

APPENDIX II:

**UNIVERSITY OF ARIZONA
RESPONSE TO PUBLIC COMMENTS**

Response to Public Comments Received 17 April 2017 through 18 August 2017

Comments from and Responses to the Arizona Game and Fish Department and the Governor's Archaeology Advisory Commission appear in separate documents (Appendix III and Appendix IV).

General Comments

A number of common themes ran through the responses:

General Comments:

1. It is clear that ASM is underfunded and understaffed. ASM has suffered through decades of state budget cuts. The University of Arizona, ABOR, and the state of Arizona should provide more funding for ASM's mandated programs. A well-funded ASM is a vital part of the cultural resource management (CRM) industry in Arizona.
2. It is clear that, historically, ASM has under-recovered one-time (current-year) and in-perpetuity costs related to the services it provides.
3. The great majority of stakeholders are supportive of ASM's move away from a task-based rate and fee system to a time-based system.
4. Thank you for listening. Thank you for being responsive to concerns by extending the second public comment period, holding additional face-to-face meetings with the cultural resource management/heritage preservation community, and postponing implementation of the new proposed fee and rate structure until 1 July 2018.
5. Stakeholders see value in using the nine-month period between the potential adoption of the proposed new rate and fee structure by the Arizona Board of Regents (ABOR) and the date when the new structure potentially would go into effect to work with ASM to better tailor proposed business practices to the needs of stakeholders and to develop a broad-based approach to addressing unintended consequences of increased costs associated with services provided by ASM.
6. Stakeholders appreciate that ASM has responded to comments and concerns in changing the proposed base billing unit for collections intake and in-perpetuity curation of objects from the one-cubic-foot box to half of a one-cubic-foot box.
7. Stakeholders appreciate that ASM has responded to comments and concerns in changing the base billing unit for in-perpetuity curation of documents from the linear foot to the linear inch.

8. Stakeholders appreciate that ASM has responded to comments and concerns in clarifying and developing revised business practices related to the proposed new rate and fee structure (in the areas of quotes and billing). One CRM industry stakeholder described the revised business practices as “a model that works,” “one that shares risk appropriately,” and “a system that mirrors our way of working in private industry.” Another writes:

[w]e are pleased that ASM has taken into account our comments...and we appreciate ASM working with the greater Cultural Resource Management (CRM) community to address and resolve the concerns of professional archaeologist stakeholders. We are particularly pleased that ASM has expressed its commitment to provide binding estimates for fees, thus sharing and not transferring the financial burden and risk taken by CRM companies...in estimating project costs.

Specifically, stakeholders appreciate that:

- ASM has committed to scope-dependent quotes for services, reducing budgetary uncertainty for project proponents, agencies, and CRM firms.
- ASM is developing an easy-to-use, online questionnaire for stakeholders to request quotes.
- ASM has committed to a two-day turn-around in issuing quotes.
- ASM has waived previous plans to require a 15% deposit for estimated costs associated with all services to be provided up to collections intake and in-perpetuity curation.
- ASM has changed its proposed billing system. Instead of monthly billing events for each job, ASM now proposes a two-bill cycle. The initial billing event will occur when a quote is accepted by the client. This billing will cover the costs of activities undertaken by ASM to complete work up to the point of collections intake. The second billing event will be triggered at the time of collections intake for projects curated at ASM, and at the completion of work for all other projects. The second billing will cover collections intake (processing) and curation in perpetuity (objects and documents) for projects curated at ASM. The second billing event will cover the cost of document curation for projects generating objects not curated at ASM.

9. Some stakeholders have expressed appreciation for the effort that ASM has taken to provide a thorough explanation of the proposed fee and rate changes.
10. Some stakeholders remain concerned about additional costs associated with addressing poorly prepared collections, for which CRM firms will be billed at some indefinite time in the future. Can't ASM just reject these collections and send them back to the CRM firm for remediation? ASM should commit to reviewing submitted collections for compliance within one week of submission.

Response: ASM will commit to a policy of returning collections not submitted in accordance with state standards (Griset et al. 2004). However, ASM will still have to recoup costs associated with time spent determining that collections have been submitted improperly, in addition to the

costs assessed for final intake and curation of those materials once re-submitted. Given current staffing levels ASM cannot commit to a one-week turnaround for this process. ASM will commit to a one-month turnaround for returning improperly submitted collections.

11. Although the revised draft proposal is responsive to some concerns on the part of some stakeholders (mainly non-government-agency project proponents), it does not address the concerns of a broader group of stakeholders who find the new proposed fee and rate structure incompatible with their needs as well as their legal and institutional constraints. In its responses, ASM has not been sensitive enough to the concerns of cultural resource management (CRM) firms, which operate in a highly competitive, fast-paced business environment and are “caught in the middle” between project sponsors and the museum. ASM’s proposed new rate and fee structure will require significant changes in the CRM business model in Arizona. ASM has also fallen short in addressing the concerns of state agencies and municipalities. These entities are partners in historic preservation and, often, are project proponents as well. ASM should engage in a broad-based effort to address these issues, as well as possible unintended consequences of its new proposed rate and fee structure.

Response: ASM has responded by extending the second public comment period (which initially closed 7 May 2017) through 18 August 2017. Thus, public comments received between 17 April 2017 and 18 August 2017 are considered here. ASM also met face-to-face with stakeholders during the extended public comment period:

- 13 June 2017, CRM Forum held in conjunction with the Arizona Historic Preservation Conference, Oro Valley, AZ
- 15 June 2017, Presentation and Q&A at the Arizona Historic Preservation Conference, Oro Valley, AZ
- 20 July 2017, CRM Forum, hosted by the Arizona Department of Transportation, Phoenix, AZ
- 21 July 2017, Presentation and Q&A at the Four Southern Tribes Cultural Resource Working Group meeting, Salt River Pima-Maricopa Indian Community
- 3 August 2017, CRM Forum, Museum of Northern Arizona, Flagstaff, AZ

A tribal stakeholders summit, to be hosted by the Yavapai-Prescott Indian Tribe, has been scheduled for 8 September 2017, in Prescott, AZ.

In addition, based on written comments and input received in the meetings just discussed, ASM has altered its rate and fee proposal and its proposed business practices related to mandated programs.

First, we have clarified our original intent regarding “non-binding” estimates. We intended to communicate that estimates for jobs will be binding, *barring material change in the scope of the project*, as defined by the client at the time of request for quote. We did not intend to indicate

that billing would continue indefinitely as work is completed by ASM. To determine whether a material variance in scope exists, ASM will compare the estimated number of half-boxes of artifacts, digital images and linear inches of documentation with what is actually submitted. If there is a 10% or more variance in any of these measures, a revised quote will be issued based upon what was actually received. Thus, rather than providing non-binding estimates, ASM will issue scope-dependent quotes.

Second, we have agreed that quotes will be proffered within two business days of a client's request. We are currently developing information systems to not only make the process of requesting quotes for services extremely simple for our clients, but also to enable ASM staff to achieve this turnaround time.

Third, instead of monthly billing events for each job, we now propose a two-bill cycle. The initial billing event will occur when a quote is accepted by the client. This billing will cover the costs of activities undertaken by ASM to complete work up to the point of collections intake. The second billing event will be triggered at the time of collections intake for projects curated at ASM, and at the completion of work for all other projects. The second billing will cover collections intake (processing) and curation in perpetuity (objects and documents) for projects curated at ASM. The second billing event will cover the cost of document curation for projects generating objects not curated at ASM.

