The Committee has stayed in contact via email as we worked through the finishing touches of the revisions to the Curation Guidelines. Several of the committee members added new sections to the document to round out the treatment of objects and records in the field as well as processing and considerations for accessing and using collections that have already been curated. We feel that this new information can be used as a resource for the professional community.

Additionally, we are proposing a change to the structure of the committee that will be a Bylaws change; the sixth member of the committee will be an ex officio position for the Curation Facility Certification Program. The complete Bylaw change is presented later in this newsletter.

The third initiative will be worked on this year and will expand on the CTA training that the committee spread headed. This will be done with a smaller group size to allow more hands-on training with programs useful for curation tasks, as well as packaging and organizing collections for repository storage. This comes out of the TAS Curation Special Task force in which TARL trained TAS representatives on how best to rehabilitate a collection that has been stored for many years. It was successful and we think that CTA members would benefit from seeing the other side of the profession.

Standards and Guidelines Committee Report

By: Jodi A. Jacobson, Committee Chair

Over the past year the Standards and Guidelines Committee have met in person a few times and worked hard virtually to finalize the intensive survey standards. In addition, the committee has continued moving forward with standards for "discovery" and initial survey and delineation of cemeteries, as well as beginning the process of updating the Reporting Guidelines.

The Intensive Survey Standards was voted on and approved by the CTA membership at our last Spring meeting. Since that time, the THC has reviewed the document and provided edits and additions. The CTA Standards and Guidelines Committee has gone back and forth with the THC on their revisions, and we have a final approved version to be put forth to the membership for vote. This revised version includes both the general terrestrial standards and the mechanical prospection standards in one document. This document is meant to be a living document encompassing all survey/discovery level investigations. For example, once we have a final version of the Cemetery investigations guidelines, it will be added in as a new section to this living document.

The Cemetery guidelines were first presented at Spring CTA meeting. In the year since that meeting, the CTA Standards and Guidelines committee have addressed comments we received following that meeting and making other needed revisions to the document. The Standards for Identification of Cemeteries and Unmarked Graves is now ready for CTA membership discussion and vote. If approved by the CTA membership, this document will then move to THC review.

In addition, following the Spring 2019 meeting we formed an ad hoc committee led by Amy Borgens to craft and address changes to reporting guidelines. Luckily, there was high interest and the very active Reporting Guidelines committee has accomplished a lot. While not ready for publication yet, they have prepared a solid draft of the Reporting Guidelines which we will be presenting at the CTA Spring meeting for discussion and input from the membership. Our goal is to take that commentary and prepare something for formal review by the fall CTA business meeting, and to be revised and ready for a vote by the Spring 2021 CTA meeting.

Texas Private Lands Heritage Preservation Partnership Update

By: Eric Schroeder

By a majority vote of the membership last April, the Texas Private Lands Heritage Preservation Partnership (TPLHPP) came into being, referred hereafter in brevity as the Initiative. In September, we were awarded a matching grant and in November we had our first strategic planning session at San Felipe de Austin State Historical Site to refine the effort's mission and objectives. I am grateful to those that agreed to take time out of their busy schedules to help get the initiative off the ground, and a big shout-out goes to Tiffany Osburn, Sarah Chesney, Allison King, John Lowe, Mary Jo Galindo, Philip Washington, and Angela Moody. We developed and ordered exhibit banners and brochures, developed surveys, and purchased exhibitor booths at three annual conferences we knew private landowners would attend in droves.

The first one up was the American Farm Bureau Association Conference in Austin in January. Mary Jo and I occupied the exhibit booth for three days, and man did our feet and calves hurt by the end of the conference, largely because we didn't have an opportunity to sit down due to the volume of visitors to our exhibit booth. Later I learned that there were 2,756 farmers, ranchers and land managers at the conference. Mary Jo and I had direct conversations with over 75 landowners from 27 different states about our Initiative's mission and objectives and collected six surveys and requests for more information.

TPLHPP at the 2020 American Farm Bureau Conference
(left: Mary Jo Galindo, right: Eric Schroeder)

In late February, Philip Washington and I exhibited at the Texas Land Conservation Conference. This event gave us exposure to 291 attendees representing preservation-minded landowners, land trusts, and conservation professionals. Philip and I directly engaged 58 attendees on archeological and historical resource preservation issues and collected four surveys and requests for more information. We also made contact with the chairman of the South Texas Property Owners Association who offered to distribute our survey out to his membership. In addition to the aforementioned events, we are also registered to attend the Texas and Southwest Cattle Raisers Association meeting in Fort Worth, but that conference has been postponed until September due to the current health crisis.

So far in the execution of the 2020 plan for TPLHPP, we have had exposure to over 3,000 private landowners, directly engaged 133 about the Initiative, collected 10 surveys, as well as an offer from a landowner organization to distribute our surveys among its members. Based on the surveys collected and the requests for more information, this effort represents an opportunity to reconnect with landowners who combined own or manage over 22,000 acres of property distributed across 13 Texas counties.

TPLHPP at the 2020 American Farm Bureau Conference
(Philip Washington)

So, what does the Initiative offer landowners? Of course we have high aspirations in this area, but I have always believed in the saying, “Under promise and over deliver”,
especially since the Initiative is new and we are just now getting a sensing of the perceptions private landowners have regarding these issues.

For now what we do are three things:

(1) learn about landowner concerns and collaborate on preservation issues;
(2) provide best management practices for the preservation of heritage resources on private lands; and
(3) connect landowners to resources and organizations that can best facilitate their preservation goals.

What we hope to get from landowners are:

(1) an appreciation for heritage resources and for them to become advocates for heritage preservation in their own communities;
(2) engage federal, state, and local legislative representatives about providing more resources and incentives for heritage preservation on private lands; and
(3) assist us in expanding our outreach efforts with in-kind or monetary donations.

In anticipation of this effort continuing into 2021, the executive committee agreed to move forward with an application to the FY 2021 funding cycle of the Texas Historic Preservation Trust Fund, and CTA submitted a pre-application packet to THC in February. The plan for the Initiative in FY 2021 is to exhibit at the following conferences:

- Texas Forestry Association Conference in Lufkin (October 2020)
- Amarillo Farm and Ranch Show (December 2020)
- Texas Land Conservation Conference in San Antonio (February 2021)
- Texas and Southwest Cattle Raisers Association in Fort Worth (March 2021)

2021 Proposed TPLHPP Budget

Event	Exhibitor Fees	Lodging	Meals	Mileage	
Amarillo	$450.00	$576.00	$110.00	$575.00	(1,000 miles)
Tx Forestry	$250.00	$576.00	$110.00	$287.50	(500 miles)
Tx Cattle	$500.00	$576.00	$110.00	$230.00	(400 miles)
Land Conservation Assoc.	$200.00	$384.00	$110.00	$86.25	(150 miles)
Totals	$1,400.00	$2,112.00	$440.00	$1,178.75	

Total Travel	$5,130.75
Misc (printing, conference swag, parking)	$179.00
Total Budget	**$5,309.75**
TPTF Grant Request	**$2,654.87**
Cost to CTA	**$2,654.88**
Lodging Rate	$96.00
Meals	$55.00
Mileage Rate	$0.575

We are interested in your feedback on the Initiative, so if you have questions, concerns, or you want to become involved, please contact me at eschroeder@baereng.com.

Texas Historical Commission Updates

In consideration of city, state, and federal recommendations, the THC's Austin offices are now closed to the public until further notice. All non-essential Archeology Division and other THC staff are working remotely but remain able to provide most of our services within the standard timeframe. We are very restricted in our ability to travel or attend meetings, and we ask anyone wishing to meet with us beyond email or phone to use tele- or videoconferencing as an alternative.

Currently standard mail services are limited due to staffing, and any projects not submitted electronically may be delayed or unavailable for a substantial period of time should the situation change. Because of this, we strongly encourage anyone not using our online review portal eTRAC to begin using this as soon as possible, as this will guarantee the quickest federal and state reviews.

To ensure timely attention, we are also requesting that all new permit applications be submitted electronically to both the regional archeological reviewer and Bill Martin (bill.martin@thc.texas.gov).

In light of a number of logistical difficulties with the submission and receipt of certain hard copy deliverables, effective March 23, 2020 we are temporarily allowing digital submission of the following in lieu of hard copies to satisfy Texas Administrative Code Chapter 13, Part 2, Chapter 26, Subchapter C, Rule 26.16 (a)(3) & (5) final report requirements:

1. **Final Report Copies**
    a. **The requirement for one unbound printed final report copy will be suspended.**
    b. **The requirement for an archival CD/DVD with digital copies of final reports will be suspended. In lieu of delivery via archival CD/DVD, please e-mail the tagged PDF copies of the restricted and unrestricted versions to Laney Fisher (laney.fisher@thc.texas.gov), with the regional reviewer CC'd. If you have issues with the file size, please contact Laney Fisher for an alternate electronic delivery method.**
    c. **The requirement for the transmittal of 11 redacted copies to the listed libraries and archeological research facilities will be suspended.**
2. **Curation Forms and Held-In-Trust forms from THC Certified Curatorial Facilities may now be submitted electronically. Signed hard copies of HIT forms will be mailed to facilities as soon as possible. Curation and HIT forms should be emailed to Laney Fisher (laney.fisher@thc.texas.gov).**

We also strongly recommend you review the ACHP's current COVID-19 guidelines for federal projects. While we will do our best to keep existing review schedules, depending on circumstances, standard review times may be extended as appropriate.

We appreciate your patience in this difficult time, and please let us know how we may be of further assistance moving forward. Thank you again for helping to preserve the historical and cultural resources of the people of Texas. Stay safe!

Proposed CTA Bylaw Changes

PROPOSED BYLAW CHANGE:

Current Bylaw:

Section 8. Curation Committee The Curation Committee shall consist of six members appointed by the President with the assistance and approval of the elected officers. Members shall serve staggered terms of two years, with three appointed each year, and shall elect their Chair. The Committee shall work to improve and bring up to current standards the care and management of archeological collections (archeological records and material collections).

Proposed Bylaw (changes/additions in red):

Section 8. Curation Committee The Curation Committee shall consist of six members **that include the current Curatorial Facility Certification Program (CFCP) coordinator and five additional members (a mixture of repository representatives and CRM professionals)** appointed by the President with the assistance and approval of the elected officers. **The CFCP will serve as an advisory, non-voting member of the committee.** Members shall serve staggered terms of two years, with two appointed each year, and shall elect their Chair who serves for three years. The Committee shall work to improve and bring up to current standards the care and management of archeological collections (archeological records and material collections).

Proposed 2021 Budget

Category/Budget Item	Fees/Amts	INCOME 2019 Actual No	2019 Actual Amt	2020 Budgeted No.	2020 Budgeted Amt	Proposed 2021 No.	Proposed 2021 Amt	% of 2021 Inc.	EXPENSES 2019 Actual	2020 Budgeted	Proposed 2021 Budget	% of 2021 Exp.	2021 Balance
Memberships		180	$ 9,135.00	205	$ 7,350.00	**225**	**$ 8,250.00**	**38%**					**$ 8,250.00**
Principal Investigator	$ 45.00	127	$ 5,715.00	110	$ 4,950.00	130	$ 5,850.00	27%					$ 5,850.00
Professional Archeologist	$ 30.00	94	$ 2,820.00	65	$ 1,950.00	65	$ 1,950.00	9%					$ 1,950.00
Student/retiree (voting)	$ 15.00	33	$ 495.00	25	$ 375.00	25	$ 375.00	2%					$ 375.00
Institutional (non-voting)	$ 15.00	7	$ 105.00	5	$ 75.00	5	$ 75.00	0%					$ 75.00
Contractor Listing Fees	**$ 150.00**	58	$ 8,700.00	50	$ 7,500.00	**50**	**$ 7,500.00**	**34%**					**$ 7,500.00**
Other income			$ 7.89		$ 2,660.50		**$ 2,660.50**	**12%**					**$ 2,660.50**
Checking Interest			$ 2.26		$ 1.00		$ 1.50	0%					$ 1.50
Money Market Interest			$ 3.77		$ 3.75		$ 3.50	0%					$ 3.50
Scholarship Fund Interest			$ 1.86		$ 1.75		$ 1.50	0%					$ 1.50
Grants/Donations					$ 2,654.00		$ 2,654.00	12%					$ 2,654.00
Adminstration									$ 1,295.19	$ 1,400.00	**$ 1,400.00**	**6%**	**$ (1,400.00)**
Misc. Expenses									$ 72.06	$ 100.00	$ 100.00	0%	$ (100.00)
Digital Management									$ 662.69	$ 750.00	$ 750.00	3%	$ (750.00)
Credit Card Fees									$ 560.44	$ 550.00	$ 550.00	2%	$ (550.00)
Committee Expenses									$ 109.10	$ 1,000.00	**$ 1,000.00**	**5%**	**$ (1,000.00)**
General Committee Expendatures									$ 109.10	$ 1,000.00	$ 1,000.00	5%	$ (1,000.00)
Donations									$ 9,025.00	$ 7,500.00	**$ 7,500.00**	**34%**	**$ (7,500.00)**
CTA Student Grants									$ 2,400.00	$ 2,400.00	$ 2,400.00	11%	$ (2,400.00)
TAAM Event Grants (divided among 5 applicants)									$ 2,500.00	$ 1,500.00	$ 1,500.00	7%	$ (1,500.00)
Archeological Conservancy									$-	$ -	$ -	0%	$ -
TAS Research Support Fund**									$-	$ -		0%	$ -
Texas Beyond History									$ 1,800.00	$ 1,800.00	$ 1,800.00	8%	$ (1,800.00)
TAS Multicultural Program									$ 1,800.00	$ 1,800.00	$ 1,800.00	8%	$ (1,800.00)
Other Donations									$ 525.00	$ -	$ -		
Events		12	$ 2,400.00	10	$ 3,400.00		**$ 3,400.00**		**$ 3,746.93**	**$ 5,000.00**	**$ 5,000.00**	**23%**	**$ (1,600.00)**
Spring CTA Social			$ -		$ 400.00		$ 400.00		$ 1,048.63	$ 1,500.00	$ 1,500.00	7%	$ (1,100.00)
Fall CTA Career Social ($200-2019, $300-2020)			$ 2,400.00		$ 3,000.00		$ 3,000.00		$ 2,698.30	$ 3,500.00	$ 3,500.00	16%	$ (500.00)
Outreach and Training Activities									$ 837.87	$ 7,308.00	**$ 7,308.00**	**33%**	**$ (7,308.00)**
Professional Development									$ 625.07	$ 2,000.00	$ 2,000.00		**$ (2,000.00)**
Public Outreach									$ 212.80	$ 5,308.00	$ 5,308.00		
Total Budget			$ 20,242.89		$ 20,910.50		**$ 21,810.50**		$ 15,014.09	$ 22,208.00	**$ 22,208.00**		**$ (397.50)**

Announcement

The CTA would like to congratulate Dr. Andrea Roberts on winning a Whiting Public Engagement Fellowship for The Texas Freedom Colonies Storytelling Project! The Whiting Public Engagement Program is a distinctive national grant founded to champion the public humanities in all its forms, and to highlight the roles scholars play in using the humanities to advance communities around the country. Dr. Roberts was awarded one of six $50,000 Fellowships. The CTA has supported some of Dr. Roberts' grant applications with letters of recommendations over the years and had the opportunity to hear about the Texas Freedom Colonies Storytelling Project from Dr. Roberts herself in a wonderful presentation last year. A summary of Dr. Roberts' project and plans for the fellowship funds is presented below.

The Texas Freedom Colonies Storytelling Project

Andrea Roberts (Texas A&M University; Urban Planning)

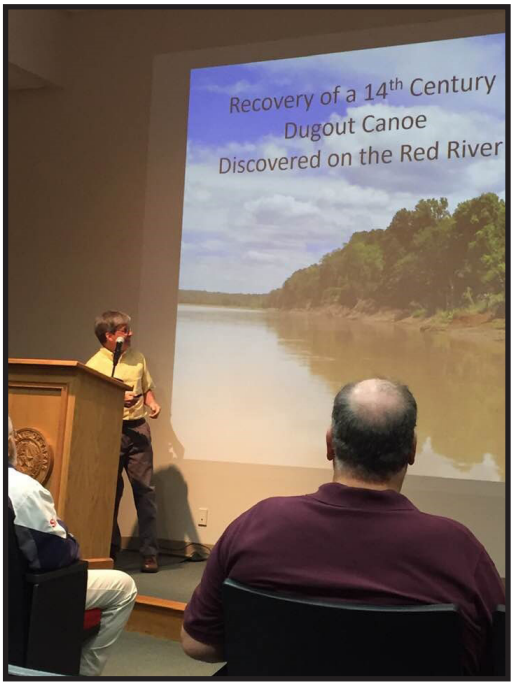
After the Civil War, formerly enslaved people founded over five hundred "freedom colonies" in Texas, where they owned land and lived freely for the first time. Colonies were unified by churches, schools, and a collective belief in a sense of community. During the Great Migration, residents began flocking to urban black meccas, and today the majority of freedom colony descendants live in Texas's major cities.

Freedom colonies represent a crucial link between contemporary Black Texans and their family roots, and in many cases are the last connections some African Americans have to their enslaved ancestors. Unfortunately, many are unmapped, absent from public record, or destroyed due to natural disasters, gentrification, and land dispossession. Andrea Roberts has spent years traveling throughout Texas interviewing aging residents and their descendants to locate freedom colonies and record grassroots preservation practices in the Texas Freedom Colonies Atlas, an interactive digital tool she created to map these communities through oral history, ethnography, and action research. Since 2017, she has mapped 357 of 557 known freedom colonies across Texas.

Roberts will use the Fellowship to engage deeply with members of the freedom colony diaspora, collaborating with museums to gather, share, and preserve the stories that help us understand their enduring attachments to these places. In a series of community events, Roberts and her team will invite freedom colony descendants to bring in photographs and heirlooms and discuss their significance with historians in a "living-room"-like setting. Their stories, photos, and objects will populate a digital showcase exploring the relationship between history, memory, and the value descendants attach to freedom colony culture and land. The project's ultimate goal is to explore the ways descendants sustain connections to these disappearing places and to advocate for preserving these important sites of cultural and intergenerational wealth.

CTA Public Outreach Grant Reports

2019 CTA Grant Report - Sam Houston Memorial Museum



Since the 2000s, the Sam Houston Memorial Museum in Huntsville has celebrated Texas Archeology Month and hosted a guest archeologist to present a free lecture to the public about a significant topic in Texas or regional history. Recent topics have included the Sea of Mud/Mexican Army Retreat, prehistoric rock art of West Texas, Frost Town townsite in Houston, and the Alamo/Texas General Land Office plans for future interpretation. This year, the SHMM hosted Mr. Jeff Girard from Northwest State University, and regional archeologist for the Louisiana Division of Archeology. In cooperation for his lecture, the SHMM had special exhibits for the evening featuring various archeological and Sam Houston-related objects and artifacts from the museum's collection.

Mr. Girard's lecture detailed the June 2017 discovery of a remarkable prehistoric dugout canoe on the banks of the Red River north of Shreveport, Louisiana. About 34 feet in length, it is one of the largest discovered in the Southeastern United States. A radiocarbon date indicated that the canoe was constructed in the 14th century, contemporary with an extensive Caddo settlement on the east side of the river. The presentation summarized the challenges that confronted researchers and local volunteers for extracting the canoe from the riverbank and transporting it to Texas A&M University for conservation. Mr. Girard also provided information about the nearby Caddo village, as well as the nature and importance of visitation, gift giving, and trade among Caddo societies of the 14th century.

Among the approximately 100 individuals who attended the lecture on October 10, many were from local I.S.D.s as well as Sam Houston State University and many regional businesses. Schoolchildren and teachers, college students, faculty, and staff from SHSU and TDCJ, as well as people within the community who were interested in local history, arts, and culture attended the evening event.