If collections submitted are found to be non-compliant with state standards, a third bill will be issued after intake is completed. As discussed above, in ASM's response to General Comment No. 10, above), ASM will commit to a policy of returning to CRM firms collections not submitted in accordance with state standards. However, ASM will still have to recoup costs associated with time spent determining that collections have been submitted improperly, in addition to the costs assessed for final intake and curation of those materials once re-submitted. ASM is also committed to holding additional workshops, throughout the state, designed to help CRM firms minimize costs by submitting collections according to standards.

This, essentially, is the billing cycle as proposed in the ASM SB 1418 CRM Forum of 13 June, and for which ASM requested feedback as to how well it would articulate with CRM firms' business practices and cash flows.

Fourth, ASM is honoring the request by stakeholders to postpone implementation of the new proposed fee and rate structure. The new structure, if adopted by the Arizona Board of Regents (ABOR), will not go into effect until 1 July 2018. Based on feedback from stakeholders, ASM will use this additional time to pursue two parallel courses of action: (1) working with stakeholders to better tailor proposed ASM business practices to stakeholder needs; and (2) working with stakeholders on a broad-based approach to addressing unintended consequences of increased costs associated with services provided by ASM (see General Comment No. 17, below).

Stakeholders attending the 3 August 2017 meeting, in Flagstaff, expressed appreciation that ASM has responded to the comments and concerns of cultural resource management (CRM) firms and agencies in developing revised business practices related to the proposed new rate and fee structure (in the areas of quotes and billing). One stakeholder described the revised business practices as “a model that works,” “one that shares risk appropriately,” and “a system that mirrors our way of working in private industry.”

ASM remains willing to continue working with stakeholders to further improve the alignment of its business practices with those of stakeholders, regardless of timetables associated with the adoption of rates and fees.

It is important to note that in the revised draft rate and fee proposal, ASM has reduced the unit bases in the rate and fee structure in response to stakeholder input. The half-inch box will be used as a minimum billing unit (for charges related to objects) in situations where ASM deems appropriate, and the linear inch (rather than the linear foot) will be used as a minimum billing unit to recover costs associated with the curation of documents in perpetuity.

12. Time-based billing and non-binding estimates are problematic, in that they make it difficult for CRM firms and project sponsors to create budgets. Uncertainty regarding project costs makes it difficult for project sponsors to determine if proposed actions are in their economic interest. ASM should return to a fixed-price, task-based fee system and issue binding estimates.

Response: The proposed rate structure was developed to be responsive to stakeholders who expressed the need to establish a system that is scalable to each project’s scope and requirements. Time-based billing answers this request and ensures that each individual project proponent does not subsidize costs incurred by other project proponents. CRM firms and project proponents are encouraged to contact ASM early in the project planning process.

Binding quotes (i.e., having no recourse to make changes for material variances in project scope) would inevitably shift costs between project sponsors, similar to task-based rates, while simultaneously incentivizing under-estimation of project size and requisite ASM resources to complete related tasks. The new rate and fee structure assigns the total actual costs to each individual project sponsor.

Regarding the issue of uncertainty regarding project costs, ASM believes that its clarification about the nature of quotes (i.e., they are scope-dependent, not “non-binding”; see ASM’s response to General Comment No. 11, above) addresses this concern. ASM will commit to a quote unless there is a material variance in the scope of the project, as measured between information received via the Request for Quote and collections actually submitted.

13. ASM’s proposed per-box fee for curation of artifacts in perpetuity amounts to a more than

400% increase. This increase is excessive, the proposed fee is higher than that charged by similar institutions, and fee/rate changes are being imposed too quickly for CRM business and project sponsors to adapt. ASM should “phase-in” these changes.

Response: Previously, ASM charged a per-box fee of \$1,000, which did not fully recover the costs of collections intake and did not recover any of the costs of curation in perpetuity. As indicated in Appendix A of the first round public comments submitted by the Grand Canyon State Electric Cooperative Association, Arizona Generation and Transmission Cooperatives, and Arizona Public Service (Childs and Kagan 2008; a National Park Service study of national trends in curation fees), archaeological repositories around the country are raising fees precisely because they are not covering costs, especially the costs of curating collections in perpetuity. This same conclusion has loomed large in other studies (e.g., Childs and Kinsey 2003; Lyons et al. 2006; Lyons and Vokes 2010; Sullivan and Childs 2003). Indeed, Childs and Kagan (2008:8) write:

Ten years ago, a large number of repositories charged the same fee(s) as their neighboring institutions and did not consider their real costs. This finding strongly suggests that the fees charged could not approach covering the true costs of curation....Despite the use of better criteria to determine fees and the associated fee increases across the U.S., 60 (63%) of the 96 respondents that charged fees in 2007/2008 reported that their fees do not cover the costs of long-term curation....Another ten (10%) respondents said that possibly, or hopefully, the fees will cover the costs of curation since they are just beginning to charge fees or have just changed their fee structure. Another seven (7%) repositories did not know whether their fees will cover their costs.

In summarizing major trends in their study, Childs and Kagan (2008:10-11) report the following:

Curation fees continue to rise as repositories better understand the real costs of curation and increase fees to properly care for the collections. The current trend for many repositories, however, is to keep their fees comparable to their neighbors.

The repositories in the western states continue to charge the highest fees. This is most likely due to the extensive federal and state lands in these states that are undergoing development and, therefore, require archeological compliance work and subsequent curatorial services. The high curation fees may be influenced by supply and demand (there are not enough repositories to handle the demand), but the high costs of property, utilities, and materials strongly impact the fees charged....

In 1997/98, only a few repositories charged both a one-time in-perpetuity fee and an annual fee, probably because most tried to cover all their long-term costs in one fee. The 2002 and 2007/08 data reveal an increase in the number of repositories that charge both a one-time fee, as an initial entry and processing fee, and a minimal annual fee to cover yearly

responsibilities, such as inspection, inventory, and conservation. Several repositories are considering only charging an annual fee and dropping the one-time, in-perpetuity fee. This is a key issue that requires careful dialog between the repositories and the federal government agencies, in particular, that own and are responsible for the collections. This is because many collections are the result of compliance activities, often by a third party permittee, for a land-use action that requires mitigation (e.g., cell tower construction, oil pipeline). The permittee or proponent of the action pays for the curation fees out of the project budget, which ends when the project ends. There is no funding for continuing annual fees. Furthermore, many government agencies fund development projects, such as the construction of irrigation systems or highways, and lack appropriated funds for ongoing programs to pay for annual fees....

There is a slow, but gradual increase in the number of repositories that are placing curation fee monies in interest-bearing accounts, including trusts and endowments. This is a sound economical approach that supports an optimistic future for the collections....

There continues to be inadequate funding available to support the long-term care and management of archeological collections. This includes the professional staff to provide the necessary services, and the space to house the collections and make them accessible across the United States. Therefore, both the collection owners and the repositories benefit when an appropriate fee is charged and paid for curation services. The public, including researchers, educators, students, and culturally-affiliated people, also benefit when the collections are in good condition and are curated in a protected place for ongoing access and use.