CTA 2019 Grant Report - Texas Archeological Research Laboratory

With the generous CTA Public Outreach Grant awarded from the Council for Texas Archeologists, The Texas Archeological Research Laboratory ushered in Texas Archeology Month with another successful Texas Archeology Month Fair! In coordination with multiple agencies, this free public event featured hands-on activities, presentations, and artifact displays designed to engage children and adults alike. You can see parents and kids getting into dancing below! The various organizations hosted booths with a wide array of educational and interactive activities including atlatl throwing, ochre painting, multiple show and tell displays, flintknapping, interactive dance demonstrations, and much more covering topics of archaeological methodology, experimental archaeology, and cultural heritage in Texas.

Great Promise for American Indians conducted a dance demonstration and pulled the crowd in to learn a snake dance.

Christopher Ringstaff, Sergio Ayala, and Robert Lassen demonstrate flintknapping.

Our resident artifact ID expert and archaeologist, Elton Prewitt, was available for all of your artifact ID needs!

TARL was delighted to host three of our own booths including a leather painting station, a bead working station, and an archaeological mini-dig where children were able to try their hand at archaeological excavation methods. You can see past and present TARL representatives having a blast below!

Lauren Bussiere, Annie Riegert Cummings, and Marybeth Tomka enjoying the fair!

Much gratitude goes to our generous donors including the Council of Texas Archeologists, the Texas Historical Commission, the Travis County Archaeological Society, AR Consultants, and the Gault School of Archaeological Research. This year's fair was made a success through the help of 78 of our local professional archeologists, avocational archaeologists and student volunteers. These 78 volunteers were from 22 various museums, archaeological organizations, and student groups, and we reached a total of 303 guests who attended the fair!

Student volunteers show fair attendees how to use the Atlatl.

Keva Boardman shows our younger attendees how to paint with fat and ochre.

Kenneth Headrick discusses real artifacts vs. reproductions.

(Photos courtesy of Tom Williams, Gault School of Archaeological Research)

Museums and Cultural Affairs

CTA Public Outreach Grant Report **January 29, 2020**
Award: $350 for the printing of archaeology conference program

The El Paso Museum of Archaeology (EPMArch) has hosted the Biennial Jornada Mogollon Archaeology Conference for the past 16 years. The conference, which is held every other year during the month of October, serves to promote archaeology in our region and to highlight the significance of protecting and preserving our heritage and cultural resources. The conference also coincides with Texas Archeology Month, providing an excellent platform for public engagement.

The 21st Biennial Jornada Mogollon Archaeology Conference featured 15 presenters who gave 30-minute presentations each over the course of two days from October 11-12, 2019. Presenters covered a variety of topics including prehistoric, historic and modern research within the Jornada Mogollon region and surrounding areas. Of special note was a visit from Pat Beckett, one of the original founders of the Jornada Mogollon Conference who gave us a nice overview of the history of the biennial event. A dinner out under the Museum's gazebo followed the first day of presentations where professionals, staff and enthusiasts got a chance to sit down and network. In all, the conference was a big success with a record-breaking attendance of 91 people! The Museum will publish a journal of this conference's proceedings in 2021.

The El Paso Museum of Archaeology would like to thank the Council of Texas Archeologists (CTA) for the $350 Public Outreach grant award we received which funded the printing of 100 copies of the conference program. CTA was acknowledge as a donor/sponsor of the conference on the backside of the front cover of the program as well as in the Museum's fall 2019 issue of *Members' Update* newsletter magazine. We have enclosed hard copies of both with this report.

Sincerely,

Jeff Romney
Program Director
Museum Supervisor, City of El Paso

cc: Elda Rodriguez-Hefner
Authorized Official
Grants Administrator, City of El Paso

Jeff Romney – Museum Supervisor, El Paso Museum of Archaeology
4301 Transmountain Road | El Paso, Texas 79924 | (915) 212-0421

"Delivering Outstanding Services"

Photographs from the El Paso Museum of Archaeology – 21st Biennial Jornada Mogollon Archaeology Conference

21st Biennial
Jornada Mogollon
Conference
October 11-12, 2019
El Paso Museum of Archaeology
4301 Transmountain Road
El Paso, Texas 79924
EL PASO MUSEUM OF ARCHAEOLOGY

THE MUSEUM WOULD LIKE TO THANK THE FOLLOWING SPONSORS FOR SUPPORTING THIS CONFERENCE

21st Biennial Jornada Mogollon Conference Program was sponsored by

Council of Texas Archeologists

Coffee and refreshments provided by

El Paso Archaeological Society

Founded in 1922

To help preserve the past and encourage the study of archaeology

MCAD

El Paso Museums & Cultural Affairs Department

21ST BIENNIAL

JORNADA MOGOLLON CONFERENCE

OCTOBER 11-12, 2019

GENERAL INFORMATION

Archaeologists working in the Jornada Branch of the Mogollon Culture area of the American Southwest present papers on their recent research during this conference. The conference is hosted by the El Paso Museum of Archaeology, which is maintained and supported by the City of El Paso. 42 years ago Patrick H. Beckett and Regge Wisman established the conference to provide archaeologists with a forum for sharing their research.

Geographically, the Jornada Mogollon extends from Carrizozo, New Mexico to just south of Villa Ahumada, Chihuahua, Mexico, and from east of Deming, New Mexico to the Pecos River, as defined by Donald J. Lehmer.

In addition to the presentations on Jornada Mogollon archaeological research, the El Paso Museum of Archaeology will host a dinner at the museum immediately following the conference proceedings on Friday.

Presenters are invited to submit manuscripts for publication in the conference volume to be published by the El Paso Museum of Archaeology in 2021. There is no charge to presenters for the publication and each author gets one free copy of the conference volume. For more information, please contact the Museum of Archaeology at archaeologymuseum@elpasotexas.gov.

EL PASO MUSEUM OF ARCHAEOLOGY

Article

The Ram's Head Site (41PC35) in Pecos County, Texas

By Drew Sitters and Eric A. Schroeder

The Ram's Head Site (41PC35), a large feature/site complex located along the western edge of the Edwards Plateau, was excavated in 1971 by archeologists with the State Department of Highway and Public Transportation (now the Texas Department of Transportation) in advance of the expansion of Interstate 10 (Young 1982; Schroeder 2019). The site area, occupied from the Early Archaic through the Late Prehistoric period, straddles a second order stream that empties into Four Mile Draw roughly 700 meters south of the site (Figure 1). Situated below the foothills of a large mesa, the site is partially buried by colluvium. The current environment supports a variety of xerophytic plants, that were likely present and used by prehistoric site occupants. These plants include the creosote bush (Larrea divaricata; binding agent), fourwing saltbush (Atriplex canescens; soap), lechuguilla (Agave lechuguilla; fibers and food), green sotol (Dasylirion leiophyllum; food), yucca (Yucca baccata; food, soap, and fibers), and prickly pear cactus (Opuntia englemannii; food, medicinal, and alcohol) (Norman and Peggy Wehrli, cited in Young [1982]).

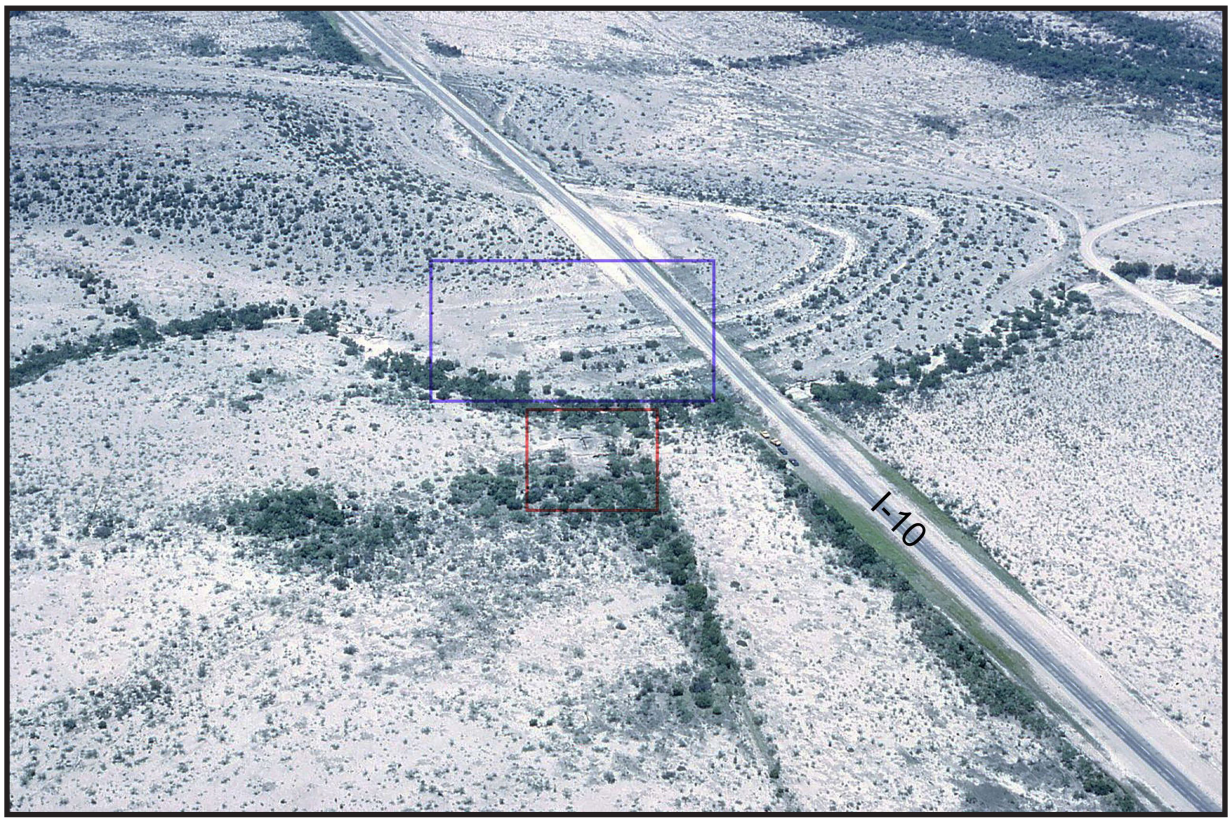


Figure 1. An aerial view of the Ram's Head site (41PC35) facing southeast. The burned rock middens (Areas 1 and 2) are outlined in red, while the five lithic debris scatters (Areas 3–7) are encompassed in blue.

Investigations led by Frank Weir and Elton Prewitt (Figure 2) documented two large ring middens (Areas 1 and 2) on the western side of the ephemeral stream. The ring middens measured up to 12 meters in diameter and ranged from 45 to 60 centimeters in thickness (Figure 3). Near the center of both middens, archeologists recorded intact circular heating elements, or earth ovens (Figure 4; Black and Thomas 2014); one of which was basin-shaped and lined with limestone slabs. The heating elements measured 1.3 to 2.1 meters in diameter with an internal depth of 10 to 15 centimeters. Charred organic material collected from both features produced six dates, which likely correspond to the terminal dates for their use: A.D. 1010 + 50; A.D. 1390 + 70; A.D. 1540 + 60; A.D. 1600 + 50; A.D. 1610 + 70; and A.D. 1710 + 60. Artifacts found within the immediate vicinity of the middens consisted of projectile points (n=20) (Figure 5), bifaces (n=97), scrapers (n=92; Figure 6), altered/edge-modified flakes (n=151), utilized flakes (n=334), unmodified lithic debitage (n=10,115), flake cores (n=55), a mussel shell pendant (Figure 7a), and an Olivella shell bead (Figure 7b).

Figure 2. Archeologist Frank Weir (right), unknown (center), and Elton Prewitt (left) discussing the Ram's Head site.

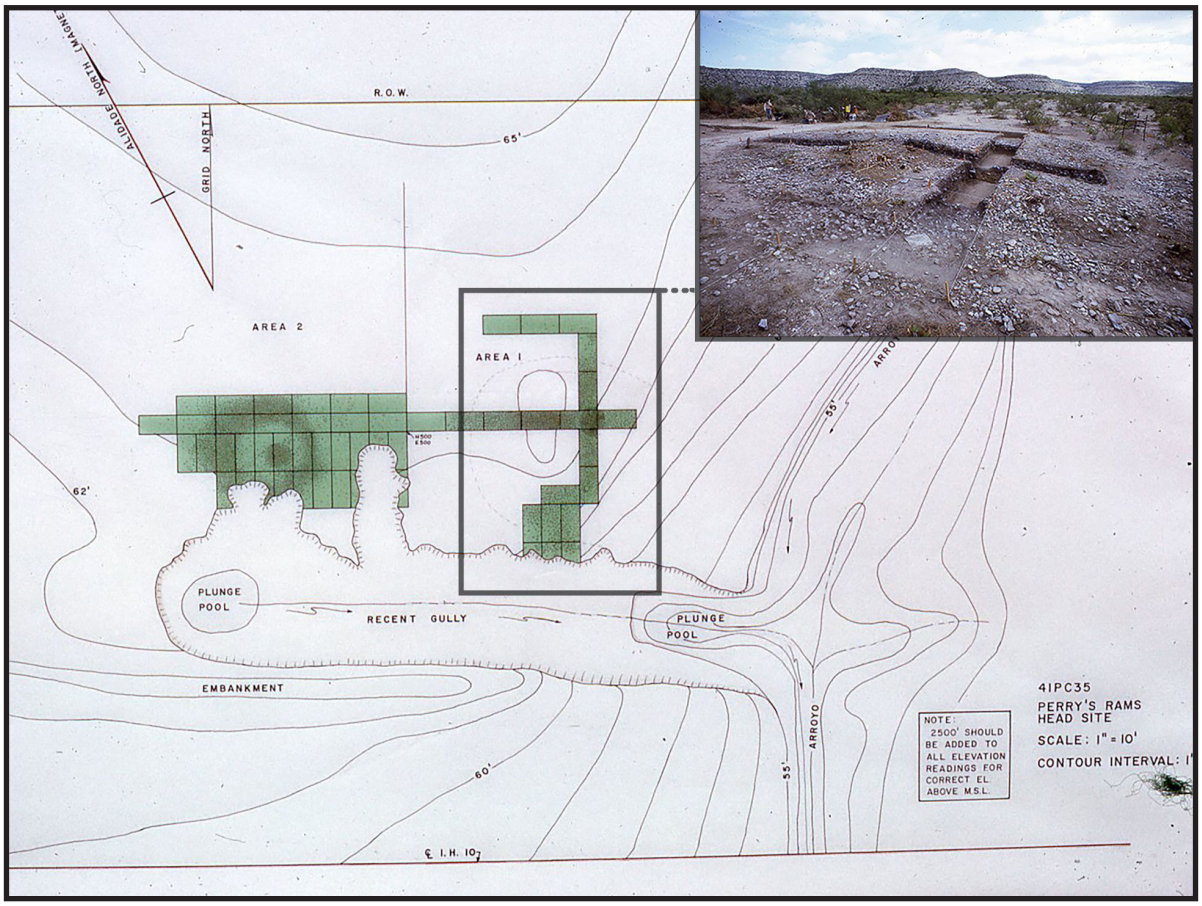


Figure 3. A plan map of the excavations at the Ram's Head site.

Figure 4. (top) Elton Prewitt pointing to one of the circular heating elements.

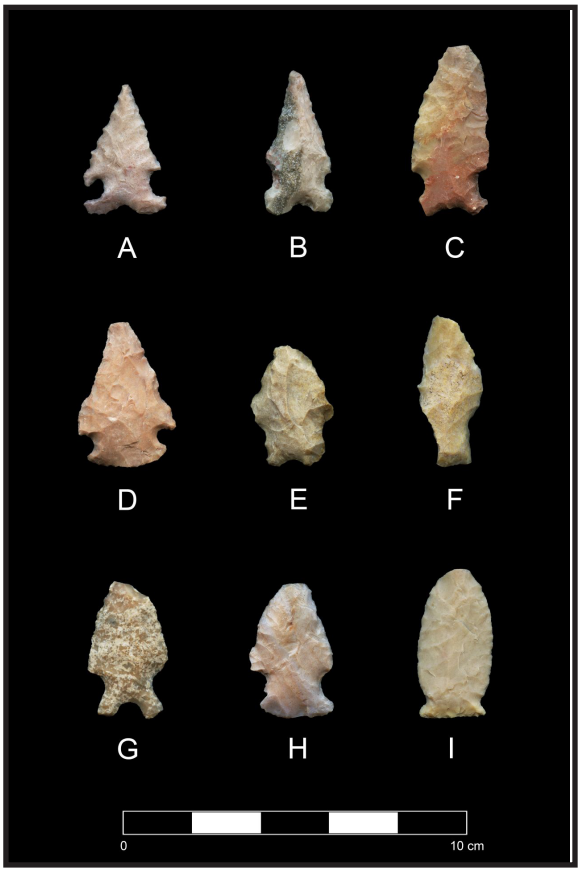


Figure 5. (right) A sample of the Archaic-age dart points recovered from the Ram's Head site: A-C, cf. Frio (Late Archaic); D, cf. Williams (Middle to Late Archaic); E, cf. Pedernales (Late Archaic); F, cf. Pandale (Middle Archaic); G, cf. Uvalde/Baker (Early Archaic); and H-I, Untyped. While not pictured here, archeologists also recovered arrow points that compare favorably to the Livermore, Perdiz, and Toyah types.

Figure 6. A sample of scrapers recovered from the Ram's Head site.

Figure 7. Shell ornaments recovered from the Ram's Head site: A, Mussel shell pendant; and B, Olivella shell bead.

To the east of the stream, five lithic debris scatters, or activity areas, were recorded on bedrock ledges (see Figure 1). Here, surface artifacts included projectile points (n=26), drills (n=2), bifaces (n=412), scrapers (n=90), altered/edge-modified flakes (n=231), utilized flakes (n=149), unmodified lithic debitage (n=43,334), and flake cores (n=387).

During the investigations at the Ram's Head site, archeologists recorded an additional 20 prehistoric sites (41PC36–41PC55) within the vicinity (one mile). Site types include short- to long-term campsites, rock shelters, and lithic quarries. Notable features consisted of hearths, burned rock middens, a possible wickiup ring (41PC46), petroglyphs or abrading marks characterized by a series of parallel lines forming straight lines and cross hatching (41PC47; Figure 8), and bedrock mortars (Figure 9; 41PC54). Collectively, the artifact assemblage from these sites consists of projectile points (n=42), scrapers (n=80), bifaces (n=130), a drill fragment, a graver, a gouge, burin spalls (n=7), altered/edge modified flakes (n=102), utilized flakes (n=148), lithic debitage (n=1048), flake cores (n=106), and mussel shell.

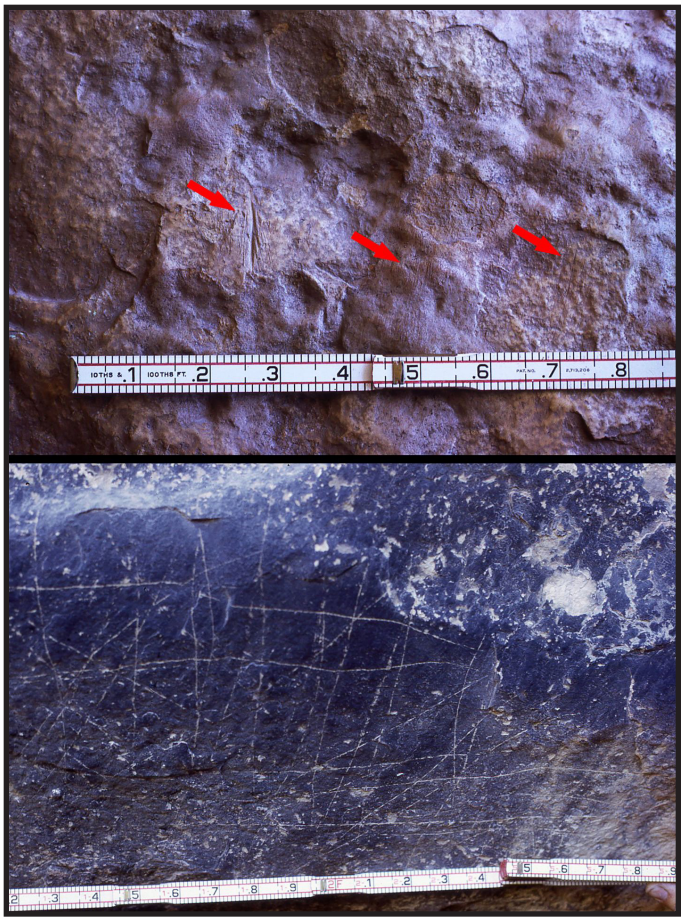


Figure 8. Petroglyphs, rock etching, or abrading marks characterized by a series of parallel lines forming straight lines and cross hatching recorded at 41PC47.