In a later report, Childs et al. (2010:198) indicate that when repositories have raised their rates and fees over the last several years, in order to attempt to cover costs, the “change in fees is almost always at least 100 percent and often quite a bit more.” Indeed, Childs et al. (2010:Figure 2) provide data on 40 repositories, showing that only one increased fees less than 100% over ten years. Seventeen repositories increased fees more than 200%, seven increased fees more than 300%, and three increased fees more than 400%. One increased fees more than 600%.

Regarding what other institutions charge, none of those held up as comparable to ASM truly are. None are required to comply with the Arizona State Constitution and Arizona State Law. ASM is legally required to recover costs associated with providing mandated services and legally prevented from subsidizing the activities of project proponents. ASM contends that any repository that is not making use of a funding model akin to a perpetuity due linked to an interest-bearing account, as described in the initial and revised draft proposals, is not actually covering its costs in perpetuity. Any repository would have to charge, as a one-time fee, many thousands of dollars per box in order to avoid charging periodic maintenance fees. The use of an interest-bearing account actually allows ASM to charge project proponents less overall.

Regarding the request to “phase in” proposed increases, there is no source of funding to defray the differential between actual costs incurred throughout this “phase-in” period and costs recovered. That said, ASM has taken stakeholder input into account in postponing implementation of the new proposed rate and fee structure until 1 July 2018, if it is adopted by ABOR. As discussed in ASM’s response to General Comment No. 11 (above), ASM will use this additional time to pursue two parallel courses of action: (1) working with stakeholders to better tailor proposed ASM business practices to stakeholder needs; and (2) working with stakeholders on a broad-based approach to addressing unintended consequences of increased costs associated with services provided by ASM (also see General Comment No. 17 and ASM’s response, below).

References Cited in ASM’s Response to General Comment No. 13

Childs, S. Terry, and Seth Kagan

2008 *A Decade of Study into Repository Fees for Archeological Curation*. Studies in Archeology and Ethnography #6. Archeology Program National Park Service, Washington, DC.

<http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1097&context=natlpark>

Childs, S. Terry and Karolyn Kinsey

2003 *Costs of Curating Archeological Collections: A Study of Repository Fees in 2002 and 1997/98*. Studies in Archeology and Ethnography #1. Archeology and Ethnography Program, National Park Service, Washington, DC.

<http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1056&context=natlpark>

Childs, S. Terry, Karolyn Kinsey, and Seth Kagan

2010 Repository Fees for Archaeological Collections. *Heritage Management* 3(2):189-212.

available online **for a fee** at:

<http://www.tandfonline.com/doi/abs/10.1179/hma.2010.3.2.189>

Lyons, Patrick D., E. Charles Adams, Jeffrey H. Altschul, C. Michael Barton, and Chris M. Roll
2006 *The Archaeological Curation Crisis In Arizona: Analysis and Possible Solutions*. Report Prepared by the Governor’s Archaeology Advisory Commission Curation Subcommittee, State Historic Preservation Office, Phoenix.

https://d2umhuunwbec1r.cloudfront.net/gallery/asp-archive/committees/downloads/GAAC_Curation_Crisis_Full.pdf

Lyons, Patrick D., and Arthur W. Vokes

2010 The Role of Fee Structures in Repository Sustainability. *Heritage Management* 3(2):213-232.

available online **for a fee** at:

Sullivan, Lynne P., and S. Terry Childs

2003 *Curating Archaeological Collections: From the Field to the Repository*. Archaeologist's Toolkit Volume 6. AltaMira Press, Walnut Creek, California.

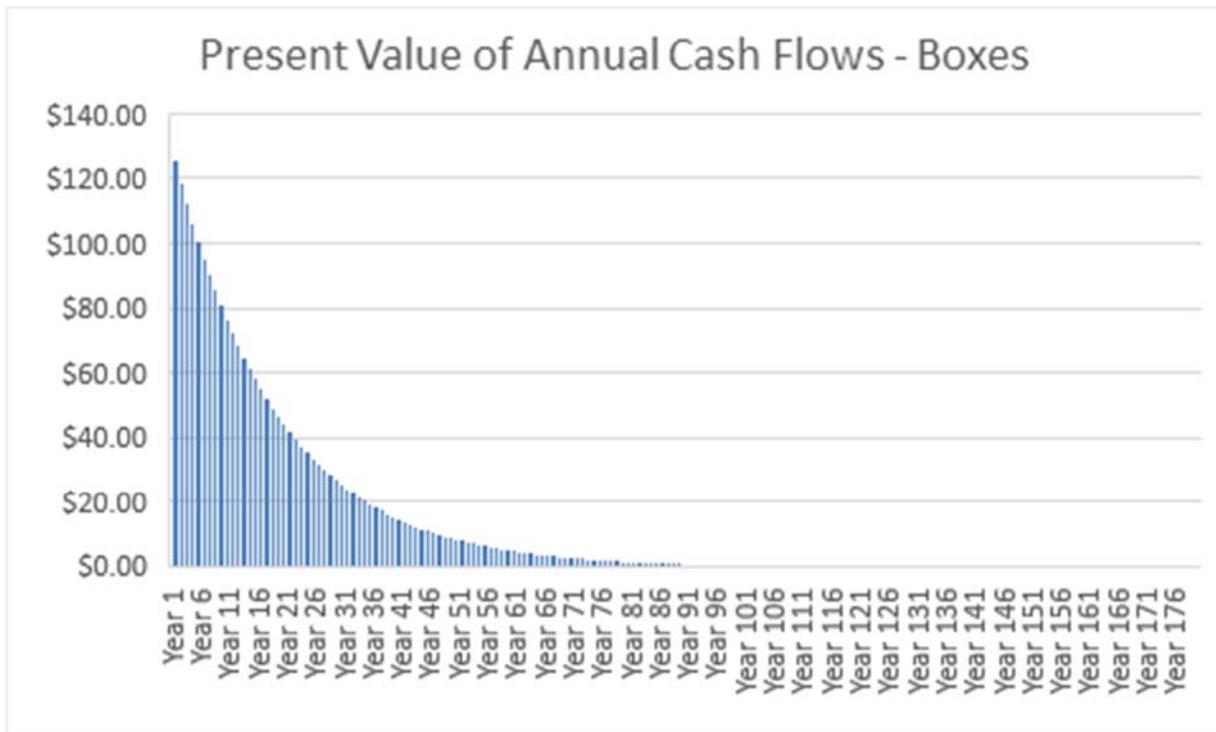
14. Some stakeholders do not concur with the assumptions on which ASM's in-perpetuity fee calculations are based and, therefore, do not support introduction and implementation of these fees as proposed. ASM should reconsider the definition of perpetuity. As a government agency, ASM can be funded such that it does not operate at a loss, thus ensuring continuity. This may constitute a different definition of perpetuity. ASM and UA define perpetuity as 180 years. Why 180 years? Other states use numbers such as 30 years and then prepare contracts that renew collections funding later.

Response: This comment reflects a misunderstanding, a conflation of how we define a perpetuity and how to properly account for such transactions. ASM and the University of Arizona do not define a perpetuity as lasting 180 years. By definition, a perpetuity is an eternity, or perpetual (see the [Merriam-Webster definition](#)). However, due to the time-value of money, cash flows related to future periods are worth less and less the further one extends into the future. In relation to the data presented within the per-box in-perpetuity fee calculations, one can clearly see that the annual cost of carrying a cubic-foot box is calculated as \$136.78. This cost of carrying a cubic foot box every year for eternity never changes, only the present value of each of those cash flows ever varies, due to the time-value of money. The value declines each period within the amortization schedule. By Year 10, the present value of that \$136.78 is merely \$81.04, and only \$1.00 by Year 90.

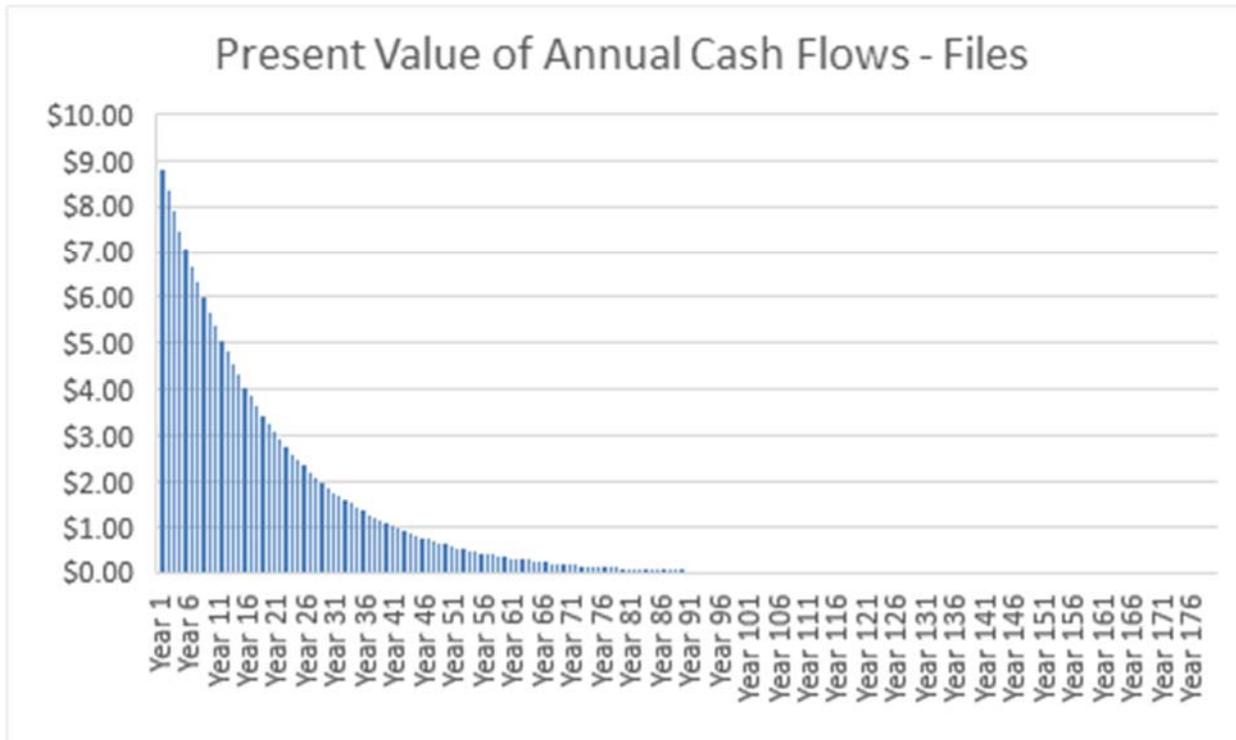
Proper accounting under Generally Accepted Accounting Principles (GAAP), for sales which are comprised of funds related to both current-period and future-period services, must be bifurcated, with only funds associated with current-period services being recognized as revenue. The remaining portion of the funds collected must be held as a liability (unearned revenue) until the services for which the funds were collected have been performed (i.e., the passage of time for objects submitted for in-perpetuity curation). The 180-year term is merely the proposed amortization schedule by which ASM will recognize as revenue the unearned revenue recognized each time ASM assesses and collects one of the in-perpetuity fees. ASM chose to use 180 years because, beyond this term, the present value of those periodic cash flows becomes so minimal as to not make the administrative cost of accounting for them practical. Therefore, the infinite term, by definition, was truncated for accounting purposes to make the administrative burden of tracking these funds simpler and therefore less costly.

One stakeholder suggests that ASM prepare contracts that renew collections funding later (after 30 years). ASM asks, who would be responsible for paying these costs, 30 years in the future? What guarantee is there that either the project proponent or the CRM firm would still be in

business? How would project proponents or CRM firms budget for this? In this system, projects are never “closed out,” as liabilities remain on the books of the project proponent and/or the CRM firm. The clear consensus expressed by stakeholders, in writing and face-to-face, is that ASM’s billing system must allow CRM firms to complete projects quickly and to remove them from their books. This is why ASM was encouraged to change to and has committed to a two-bill cycle (in most cases), with the second and (in most cases) final bill covering the costs of collections intake and in-perpetuity curation. ASM’s proposed system removes the liability for in-perpetuity curation from the books of project proponents and places it on ASM’s books. Furthermore, reducing the term covered by the per-box fee from a perpetuity to a 30-year term would only reduce the proposed per-box fee to \$2,461.00 per box, a reduction of only \$543.00.



The preceding graph has been incorporated to better illustrate the net present value of each annual installment within the stream of cash flows that comprises the in-perpetuity fee for the curation of a one-cubic-foot box. As illustrated within the graph, the net present value of the \$136.78 annual cost of curation in Year 36 is reduced to below \$20.00 by that time, and falls to merely \$1.00 in Year 90. This clearly illustrates that, due to the nature of the time-value of money, truncation of the perpetuity would have little impact on the calculated cost of curation and would open clients to additional charges at the end of the contracted curation period, long after the project to which those artifacts relate is closed. The chart below provides a similar perspective for the in-perpetuity fees assessed for the curation of one linear inch of documentation.



15. ASM should return to use of the person-field day as a budgeting and billing tool.

Response: ASM recognizes the importance of the person-field day as a budgeting tool for CRM firms. The person-field day is an integral data point in the quote system being developed. It is one of several pieces of data requested from clients (some data are relevant to all types of projects, others relate to specific kinds of projects, e.g., survey projects versus testing and excavation):

- Number of Sites and Person-Field Days at Pre-Hispanic sites?
- Number of Sites and Person-Field Days at Historic Period sites?
- Are any sites on private land? If so, how many?
- Will you be curating at ASM?
- How many half-boxes of bulk archaeological collections do you estimate will be submitted for curation?
- How many artifacts do you estimate will need to be catalogued individually?
- How many digital images do you estimate will be submitted for curation?
- How many linear inches of documentation do you estimate will be submitted for curation?
- How many sites will be monitored, tested, or excavated?
- How many total person-field days do you estimate for this project?
- How many acres will be surveyed?
- How many new sites do you estimate you will discover?
- How many sites do you estimate will require a site card update?

- Does the project fall within any of the following management areas?
 - Salt River Pima-Maricopa Indian Community
 - Gila River Indian Community
 - Tohono O’odham Nation
- Which tribe(s) and/or groups with cultural affinity will be involved?
- Is the work plan general or project-specific?
- Which land ownership category(ies) is (are) involved (State, Private or a combination)?
- How many sets of human remains do you estimate will be excavated?

16. Some stakeholders discourage ASM from charging such fees for the review of reports and other documents when another agency has a statutory responsibility to do the same. These stakeholders understand that in cases where ASM is the sole regulatory agency responsible for compliance with ARS § 41-841 et seq. and ARS § 41-865, ensuring compliance with ASM reporting standards is necessary. However, ASM is encouraged to adopt a policy specifying that it will defer review and not assess fees where qualified staff from other municipal, state, or federal agencies with regulatory or statutory oversight have already performed such reviews.