Based on the available information, Wayne Young (1982) concluded that the area saw a general increase in utilization, longer site habitation, and a greater reliance on burned rock middens over time. He postulates that site occupants chose this location due to its proximity to water, bountiful vegetal resources, and access to lithic raw material for tool making and earth oven baking. Lastly, Young (1982) believes that the inhabitants of the Ram's Head site relied heavily on plants as a food source based on the numerous scrapers, altered/edge-modified flakes, and utilized flakes found at the site.

Figure 9. Bedrock mortar holes recorded at nearby 41PC54.

Alternatively, burned rock middens, specifically ring middens of the Eastern Trans-Pecos region, may not have been solely dedicated to the processing of plant foods, but could have also been used to produce fermented beverages. Drawing from ethnographic accounts of some indigenous groups in northern Mexico (see Lumholtz 1987; Pennington 1969; Ribas 1999), some archeologists have long suggested that earth ovens were used to make alcoholic beverages from sotol and mescal (Di Peso 1974; Tunnell and Madrid 1990). Greer (1965) hypothesized that the common occurrence of ring middens together with bedrock mortars in the Trans-Pecos was a pattern reflective of the production of fermented drinks. Recently, Schroeder (2019) examined the size of central pit features of several Toyah-aged ring middens in the Eastern Trans-Pecos in relation to the amount of calories these features would produce roasting agave, and found that the effort expended for a small hunter-gatherer group to construct these features solely for the purpose of meeting caloric needs was clearly a losing proposition. From this data, he proposed that if the purpose of these features was not related to producing calories, then their use may be related more to the purpose of meeting social needs, such as feasting and the production of feast foods and drinks such as alcoholic beverages.

The Ram's Head Site collection is curated at the Texas Archeological Research Laboratory at The University of Texas at Austin.

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Acknowledgements

I would like to thank Marybeth Tomka, Head of Collections at the Texas Archeological Research Laboratory, for providing access to the collection, and Elton Prewitt for identifying the projectile points. Edits to this document were made by Timothy K. Perttula.

Fall 2019 CTA Meeting

October 11, 2019
Embassy Suites Hotel, Amarillo, Texas

Registration – 8:30 am
Call to Order – 9:09 am

Announcements

Jon Lohse: Welcome to Amarillo. Nice turnout. First item on the agenda is the approval of minutes from the Spring 2019 meeting.

Approval of Minutes, Spring 2019 Meeting: Motion (Marybeth Tomka), seconded, no discussion, minutes approved

Officers Reports

President (Jon Lohse): We have a light agenda this fall. Next spring will be pretty busy. We expect lower turnout in the fall in general. We have one voting item on the docket and that is the adoption of the ethics statement. We voted to approve. this in the Spring meeting. The business today is to add it to by-laws.

We gave out 11 checks totaling $2500 to regional and local museums and organizations for Texas Archaeology Month. Maggie Moore did a great job promoting this. We had to work hard to figure out who got money.

This afternoon, there is health and safety training organized by Dr. Schroeder. Health and safety should be taken more seriously. I appreciated Eric for putting that together.
Schedule for next Spring: SAA meeting is in Austin so I want to have our meeting next to that event. As a result, our Spring meeting will be a little later than normal. I'm talking to Derrick Hamilton about training on Bayesian modelling for C14 dating. He's done symposiums for years; he is one of the world's experts on this. Great opportunity. Look for updates as soon as we can get things shored up.

Vice President (Erin Phillips): I'm very excited about the workshop. I went to one several years ago and it was great. I am no longer chair of the Contractor's List. Catherine Jalbert is active in this role. Tonight the CTA social is 9-11pm. Looking forward to seeing you all there.

Past President (Missi Green): Still working with the EC in any way possible. Looking to keeping this group in line.

Secretary (Scotty Moore): As we reported in the newsletter, overall membership is up 26% over this time last year, which continues a multi-year trend of growth. As others have noted, this rise correlates positively with adoption of the Wild Apricot system, which allows you to make changes to your accounts more easily.

I would argue that recent growth is also driven by the great work that this organization does and continues to do, including the careful consideration and implementation of survey standards, which many other states have still yet to consider. Further, the Texas archeological community at large continues to grow. To me this means that there are more voices in the community that we can include here to make our organization stronger. I encourage project archeologists and instructors, really anyone who works with young professionals, students, and field techs to recommend that they join and have their voices included in these conversations.

Treasurer (Eric Schroeder): You saw the status of the accounts in the newsletter. We distributed the student research grants and TAM grants (12 applications and 11 awards). We only budgeted $2000 for that so we pulled $500 from committee budgets to partially fund that.

Newsletter Editor (Tina Nielsen); Thank you for your submissions. I try to take photos at the trainings and social. If you get any photos please shoot them to me and I can put them in the newsletter.

Agency Reports

Texas Historical Commission (Pat Mercado-Allinger): Review and Compliance update on eTrac : very few project reviews are coming in snail mail now. There is ongoing work on automation of permitting process. In fact, we will be inviting a few of you to work on beta testing. Stay tuned. Increase in project reviews. This year there have been a 30% increase in Antiquities Permits. It was 37% up in the last quarter. Folks at THC are busy.

Hurricane Harvey Supplemental Disaster Program: received grant from NPS for issuing sub grants for work on historical properties. There was a balance that allows for GPR in counties affected by disaster. Arlo is working to develop an RFP ready for bid by the end of the calendar year for providing those services. Talk to Arlo if you are interested in knowing more.

Archaeological Steward program: has a presentation in Yellow Rose B tomorrow at noon. We'll also talk about the successful training workshop in August, updates to Atlas and TARL, and a discussion of the case study of looters.

Archaeology Month: 129 events this year in 61 communities. I was delighted to hear about how many mini grants were made available.

Curatorial Certification: recertification of SFA, Museum of Coastal Bend, and Panhandle Plains is approved. Brad has been working with SMU, TAMU, and Witte Museum.

Marine (Amy Borgens): We are working on Civil War Brazos Santiago collections, 1554 collections. Bring students our way. Continues to resolve issues with the shipwreck database.

Personnel: welcome Emily Dilla, South Texas reviewer. Virginia Moore (special site conditions of TxDOT.

I am retiring on Halloween, no trick! Brad Jones will be taking over. I have every confidence that you will show as much support to him as to me.

SAA's are coming to Austin in 2020 - Brad is local chair for SAA in Austin. We are doing 4 tours: walking tour of downtown Austin, work with Shula on Lower Pecos Rock Art, Alexandria Project, Center of Arch Studies focused on Spring Lake and Shiner Collection, tour of TARL and Marybeth's. We hope that you can come. Public Day on Saturday – various groups will come and participate. It is aimed at legislators and educators.

Historic Sites (Sarah Chesney): Some of you are aware Historic Sites database. 31 sites in Texas Historical Sites division. We have been making some change; for example, San Jacinto, Washington on the Brazos, San Felipe under Bill Irwin. Plans in place to start more outreach. No longer the only archeologist in the division. Catherine Jalbert at Levi Jordan. Currently archeological work at San Felipe. A little testing this month and November. Larger 6-week season on the historic property in the Spring. Will update in February. Hosting 1-on-1 academy in May. If you want to come and not get paid and hang out with me. (mic drop [metaphorical])

Texas Parks and Wildlife (John Lowe): Honor to follow Pat. Good luck in your retirement. I'm John Lowe, here representing our agency.

(Written statement from Michael Strutt [provided by John Lowe]): "Greetings colleagues: The Cultural Resources Program of your state parks continues to grow and evolve. I am not able to be with you because I am up to my eyeballs in our important work for the public. The Program recently (re) inherited historic preservation as part of our skill sets and staff. Unfortunately, as of today we have 3 vacant positions on that team and will be looking to hire architectural historians and an historian very soon. Similarly, we will be hiring two temporary curators for the Battleship Texas. As you may have heard the battleship will transfer operations to a non-profit partner,

The Battleship Texas Foundation. However, the ship and her 40,000+ historic objects remain the property of the state and in the care of the TPWD. The ship will go to a dry dock for repairs sometime in the next few months and we are working very quickly to get all the exhibits and historic objects off the ship before she is towed for repairs. We are fully staffed on the archeological side of the Program.

If you were not able to come to Palo Duro Canyon for the field school this June, you missed a wonderful event with our partners in TAS at one of the most beautiful places in the state. IT was a whirlwind week with a temperature swing of about 50 degrees between day one and day two. Saturday was 102 and Sunday was maybe 52 and windy. I won't spoil the papers to be given this weekend, but we found really great history and pre-history on the park. Tony Lyle and Kevin Hanselka and others will be giving papers on the new findings. I invite you to heard their presentations. Brad Jones: congratulations. I look forward to continuing our partnership and working with you in your new capacity. Have a great conference everyone."

John Lowe: Excavations at Waco Tanks of a hearth feature; it appears to be a midden or a series of hearths. Cool things going on.

Wildlife: lots of projects I am monitoring. I've been getting emails from people I don't know. Come introduce yourself so that I can put names to faces.

Texas Department of Transportation (Jason Barrett): Text from Scott Pletka: Sends greetings to Texas arch community. He "regrets" not being able to hear about budget allocations.

News: Jen Anderson has joined TxDOT. TxDOT is hosting a workshop on how consulting parties can participate in projects. Afterwards a session on tribal consultation will be held. I (Jason Barrett) will be giving presentations on TAS field school; Jen Anderson has a poster; Chris Ringstaff's daughter has a poster on experimental use wear analysis.

Next RFPs will come out in spring 2020: statewide contracts for BGs and surveys, two active contracts for those services right now. Arch surveys for TxDOT get contracted through 5 different mechanisms (ENV, districts, PEPs, etc.). Lots of different consultants. The industry seems to be doing well. I hear that it's hard to take on new work and meet expectations. We've seen odd results – trenches in less than ideal conditions. Field crews reporting negative findings in locations with sites, questionable abilities to identify artifacts in field, recoding sites incorrectly/incompletely. We as an industry may need to revisit field standards/time, set higher experience requirements, require PIs to spend more time in the field. Supplementary training via TxDOT. We don't have a solution but would like people to consider it.

Texas Archeological Research Laboratory (Jonathan Jarvis): those undertaking larger projects, we encourage you to contact us early so that we can coordinate collections and/or large numbers of trinomials. RE: trinomials, we are happy to help you streamline submitting digital data. Look forward to seeing everyone in Austin.

(Marybeth Tomka): TARL was a recipient of one of the CTA TAM grants. We had 330 people at our fair which was last weekend. We have had discussions about curational movements.

Curation updates: we are going to an all-digital submission for requests for housing, access, etc. Our staff is so small, please use this system so that we know what to expect. If you just call or show up you may get the brush off. My curatorial associate is going on maternity leave shortly, so I will have a temp. Between now and mid-Jan have some patience with us. Please don't hesitate to reach out if you need anything.

Standing Committee Reports

Auditing (Mark Denton– not present): No report

Budget Committee (E. Schroeder): No report

Communications (Catherine Jalbert, not present) Jon Lohse: No report but Catherine has been working hard on moving the website. Is anyone not seeing emails? (No hands). Admin view allows us to see if emails are opened or not. If you are having issues seeing or receiving emails, we can go in and see easily. Let us know.

Contractors (Catherine Jalbert, acting, not present) Jon Lohse: plan to move list to Wild Apricot to give contractors full control of their firm listing. Questions? None.

Curation (Marybeth Tomka): We will tweak curations standards. We did a big overhaul (thank you to Tina for formatting). I love our ethics statement but it doesn't include curation.

Jon Lohse- duly noted

Governmental Affairs (Duane Peter/Nesta Anderson): No report

Membership (Katie Canavan): No report

Multicultural Relations (Mary Jo Galindo): We donate money to TAS for native American fieldwork scholarship. We had three recipients from Mescalaero Apache Nation.

Nominating (Bill Martin): This Spring all positions except for VP are up for election. I haven't had a discussion with all of the board members. Scotty and Tina have signaled their interest. If you have interest, let me know

Jon Lohse: president can serve 3 terms. I am willing to do a 3rd term, but given the interest level, it's important to let people contribute. I don't want to clog up the machinery. If someone wants to take their turn, I'm happy to make space. Otherwise I will serve again.

Public Education (Todd Ahlman): No report

Standards and Guidelines (Arlo McKee): Reviewers at THC have looked at structural changes to the standards passed last spring to be consolidated under one single umbrella. So cemetery standards, intensive standards, etc will be chapters in overall standards. We are working on cemetery and geophysics and report guidelines. Probably a year out.

Special Committee Reports

History (Reign Clark): No report

Old Business

Update from Andi Burden (not present) about CTA Cemetery Taskforce: From Andi Burden read by Jon Lohse: "The Task Force, comprised of THC's Jenny Mc Williams, Michelle Valek, and Rebecca Shelton, Dr. Andrea Roberts of Texas A&M University, Jonathan Jarvis of TARL, Dr. Ashley Lemke of UT Arlington, Zach Overfield (SWCA), and Allison King (Percheron), has met once since the Spring CTA Meeting.

We have:

- met our first goal- to create a task force and finalize the committee roster;
- established a baseline understanding of the existing THC digital database of cemetery locational data;
- began identifying Task Force assistance opportunities for working with the THC, particularly digital data reconciliation, data input, and QC; and
- discussed priority areas of the state for which we should concentrate this assistance.

We will be meeting again to follow up on some of these items and discuss further strategy.

I'd like to say thank you to all of the great individuals who have helped get this off the ground and I will be sending out a doodle poll for our next meeting tomorrow."

Vote on Bylaws update (Jon Lohse): we voted to adopt this ethics statement last meeting. (Reads over ethics statement). Proposed bylaw change has been circulating around. A clause will be added that will be Section 3. Ethics.

Point of order (Bill Martin): do we have a quorum?

Jon Lohse: 25 is the min, we are there.

Question (Bill): what is the consequence of violation?

Jon: if they willfully violate it they will be removed from CTA.

Bill: removed by whom?

Jon: we'll cross that bridge.

Question (Doug Mangum): is it forever or for a predetermined period of time?

Jon: We'll decide that at a later time.

Motion to amend by Bill Martin. Seconded. Approved by acclamation.

Update on Standards Committee progress (Jon Lohse): anything you want to share Arlo? No.

Update on Texas Preservation Trust Fund Grant award (Eric Schroeder): we received a letter 2 weeks ago indicating that we got matching funds. At this point I would like to solicit membership to form a committee to develop a strategic plan for this initiative. What materials would we present to organizations? In the grant we proposed three opportunities. We need to develop paraphernalia. Also in the grant was to attend the Master Naturalist, Texas Farm Bureau conferences. Grant funds are for travel and supplies for 2 people to attend each one. Do we want to request volunteers?

Jon Lohse: yes let's ask for volunteers. Does everybody understand?

Volunteers: John Lowe, Mary Jo Galindo, Allison King, Sarah Chesney

Pat: I suggest that you approach Leslie Bush.

Eric Schroeder: we will work to put together a plan.

New Business

Report from David Kilby regarding Texas State University degree program: Hopefully you are already aware in our Master's program. We take pride in training people that go out into CRM and academia. We have initiated a Ph.D. in Applied Archaeology. This is geared toward CRM, ethics, project management training. If you or employees are seeking that, please keep us in mind. I have brochures. I'll leave them by the podium near the back doors.

Report from Charles Frederick regarding burial of sites as preservation/avoidance
Method: Query to membership- One way to avoid sites is to bury it. I worked with a client to redesign their project to bring in fill to bury sites to avoid Section 106. There is little evidence that burial protects sites, however. The literature that supports this process is based on a 1980s theoretical argument done by USACE. It strikes me that Civil Engineer wanted to avoid our process. I think that we should consider having a position on this. I know that Arlo has done some work on this. We don't want clients to think that they can avoid the process.

Bill Martin: years ago we had this problem with TxDOT. We have some literature on our website. Ringstaff wants to do more studies on this for

alternative mitigation. Fill isn't ideal, because it compresses and breaks artifacts, affects soil chemistry, etc.

Charles Frederick: this was a tollroad project, not TxDOT. My concern is that I have little faith that once a ROW is established and sites have been written off, then they have no protections.

Becky Shelton: we see lots of reports that say that sites in ROW don't have integrity

Arlo McKee: we see this with reservoirs too. Other engineers are considering this, sometimes in good faith, especially to avoid cemeteries. We don't have a handle on the all the processes. Literature says "it depends". We have too many different agency procedures.

Jason Barrett: an archaeology consultant is advocating burying a site. We are fighting against it. In fact, when I was first hired, burying sites was considered an impact, not a mitigation. We are dealing with third parties and we aren't the main drivers of work. People advocate against good policy. I have started to ignore it when consultants recommend avoiding ROW.

Charles Frederick: the logic on this particular project was that artifacts were in good context, went straight from survey to NRHP recommendation. We don't know anything about the stratigraphy or the archaeology of that region.

Erin Phillips: Years ago I worked on a project where campus was putting in a bus system so they dug up roads to modify dorms that would be affected. So sites buried under roads aren't protected.

Mary Jo Galindo: cost to mitigate was comparable to time to cover it up.

Jason Barrett to Charles Frederick: was time the issue?

Charles Frederick: it was a philosophical issue. Will probably cost them more in the end.

John Lowe: Just as a member (not speaking for TPWD) our goal is preservation first and foremost. If there is science that supports burial as preservation, we should explore it. In some cases it might work. At San Jacinto, where they were trying to recreate the prairie, our point was that by converting marsh to prairie, we reduce wave action and erosion on sites. It should be a case-by-case thing.

Charles Frederick: The science isn't there.

Arlo McKee: Its highly site specific. In one example, there was a lot of effort to protect the site, but they ended up breaking more faunal remains. The danger is in many types of projects. One of the things about the 1990s studies-they strongly advocated for continuous monitoring, which hasn't happened and isn't included into costs.

Eric Schroeder: Approaching it from an engineer's standpoint, burying sites is their way to mitigate risk. They can calculate how much fill – which is discreet. Excavating a site leads to unknown costs.

Marybeth Tomka: If you change soil, humidity, etc. you aren't preserving the site, you are destroying it.

Charles Frederick: well you are changing it. It depends on the site, water table, etc.

Marybeth Tomka: when dealing with engineer, they are thinking in black and white. They may not believe our science

J. Phillip Washington: this is site specific. If engineers want to use this, our response as a consultant has been: there is no science that supports it in this particular situation. If we had guidance on a process, it would helpful for

consultants to bring to an engineer or client.

Charles Frederick: there is one article in literature that says its ok, but that's not enough information.

Jon Lohse: I invite Charles to prepare an opinion statement to share with us in the Spring and see if the council wants to adopt it. Feel free to enlist support.

Report from Eric Schroeder about investment opportunities for extra CTA cash: As you know, we have about $28,000 in money market account earning about $3 a year. We can pump it up. We wanted to form a scholarship, but it didn't gain the amount of interest that we hoped it would have. I suggest bond market funds to invest. We can get 7-8% per year, which would be $2,500 per year, which goes a long way to pay for tuition. I proposed a more ambitious plan in the newsletter, knowing that it would take some more effort to commit. Figuring out how we would do it is something I think we should explore. I think it would nice if we could support a grad student for a year, which is $12-15k. Short term goal is to think about how we want to invest. I can come up with options for April newsletter. I'm looking a low risk funds with mostly bonds and a few stocks.

Marybeth Tomka: my only concern is that I was treasurer for TAS when the stock market crashed. If you go low risk, you still have risk. With the volatile political situation, I wouldn't do it. We lost over $100,000.

Jon Lohse: Call for other new business. None

Meeting Adjourned at 10:24 am.

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COUNCIL OF TEXAS ARCHEOLOGISTS

Standards and Guidelines Committee

Intensive Terrestrial Survey Guidelines

March 30, 2020

I. INTRODUCTION AND PREAMBLE

The standards and guidelines contained herein were developed by the Council of Texas Archeologists (CTA) Standards and Guidelines Committee, additional subject-specific ad hoc sub-committees, and input from the CTA membership at large. The guidelines were initially approved by CTA membership on April 5, 2019 and the accepted version has been reviewed by the Texas Historical Commission (THC) Archeology Division. The current version includes their comments and suggested revisions. The guidelines below should be considered minimum acceptable standards for discovery level of investigations. The goal for these guidelines is to ensure any potential survey area has undergone adequate due diligence to identify the potential presence of archeological sites, presence/absence of cultural material has been fully assessed, boundaries for archeological sites have been accurately recorded and delineated, and that field data collection will be sufficient to support any findings from the survey level investigation. These guidelines will be revised and added to as additional techniques and methods for discovery of archeological sites become more prevalent and/or standardized.

1. Professional Qualifications

Archeological investigations must be supervised by an archeologist who meets the U.S. Secretary of the Interior's Professional Qualification Standards for Archeology (48 FR 22716 or 36 CFR Part 61); or meets the requirements for Principal Investigator defined in Title 13, Part II of the Texas Administrative Code, Chapter 26 Subchapter A, Rule §26.4.

II. NEAR SURFACE INTENSIVE SURVEY

These standards should be considered the minimum acceptable for terrestrial surveys less than 200 acres in size. Specific project circumstances may suggest variance from these standards; such conditions should be discussed with the THC Archeology Division prior to implementing the survey and should be clearly described and defended in the plan of work and the report of investigations. For project areas larger than 200 acres, survey methodologies should be discussed with the THC Archeology Division prior to implementing the survey.

1. Background Research

Archeologists must conduct background research prior to field investigations. At a minimum this shall include searches of the Texas Historical Commission and the Texas Archeological Research Laboratory records or the equivalent Texas Archeological Sites Atlas Database for previously recorded archeological sites and historic properties and for previous archeological work. A 1-km search radius works well in many locations, but this search distance can be increased as necessary to best provide a context for the proposed survey. The background research should also include pre-field review of historic maps and aerial imagery of the project area to identify locations of historic structures and features that should be investigated.

2. Survey Transect Interval

The maximum interval between transects should not be greater than 30 m.

3. Shovel Testing

Shovel tests (STs) are excavated in settings that have potential for shallowly buried cultural materials. STs are 30 cm in diameter or on a side and are dug in levels no thicker than 20 cm with sediments screened through ¼-inch mesh unless high clay or water content requires that they be troweled through. STs are excavated to the lesser of:

a) the bottom of Holocene deposits in depositional areas;
b) subsoil in upland areas; or
c) a minimum depth of 80 cm.

If the impacts from the proposed action/undertaking are anticipated to be deeper than 80 cm, then deeper mechanical investigations (see Deep Prospection Standards) or geophysical remote sensing may be warranted. Locations of all STs should be recorded regardless of whether cultural materials were recovered from the ST.

The following should be used to calculate the minimum number of shovel tests to excavate a project area. Site delineation shovel tests are excavated <u>in addition to</u> survey shovel tests and should not be used to satisfy the minimum number indicated below.

a) Linear surveys.
    i) Linear projects are defined as at least 10 times longer than they are wide and require at least one transect for every 30 m of width or fraction thereof. At least one ST is required per 100 linear meters (m) of each transect (equivalent to at least 16 ST per mile).
        1) For example, a project within a 150-foot-wide (46-m-wide) corridor that is one mile in length (1.61 kilometers) would require two survey transects with a minimum total of 32 STs.
    ii) Divergence from strict transect lines and spacing is encouraged to investigate landforms, visible features, or other high probability areas and/or to avoid a surface restrictive feature (e.g., bedrock, creek, pavement) that prevents sub-surface exploration in an effort to redirect efforts to investigating landforms with a high potential to contain sites.

The overall shovel test density should remain in keeping with the overall project dimensions. Investigations should avoid relying solely on preset locations for shovel tests.

b) Area (non-linear) surveys.
    i) For projects less than 25 acres in area, at least 2 STs should be excavated per acre.
    ii) For projects between 25 and 200 contiguous acres in size, at least 50 STs should be excavated for the first 25 acres plus at least one ST per every five acres over 25 acres.
        1) For example: a 30-acre survey would require a minimum of 51 STs; a 35-acre survey would require a minimum of 52 STs; a 199-acre survey would require a minimum of 85 STs.
    iii) For project areas larger than 200 acres, survey methodologies should be discussed with the THC Archeology Division prior to implementing the survey. In some cases, a predictive model may be appropriate to stratify the project area into zones having different field tactics.

EXCEPTIONS TO STANDARD SHOVEL-TESTING GUIDELINES: Shovel testing should be conducted for all project areas; however, some locations may preclude or limit the usefulness of shovel tests. Some of these areas may include:

a) upland or erosional settings with exposed bedrock;
b) on slopes greater than 20 percent (ca. 11 degrees); and/or
c) in settings with evidence of significant ground disturbance.

All such locations should be clearly delineated on maps, photo-documented, and discussed in the report. Ground surface visibility alone is not justification for excluding sub-surface investigations. All areas must be shovel-tested regardless of surface visibility unless multiple lines of evidence, including both desktop and field observations, can demonstrate no potential for buried deposits. A minimum of one ST must be excavated and photo-documented for each excluded area, regardless of surface visibility, to assess the potential for buried deposits where artifacts may not be visible on the surface and/or demonstrate the nature and extent of significant ground disturbance. Please note that the intent is not to reduce the level of effort (excavating fewer STs than prescribed for the project area), but rather to redistribute STs to areas where there is greater potential for buried cultural materials.

4. Defining Site and Isolated Find Boundaries

All project research designs or scopes of work should include a clear definition of what constitutes an archeological site and an isolated find. It is expected that any cultural materials identified during survey greater than 50 years of age would at least minimally be designated as an isolated find. When defining site boundaries, a combination of natural and cultural features, and archival documentation should be incorporated into site definition.

In consideration of site definitions, all artifact scatters should be delineated as sites through shovel testing and in-field observations. To delineate site boundaries in settings having the potential for shallowly buried cultural materials, positive STs should be excavated in a cruciform pattern at intervals no greater than 15 m until two negative STs are found in each direction or topographic limits (e.g., landform boundaries, streams) are reached. Site boundaries should be recorded from the location of the first negative ST, unless an additional ST between the first negative and last positive is conducted and is also negative. All surficially

discovered sites or isolated finds must be accompanied by ST investigations to verify whether additional sub-surface deposits are associated and site boundaries properly delineated. For larger sites, additional STs may be necessary to define boundaries beyond just the four cardinal directions.

5. Field Recording

The following paragraphs discuss specific guidelines pertaining to in-field photography and geospatial data collection.

PHOTOGRAPHY: The following discussion assumes all field images will be captured in a digital format. All field photographs should be captured with the subject in focus with a camera capable of at least 5 MP[1] images. Although most cameras natively capture images in a lossy JPG format, a lossless format, such as TIFF or RAW, is often required for curation and images should be captured in this format, if possible. The locations of all photographs should be captured either through a GPS or should be capable of being plotted on a 1:12,000 map.

a) All archeological sites should be photographed from a minimum of two angles with as consistent of lighting as possible. Photographs of all cultural features and other representative natural features of interest should be captured for each site.
b) Representative photographs of project area conditions should be captured for all projects.

GEOSPATIAL DATA: Survey corridor boundaries and locations of all subsurface excavations including STs should be recorded in the field. An accurate site map that can be easily referenced to a 1:24,000 scale quadrangle map is required for all recorded archeological sites. Required information on all maps includes locations of all STs, excavations, site overview photographs, individual artifacts or artifact clusters, cultural features, and relevant natural or other landscape (e.g., roads, buildings) features. GPS locations are often recorded in combination with or in place of pace/tape and compass mapping of sites and project areas. For field projects employing GPS as the only mapping technique, the GPS data should be recorded and reported with the instrument and field methods used to collect the data in order to provide an estimate for the data accuracy.

a) Most baseline consumer-grade GPS units collect with a 3–5 m accuracy, while WAAS[2]-enabled units are capable of 1–3 m accuracy in the best conditions. Submeter-accurate GPS data should be collected on sites when recording point-provenienced artifacts and features, and these data should be reported along with error measurements.

In-Field Artifact Recording – It is strongly recommended that all artifacts from subsurface contexts and diagnostic surface artifacts be collected. However, if a diagnostic-only or no-collect policy is being implemented, the following minimum levels of documentation are required for the in-field documentation of artifacts:

a) For both no-collect and collection strategies, quantities of artifacts or estimates of materials in surface scatters should be recorded for all sites and the locations of artifact concentrations plotted on site maps. Research designs and reports need to be clear on sampling methodology employed.
b) For any limited or non-collection strategy, artifact field documentation should be sufficient to achieve the analysis proposed and discussed in the scope of work or research design and draft

report. Field documentation methodologies should allow for determining the appropriate regional, temporal, or stylistic elements for each of the documented artifact classes.

c) Photography. For limited and no-collect surveys, all artifacts recovered from shovel tests or other sub-surface investigations should be photographically documented if they are not being collected. In addition, all uncollected diagnostic artifacts and a representative sample of non-diagnostic materials from the surface should be documented in the field. In addition to the standards for photography provided above, the following are specific to artifact documentation:
    i) All images must include a scale, and preferably, include a color correction card.
    ii) All sides of diagnostic artifacts must be photographed. For non-diagnostic artifact classes such as container glass, debitage, or burned rock, an image of all material recovered from subsurface tests and a representative sample of surface finds should be included. Photographs must be of sufficient resolution to permit minimal recording of diagnostic attributes (cf. color/width/form)
    iii) With the exception of photos showing *in situ* artifact contexts, artifact images should be taken on a neutral background or background that effectively complements the artifact color to maximize identification.
    iv) Images of all diagnostic artifacts and a representative sample of other artifacts must be included in the report or as an appendix. All artifact photos should be curated with the receiving repository.
d) Additional Site Data. Data suitable for compilation and submission of state site survey forms or site revisits should be recorded as required by Chapter 26, Subchapter A, Rule §26.14f

6. Site Forms and Site Revisit Forms

Site forms and site boundary polygons should be submitted for all sites investigated. In addition, site revisit forms should be submitted for any previously recorded site location that is investigated, regardless of whether cultural deposits are encountered at the previously recorded location. If changes in the site boundary are recommended based on the current investigations, a revised site boundary polygon should also be submitted.

NEAR-SURFACE INTENSIVE SURVEY
SUMMARY TABLE

MINIMUM NEAR-SURFACE INTENSIVE SURVEY STANDARDS
For Project Areas of 200 Acres or Less

Transect Interval

Not greater than 30 meters

Linear Surveys

- Must be more than 10 times longer than they are wide
- Require one transect for every 30 m of width or fraction thereof
- At least one ST is required per 100 linear meters on each transect (16 ST per mile)

Area Surveys

Size	**Shovel Test Density**
<25 acres	2 per acre
25–200 acres	50 ST for the first 25 acres, plus 1 ST every 5 acres over 25 acres

Site Definition

All projects require a clear definition of an archeological site to guide field survey

All surficial and near-surface sites need to be investigated through shovel testing[1]. Delineation shovel tests should be excavated in a cruciform pattern at 15 m intervals or less until two negatives are encountered in each direction or landform limits are reached.

Field Recording

Projects & Sites

- Representative photographs of typical project area conditions required for all projects, including no finds surveys.
- Archeological sites require photographs from different angles documenting site setting.
- All cultural features and representative other natural features should be photographed
- Locations of sites, sub-surface excavations, survey corridors, relevant features, and photograph locations need to be mapped through GPS or other means capable of referencing all data to 1:24,000 scale quadrangle maps

Artifacts

- Quantities or estimates of cultural material types in surface scatters must be recorded .
- All diagnostic artifacts and representative non-diagnostic materials should be documented through photography.
- All images must include a scale, and preferably, a color correction card.
- All sides of artifacts should be photographed.

1. Shovel tests (STs) are excavated in settings that have potential for shallowly buried cultural materials. STs are 30 cm in diameter or on a side and are dug in levels no thicker than 20 cm with sediments screened through ¼-inch mesh unless high clay or water content requires that they be troweled through. STs are excavated to the lesser of:
   a. The bottom of Holocene deposits in depositional areas;
   b. Subsoil in upland areas; or
   c. A minimum depth of 80 cm.

III. SURVEY LEVEL MECHANICAL PROSPECTION

This document is intended to establish minimum standards, and best practices where appropriate, for using mechanical equipment to locate and define the boundaries of buried archeological sites in a terrestrial setting. It includes standards for documentation, but is not intended as a standard for geoarcheological work. It is also not intended to guide the use of mechanical equipment to assess and investigate sites (beyond basic boundary definition during the identification phase). All such activity should be governed by a site-specific plan developed in consultation with the THC.

SAFETY: All mechanical excavation and documentation should be performed in a safe manner in full compliance with all applicable OSHA regulations.

DEPTH: All mechanical excavation should be continued to the lesser of:

a) the project's vertical APE (Area of Potential Effect);
b) bedrock;
c) deposits that represent facies beneath which archeological potential is minimal, such as thick (50 cm+) channel gravels;
d) deposits that substantially predate the Holocene; or
e) to the maximum depth that can be reached by an appropriately scaled and powered machine (i.e., 4–5 m below ground surface for trenches; 1 m+ for auger tests).

All judgments regarding whether categories c) and d) are satisfied should be made by senior level personnel (e.g., a trained geoarcheologist or a Project Archeologist [PA] to PI level archeologist with experience in the region).

LOCATION: All mechanical units should be located using consumer-grade GPS (e.g., Magellan receivers, modern cell phone with specialized mapping app). Locations should use an explicit, consistent projection and datum.

Best Practices for location include:

a) cross-checking GPS locations with aerial imagery;
b) where possible, location should be recorded using GPS with sub-meter accuracy (e.g., Trimble) or survey equipment (e.g., Total Data Station) set at a known point;
c) trench orientations/perimeters should be captured with multiple readings; and
d) measurement error should be recorded and included in reporting.

1. Mechanical Augering

Machine-mounted power augers with a bore diameter of at least 8 inches (20 cm) may be substituted for shovel tests at a 1:1 ratio, provided that all of the spoil is screened to identify artifacts.

Hand augers and hand carried machine augers are useful for gauging sediment depth and identifying buried surfaces (paleosols), but in general are not considered reliable for assessing the presence of cultural material because of their small diameter. Therefore, hand augers and hand carried machine augers are not recommended as a substitute for shovel tests, particularly for determining that a site is not present. However, when machine access is not feasible for environmental reasons (e.g., in a wetland, in

dense hardwoods, on a floodplain segment surrounded by incised channels), hand augering with a 3-inch or 4-inch bucket auger at a 2:1 ratio to the recommended number of shovel tests (two augers per one shovel test) is considered a "reasonable and good faith" alternative.

Best Practices for Mechanical Augering include:

a) use of a plywood sheet or heavy canvas tarp with a hole in it to sit around the auger and keep the spoil from falling into vegetation;
b) use of extension bits to reach depths in excess of 1 m; and
c) screen probe matrix with ¼-inch mesh for cultural materials.

2. Mechanical Trenching (backhoe, trackhoe, gradall, excavator)

While CTA recognizes that trenching is far more damaging to sites than shovel testing and that low impact methods such as remote sensing certainly have their place in archeological investigations, we believe that trenching is the only reliable method to determine whether a buried site is present below shovel test depths. Accordingly, we recommend that mechanical trenches should be used whenever shovel testing is inadequate to evaluate a given setting to the appropriate depth. Trenching is not recommended in lieu of shovel testing but should be employed when shovel tests alone do not reach required depths for a project.

While a trench provides a much better opportunity than a shovel test to identify buried cultural material at a given point on the landscape, individual trenches are not significantly better at providing areal coverage, and one trench cannot substitute for a large number of shovel tests. The same transect spacing should be used for trenching that is used for shovel tests, and trenches should be deployed at a ratio of 1:2 relative to the shovel test schedule in the survey standards. That said, the location of trenches should not be purely mechanistic. The investigator should adjust placement to accommodate terrain, vegetation, and modern cultural features. The density and placement of trenches for projects larger than 100 acres should be tailored to the area of interest by a trained geoarcheologist or a senior-level archeologist with experience in the region and negotiated in advance with THC. Trenches should be a minimum of 24 inches (60 cm) wide, at least 4 m long, and excavated to the appropriate depth, as specified above. Safety benches and access ramps should not be used to inflate the count of trenches for purposes of meeting this standard.

At minimum, trenches in loamy and clayey environments should be either:

a) excavated by slowly peeling off thin (5 cm or less) subhorizontal layers under close monitoring using a smooth-bladed bucket, with subsequent hand cleaning and inspection of the walls and monitoring and inspection of spoil;
b) excavated using a smooth-bladed or toothed bucket, with screening of at least one five-gallon bucket from every third excavator bucket load during excavation, and careful cleaning and inspection of the walls on completion; or
c) excavated using a smooth-bladed or toothed bucket, with controlled hand excavation and screening of a contiguous column measuring at least 30 x 30 cm, and careful cleaning and inspection of the walls on completion. Because artifacts in sandy sediments are difficult to identify in trenches, sample screening (per approaches a or b above) is required for trenches in sandy environments. Minimum documentation standards for trenches should include a basic profile description and a high-quality color photograph of a well-cleaned profile column at least 1 m wide.

Best Practices for trenching include:

a) use of a wide, smooth-bladed bucket during trenching;
b) close monitoring and hand investigation of artifacts and features exposed in the floor as trenching occurs;
c) excavation of a controlled column sample and screening of fill by depth;
d) close, supervised cleaning of trench walls to identify archeological strata, which can be subtle in section;
e) orientation of trenches so that profile photographs are uniformly lit;
f) detailed description of profile using criteria of Schoeneberger et al. 2012 or similar
g) opportunistic sampling of artifacts and datable materials; and
h) staggering of trenches along adjacent transects.

3. Site Definition

Where practical, landforms and natural exposures should be employed to identify and constrain the boundaries of deeply-buried sites. Where sites are found at a depth greater than can be reached with shovel testing, a minimum of four trenches or mechanical auger tests should be used for site definition unless other criteria can be used to constrain site size. However, the need to define the boundary at depth should be balanced against disturbance to shallower components, and boundary definition may be deferred to the testing phase where warranted. Mechanical auger holes used for site definition should be substituted for shovel tests on a 1:1 basis.

4. Scraping (bulldozer, front end loader, maintainer/road grader)

While such equipment is often appropriate for prospecting for features (particularly burials) within the boundary of a known site, scraping is not endorsed as a method of site location. Any use of such equipment should be discussed in advance with THC.

References

Schoeneberger, P.J., D.A. Wysocki, E.C. Benham, and Soil Survey Staff
2012. Field book for describing and sampling soils, Version 3.0. Natural Resources Conservation Service, National Soil Survey Center, Lincoln, NE.