Response: ABOR Policy 8-203 (Conditions for Work Under Permits) sets forth standards for archaeological reports, and in order to ascertain that permittees have met the conditions of their permits, ASM (the agency that issues these permits) must review submitted reports. Charges for this activity will be billed as part of collections intake.

17. There will be unintended consequences of the proposed changes to ASM’s rate and fee structure, including reduced scopes of work for archaeological projects, the recovery of smaller samples (and less information), non-compliance with state laws that protect cultural resources and human burials, illegal culling of collections by CRM firms, and attacks on the state’s statutory and regulatory framework for protecting cultural resources and human remains. How will ASM work to enforce compliance with the Arizona Antiquities Act? ASM’s response to concerns regarding unintended consequences is dismissive.

Response: ASM did not intend to be dismissive in its response. These are serious concerns that merit serious discussion by all stakeholders. That said, the cost of compliance should not be an excuse for noncompliance. It is also true, as discussed below, that it is illegal for CRM firms or project proponents to cull state-owned collections, except under specific circumstances and with the written approval of ASM. Regarding enforcement of laws, ASM does not enforce state statutes, it administers state statutes. Enforcement would involve actions by state law enforcement agencies, including county sheriff departments, municipal police departments, investigators from the Office of the Arizona Attorney General, and prosecutors from Arizona counties and/or the Office of the Arizona Attorney General. Unless CRM firms engage in fraud, by reporting smaller artifact counts than those actually recovered, disparities between artifacts reported (in documents submitted to ASM) and artifacts received for curation will make culling

obvious.

At the CRM Forum hosted by the Arizona Department of Transportation, on 20 July 2017, stakeholders had many constructive comments regarding how to address unintended consequences:

- There was discussion of a possible two-tiered approach to archaeological data recovery (i.e., some sample of a site from which resulting collections are curated entirely and a sample that is subject to culling or some other procedure that limits the size of collections). The consensus was that culled collections are problematic in that they are severely limited in terms of research potential, and preserving research potential is at the heart of what we do in the cultural resource management community. If a two-tiered approach moves forward, overarching guidelines must be developed, based on input from many different kinds of experts.
- Some discussions of this topic touch on the question of what might be the “ideal” minimal proportion or percentage of a site to be excavated, assuming curation of all materials recovered.
- ASM’s approach to the review of research designs (mitigation plans) does not focus on percentages of sites to be excavated. Instead, the focus is on the appropriateness of the proposed research questions and the goodness of fit between these questions, the nature of the resource(s) involved, the size and location of the APE (area of potential effects) relative to the resource(s) involved, the proposed data recovery techniques, and the classes of data to be recovered. These same principles show up in the state reporting standards issued jointly in 2009 by the State Historic Preservation Office (SHPO), ASM, and the Arizona State Land Department (ASLD):

http://www.statemuseum.arizona.edu/media/statemuseum/file/az_report_standards_2009.pdf

- That document can be a good model of how to move forward together as a group of state agencies and as a larger cultural resource management community.
- An alternative, related, or parallel strategy would involve better stratifying recovery samples, i.e., better prioritizing of sites to be excavated based on, for example, rarity and research potential (in the context of existing gaps in knowledge). Stakeholders discussed making better use of SHPO Historic Contexts (the group identified this as a “good starting point”) and the possibility of developing overarching mitigation plans like those used by the Bureau of Land Management in New Mexico (The Fruitland Project Mitigation Plan and the Permian Basin Mitigation Program). For more information on the Permian Basin Mitigation Program, see:

http://www.nmacweb.org/My_Homepage_Files/Download/NewsMAC_2010-1.pdf

http://www.sricrm.com/news/BLM_Permian_Basin.html

http://www.nmhistoricpreservation.org/assets/files/press-releases/permian_basin_moa.pdf

<http://www.saa.org/portals/0/saa/publications/amantiq/articleschlanger.pdf>

<https://www.cambridge.org/core/services/aop-cambridge-core/content/view/196A11A758BEEA4C5EFE6BF1269DBFAB/S2326376800000735a.pdf/div-class-title-the-permian-basin-programmatic-agreement-after-seven-years-of-implementation-div.pdf>

<https://www.cambridge.org/core/journals/advances-in-archaeological-practice/article/div-classtitlevalues-based-management-of-archaeological-resources-at-a-landscape-scalediv/FC7AAE375D4CFEFD0DD479437C12185B>

- Stakeholders also discussed the benefits of alternative mitigation strategies such as working with existing collections.
- There was some discussion regarding whether the community should reconsider how eligibility is determined/applied, and whether managers should be more conservative in this area. Consensus settled on the notion that the use of eligibility is related to a conservation approach to the archaeological record and that we, as a community, should focus on how to resolve adverse effects (e.g., through alternative mitigation) rather than the issue of eligibility.
- Stakeholders suggested including more academic archaeologists in future discussions and also highlighted the importance of tribes being engaged meaningfully in this process.

At the 3 August meeting, in Flagstaff, there was additional conversation about the notion of a “two-tiered approach” to archaeological data recovery. Comments offered by stakeholders included the following:

- This approach could be characterized as “salvage versus science,” and represents a step backward in historic preservation/cultural resource management.
- Before ASM’s recent proposal, costs were already pushing the CRM industry toward more of an emphasis on salvage and less of an emphasis on good science.
- Determining which portions of a site to prioritize under a two-tiered model would entail an unacceptable level of effort and cost (no real cost savings would be realized).

At the 3 August meeting, in Flagstaff, discussion of the possible benefits of large-scale, alternative mitigation plans like the Fruitland Project Mitigation Plan and the Permian Basin Mitigation Program continued. Such overarching, regional plans take a landscape-scale approach to archaeological resources, rather than continuing to manage and treat sites on a project-by-project basis. Landscape-level planning gets around piecemeal decision-making at the project or site level by taking a step back and considering research priorities and how certain types of sites might best contribute to the advancement of scientific knowledge. In the case of the Fruitland Project Mitigation Plan, project proponents contributed funds toward data

recovery from sites not directly impacted in order to further research about ancestral Puebloan and Navajo sites in the general project area. Regarding the latter group of resources, this was particularly important, as the project area is the Dinétah, where the Navajo emerged as a unique cultural entity. Project proponents were particularly supportive of this plan because they could see the value in illuminating the earliest archaeology of the Navajo people, compared to digging a few trenches in sites that would yield very little new or meaningful information about the past. In short, project proponents could point to substantive contributions to society as a whole, rather than the archaeological clearance of well pads, pipelines, and roads.

Stakeholders at the 3 August 2017 meeting suggested that such overarching plans (and Arizona, like New Mexico, would need multiple regional plans), with clearly defined research priorities, could be very helpful to land-managing agencies, in that it would be easier to determine where proposed development projects are likely to be most expensive or least expensive (i.e., where such projects would be in the best economic interest of a land-managing agency, for example, the Arizona State Land Department).

ASM pointed out that these sorts of plans, which place the decision-making in a sound scientific context at the beginning of the management process (planning), prevent situations where, at the end of the management process (curation), stakeholders are put in the position of discussing and making plans about the possible culling of collections. ASM contends that the best legal, scientific, and ethical approach is to make the best scientifically informed decisions about which sites and which portions of sites to excavate and to then curate the resulting samples in perpetuity to preserve research potential.