SURVEY-LEVEL MECHANICAL PROSPECTION
SUMMARY TABLE

MINIMUM DEEP PROSPECTION STANDARDS For Project Areas of 100 Acres or Less	
Depth	Excavation should continue to the lesser of: a) project's vertical APE b) bedrock c) deposits beneath which archeological potential is minimal (thick channel gravels, etc.)[1] d) deposits that substantially predate the Holocene[1] e) maximum depth that can be reached by appropriate machinery (4–5 m)
Equipment[2]	machine-mounted power auger, backhoe, trackhoe, gradall, excavator
Mechanical Augers[3]	• Minimum of 8-inch (20-cm) bore diameter • substituted for shovel tests at 1:1 ratio • All auger spoil should be screened to identify artifacts

Trenches[4]	• Minimum of 24 inches (60 cm) wide and 13 feet (4 m) long, excavated to appropriate depth, and benched according to safety concerns
	• Substituted for shovel tests at 1:2 ratio[4]
	  • Trenches should be excavated by peeling thin (5 cm) layers with a smooth-bladed bucket under close observation and subsequent cleaning of walls;
	--or--
	  • at least one 5-gallon bucket from every 3rd excavator bucket load should be screened, with subsequent cleaning of walls
	--or--
	  • controlled excavation and screening of a contiguous column measuring at least 30 x 30 cm

1. Judgments on trench placement should be made by senior-level personnel (e.g., trained geoarcheologist or PI-PA level archeologist with experience in the region) and justified in the report.
2. All deep excavation activities should comply with applicable laws governing workplace safety (OSHA).
3. Front-end loaders, road grader/maintainers, bulldozers, and other heavy equipment intended for blading large areas are not appropriate except in specific circumstances, and their use should be discussed with THC in advance. Hand augers with less than 8-inch bore diameter are generally not adequate for intensive survey due to insufficient sample size.
4. Where available, trenches should be excavated with a smooth-bladed bucket and trench walls should be cleaned and inspected. Reports should include a basic profile description and a high-quality color photograph of a well-cleaned profile column at least 1 m wide.

COUNCIL OF TEXAS ARCHEOLOGISTS STANDARDS
FOR IDENTIFICATION OF CEMETERIES
AND UNMARKED GRAVES

DRAFT, March 27, 2020

1. Purpose and Scope:

These standards should be considered the minimum acceptable level of work for all investigations related to the discovery and identification of unknown or abandoned cemeteries and/or unidentified graves conducted by archeologists in Texas. This document outlines the methods by which the location of a cemetery and number of graves within a cemetery should be identified to determine its size and bounds, where required by federal and/or state law due to the likelihood that such burial features are present. These standards should be consulted during the initial review of a proposed project to ensure that such sensitive resources are identified and the constraints they may pose for the project are considered.

This document is **not** intended to provide guidelines for the removal of interments or the inadvertent discovery of human remains. Procedures for the removal of interments and inadvertent discovery of human remains are outlined in the Texas Health and Safety Code (Title 8, Subtitle C, Chapters 711-714) and Texas Administrative Code (Chapter 22, Title 13, Part 2). Additionally, coordination with the Texas Historical Commission is required for investigations conducted in city or county cemeteries per the Antiquities Code of Texas (Texas Natural Resource Code, Title 9, Chapter 191). This document assumes all investigations are conducted in accordance with all State or Federal statutes and regulatory guidance as apply to cemeteries, graves, burials, or human remains.

2. High Probability Areas for Encountering Unknown or Abandoned Cemeteries:

The discovery of unknown or abandoned cemeteries should be anticipated if the area of potential effect (APE) of a project includes one of the following high probability areas:

- Locations where known cemeteries or graves exist or may extend into the APE*;
- Locations where historic cemeteries and/or graves are suspected to be within or near a project APE, even if there is no visible evidence of them;
    - Sites where unknown cemeteries can typically be found or contain unidentified graves include:
        - plantations and farms
        - prison farms/camps
        - churches
        - battlefields/military encampments
        - hospitals, orphanages, schools for blind, deaf and dumb; mental health institutions, and other state-run facilities
        - known locations of former Freedman's colonies

- Locations where a prehistoric cemetery is suspected.
    - Sites of higher probability to contain individual burials or cemeteries include:
        - long-term habitation sites such as villages, Caddo settlements, or other long-term or multi-season use site
        - sites with burned habitation structures
        - artificial and natural (pimple) mounds
        - liminal settings such as rock shelters or overhangs
        - knolls adjacent to/overlooking rivers, creeks, and other waterways

**It should be assumed that unmarked graves may be present in every historic cemetery (50 years or older as defined by 13 TAC 22.1), both within and beyond the marked boundaries.*

3. **Background Research:**
   If a project APE is located within one of the above high probability areas, the researcher will conduct background research in an attempt to establish the extent, approximate age, and demographic representation of any historic cemeteries or individual graves within the APE, searching at least **four** of the following sources at a minimum*:
    - USGS topographic maps
    - soil survey maps
    - county road maps
    - Sanborn maps (if in an urban area)
    - Historic aerial photographs available for the location
    - TxDOT's Texas Historic Overlay
    - Texas Historic Sites Atlas and Archeological Sites Atlas
    - Public records, including city and county deeds, tax records, and cemetery records
    - Oral information from descendant groups associated with a project location
    - The Texas Freedom Colonies Atlas at Texas A&M University

**If one or more of the above sources indicate a cemetery is present within the project APE, a good faith effort must be made to conduct as much additional historic background and oral history research as is practical under time and budget constraints to identify zones with a high likelihood of containing graves.*

4. **Field Verification of Unknown or Abandoned Cemeteries:**
   Additionally, if one or more of the above sources indicate a cemetery or graves are present, you must confirm the presence and determine the extent of a cemetery or graves within the project APE in areas where they have been reported, or are suspected, using the minimum requirements outlined below. At a minimum the entire limits or boundaries of the cemetery within the APE must be established. If feasible and allowable, it is best practice to establish the full limits or boundaries of the cemetery beyond the APE boundaries to establish firm boundaries for future avoidance or planning.

Non-invasive methods such as cadaver dogs and remote-sensing are appropriate techniques to complement the search for unmarked graves. Based on terrain, soils and geology, and other

conditions, depth or age of deposits, the efficacy of techniques may vary and those conditions should be considered when choosing a non-invasive method(s). If remote sensing is used, the researcher should conduct survey with two complementary techniques, one active and one passive, such as ground penetrating radar (GPR) and magnetic survey. Note however, that negative information from a cadaver dog or geophysical survey is not necessarily proof that no graves exist in the surveyed area. Ground-truthing cadaver dog and geophysical data through survey and excavations is always recommended to confirm the presence or absence of graves within the survey area if there will be potential impacts to those areas.

Boundary investigations should include use of machine-aided excavation with a smooth bucket to search for unmarked graves beyond the last known interment. The depth of those investigations should be based on presumed/identified depth of known graves identified by data or in similar cultural settings and investigations should exceed the deepest known depth of identified graves or grave features by at least 2 feet (60 centimeters) to verify presence/absence. Evaluate soil texture and thickness of overburden and alter excavation methods accordingly to minimize the possibility of damage to graves. Conduct excavations at least 25 feet beyond known graves to delimit the cemetery's boundaries. A distance of 50 feet is advisable in historic cemeteries with high potential for unmarked graves, or cemeteries with segregated areas based on social, ethnic, racial, or religious affiliation. The greater distance is especially advisable where no supporting documentary evidence of a boundary exists, and the Principal Investigator should use professional judgement to ensure no graves are missed. All machine-aided excavations must be directed and monitored by archeologists with demonstrated past experience in burial or grave identification, exhumation, or other cemetery investigations.

Fully record and map the locations where graves are indicated through excavation. Record the extent and depth of the area investigated. Use a total data station or global positioning system with a sub-meter level of accuracy to record any grave shafts or physical manifestations indicative of graves identified through visual inspection. If human remains are incidentally exposed (inadvertent discovery) they must be fully documented, then covered with a protective layer of easily removable sediment and the location secured while ongoing coordination as appropriate with THC/SHPO, appropriate Federal or State Agencies, and descendant communities, as relevant, occur. Methods of documentation (e.g., detailed plan and profile sketches, photography, photogrammetry) of human remains should be in keeping with data collection needs and balanced with considerations of concerns of descendent communities for appropriate methods of documentation.

Compile a detailed report of investigations summarizing all the background information on the history of the cemetery and the field investigations. The report should include:

- A description of the methods of archival research and field investigations, including an explanation of how the cemetery or graves were identified;
- A depiction of the extent of cemetery or graves on maps and aerial photographs;
- Information on the extent and depth of the area investigated, and a depiction of the surveyed area relative to the APE;
- Description of the geology, geomorphology, and stratigraphy encountered during the search for graves;

- An account of the level of effort expended, including the names and number of persons conducting the investigations;
- An explanation of any constraints that limited the investigations; include a statement of potential for graves existing outside the APE, such as African-American graves outside of, or near a white family cemetery from a former slave-owning property, but not within the APE;
- A justification explaining how the extent and methods of investigations constitute a good faith effort to identify unmarked graves within the APE;
- Photographs, drawings, and other documentation to illustrate and support the findings; and
- Best practices for recording unmarked graves and cemeteries, and working with landowners should follow CTA standards and guidelines for Intensive Terrestrial Survey area and site and artifact location recordation, THC guidance on their website at https://www.thc.texas.gov/preserve/projects-and-programs/cemetery-preservation/discovery-and-notice-existence, and other applicable CTA standards and guidelines.

If an inadvertent discovery is made of a prehistoric burial during survey otherwise not searching for graves, the field methods necessary for locating other burials should be coordinated with THC and, as relevant to any survey-associated Antiquities Code of Texas (Texas Natural Resources Code, Title 9, Chapter 191), with State Agencies. In this case, the use of machine-aided excavation may not be best practice if the burial is located within a prehistoric site unless removal of overburden is necessary to access target deposits. Delineation utilizing hand excavation or other methodology coordinated directly with the THC should still be conducted to ensure a good faith effort to delineate cemetery boundaries if there will be potential impacts to those areas.

> These guidelines do not address situations where graves, marked or unmarked, must be exhumed and relocated. Such situations must be addressed on a case-by-case basis in consultation with project sponsors, descendant groups, and regulatory authorities. All archeological work conducted within cemeteries must adhere to the requirements of the Texas Health and Safety Code.

COUNCIL OF TEXAS ARCHEOLOGISTS

GUIDELINES AND STANDARDS FOR CURATION

Prepared by the Curation Committee
Revised Spring 2020

CONTENTS

Appendices

The Council of Texas Archeologists Curation Committee and its predecessors have a long history in developing curatorial standards. This document replaces the Council of Texas Archeologists Guidelines for Curation Standards and Procedures, as amended. Professional archeologists can refer to these updated guidelines when preparing and organizing archeological research collections for long-term curation. These guidelines and standards will be reviewed and updated (if needed) every five years.

1 INTRODUCTION

Archeological sites are unique and nonrenewable cultural resources. Archeological investigations often result in the partial or total destruction of sites, leaving the archeological record consisting of the physical objects (i.e., artifacts, samples) and the associated documentation (e.g., permits, field/laboratory records, photographs, reports). These collections are the data sources for both present and future research and interpretation, and represent the cultural patrimony of the federal government, the state, and private landowners. Accordingly, it is necessary to systematically document, process (e.g., clean, label), inventory, and permanently house these collections in perpetuity. Selecting a museum or repository [herein repository] to provide professional and systematic curatorial services on a permanent basis should be of utmost concern and consideration to all members of the archeological community, and should be chosen in line with requirements for federal collections as set out in 36 CFR Part 79. and for state-associated collections as outlined in Chapter 29 of the Texas Administrative Code .

Archeologists working on projects/research are encouraged to utilize these guidelines into developing project budgets, schedules, and personnel requirements. Repositories are encouraged to refer to these guidelines when considering institutional staff and policy development, long range planning, and modification/expansion of facilities.

When a qualified archeologist conducts a cultural resource survey, excavation, or other study, the research design should contain the collection strategy and curation plan approved by the lead agency. Ideally, all project planning relating to the curation of project records and artifacts should be done in consultation with the Curator or Collections Manager of the selected repository. The field collection strategy should be governed by a research design that addresses the management and research goals of the project, the types of materials to be collected and curated, and a systematic sampling that is acceptable to the principal investigator, review agencies, and recipient repository. As a minimum, the collection strategy should include provisions for a representative sample of all classes of cultural materials unless there is an overarching concern (e.g., health risk, repatriation of human burial remains, or impracticality of stabilization), and/or protocols for adequately recording and documenting artifacts in the field. Complete objects are generally rare and should receive high priority for collection to facilitate future research and interpretive display. Fragmentary objects with diagnostic attributes (e.g., patterns, complete dimensions, temporal attributes, stylistic attributes, makers' marks, use-wear marks, etc.) are important for comparative analysis and should generally be saved. Material with residues, chemicals, or elements potentially useful for future studies should also be prioritized for retention.

When cultural materials are encountered as the result of a cultural resource survey, excavation, or other study, archival procedures must be followed and decisions must be made by qualified archeologists as to what must be recorded, discarded, or saved for a permanent collection. When eliminating material, archeologists may have to consider hazards to health and safety, irreversible deterioration, importance for scientific research, heritage appreciation, educational value, or its age being too recent to qualify as historical. Such decisions also must consider practical factors, such as weighing the costs of curation against the present and potential heritage and research values of the collections, as well as laws regulating

the disposal of collections such as Chapter 26.17 of the Texas Administrative Code. As it is extremely difficult to predict the potential for research, a conservative approach is recommended.

For collections recovered from submerged environments under an Underwater Excavation permit, conservation treatment of the recovered artifacts is a requirement of the permit. While not required for terrestrial investigations, conservation treatments for certain classes of artifacts, such as metal and organics, may be necessary or at least beneficial for the long-term preservation of the artifact. Archeologists should consult with professional conservators to determine if treatment is required or feasible, what type of treatment is appropriate, and at what cost. Conservation measures should be completed before acquisition by the permanent repository, as part of the project proposal costs. Once accessioned by a repository, any subsequent conservation and maintenance measures are the responsibility of the repository.

Recording practices and procedures should be coordinated with the Curator or Collections Manager and included in the archeological budget. Of particular concern should be the following:

1) All paper products used for field notes, catalogs, labels, tags, and reports should be of archival quality.
2) Electronic records should be compatible with the repository's system(s).
3) Photographs and other documents should be archivally processed and placed in archival holders.

Identifying labels and/or numbers should be affixed to each artifact with reversible but stable archival materials whenever feasible. For example, organic materials are not suitable for direct labeling, and certain bulk categories may only need to have a percentage labeled.

When preparing a collection for curation following field investigations, further consultation with repository staff may be necessary if the recovery varies from what was discussed in the research design. Such considerations could include the concerns of culturally affiliated groups, emergency discoveries in the field, and other factors.

These guidelines pertain to all archeological material collections and documenting records regardless of their origin. Archeological material collections and their documenting records generated through compliance with historic preservation or environmental laws, regulations, and guidelines must be housed at a museum or repository with the capability to ensure adequate permanent storage, security, and ready access to collections by qualified users by law (see Appendix A for list of federal and state laws).

2 GUIDELINES FOR SUBMITTING COLLECTIONS FOR CURATION

Archeological collections consist of records, which document the history of the project, and materials, which are the artifacts, samples, and other tangible remains collected during the course of a project. Collections may consist of records and materials, or they may consist of records only. Typical types of records and materials are discussed in further detail below.

2.1 Pre-Curation Field Strategies

Archeologists should think about curatorial issues and practices from the very beginning of a project, and consider the following best management practices in the field for the collection, handling, and storage of materials collected and associated project records.

Collections management in the field starts with implementing the field collection and statistical sampling methods presented in the project research design and or/proposal approved by reviewing agencies (ex. a THC reviewer upon application for a Texas Antiquities Permit).

> ***Example of a Data Recovery Collecting Strategy:***
>
> All artifacts, dating, botanical and faunal samples will be carefully collected by vertical and horizontal provenience. Fire-cracked rock (FCR) will be collected only when associated with a cultural feature after thorough documentation, or if it is associated with charcoal or other unique contexts as directed by the crew chief. Samples of feature fill will also be collected. Two samples per feature level will be collected, a 1-liter sample to be processed for further analysis, and a ½-liter sample to be curated for posterity.
>
> Unexpected discoveries at the site may necessitate changes in the collecting strategy and sampling plan. When changes are made, they should be well documented and continue to support the research goals of the project.

An example of a project-specific field curation protocol is also presented in Appendix C.

Reminder: There may be materials either redundant or non-cultural that the Principal Investigator (PI) will want to discard once in the laboratory. THC approval must be obtained prior to such culling in the lab and all sampling and/or discarding must be fully documented and included in the associated records submitted for curation. Please note, that clearly modern items (i.e., less than 50 years old) recovered in the field may be disposed of without consultation with the THC.

2.1.1 *Excavation and Field Conservation*

Excavation changes the environmental conditions that archeological materials are acclimated to. When they are unearthed and exposed to different temperature, relative humidity and lighting conditions, artifacts immediately begin to react to the changes in ways that are both visible and invisible to the archeologist (Sease 1994). Most often these changes lead to rapid object deterioration. Planning for conservation in the field is therefore essential for the long-term preservation of archeological objects. For Data Recovery and Testing projects, it is best to employ a Finds Manager, a site secretary, or appoint a quality control person to serve the ancillary duty of being present onsite during excavations to manage the documentation and artifacts from the field to the lab. It is this person's responsibility to know when a professional conservator is needed, and to consider the following:

- The types of material remains anticipated.
- What types of conservation treatments may be needed in the field.
- Volume and kinds of archival quality storage materials that will be required to stabilize the materials and safely transport the collection from the field to the lab or repository.
- How the material remains can best be collected to facilitate their long-term preservation.
- Choice of excavation tools that may affect the materials and condition of an object; the best tools that will inflict the least harm should be chosen prior to field work.
- A number of factors, such as water, temperature, humidity, and sunlight, affect the stability of an object in the ground during and directly after excavation
- Always assume objects are fragile and immediately cover up an object or a group of objects that seem unstable.
- Contact a professional conservator for advice on *in situ* treatment and methods to remove the object(s).

- Objects should be kept in bags or containers with like materials. Improper mixing can cause damage to some objects (e.g., placing bones or soft ceramics in containers with large and heavy lithics).
- Remember that any procedures applied to an object should be reversible (can be later be removed without any damage to an artifact).
- A professional conservator should always be consulted for complex treatments or if there are any questions about correct conservation procedures. In particular, be sure appropriate adhesives and consolidants are selected.

2.1.1.1 SOIL

- The type of soil in which objects are found can be used to anticipate the condition and conservation needs of the recovered artifacts.
- The chart in **Table 1**, outlines the general preservation of objects in some basic types of soil conditions (NPS 2019a; Sease 1994).

Table 1. Soil chart adapted from Sease (1994) and the National Park Service (NPS 2019a) outlining the general preservation of objects in some basic types of soil conditions.

		Acidic	Alkaline	Saline	Water-logged Acidic	Water-logged Alkaline	Desert	Arctic
	Ceramics	R-calcareous fillers dissolve	P-basic structure affected	P	R	P	G-wind erosion possible	G
	Lithics	G	G	P-soluble salts	P	P-insoluble salt encrustation	G-wind erosion possible	G
	Glass and Glazes	R-alkali leaching	P-basic structure affected	P	R	P	G-wind erosion possible	G
	Wall Plaster	P	G	P	P	P	G	G
	Shell	P	G	P-soluble salts	P	P	G	G
Metals	**Iron**	P-corrosion	G	P-corrosion	G	G	G	G
	Copper Alloys	P-corrosion	G	P-corrosion	G	G	G	G
	Lead	P	P-basic structure affected	R	G	G	G	G
	Silver	P	G	G-slight saline P-high saline	G	G	G	G
Organics	**Bone, Ivory, Antler**	P	G	P-soluble salts	P	P	G	G
	Wool, Leather, Hair	P-deterioration of protein	P	R-dehydration	G	G	G	G
	Wood, Cotton, Linen	P	P	R-dehydration	G	G	G	G

G=Good Preservations; R=reasonable Preservation; P=Poor Preservation

There are many resources on the internet that provide advice on field and lab conservation, as well as links to finding an objects conservator. The best advice is to not do anything and keep the object(s) in equilibrium – if wet, keep wet.

2.1.1.2 PACKAGING

Packaging in the field is often considered temporary, but many times these "temporary" containers end up housing the collections for months or even years. Therefore, only archival quality materials should be used and all exterior containers must be labeled immediately with an attached box tag. Therefore, complete bags should be put away in a larger protective container (properly labeled) and checked throughout the fieldwork until it is transported to the lab. Tyvek tags or paper tags that are protected by their own smaller Ziplock bag can also be placed inside the artifact bags in order to ensure the provenience information remains intact even if the ink fades away. Artifact bags should be 4-mil self-closing zip top bags (same as required for curation). Never use paper lunch sacks or bags that do not close on their own (no string or twisty ties to close bags). Boxes or bins should also be closeable and preferably water resistant.

For most materials, it is often best to keep them stored in similar conditions to how they were buried; acclimation to new conditions should be slow. In general, if the in-situ context is dry, you should keep the objects dry after excavation. Alternatively, if it is damp or wet, slow drying is best. Waterlogged organic materials like wood or bone should be kept wet until a conservator can treat them. Other things to consider include:

- Don't place objects in direct sunlight to prevent condensation.
- If storing objects for long periods before processing, consider opening the bags to dry slowly; however, make sure they are supported and don't fall over spilling their contents.
- Pack objects of different materials separately.
- Don't fill bags too full.
- Don't put heavy objects on top of light ones.
- Make sure objects are well supported if fragile.
- Plan ahead, especially if specialized packing is needed.
- Assemble a field kit.

2.2 Arranging for Curation with an Archeological Repository

In choosing a repository, the archeologist should consider the existence of previously excavated collections, with the aim of keeping collections from the same site together whenever possible. In particular, it is most important that materials be housed in the state of origin. The archeologist should confer with the selected repository as early as possible in the project planning process regarding specific curation guidelines required by that particular facility. All Antiquities Code of Texas permitted state-associated collections must be curated in a repository certified through the THC's Curatorial Facilities Certification Program.

2.2.1 *Letter of Request for Housing*

Texas Antiquities Code permits require that the PI select a final repository for the collection, but only requires proof of acceptance once the collection has been submitted for curation. Nonetheless, a request for housing should be submitted to the repository by the archeologist prior to the preparation of collections. This letter provides advance notice to the repository that the archeologist intends to submit

collections for curation (this might not be necessary in the case of records-only collections). By requesting housing at the start of a project the archeologist will know in advance if the selected repository agrees to take the resulting collection for curation and be able to plan processing of the recovered materials and records kept that fit the curation standards of the repository. Basic information typically included in the letter is:

- Name of submitting archeologist
- Name of sponsoring individual/agency/institution
- Nature of investigation
- Date of investigation
- Project area and/or site(s) location(s)
- A need for housing material and documenting records collections (e.g., a collection may include records only)
- Projected date for curation
- Specifications of ownership and legal responsibilities

Examples:

Texas Archeological Research Laboratory (TARL):
https://liberalarts.utexas.edu/tarl/_files/pdf/tarlcurationform1-rfh-pha-2018-2.pdf
Center for Archaeological Research (CAR):
http://car.utsa.edu/CARCuration/CurationSOPForm.html
Center for Archaeological Studies (CAS):
https://cas.anthropology.txstate.edu/curation/standards-procedures/curation-forms.html

After the archeologist submits a letter of request for housing, the repository will provide a provisional housing agreement. This document is the repository agreement to provide curation for the collection assuming that the repository's curation requirements are met.

2.2.2 *Letter of Transfer/Ownership*

Appropriate documents delineating transfer of ownership or specific custodianship must accompany the collection into curation. These documents let the repository know that the archeologist has the permission of the individual or agency to turn over the collections to the repository for curation. Upon transfer of materials from the archeologist to the repository, the archeologist must submit this transfer of ownership which specifies ownership of the collections to be curated, and clarifies any legal responsibilities to be assumed by the repository.

Examples:

TARL: https://liberalarts.utexas.edu/tarl/_files/tarlcurationform6_transfer_2018.pdf (for a private sponsor) https://liberalarts.utexas.edu/tarl/_files/tarlcurationform7_govt_2018.pdf (for a public agency)
CAR: http://car.utsa.edu/CARCuration/CurationSOPForm.html
CAS: https://cas.anthropology.txstate.edu/curation/standards-procedures/curation-forms.html

2.2.3 *Letter of Acceptance*

The archeologist should ask the repository to provide a letter stating receipt of the collections. Relative to collections made under an Antiquities Code of Texas permit, the "State-Associated Collections Curation Form" serves as the formal letter of acceptance submitted to the THC by the repository in order to satisfy

the PI's curation requirements. A repository is not obliged to provide such a document until accessioning of the collection is completed to the satisfaction of the repository.

2.3 Standards for Preparing Archeological Records

Records submitted for curation should be organized and in good condition. Minimally, records submitted to a repository should be sufficient to document the project and its collections.

Examples of records that may be included are:

- Letter specifying ownership of curated materials
- Copies of correspondence (e.g., research design, antiquities permit, THC concurrence)
- Site form with accompanying USGS map portion showing site location
- Maps and mapping notes (the submission of digital mapping data should be discussed in advance with the repository)
- Daily journal
- Survey or excavation notes
- Photographic log
- Photographs (e.g., prints and negatives, color slides, infra-red, digital images)
- Explanation of cataloging system used
- Field catalog of specimens
- Catalogue or itemized specimen inventory
- Analysis notes
- Digital data (coordinate acceptable formats with repository)
- Transcripts, tapes; oral/historical documentation
- Copies of historic documents
- News clippings, miscellaneous published materials
- Financial and budget records
- Bibliographic records
- Final report: pdf and hard copy versions (redacted and unredacted versions)

While each repository will have its own policies and procedures for the organization of records, all archeologists should:

1) Include original documents unless an alternate agreement has been reached with the repository. All curated records must be on archivally stable (lignin-free, acid-free) material and must be in archivally stable folders or binders, as appropriate. Large individual records such as maps and profiles are to be on archivally stable paper or polyester film and in archivally stable folders.

2) Review all records submitted for curation before submission to ensure that they are legible and reproducible, particularly if they are handwritten or in pencil. Special care should be taken to ensure that secondary documents (typed or rewritten) are accurate.

3) Include, as minimum documentation of a site, a completed site form and the location shown on a USGS topographic map (1:24,000). The form can be the printout from TexSite. Provide Universal Transverse Mercator (UTM) coordinates (note which North American Datum [NAD] is used), at least to site centerpoint, or latitude and longitude if no UTM ticks are marked. The map plotting should indicate the approximate extent of a site and note any possible continuations. If a site is part of a survey, unless the project contract specifies otherwise, survey boundaries and coverage should be indicated.

4) Include a comprehensive records, photograph, and artifact recording system in conjunction with the selected repository (e.g., some repositories use consecutive Lot and Photo numbers and must be contacted for the number assignments).

Examples of curation standards for records:

TARL: https://utexas.app.box.com/s/k2tcn9afmncl1zwmkheaubt2ri2vu5w4
CAR: http://car.utsa.edu/CARCuration/CurationSOPForm.html
CAS: https://cas.anthropology.txstate.edu/curation/standards-procedures.html

2.3.1 *Guidelines for Environmental Conditions by Material Type*
(adapted from NPS Museum Handbook, Part I [NPS 2019b])

In this section we concentrate on dealing with wet objects since that is the most common situation. Also the best advice is to slowly dry out objects, never do it quickly and never have the full force of air directed onto the materials.

2.3.1.1 STONE

Dry out damp stone slowly. Unstable (salt-contaminated) stone needs to be kept in a Relative Humidity (RH) below 50%. The humidity level should be kept as stable as possible to avoid further damage by the hydration cycle of the soluble salts. The temperature needs to be at a steady level between 60 and 72 degrees.

2.3.1.2 CERAMICS

Dry out damp ceramics slowly and look for crystallization of salts which can damage the surface. Low fired ceramics are weak when wet, so take care when handling. Similar to unstable stone, keep temperature and RH levels stable.

2.3.1.3 GLASS

Weathered or spalled surfaces are vulnerable to moisture. Controlled humidity at 20–40% is best.

2.3.1.4 METALS

Dry or damp ferrous metals should be stored in a desiccated environment. Silica gel packets and an oxygen free container are the recommended method of desiccation in the field. For iron, the RH should be less than 12%. Nonferrous metals should be stored in a desiccated environment of RH less than 35%. Humidity indicator strips can be used to monitor RH in sealed containers.

2.3.1.5 BONE AND WOOD

Dry out slowly if damp. Never place in direct sunlight to dry. RH should be stable at around 50%. Bone found in archeological contexts is often in poor condition. Be sure to package bone separately from heavier objects and provide sufficient support and padding with archival tissue or polyethylene foam.

2.3.1.6 STORAGE OF SMALL AND/OR FRAGILE MATERIALS

Make sure fragile material is well supported – use acid free tissue or foam. Small objects can be packed in sealable polyethylene bags with added foam or tissue if needed for support. Small finds, like seeds and botanical remains can be stored in polyethylene or polypropylene vials.

2.3.1.7 SPECIAL ANALYSIS SAMPLES

Sample preparation differs with sample material type and technique. Discuss type of analysis to be conducted with the designated repository ahead of time to plan for proper packing. Many dating laboratories offer guidelines for collection and storage on their websites. In general, use materials that will not contaminate samples (ex. place samples in glass vials so not to contaminate with modern materials).

Handle materials with gloves or wear other protective gear to prevent contamination if necessary (ex. samples that will undergo residue studies should never be handled without gloves).

2.3.2 *Field Recording*

The records in the field, as well as in the lab, are vulnerable to a variety of environmental threats as well as mishandling. Some general recommendations to follow in the field in order to promote the long-term preservation and viability of the documentation are:

- All records should be written as neatly as possible (make sure you can discern numbers from one another for example) and with a #2 pencil [NO ink!]. Your writing must be dark enough to be clearly photocopied;
- use appropriate long-lived media for all record types; use permanent and archival stock in paper, ink, lead pencil, folders, and boxes;
- inspect and redo damaged or inadequate records;
- label everything, or their containers;
- use appropriate storage for all media in the field in order to protect them from poor environmental conditions and threat of fire or theft;
- carefully consider existing guidelines and equipment for digital and audiovisual media, make sure backup copies and hard copy printouts exist whenever possible (possible exemptions might include remote sensing data); and,
- ensure that project information and data is captured by appropriately knowledgeable staff.

2.4 Standards for Preparing Material Collections

When preparing collections for curation be aware that insects are attracted to any dirt that may be found on objects; mold and mildew thrive in darkness on damp surfaces. All uncleaned specimens should be identified on the inventories and the repository must be consulted before submitting these types of specimens. Specimens must be completely dried after cleaning and before packaging and housing with the relative humidity controlled and sufficient ventilation to ensure air movement to prevent mold and mildew.

Because some specimens are fragile and hygroscopic, material such as bone should never be soaked in any cleaning agent, and it should be allowed to air dry after cleaning. Force-drying causes additional stress, which can damage the specimen. For specimens in good physical condition: dust or lightly brush

off surface dirt. Additional cleaning may make use of water, acetone, or a similar cleaning agent. Consult with a conservator when unsure of how to proceed.

- Dampen surface with a soft brush or cotton swab and rub gently.
- Dry area with a clean cotton swab or soft cotton cloth.
- Allow to air dry; blow dryers or heaters can cause additional stress and cracking.
- Dry completely before storage.

Examples of curation standards for material collections:

TARL: https://utexas.app.box.com/s/k2tcn9afmncl1zwmkheaubt2ri2vu5w4
CAR: http://car.utsa.edu/CARCuration/CurationSOPForm.html
CAS: https://cas.anthropology.txstate.edu/curation/standards-procedures.html

2.4.1 *Labeling*

The catalog number should be small, located in an inconspicuous spot, and placed so as not to obscure any distinctive feature. Never place a label on the retouched edge of a lithic tool, the decorated surface of pottery, or the maker's mark or other diagnostic feature of an artifact. For example, always try to label the ventral (smooth) face of a flake or tool and undecorated or difficult to see portions of pottery. For bifacial lithic items, and for all items where there may be a question, try to label the least "photogenic" surface.

Use a two-coat labeling system to insure reversibility while providing stability and imperviousness to moisture is crucial. While the instructions below assume the use of archival ink for labeling, increasingly very small laser printed tags on archivally stable paper are used instead of handwriting on the artifact. In these cases, place the paper label on a base coat of Paraloid B-72 to adhere the label and use a top coat to seal it.

1) Never write directly on the specimen.
2) Never use fingernail polish, white-out, or other such substance.
3) Apply a base coat of 10% Paraloid B-72 solution for most specimens; use white titanium pigment in B-72 as a base coat for dark-colored specimens. Allow to dry before labeling.
4) Use black India ink, Pigma, or Millennium pigmented pens for the number. (**HINT**: Pigma pen ink tends to dissolve when exposed to the solvent in the B-72.) If the base is a dark color, use white-pigmented ink or use a white-pigmented undercoat prior to labeling with black ink or pigment pens. Allow to dry.
5) Cover the number with a top coat of 10% Paraloid B-72 solution.

Artifacts too small to be labeled

1) Usually sort these artifacts by artifact class or analytic unit.
2) Place in 4-mil polyethylene self-sealing bags (or other archivally-stable containers).
3) Label clearly. Provenience information must be on a tag made of Tyvek or acid-free paper and enclosed in the container.
4) Include information regarding artifact counts and weight totals.

Items not directly labeled: these include organic materials such as human remains, matting, wood, and fur, and deteriorating materials such as metal and flaking/patinated glass or eroding ceramics.

1) Identify with tags of Tyvek or acid-free cardstock for longer life tags.

2) Affix tags without endangering delicate materials. They should not be in direct contact with the material, but may be enclosed in a poly bag or inserted between double bag enclosures (check with repository).
3) Treat small items in this category as described above.

Illustrated or photographed artifacts

1) Consider identifying artifacts illustrated or photographed in reports and/or publications. Typically these should not be separately housed, but kept with the appropriate analytical groups that they represent. However, coordinate with the curatorial repository beforehand to verify their requirements.
2) The information that an artifact portrays in an illustration should be noted in the associated document catalog; reference to the report and the figure number is helpful.

2.4.2 *Packaging*

- Specimens should not be allowed to roll loosely, bump into each other, or be stacked on top of each other in their container except with certain categories of bulk materials (e.g., burned rock).
- All packaging should be done with acid-free materials, lignin-free materials, or polyester/polyethylene/polypropylene materials. Poly bags should be 4-mil.
- Padding or a similar protective barrier should be used as needed to protect individual specimens within a larger container.
- Avoid packing heavy and light/fragile items in the same box.

Additional details concerning packaging materials:

All packing materials must be archivally stable and acid-free. The materials listed below are some of the most common items used for packaging:

Acceptable Materials: · Acid-free corrugated board and mat board, preferably unbuffered · Clear, polyethylene self-closing plastic bags without pleats · Clear, polyethylene plastic containers · Unbuffered, acid-free cardboard boxes, various sizes · Unbuffered, acid-free tissue paper · Polyethylene foam, preferably foamed with nitrogen · Polystyrene – rigid boxes only · Unbleached muslin, washed 5 or 6 times to remove sizing · Silica gel (packaged)

Unacceptable Materials: · Colored or clear plastic bags with pleats and/or twist ties · Colored plastic containers · Plastics containing PVCs · High acid content or buffered cardboard boxes · High acid content or buffered tissue paper · Paper towels · Newspaper · Any acidic paper products · Glass containers · Rubber bands · Pressure sensitive tapes (scotch, masking, mailing, etc.) · Bubble pack · Cotton Wool · Polystyrene peanuts or beads

Non-archival quality pressure-sensitive tape (e.g., scotch, masking, strapping) fasteners and glues should never be used on documents. Any material in contact with paper records should be of archival quality, reversible, non-yellowing and should not cause damage to the paper.

2.4.3 *Conservation*

Any conservation treatment should be done in consultation with the repository. Items in very fragile condition should be inspected and treated by a competent conservator. In any conservation procedure, all work should be reversible both in the short-term and long-term.

Adhesive: use a reversible mending agent such as Paraloid B-72.

1) Coat the edges of the break with a 10% Paraloid B-72 solution and allow to dry.
2) Apply a 20–25% Paraloid B-72 solution as an adhesive to conjoin the pieces; allow to dry thoroughly.

Consolidant: use a reversible product such as Paraloid B-72, but unless you have experience or someone with experience to supervise, this is not advisable.

1) Apply a Paraloid B-72 solution from 1% to 10% depending on condition and porosity.
2) Allow to dry thoroughly.
3) Apply second (or more) treatment(s) if necessary, allowing thorough drying between treatments.
4) Conservation treatment records should be maintained as part of the documentation of the specimen.

2.5 Checklist for Submitting Archeological Material Collections

Material collections submitted for curation should be organized and in good condition. Archeological materials submitted for curation could include the following categories:

- Ceramics (e.g., vessels, figurines, sherds, pipes)
- Lithics (e.g., stone tools, debitage, burned rock, comparative materials)
- Glass (e.g., window panes, bottles)
- Metal (e.g., nails, armaments)
- Synthetic materials (e.g., plastic, nylon)
- Faunal materials (e.g., animal osteological, shell, horn)
- Vegetal materials (e.g., charcoal, wood, seeds, pollen, phytolithic, matting, basketry)
- Human remains

It is held that, with only rare exceptions, material collections to be housed have been analyzed, and therefore artifact cleaning, cataloging, preservation, and site-specific specimen-level inventories have been completed according to established guidelines. While specific handling guidelines are formulated by each repository, all repositories require an archeologist to see that:

- Material collections are accompanied by all documenting records, including any analysis records.
- An explanation of the cataloging system is provided.
- While proper cleaning is expected for most items collected, there may be specimens for special studies where cleaning would compromise or change the results of the study. These items should be identified, separated from other collected material, and omitted from the usual cleaning process. The repository should be informed of this on the request for housing form. If the items are being kept for future prospective tests and will be coming into curation in an unwashed state, this status must be reflected in the records (inventories, packing documents and labels). **All other materials** are to be cleaned and preserved using appropriate reversible, nondestructive techniques. The materials should be accompanied by documents listing these techniques, and the records adjusted to document the items singled out for special studies.
- Specimens needing ongoing conservation are separated and documented. If ongoing preservation costs are not included in the initial fee, additional charges may be assessed.
- All specimens are labeled in accordance with the accessioning, cataloging, and labeling systems of the repository.

- Unless alternate arrangements have been made with the repository, all specimens should be labeled (indelible stamp, India ink, etc.) with a site designation and intrasite provenience. Specimens too small to be numbered and/or large groups of similar specimens retaining original provenience groupings are to be placed in labeled containers to ensure against loss of provenience and/or analysis groupings.
- Fabric or paper tags should be affixed to perishable or fragile specimens that are not to be directly marked upon.
- Tags in bulk samples (e.g., matrix, soil, burned rock) should be enclosed in small plastic bags within bags, or placed in another bag with the tag between the two plastic bags.
- Follow the facility's guidelines of labeling boxes. Some will affix their own tags.
- All paper labels and tags should be acid- and lignin-free.
- Labels in or on containers should provide the following information: site designation, project name and date, provenience data, and analytical group; some repositories also include number of specimens contained within.
- The quantity of bulk samples (e.g., matrix, soil, burned rock, etc.) to be curated is set before submission to the repository. These determinations should consider the potential of samples and specimens for future research and to the limited space for housing in most repositories. Sampling is highly recommended.
- All artifact bags are polyethylene plastic bags, rather than paper bags, in accordance with the packaging system of the repository.
- The use of plastic or cardboard containers in addition to plastic bags is considered when they are appropriate for protection, separation, and/or future use of the collections. Boxes should be sturdy and should fit the size/shape requirements of the repository. The repository may provide the boxes to facilitate submission.
- Following analysis, analytical categories are maintained and **not disassembled**.
- If unusual circumstances exist and a collection is not analyzed, it is packaged according to its field provenience and accompanied by a corrected and updated field catalog.
- A specimen inventory or catalogue accompanies each collection. This inventory must accurately reflect the quantity of material, the analysis, and packaging order. Analytical group designations on inventories should correspond to those used in the final report and on packaging labels.
- Collections should be hand transported to the repository, if at all possible. Where shipping is unavoidable, wrap and pad artifacts to withstand impacts and use a carrier with a tracking system. The box-within-a-box packaging method is preferred. If materials must be shipped, contact the repository in advance for guidance and inform them of the date the materials are shipped and expected delivery date.