As at the meeting in Phoenix, there was some discussion regarding whether the community should reconsider how eligibility is determined/applied, and whether managers should be more conservative in this area. ASM supports the State Historic Preservation Office's (SHPO) position on this issue (as expressed in the Phoenix meeting), i.e., that the use of eligibility is related to a conservation approach to the archaeological record, and that we, as a community, should focus on how to resolve adverse effects (e.g., through alternative mitigation plans and practices) rather than the issue of eligibility.

Consensus settled on the notion that SHPO is an absolutely key and central stakeholder in the process of developing plans to avoid unintended consequences. Professional associations representing CRM firms and archaeologists, such as the Arizona Archaeological Council, were also identified as key stakeholders going forward. Stakeholders also discussed the benefits of alternative mitigation strategies such as working with existing collections.

18. Recently discussed proposals to reduce the percentage of scientifically controlled Archaeological data recovery to a small sample of an archaeological site while investigating the remainder of the site in a less controlled fashion (a stakeholder-introduced model referred to as a "two-tiered approach" in public fora) are reminiscent of the type of non-

scientific archaeology often practiced in the 1950s-1970s. Sound science is one of our community's core values, and is critical to maintaining professional credibility while fulfilling business requirements. The two-tiered approach could lead to returning the CRM profession to the days of "salvage archaeology" at the expense of science.

Response: Instead, of the "two-tiered approach," ASM and other stakeholders propose the development of overarching, regional mitigation plans that prioritize sites to be excavated. Examples include the Fruitland Project Mitigation Plan and the Permian Basin Mitigation Program, both designed to prioritize archaeological data recovery in large portions of New Mexico (see ASM's response to General Comment No. 17, above). In short, such plans move CRM archaeology clearly in the direction of good science and away from the previous model of "salvage."

19. ASM should develop a policy on culling of collections before submission for curation.

Response: For decades, the archaeological community, including museums, state and federal agencies, and CRM firms, has been wrestling with the best response to the nation's curation crisis. Three proposals dominate the policy discussions that have emerged: (1) agencies responsible for the management of cultural resources should develop formal policies for the culling of collections to produce representative samples of materials collected during fieldwork; (2) more in-field analysis should be conducted, with artifacts either left in place or reburied on site; and (3) archaeologists should excavate smaller samples of sites but curate everything that is recovered.

ASM's extant policies represent *de facto* acceptance of the premise that, if cost is an issue, archaeologists should excavate or collect smaller samples from sites but submit for curation all items collected (with the exception of mass-produced objects, as discussed below).

Project proponents and CRM firms should remember that, pursuant to ABOR Policy 8-204(Q):

All collections of archaeological or paleontological specimens and all project records that are acquired under the authority of a permit or that result from permitted activities remain the property of the State of Arizona regardless of the repository institution.

This means, in part, that project proponents and CRM firms are prohibited from culling and discarding portions of collections acquired under the authority of an Arizona Antiquities Act permit.

ASM already has policies addressing this subject, which appear in its Repository Manual (Griset et al. 2004; see link below):

1.7 Disposal of Archaeological Material

By agreeing to serve as a repository for archaeological collections, ASM does not accept responsibility for unauthorized disposal of any archaeological material prior to the transfer of such material to ASM. Any such action must conform to the following guidelines for disposal and documentation.

1.7.1 Collections from State Lands in Arizona

Archaeological projects may not unilaterally discard or otherwise dispose of survey or excavated collections from State lands or any part of them. The Director of the Museum must approve disposal of any cultural material, no matter how trivial in appearance or apparent significance, from any surveys or excavations on State lands. This approval must be in writing.

This process is generally restricted to historic mass-produced products—fragmentary glass bottles, plate glass, and metal containers—that are redundant in the collection. In such cases, the project is expected to retain as many complete examples as are necessary to document all variations of a product (e.g., different labels on bottles and cans, etc.). The specimens considered for disposal should be pieces that are not only redundant, but also less intact or less stable. These redundant, fragmentary materials must be thoroughly and professionally studied, and the derived information must be presented in a professionally acceptable manner.

Non-artifact samples such as unprocessed flotation or soil samples may be culled from excavated collections without prior approval. The soil should be screened before disposal in order to recover any small artifacts. Indicate that materials have been culled in the electronic database (see Section 3.2.3), or include a list of disposed items and their associated field numbers in the project documentation.

1.7.2 Collections from Other Lands in Arizona

It is the responsibility of all parties using ASM as a repository to comply with the policies and guidelines of the agency owning, sponsoring, or authorizing the project. This is particularly critical for the disposal of material. Complete records of any such disposal must be provided to ASM as an essential part of the project documentation.

In addition, the results of discussions with Arizona's tribal communities indicate that many feel quite strongly that once materials have been collected as a result of archaeological excavation, they should not be discarded (i.e., such objects should be retained for research and educational purposes, shedding light on the lives of their ancestors).

The reason to prevent culling is to preserve the long-term research potential of collections as new analytical techniques are developed. Examples of techniques that have revolutionized archaeological practice and have dramatically expanded what can be learned from the archaeological record include dendrochronology (tree-ring dating), radiocarbon dating, trace-

element analysis and petrographic analysis (methods of matching artifacts with the raw materials used to make them; revealing evidence of trade, migration, etc.), residue analyses (determining directly how ancient objects were used), and DNA studies of plants, animals, and human remains (the latter, with the written permission of and collaboration with descendant communities; revealing connections between past and extant groups, tracking ancient human migrations, and illuminating the spread of agricultural crops and domesticated or economically important wild animals).

In-field analysis is problematic from a number of perspectives, as detailed in a report by the Governor's Archaeology Advisory Commission (Lyons et al. 2006) and number of more recent studies (see, e.g., Childs and Benden 2017). The quality of information generated through in-field analysis is generally unacceptably low and, even when the information is high in quality, additional research cannot be done to confirm the initial conclusions of the project or to ask new questions based on the collection, as the collection is no longer accessible (also see Childs et al. 2010).

References Cited in ASM's Response to General Comment No. 19

Childs, S. Terry, and Danielle M. Benden

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2004 *Requirements for the Preparation of Archaeological Project Collections for Submission to the Arizona State Museum*. Collections Division, Arizona State Museum, University of Arizona, Tucson.

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Lyons, Patrick D., E. Charles Adams, Jeffrey H. Altschul, C. Michael Barton, and Chris M. Roll
2006 *The Archaeological Curation Crisis In Arizona: Analysis and Possible Solutions*. Report Prepared by the Governor's Archaeology Advisory Commission Curation Subcommittee, State Historic Preservation Office, Phoenix.

https://d2umhuunwbec1r.cloudfront.net/gallery/asp-archive/committees/downloads/GAAC_Curation_Crisis_Full.pdf

20. The proposed increases will cause financial hardship for individual agricultural producers by making planned improvements and conservation practices on state lands, which they lease, cost-prohibitive. There will be fewer conservation projects initiated by individual producers. There should be an exemption of sorts related to some fees paid for cultural resource management services provided to agricultural interests, i.e., the Natural Resources Conservation Service (NRCS; a federal agency) should be allowed to continue paying ASM a flat annual fee for document submissions rather than pay on a per-project (time-based cost) basis. Because conservation projects and archaeological compliance work benefits all the people of Arizona, rather than individual agricultural producers (project proponents), the people of Arizona should cover these costs.