3 GUIDELINES FOR TREATMENT OF HUMAN REMAINS

Human remains and objects associated with funerary practices that are either intentionally excavated and deposited for curation or identified in extant collections through consultation must be handled with respect, cared for, and preserved during temporary and/or long-term housing. **Human remains and associated funerary objects should always be in kept in a secure, nonpublic area away from activity.** Where cultural affiliation is known or suspected, consultation with the appropriate group or descendants may identify special handling or housing requests that the curation facility will do its best to accommodate. Ideally, consultation should be done before field investigations commence whenever finding human remains is a possibility.

After excavation, it is important that individuals are kept together and not commingled. In the same way, the remains of a given individual and their associated funerary objects should be kept together (or physically nearby) for temporary and/or long-term housing.

3.1 Cleaning

Human remains are fragile and hygroscopic (attract moisture from the atmosphere). Poorly preserved human remains should not be washed. Always consult with a bioarcheologist or bone conservator for post-excavation treatment. Temperature and humidity fluctuations should be avoided. The archeological lab director/manager may consider having the bioarcheologist or osteologist do the final cleaning.

- Loose earth and dust can be removed by careful, soft brushing and not require washing.
- If necessary, washing should be done with extreme care using lukewarm water to dampen soft brushes and sponges.
- Never completely immerse bone or allow it to become saturated.
- Water should be changed after each individual and frequently when fouled.
- Take care not to damage tooth enamel or to remove deposits of dental calculus; always use a damp sponge, never use a brush.
- Handle the cranium with particular care and ensure that all soil is removed from its interior; soil left in any hollow bones will shrink and harden, causing considerable damage.

3.2 Drying

Once the remains have been dry brushed or washed, dry completely at room temperature and out of direct sunlight and away from hot light sources, ultraviolet lighting, ventilation or heat ducts, exterior walls, and windows.

- Bones should be laid out to dry in such a way as to minimize the possibility of the remains of different individuals being mixed.
- Never apply preservative agents, consolidants, varnish, glue, or adhesive tape to human material. Painter's tape has been shown to hold during analysis and is easily removed without damage to the surface of the bone.

3.3 Cataloging and Labeling

- Do not write directly on the bones or associated funerary objects.
- Use an acid-and lignin-free paper label or other archival labeling material (e.g., Tyvek tags).
- Attach label inside and outside of the bag or other packaging.

3.4 Packaging

- If at all possible, requests by descendant groups bearing on packaging and housing of human remains should be accommodated.
- Bones must be completely dry before they are packaged.
- Ideally keep human remains and funerary objects from a single individual burial together.
- Bones should be individually wrapped securely with enough padding to prevent damage.
- Padding or a similar protective barrier should be used to protect individual bones that are stored within a larger container.

- Ensure that the bones cannot fall out of bags or boxes and become lost or commingled.
- All packaging and padding should be done using acid-and lignin-free or polyester/polyethylene/polypropylene materials.
- While it is best to avoid stacking containers that hold human remains, it can be done if the boxes are sturdy and descendant groups are not adverse.
- Human remains and associated funerary objects should always be in kept in a secure, climate-controlled, nonpublic area away from activity.

4 NEGATIVE FINDINGS PROJECTS

Archeologists are encouraged to submit complete collections of records resulting from negative findings projects, that is, archeological projects that do not record any new sites, revisit or reassess existing sites, collect any archeological material from sites, or collect individual finds. However, archeologists may choose to abide by the following requirements in lieu of submitting complete records-only collections from Negative Findings Projects for curation. Submissions are further dependent on the repository's rules when they deviate from the items enumerated below:

1) Archeologists will submit to a designated curatorial facility for curation, one hard copy and one digital copy of the final report (note some repositories might require two hard copies of final reports). In addition to the CTA Guidelines for CRM Short Reports, final reports must:

    a) Include copies or scans of field forms generated during the project attached to the report as an appendix. These field forms must include at a minimum: a subsurface testing log indicating the locations and results of any and all shovel tests, auger holes, or backhoe trenches; and any field notes or daily journals. The appendix should be included in both the review draft and the restricted final draft sent to the THC;
    b) be accompanied by the signed request for housing and letter of transfer form(s);
    c) minimally provide enough photos to adequately depict field conditions and an associated photo log. These photos should minimally include general project area views, representative pictures of shovel tests, pictures illustrating major disturbances, and photos of the survey crew working on the project. Photos not included in the report should be noted in the photo log; and,
    d) include copies or scans of all project correspondence records, including coordination/notification letters and proposals as appendices.

Only reports meeting these requirements will constitute the complete record of the survey.

2) Original records may be retained indefinitely or discarded by the permit holder under the disposal rule provided in Title 13, Part 2, Chapter 26, Subchapter C, Rule 26.17 (f).

5 CONSIDERATIONS FOR COLLECTIONS-BASED RESEARCH

The security and safety of state-associated collections is of utmost importance. Controlled access to state-associated collections by employees, researchers, and the public limits the opportunities for theft and destruction to objects, samples, documentation, and historical items. Strict collections access aids in the control of human traffic in storage areas. State-associated collections are not open to the general public on a walk-in basis. The information on the location and nature of archeological sites on land or under waters belonging to the State of Texas or any political subdivision of the State is not available to the general public.

Research on state-associated collections is for the benefit of the people of Texas and the discipline. Requests for access to state-associated collections retained by the THC for care and management should go to the THC. Requests for access to state-associated held-in-trust collections should go to the appropriate curatorial facility. Final reports for all TAC permitted archeological investigations should list the final repository for the associated Held-In-Trust collection in the management summary and/or abstract sections. The final repository should also be listed on the Texas Sites Atlas. If you are interested in accessing or using a curated collection for research or public outreach, the first step is to contact the final repository and familiarize yourself with their Access & Use, loan, and destructive analysis policies and procedures. Please be aware that repositories require a review and approval of the research design and/or proposal as stated in the THC's certification standards when considering any destructive analyses. Due to the amount of time needed for accessing and pulling collections, documenting the analyses, and additional reporting to the THC in the annual report, these repositories may charge an access and use fee. It is also appropriate for agencies that will require comparative analyses that involved long-curated collections to consider contacting the repository before the contracts are written to assure collections can be accessed.

Access may be denied based on endangerment to the state-associated collection or objects, samples, documentation, or historical items or their unavailability due to not being accessioned or cataloged, out on loan, or inadequate research design. If access is approved, it is your responsibility to talk with the repository staff about the way the collection needs to be returned so that the collection is in better shape than in which it was found. This is especially important for legacy collections or collections needing rehabilitation including any collection that has been in curation since before the 2005 Certification Program was initiated.

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1994 *A Conservation Manual for the Field Archaeologist*, 3rd edition. Archaeological Research Tools 4. Los Angeles: UCLA Institute of Archaeology.

APPENDIX A

Federal and State Laws

Federal Laws

Antiquities Act of 1906 provides for the protection of historic, prehistoric, and scientific features located on federal lands. It authorizes the President to designate as National Monuments historic and natural resources of national significance located on federally owned or controlled land. The Secretaries of the Interior, Agriculture, and Defense are authorized to issue permits for archeological investigations on lands under their control to recognized educational and scientific institutions for the purpose of systematically and professionally gathering data of scientific value.

http://www.nps.gov/archeology/tools/laws/AntAct.htm

National Park Service Act of 1916 establishes the National Park Service to manage our nation's parks and to "conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such a manner and by such a means as will leave them unimpaired for the enjoyment of future generations."

https://www.nps.gov/grba/learn/management/organic-act-of-1916.htm

Historic Sites Act of 1935 establishes as a national policy preservation for public use of historic sites, buildings, and objects. This act led to the eventual establishment within the National Park Service of the Historic Sites Survey, the Historic American Building Survey (HABS), the Historic American Engineering Record (HAER), and the National Historic Landmarks Program.

http://www.nps.gov/history/local-law/FHPL_HistSites.pdf

Curation of Federally-Owned and Administered Archeological Collections (36 CFR Part 79)

http://www.nps.gov/archeology/tools/laws/36CFR79.htm http://www.nps.gov/archeology/tools/36CFR79.htm http://www.nps.gov/archeology/collections/laws_04.htm

Reservoir Salvage Act of 1960 provides for the recovery and preservation of "historical and archaeological data (including relics and specimens)" that might be lost or destroyed in the construction of dams and reservoirs.

https://www.usbr.gov/cultural/ReservoirSalvageAct1960.pdf

National Historic Preservation Act of 1966, as amended, establishes a program for the preservation of historic properties throughout the United States. It created the National Register of Historic Places, State Historic Preservation Offices, and the Section 106 Review Process.

http://www.nps.gov/history/local-law/FHPL_HistPrsrvt.pdf
http://www.nps.gov/archeology/tools/laws/NHPA.htm

Department of Transportation Act of 1966, Section 4(f) states that the Secretary of Transportation shall cooperate and consult with the Secretaries of the Interior, Housing and Urban Development, and Agriculture, and with the States in developing transportation plans and programs that include measures to maintain or enhance the natural beauty of the lands traversed. The Secretary of Transportation shall not approve any program or project that requires the use of land from a public park, recreation area, wildlife and waterfowl refuge, or historic site unless there is no feasible and prudent alternative.

https://www.faa.gov/about/office_org/headquarters_offices/apl/environ_policy_guidance/policy/faa_nepa_order/desk_ref/media/5-dot-act-section4f.pdf

National Environmental Policy Act of 1969 declares that it is a federal policy to "preserve important historic, cultural, and natural aspects of our national heritage. It requires federal agencies to use a systematic and interdisciplinary approach that incorporates the natural and social sciences in any planning and decision making that may impact our environment.

https://www.fws.gov/r9esnepa/RelatedLegislativeAuthorities/nepa1969.PDF

Archaeological and Historic Preservation Act of 1974 amends the 1960 Reservoir Salvage Act by providing for the preservation of significant scientific, prehistoric, historic and archeological materials and data that might be lost or destroyed as a result of flooding, the construction of access roads, relocation of railroads and highways, or any other federally-funded activity that is associated with the construction of a dam or reservoir.

http://www.nps.gov/archeology/tools/laws/AHPA.htm

American Indian Religious Freedom Act of 1978 states that it is a policy of the United States to protect and preserve for American Indians their inherent right of freedom to believe, express, and exercise the traditional religions of the American Indian, Eskimo, Aleut, and Native Hawaiians, including but not limited to access to sites, use and possession of sacred objects, and the freedom to worship through ceremonial and traditional rites.

http://www.nps.gov/history/local-law/FHPL_IndianRelFreAct.pdf

Archaeological Resources Protection Act of 1979 defines archeological resources as any material remains of past human life or activities that are of archeological interest and at least 100 years old, requires federal permits for their excavation or removal and sets penalties for violators.

http://www.nps.gov/history/local-law/FHPL_ArchRsrcsProt.pdf
http://www.nps.gov/archeology/tools/laws/ARPA.htm

Abandoned Shipwreck Act of 1987 asserts United States Government ownership of three categories of abandoned shipwrecks: those embedded in a state's submerged lands; those embedded in coral formations that are protected by a state; and those located on a state's lands that are included or are eligible for inclusion in the National Register of Historic Places. The law then transfers title for most of the shipwrecks to the respective states and stipulates that states develop policies to protect the shipwrecks.

http://www.nps.gov/history/local-law/FHPL_AbndShipwreck.pdf
http://www.nps.gov/archeology/tools/laws/ASA.htm

Native American Graves Protection and Repatriation Act of 1990 gives ownership and control of Native American human remains, funerary objects, sacred objects and objects of cultural patrimony that are excavated or discovered on federal land to federally-recognized American Indian tribes or Native Hawaiian organizations. The law also establishes criminal penalties for trafficking in human remains or cultural objects, and requires agencies and museums that receive federal funding to inventory those items in their possession, identify any descendants, and consult with appropriate tribes about repatriation.

http://www.nps.gov/archeology/tools/laws/NAGPRA.htm

Executive Order 13007, Indian Sacred Sites, 1996 instructs all federal land management agencies, to the extent practicable, to accommodate access to and ceremonial use of Indian sacred sites by Indian practitioners and to avoid adversely affecting the physical integrity of those sacred sites.

https://www.energy.gov/sites/prod/files/EO%2013007%20Indian%20Sacred%20Sites.pdf

Texas State Rules, Regulations, and Codes

Antiquities Code of Texas (Amended Sept. 1, 1997) was adopted in 1969 and gave protection to all cultural resources, historic and prehistoric, within the public domain of the State of Texas. The Antiquities Code assigns the Texas Historical Commission as the legal custodian of these resources. Under the Antiquities Code the THC issues permits to conduct archeological investigation of cultural resources to qualified individuals and institutions who demonstrate the capability and willingness to obtain the maximum scientific archeological and educational information from such investigation. In addition, in Chapter 29 the THC, through the CFCP process, also regulates those facilities that can hold state-associated collections generated under and Antiquities Permit.

https://www.thc.texas.gov/public/upload/images/AntiqCode.pdf

Rules of Practice and Procedure for the Antiquities Code of Texas

https://texreg.sos.state.tx.us/public/readtac$ext.ViewTAC?tac_view=4&ti=13&pt=2&ch=26

Texas Administrative Code Title 13, Part II, Chapter 25 Rule 25.6—Collections

https://texreg.sos.state.tx.us/public/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=13&pt=2&ch=25&rl=6

Texas Administrative Code Title 13, Part II, Chapter 29—Management and Care of Artifacts and Collections

https://texreg.sos.state.tx.us/public/readtac$ext.ViewTAC?tac_view=4&ti=13&pt=2&ch=29&rl=Y

APPENDIX B

Useful Terms

Accessibility – The capability of records/collections to be easily and quickly located, organized and indexed/cleaned and cataloged, and be usable by someone other than the original investigator.

Accessioning – The process of transferring title, ownership, or stewardship from the providing source (fieldwork, purchase, gift, transfer, etc.) to the repository/museum.

Accession number – A tracking number unique to a group of incoming collection objects/records, whose purpose is identification, not description; the most common form is the year and order in which the collection is accessioned (e.g., 1997-1).

Accredible standards – Currently acceptable practices and procedures that are greater than minimal; periodically upgraded.

Acid-free – Refers to paper or paper-board products having a chemical pH of 7.0 or higher; loosely-used term referring either to neutral pH or alkaline-buffered materials. However free of acid a paper may be immediately after manufacture, over time the presence of residue chlorine from bleaching, aluminum sulfate from sizing, or pollutants in the atmosphere may lead to the formation of acid unless the paper or board has been buffered with an alkaline substance.

Acid-free alkaline-buffered – Refers to paper or paper-board products to which various alkalines have been added to neutralize acids or serve as an alkaline reserve for the purpose of counteracting acids that may form in the future. Packaging in such materials creates a safety barrier against the migration of acids both into and out of an object. Cellulosic materials (paper, cotton, linen, etc.) require alkaline-buffered or inert surroundings (wrappings, packaging, boxing, etc.).

Acid-free neutral – Refers to paper or paper-board products that have a chemical pH of 7.0, neither acidic nor alkaline. Proteinaceous materials (wool, silk, hair, leather, feather, etc.) require neutral or inert surroundings, as do most photographic materials.

Acquisition – The act of gaining physical possession of an object, specimen, or sample and associated records.

Acryloid B-72 (or Paraloid B-72) – An acrylic resin (polymethyl acrylate/polyethyl methacrylate copolymer) used as an adhesive or a consolidant; stable and soluble under normal conditions (environmentally-controlled); recommended uses include metals (silver and iron), textiles, lacquer work and wood. Acrylates are known to cross-link (become irreversible) with ultraviolet exposure.

– Chemically an ethyl methacrylate co-polymer, Paraloid B-72 is a durable and non-yellowing acrylic polymer used for consolidating wall paintings (1-5%), fragile wood (5-20%), etc. It may be used as a fixative when diluted with a solvent to secure markings on artifacts and as an adhesive (50%+) for a variety of substrates. Paraloid B-72 is soluble in acetone, toluene, and isopranol.

Archival/Archivally sound/Archivally stable – A non-technical term that suggests that a material or product is permanent, durable, or chemically stable and, therefore, can be used safely for preservation purposes.

Associated funerary objects – Objects that, as a part of the death rite or ceremony of a culture, are reasonably believed to have been placed with individual human remains either at the time of death or later, and both the remains and associated funerary objects are presently in the possession or control of a

Federal agency or museum, except that other items exclusively made for burial purposes or to contain human remains shall be considered as associated funerary objects.

Blueboard – Refers to acid-free, lignin-free corrugated board used for packaging and housing material (boxes, supports, etc.).

Cataloging – Assigning an object to an established classification system and initiating a record containing identification, provenience, accession and catalog numbers, and location of that object in the collection housing area; each object in a group may be assigned a unique number.

Collection – A related group of objects or specimens and associated documents and data in the care of a repository/museum.

Collections Management Policy – A detailed written statement that explains why a repository/museum is in operation and how it goes about its business. It articulates the repository/museum's professional standards regarding objects and records left in its care. It serves as a guide for the staff and a source of information for the public.

Collections Manager – (see also ***Curator***) A person who possesses knowledge, experience and demonstrable competence in collections care and maintenance including archival methods and techniques appropriate to the nature and content of the collection. A collection management professional should, as a minimum, have experience in collection management and a graduate degree from an accredited institution in anthropology, history, museum studies, or related discipline, or equivalent experience.

Conservation – The treatment of an object to return or enhance its chemical or physical stability; uses interventive methods. Conservation is different from restoration, which is the process of returning an object to its original or previous condition or appearance mainly for aesthetic purposes.

Conservation report – Written report describing the current state of a collection object; includes information regarding the object's provenience, description, and general condition; may include a rough sketch or a photograph of the object. This type of report is ideally done when an object first enters a collection, and thereafter, if it is exhibited, loaned, needs conservation care, etc.

Conservator – A specialist, educated and trained in the preservation and treatment of physically or chemically unstable objects.

Culturally sensitive materials – Objects or materials including human remains whose treatment or use is a matter of profound concern to living peoples who can demonstrate cultural affiliation. Other sensitive components of a collection may include notes, books, drawings, other artworks, photographic media, depictions of human remains, religious objects, and sacred or religious events, and other images relating to culturally sensitive materials.

Curation/Curatorial Services – Managing and preserving a collection according to professional museum curation and archival practices, including, but not limited to:

- Accessioning, inventorying, cataloging, and labeling a collection;
- Handling, cleaning, stabilizing, and conserving a collection in such a manner to preserve it;
- Identifying, evaluating, and documenting a collection;
- Housing and maintaining a collection using appropriate methods and containers, and under appropriate environmental conditions and physically secure controls;
- Periodically inspecting a collection and taking such actions as may be necessary to preserve it; and

- Providing access and facilities to study a collection.

Curator – (see also ***Collections Manager***) A specialist educated in a particular academic discipline relevant to the repository/ museum's collections and trained in collections care and maintenance. The Curator is directly responsible for the care and academic interpretation of all objects, materials, and specimens belonging to or lent to the repository/museum; makes recommendations for acquisitioning and deaccessioning; is responsible for attribution, authentication, and research on the collections and the publication of the results of that research. The Curator also has administrative and (if appropriate) exhibition responsibilities and should be sensitive to sound conservation practices; makes policy in all of these areas

Deaccessioning – The process of legally removing objects from a repository/museum's collections.

Documenting or Associated Records – Original records that are prepared, assembled, and document the efforts to locate, evaluate, record, study, preserve, or recover a prehistoric or historic resource. Some records such as field notes, artifact inventories, and oral histories may be originals that are prepared as a result of the field work, analysis, and report preparation. Other records such as deeds, survey plats, historical maps and diaries may be copies of original public or archival documents that are assembled and studied as a result of historical research. Classes of documenting records (and illustrative examples) that may be in a collection include, but are not limited to:

- Records relating to the identification, evaluation, documentation, study, preservation, or recovery of a resource (such as site forms, field notes, drawings, maps, photographs, slides, negatives, films, video and audio cassette tapes, oral histories, artifact inventories, laboratory reports, computer cards and tapes, computer disks and diskettes, digital data, printouts of computerized data, manuscripts, reports, and accession, catalog, and inventory records);
- Records relating to the identification of a resource using remote sensing methods and equipment (such as satellite and aerial photography and imagery, side scan sonar, magnetometers, sub-bottom profilers, radar, and fathometers);
- Public records essential to understanding the resource (such as deeds, survey plats, military and census records, birth, marriage and death certificates, immigration and naturalization papers, tax forms, and reports);
- Archival records essential to understanding the resource (such as historical maps, drawings and photographs, manuscripts, architectural and landscape plans, correspondence, diaries, ledgers, catalogs, and receipts); and
- Administrative records relating to the survey, excavation, or other study of the resource (such as scopes of work, requests for proposals, research proposals, contracts, antiquities permits, reports, documents relating to compliance with Section 106 of the National Historic Preservation Act (16 U.S.C. 470f), and National Register of Historic Places nomination and determination of eligibility forms, curation documents and agreements).

Federally-associated collections – Archeological collections excavated on Federal lands and Held-in-Trust for the Federal government by designated repositories/museums.

Finds Manager – A person (lab manager [or equivalent] or someone appointed by the lab manager) present onsite during excavations to manage the documentation and collection, packaging, and transport of artifacts and samples from the field to the lab. It is this person's responsibility to know when a professional conservator is needed.

Flammable liquids – Solvents such as ketones (acetone), alcohols, benzines; should be stored in a fireproof (e.g., concrete-lined) cabinet, closet, etc. Labels on containers for all liquids used should be checked for such warnings, and those liquids found to be flammable should be stored appropriately.

Flammable materials – Any materials capable of being ignited easily and of burning with extreme rapidity; should be stored in fire-proof storage area (same as flammable liquids above).

Heating, Ventilation, and Air-Conditioning system (HVAC) – A ducted system that controls temperature, relative humidity, and possibly pollution (gaseous and particulate). The system includes fans with heating and cooling elements mounted in air handlers, humidifiers and/or dehumidifiers, screen filters for filtering particulates (dust), and vapor-phase filters (charcoal, etc.) for filtering gases. HVAC systems range from top-of-the-line systems that accomplish all of the above to ordinary heater/air conditioners similar to those found in residences.

Held-in-Trust collections – Collections generated from public lands that have Federal or State ownership.

Housing – Safe, appropriate containers, furniture, and fittings within which collections are placed for long term storage and preservation.

Human remains – Osteological remains of the species Homo sapiens.

Humidity card indicators – Paper cards that change color as the relative humidity changes.

Hygroscopic – A material that absorbs or attracts moisture from the atmosphere.

Inert – Refers to products made of non-reactive, chemically stable materials that are not easily decomposed; these materials, such as polypropylene or polyethylene, have no pH value.

Inventory – A physically-checked, itemized list of the objects in a repository/museum's collections.

Letter of Acceptance – A document from the repository/museum stating acceptance of collections and indicating that the Submitting Archeologist has met minimum curation obligations.

Letter of Request for Housing – A document from a Submitting Archeologist to a repository/museum requesting that the facility curate the materials from a specified project/collection; it provides basic information describing the history of that project/collection.

Letter of Transfer/Ownership – Documents the transfer of ownership or specific custodianship of a collection being curated.

Lig-free or lignin-free – Refers to products that are acid-free and have had the lignin removed. Lignin is a naturally-occurring organic acid that acts as a binding agent in woody plants. It is easily oxidized, resulting in yellowing, embrittlement, and weakening of the products. Lignin has been replaced by alpha-cellulose, a stable form of cellulose derived from cotton.

Material Collections – Artifacts, objects, specimens, samples, and other physical evidence that are excavated or removed in connection with efforts to locate, evaluate, document, study, preserve or recover a prehistoric or historic resource. Classes of material remains (and illustrative examples) that may be in a collection include, but are not limited to:

- Components of structures and features (such as houses, platforms, enclosures, terraces, fortifications, mounds, and pieces of shipwrecks ship's hull, rigging, armaments, apparel, tackle, contents, and cargo);

- Components of petroglyphs, pictographs, or other works of artistic or symbolic representation;
- Intact or fragmentary artifacts of human manufacture (such as tools, weapons, pottery, basketry, and textiles);
- Intact or fragmentary natural objects used by humans (such as rock crystals, feathers, and pigments);
- By-products, waste products or debris resulting from the manufacture or use of man-made or natural materials (such as dumps, cores, and debitage);
- Organic material (such as vegetable and animal remains, and coprolites);
- Human remains (such as bone, teeth, hair, and cremations);
- Environmental and chronometric specimens (such as pollen, seeds, wood, shell, bone, charcoal, tree core samples, soil, sediment cores, obsidian, volcanic ash, and baked clay); and
- Paleontological specimens that are found in direct physical relationship with a prehistoric or historic resource.

Melinex – Archival polyester film from DuPont; dimensionally stable, chemically resistant, non-yellowing (replaces Mylar).

Microfoam – An expanded resin of polypropylene, an inert stable plastic; used for padding of objects in boxes or on shelves.

Mission statement – A written document that states a repository/museum's institutional philosophy, scope, and responsibility.

Museum – A legally-organized and permanent not-for-profit institution, essentially educational or aesthetic in purpose, with professional staff, that owns and utilizes tangible objects, cares for them, and exhibits them to the public on some regular schedule. A museum may have Held-in-Trust collections generated from public lands.

Mylar – A common trade name from DuPont for a polyethylene terephthalate, an inert, chemically stable plastic. Its characteristics include transparency, colorlessness, and high tensile strength. It is commonly used in sheet or film form to make folders, encapsulations, and book jackets.

NAGPRA – Native American Graves Protection and Repatriation Act. This act was adopted in 1990 (amended in 2010) and requires any federally-funded institution (except the Smithsonian) to inventory collections, develop a list of all human remains and sacred objects for federally-recognized Native American groups. The institution files this list with the Department of the Interior for review by Native American and Hawaiian groups. If an institution is involved with NAGPRA, researcher access, inventorying, and deaccessioning procedures may be affected by NAGPRA.

Negative Findings Projects – Archaeological projects that do not record any new sites, revisit or reassess existing sites, collect any archaeological material from sites, or collect individual finds.

Nitrate negative – An unstable cellulose-based film whose degradation and extreme flammability can harm or destroy photographic collections; long-term preservation of a collection of cellulose-based film negatives would be a frost-free freezer.

Packaging – Archival-quality materials within which objects are surrounded, contained, and enclosed for long term storage and preservation.

Perpetuity – When applied to certain materials bequeathed to or accepted by a repository/museum, to be held and cared for forever.

Polyethylene – An inert, chemically stable, highly flexible, transparent or translucent plastic; comes in the form of sheeting or bags.

Polypropylene – A thermoplastic polymer used in a wide variety of applications, including packaging, textiles, laboratory equipment, plastic parts, and reusable containers of various types; it is rugged and unusually resistant to many chemical solvents, bases and acids. For archival purposes, it is relatively rigid when in its untreated (oriented) sleeve format, soft when surface-treated in its binder storage pages format.

Preventive conservation – Non-interventive collection care to minimize conditions that may cause damage; includes maintaining proper environmental controls, screening for air-borne particulates, monitoring for pests, and stressing proper handling and good record-keeping.

Provisional Housing Agreement – A written agreement between a repository and a submitting archeologist stating conditions under which the repository will accept and curate the materials from a project turned in for curation by the submitting archeologist.

PVA (or PVAC) – The copolymer polyvinyl acetate. It is a colorless transparent plastic, widely used in years past both as an adhesive and consolidant based on the formula selected. It comes in bead form and is mixed with a liquid carrier (solvent such as acetone). Conservators no longer recommend PVA. Acryloid (Paraloid) B-72 is the appropriate replacement for PVA.

Repatriation – The return of culturally sensitive materials to concerned parties. Repatriation is a collaborative process between scientists and concerned parties in their attempts to interpret and protect people and cultures with respect, dignity, and accuracy. Repatriation is a partnership created through dialogue, cooperation, and mutual trust. The intent of NAGPRA is repatriation.

Repository – A permanent, not-for-profit education or research-oriented agency or institution that provides in-perpetuity legal housing and curation of records and material collections.

Research Design – A written plan that provides the rationales, goals, and methods for investigations of archeological sites including, but not limited to:

- The scientific and anthropological reasons for pursuing the proposed investigation;
- Hypotheses to be tested and the questions to be asked of the data; that is, what the investigator hopes to determine about past human activity, including such items as occupational sequence, settlement patterns, subsistence strategies, chronology, trade and social networks, alliances, etc.;
- The explicit manner in which data will be collected and analyzed, and how these relate to the research goals;
- Plans for consultation with affiliated Native Americans, and/or other cultural groups;
- Inferential techniques to be used to interpret the data; and schedule and work effort estimates.

Reversible – Able to return to a previous state. A process that can be undone; a method of treating or coating an object that is not permanent and can be removed without damaging the item.

Sacred objects and objects of cultural patrimony – Specific items that are needed by traditional religious leaders for the practice of an ongoing religion by present-day adherents.

Scope of collections – Defines the purpose of a repository/museum's collection and sets agreed-upon limits that specify the subject matter, geographic location, and time period to which the collections must relate.

Trinomial Smithsonian Institution Site Designation System – Provides a state number, then a county abbreviation, and finally a sequential number that identifies a particular site recorded in the county. For example, 41LU1 (Lubbock Lake Landmark): "41" designates the state of Texas; "LU", stands for Lubbock County; and "1" indicates the first site in Lubbock County recorded with the Texas Archeological Research Laboratory at The University of Texas at Austin (state repository for site forms).

Specimen-level inventory – A specimen-level inventory should be project- and site-specific and include:

- Trinomial (and field/temporary site number, if used);
- Lot/catalog number;
- Description of materials and quantity;
- Provenience, including horizontal and vertical values, as well as unit, feature, shovel test, notations, as appropriate;
- Date of collection; and
- Names of collectors and names of catalogers.

Stabilization – Treatment of materials to prevent or greatly limit continued deterioration.

State-associated collections – Archeological collections excavated from State lands

Systematic – Using a methodical and thorough set of guidelines and procedures to gather archeological collections, to house and document archeological records and material collections, etc.

Tyvek – A trade name for a form of polyethylene sheeting; used for wrapping, lining drawers, interleaving, or draping open shelves.

Unassociated funerary objects – Objects that, as a part of the death rite or ceremony of a culture, are reasonably believed to have been placed with individual human remains either at the time of death or later, where the remains are not in the possession or control of the Federal agency or museum and the objects can be identified by a preponderance of the evidence as related to specific individuals or families or to known human remains or, by a preponderance of the evidence, as having been removed from a specific burial site of an individual culturally affiliated with a particular Indian tribe.

APPENDIX C

Example of a Project-Specific Field Curation Protocol

Example Field Curation Protocol - Texas Lake Data Recovery Project

All artifacts, dating, botanical and faunal samples will be carefully collected and immediately stored in appropriate packaging (see next section). Never work without a properly labeled artifact bag. Artifacts removed from the unit should be placed immediately in the bag, do not "stockpile" them near the unit or in a bucket as they may get separated from the unit or mixed with a different provenience. Never combine artifacts or sediment from different unit-levels.

It is important that you do not pull up artifacts from the floor of your unit or from the walls. Artifacts in the wall of your unit (provided more than half is still firmly embedded) belong in the next unit over and should remain until systematically excavated. Artifacts in the floor of your unit should be left until fully exposed and then recorded on your level form before removing.

Some levels (your supervisor will tell you which) require that you map in all artifacts larger than a quarter. When excavating around stone tools and debitage avoid the use of metal tools, which can scratch or leave a metallic residue on the artifacts – use bamboo (chopsticks work great when sharpened) or wood.

Keep an eye out for clusters of bone. Some excavations yield quite a lot of bison and deer bone for instance. Carefully excavate around the bone without getting too close to it (it's usually pretty fragmentary). If it turns out to be a large bone we may want to pedestal it and encase it in a plaster jacket. The final, micro-excavation will then be done in the lab by an analyst.

All collected materials will be given unique lot numbers and labeled with this number in addition to associated provenience information. All collected materials will be removed from the work site on a daily basis to ensure their safety.

Buckets **-** The soil you remove from your unit will be taken, bucket by bucket, and screened for artifacts. It is very important that each bucket you utilize have a piece of flagging tape tied to the handle identifying the unit, level and bag number that is being screened. A second tag with identical information will be placed IN the bucket prior to filling. This labeling will keep the buckets from being mixed at the screen. Larger stones should not be sent to the screens. First make sure they are non-cultural stones and may be disposed of, then put them in a bucket for removal to the backdirt pile.

Samples **–** Samples, particularly those that might yield radiocarbon dates, are very important and should be taken from the level in situ (rather than from the screen). Keep your eyes open for unusual features or concentrations of items such as shell, bone or charcoal. A 4-liter soil sample will be taken from each level. If you think that you may have found something that should be sampled call your supervisor's attention to it and you will be instructed on how to proceed.

Screening **-** Screening is done through ¼-inch mesh screens with the aid of water from a hose when necessary. Screening is easier if the buckets are not overfilled and can be presoaked before water screening (let them soak for a while). Do not "scrub" the material through/across the screen. This leaves metal marks on the artifacts. Break apart clumped soil (peds) with hands, not a metal trowel. Flakes inside peds can be sharp, so it is advisable to wear gloves while screening. When buckets are brought to the screens line them up according to unit and level so that the screening team can immediately see if more buckets from the level they're working on are ready. When you select a bucket for screening make sure that the information on the flagging tape tied to the handle agrees with the information on the artifact bag you have been given.

Separate bone, shell, lithics etc. when screening and put them in different bags. All of the bags must be labeled and all will carry the same lot number (aka bag number). Smaller bags can go inside the larger ones when you turn them in.

Things to collect from the screen:

ALL lithics – every lithics flake or angular piece that looks even remotely cultural down to the smallest piece in the screen,

Bone – you are likely to see bone fragments, both burned and unburned, and these should be bagged separately,

Shells – snail and bivalve shells should be saved (especially snails from deep levels), fossil shells from the limestone bedrock can be noted in the notes and discarded,

Burned rock – burned rock from the deeper strata could be very important, check with your supervisor as to how much you should save,

Exotic materials – any non-local material like petrified wood, alibates chert, quartz etc. (rule of thumb – if it catches your eye and the material looks unusual, bag it),

Pigments – hematite (red) and limonite (yellow) mineral pigments,

Engraved stones – some small, flat, smooth stones in Central Texas may bear elaborate patterns of delicately engraved lines. These engraved lines have been found both on small hand-sized pieces of limestone as well as on the cortical surface of flakes and other chert objects. Pay careful attention to such stones both in your excavation and in the screen so as not to overlook and discard these important artifacts,

Other – items may appear in the screen and catch your eye such as seeds, burned clay, quantities of charcoal, please call the attention of your supervisor to these items.

Collected artifacts are placed in field collection bags. It is important that each bag have the correct corresponding provenience information. In the field, label 4-mil zip-closure bags using permanent marker with the following information:

SITE *(41TX9999)*

PROJECT *(Texas Lake Mitigation Project)*

LOT NO. *(assigned in field)*

HORIZONTAL PROV. *(Unit#, Quad #, etc.)*

VERTICAL PROV. *(Level and depth (cmbs)*

EXCAVATOR *(digger and note-taker)*

DATE (*date of excavation*)

Features – If features are encountered during the investigations, they will need to be properly mapped, drawn, photographed, and recorded using the appropriate project field forms. The feature should be bisected with half the soil dry or wet screened through 1/8-inch hardware cloth and the remainder saved

as a bulk sediment sample. Features should be excavated by cultural/natural layers or within 10 cm levels and the bulk sediment samples should follow the same procedures.

Field Supervisor - The field records are overseen by the field supervisors. Lot numbers (bag numbers) will be assigned in the field by the supervisor and will remain the same regardless of the number of field bags required to complete a single level of excavation. The field supervisor will record the bag number, unit coordinates, excavation level, and top elevation on the Lot Summary Form before a field bag and level form are issued. Both the field supervisor and the project archeologist will need to initial and date the Lot Summary form. In order to prevent identical lot numbers from being assigned to materials of different provenience, only one binder of Lot Summary Forms will exist for the project and must be onsite in order for new lot numbers to be assigned. When the excavation and screening of a level is complete, the supervisor will enter the bottom elevation, material type(s) and date of completion on the Lot Summary Form. The individual who submits the field bag(s) from that level will then initial and date that it is complete. At the end of each day, a Daily Lot Bag Check-in Form must be turned in to the lab along with the artifact bags collected that day.

Forms - There are five basic field forms with which all project staff should be familiar. The most frequently used will be the Unit Level Form. Less frequently used are the Profile Description Form, Unit Summary Form, and Feature Form, and Feature Continuation Form. Supervisors can answer any questions as to the meanings of any of the items requested on forms. Be sure to fill out all items on every form and to always record as many additional notes as possible.

APPENDIX D

Field Conservation Tips

1.0 HANDLING

- Always assume an object is fragile. The true condition of an object may not be immediately apparent.
- Handle objects as little as possible. Do not pick up objects by handles, rims, or other attachments.
- Avoid bending flexible objects.

2.0 LIFTING

- The method chosen to lift an object out of the ground depends on its strength, size, weight, composition, and condition, as well as the condition of the soil matrix.
- Assess the object condition, then record information, sketch and/or photograph the object before lifting it out of the ground.
- Remove as much dirt surrounding an object as possible before removal. Do not flick or pry an object out of the ground.
- Support the object at all times. A pedestal of dirt may be left underneath the object for support while continuing to excavate around it.
- Lifting an object out of the ground with its surrounding dirt (block lifting) is useful for extremely fragile objects. The appropriate method of block lifting depends on the size and weight of the object and on soil condition.

3.0 BANDAGING AND CONSOLIDATION

- A bandage can be used to support fragile objects once they have been excavated. A bandage consists of gauze or cloth strips wrapped around an object in layers. Adding plaster or resin can strengthen the bandage, but do not glue or plaster a bandage directly to an object. It is critical to apply a separate layer between the bandage and object.
- Backing an object is useful for fragile, flat objects. Backing usually involves the application of a rigid bandage to the object. Some PVA emulsion, Acryloid B-72, or plaster can be used for rigidity. Do not use Elmer's Glue-All®.
- Consolidants should only be used when absolutely necessary and in consultation with a professional conservator. The choice of consolidant will depend on the type and condition of the materials involved. Consolidation should not be attempted on waterlogged materials.
- Consolidants can be applied to fragile objects to join pieces and allow for lifting and handling. Consolidants should have: 1) good adhesive and cohesive properties; 2) achieve good penetration; 3) be durable, stable, and reversible; and 4) not alter the appearance of the material consolidated.
- Do not consolidate any material that will be used for dating or scientific analysis.
- Clean an object thoroughly before applying a consolidant. The most common consolidants are PVA emulsions or resins and Acryloid B-72. Allow the consolidant to dry completely before lifting the object out of the ground.