Response: ASM cannot propose a rate and fee structure that does not recover its costs. Project proponents must pay the costs associated with their projects. These costs may not be subsidized by ASM or another project proponent.

A foundational tenet of federal and state cultural resource management law is that the proponents of development on state or federal lands are responsible for the costs associated with managing cultural resources that may be affected by those projects, including curation of project records. No state agency will accept this responsibility free of charge. Such subsidizing or gifting is prohibited by state statute and by the Arizona State Constitution.

NRCS will continue to do archaeological survey work for ranchers and farmers (as NRCS is required to do this under federal law). Furthermore, NRCS is specifically driven by finding sites so that they can be avoided and not excavated. NRCS formerly was paying a flat annual fee for filing survey records with ASM. ASM now requires that the costs of filing be fully recovered, on a per-project basis. From NRCS's perspective, this means that individual producers are now responsible for these costs. The increase in costs, in the vast majority of cases, per project, will be from \$200 to perhaps \$500. Some very rare, very large projects may cost up to \$1,000 to file.

According to ASM's records, over the last ten years, out of thousands of projects received, five (5) NRCS projects like those discussed here have resulted in materials coming to the museum for curation. The total amount of fee money received from those five projects was \$1,120. According to ASM records, no NRCS project has ever resulted in object collections curated by ASM. All ASM has ever received and curated is documents.

The system of how archaeological survey is done will not change (producers will not have to hire private firms to do this work). The purpose of the archaeological work by NRCS is still to look for sites in order to avoid them (not to dig them, i.e., costs remain very low, meaning

curation of documents and not boxes of artifacts). The only change here is that individual producers will now be responsible for perhaps as much as \$500 to (very rarely) \$1000 to file documents with ASM.

ASM has begun meeting with NRCS staff to see what can be done, in the context of federal law, state law, and the University of Arizona's institutional constraints, to better align ASM's and NRCS's business practices, with the goal of better serving individual agricultural producers. In addition, ASM has been working in partnership with NRCS, the Arizona State Land Department, and the State Historic Preservation Office on a programmatic agreement (under Section 106 of the National Historic Preservation Act) designed to streamline NRCS's archaeological compliance activities in Arizona.

21. The proposed new rate and fee structure creates a situation where CRM firms will continue to receive invoices long after collections are submitted. It is difficult to predict with confidence when ASM will complete its tasks related to collections intake and, therefore, the period of performance in any given contract with a project sponsor will be open-ended. Most project sponsors and CRM firms will find this unacceptable. Typically, final payment by project sponsors to the CRM firm is contingent upon submission of collections and payment of all curation fees. There is often no option to go back to project sponsors for additional funds to cover new costs.

Response: Quotes for work to be performed by ASM will be honored, barring material changes in the scope of the project at hand. Material changes are defined based on what is submitted for intake and curation versus what was initially estimated. If a revised quote is necessary due to such a material change, the revised quote will be honored, and that is all that will be billed for the intake and curation portion of that project. Billing will not extend beyond the time that collections are submitted for intake and curation, other than to potentially issue a revised quote and invoice based upon the quote in effect at that time.

As stated within the public forums, invoices for collections intake tasks are based on the assumption that CRM firms turn in collections in accordance with state standards and that ASM will not have to incur additional costs in bringing collections up to standards. CRM firms may be subject to additional costs in the future, if submitted collections are found to be non-compliant.

It is worth mentioning that federal agencies (e.g., the Army Corps of Engineers) pay archaeological repositories curation fees on an ongoing, annual basis in the eastern United States, under five-year or ten-year, renewable curation contracts. Instead, ASM proposes to charge a one-time curation fee that, through the use of an interest-bearing account, will cover costs in perpetuity.

22. While ASM's proposed estimation process may be reasonable, we are concerned with the level of specific detail that has been provided on this process to date, and we need to better

understand the process by which ASM is planning to create cost estimates after the new fee structure is instituted. ASM has not yet shared its equations for producing quotes, has not tested it, and has not proven its effectiveness. How, precisely will the project estimation process work?

Response: As discussed in ASM's public fora, a project proponent or a proponent's agent (a CRM firm) requests an estimate by submitting an ASM Cost Estimate Questionnaire (Request for Services Form) to ASM online. Information gathered thereby includes estimates of half-boxes of artifacts, individually catalogued artifacts, digital images and linear inches of documentation to be submitted for curation (see ASM's response to General Comment No. 15, above). These are the same pieces of information that CRM firms currently use, with their own data from past projects, to come up with budgets in response to requests for proposals.

ASM will perform its own estimates using its own historical data to ensure the reasonableness of the client's estimates. If the client's submitted estimates are found to be reasonable, the quote will be issued based upon the client's estimates. ASM will multiply the estimates for the total number of boxes of bulk archaeological collections, objects to be individually catalogued, inches of associated documentation, and photographic images by the average time to complete each group of tasks that comprise ASM's mandated services. The sum of these products, in addition to the costs of in-perpetuity curation for the estimated number of half-boxes, individual artifacts, and linear inches of documentation, becomes the scope-dependent quote. This scope-dependent quote will be submitted to the client within two business days of receiving a correctly completed ASM Cost Estimate Questionnaire (Request for Services Form).

If the client's submitted estimates of half-boxes of artifacts, individually catalogued artifacts, digital images, or linear inches of documentation to be submitted for curation are questionable based on ASM's estimates using historical data, ASM will reach out to the client to determine a more reasonable estimate for inclusion within the quote. The two business day guarantee for quotes does not apply in such cases.

Once a project proponent or a proponent's agent (a CRM firm) agrees to the terms of the quote, ASM will invoice based on the estimated costs of activities to be undertaken to complete work up to the point of collections intake. ASM will begin processing requested service(s) upon remittance of this initially invoiced amount. A project proponent or a proponent's agent (a CRM firm) may request an estimate for any single service provided by ASM (e.g., a burial agreement), or any group of services (e.g., a burial agreement, project registration for an excavation project, etc.), up to and including any and all services needed.

In its public fora, ASM has asked for volunteers (CRM firms, agencies, and project proponents) to help test ASM's system and to help refine it during the nine-month period between adoption of the new proposed rate and fee structure (if it is adopted by ABOR) and its implementation. ASM looks forward to working with stakeholders to test and to perfect this process over the

nine-month period between the potential adoption of the proposed new rate and fee structure by ABOR and the date when the new structure potentially would go into effect.

Please note that the statutory requirements of ARS § 15-1631 bear on ASM's rates and fees, not its business practices and the methods by which it generates quotes. Nonetheless, ASM will continue to engage stakeholders on this issue in an effort to ensure that the implementation process moves forward as smoothly and with as few negative consequences as possible.

Specific Comments

The following comments were made by only one, or in some cases, two respondents:

1. ASM should work toward changes in state law and regulations such that project sponsors, rather than CRM firms (permittees), are directly responsible for paying the costs of curation.

Response: ASM must work within the existing statutory and regulatory framework, which makes permittees responsible for paying curation fees. Permittees then pass these costs on to project proponents.

2. When must the 15% deposit on projects be paid to ASM?

Response: In response to stakeholder concerns regarding timing of billing, and to reduce administrative burden for both CRM firms and ASM, a deposit will not be required. Instead, ASM will bill in two installments, similar to current business practices. The initial invoice will be based on the estimated costs of activities undertaken by ASM to complete work up to the point of collections intake, and will be issued at the inception of the project. The second invoice will be issued at the time collections are submitted for intake (projects curated at ASM), or project completion (projects not curated at ASM). The second billing will cover collections intake (processing) and curation in perpetuity (objects and documents) for projects curated at ASM. For projects generating objects not curated at ASM, the second billing will cover the cost of document curation.

As stated within the public forums, invoices for collections intake tasks are based on the assumption that collections will be submitted in accordance with state standards and that ASM will not have to return them to CRM firms so that they may be brought up to standards. CRM firms may be subject to additional costs if submitted collections are found to be non-compliant and must be returned for remediation and resubmission.

3. Will the deposit be refunded if the project is cancelled?

Response: ASM will refund the initial invoice amount, less any costs related to services rendered before the project was cancelled.

4. When will billing happen (i.e., the same month that costs are incurred or the subsequent month)?

Response: Billing will be triggered by acceptance of a quote, and subsequent conversion into a project for the initial invoice. The second and final invoice will be triggered by either project completion (projects not curated at ASM) or when collections are submitted for intake (projects curated at ASM).

As stated within the public forums, invoices for collections intake tasks are based on the assumption that collections will be submitted in accordance with state standards and that ASM will not have to return them to CRM firms so that they may be brought up to standards. CRM firms may be subject to additional costs if submitted collections are found to be non-compliant and must be returned for remediation and resubmission.

5. Does the new approach to project registration mean that CRM firms will have to pay a set fee (as in the old system) plus a time-based charge?

Response: No. There is no set fee for project registration under the new proposed system. Costs will be billed based on estimated time to complete each task.

6. How will ASM bill for ASM site numbers to be assigned to sites on private and federal lands, as NOIs (Notices of Intent) are not required in these cases?

Response: Billing will be based on labor rates for staff time required to fulfill the requested service(s) (e.g., requests for site numbers).

7. Is payment for project registration due at project initiation, or is it just the 15% deposit that is due?

Response: Under the revised proposed billing cycle, the initial invoice will be based on the estimated costs of activities undertaken by ASM to complete work up to the point of collections intake, and will be issued at the inception of the project. ASM will no longer require a deposit.

8. Is the cost of a project-specific burial agreement set at \$2,375, or is this an example? If it is an example, how should CRM firms budget for this cost?

Response: The draft proposal and the revised draft proposal present an example. Obtaining a burial agreement, as with all other services offered by ASM, will require CRM firms to request a quote. If it is known at project inception that a burial agreement will be necessary, this can be indicated on the request for quote form, and the cost of it will be imbedded within the initial quote. If one is required after a job is already in progress, a quote for just that differential cost

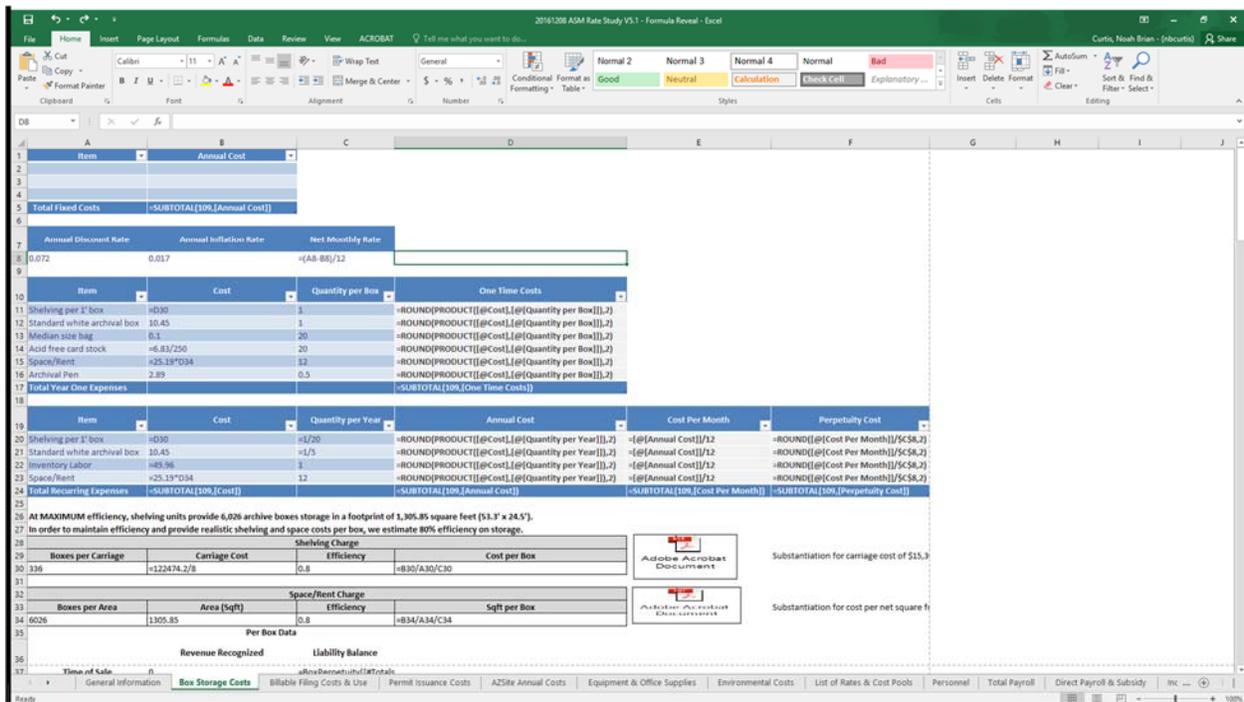
can be requested and a revised quote will be issued to include that service.

9. ASM should not charge fees for expedited estimates, as a quick turnaround in this area is an important part of the CRM business model.

Response: Turnaround time is within two business days of receiving a correctly completed ASM Cost Estimate Questionnaire. There is no fee for an estimate; estimates cannot be expedited.

10. ASM should make all of its cost recovery calculations public.

Response: ASM and UA management will not publicly disclose the names of personnel and their salaries beyond what has already been provided during the initial public comment period. Below is a screenshot showing the formulaic calculations for the in-perpetuity fee related to the curation of boxes of artifacts. The embedded PDFs substantiating the values used in cells B15, B23, B30, A34, and B34 were provided within the materials posted after the initial round of public comments. ASM is also engaging an external accounting firm in an attestation on the calculated rates and fees.



11. How will ASM estimate the number of hours per task and project, and will ASM monitor these estimates in light of the fact that they are non-binding?

Response: Initially, ASM will use historical data from past projects, in the context of data supplied by Project proponents or their agents (CRM firms) via an ASM Cost Estimate

Questionnaire (Service Request Form). Future estimates will be refined based on data derived from the museum's new time management software system. It is important to note that, once ASM provides a quote based on information provided by the CRM firm, that quote will be honored, barring a material change in the scope of the project, as defined above.

12. How will the cost of project registration for each specific survey be estimated? Will there be a new required NOI form for the consultant to fill out with additional information (i.e., acreage of survey, predicted site density, etc.)?

Response: Project proponents or their agents (CRM firms) are now required to submit an ASM Cost Estimate Questionnaire (Service Request Form). To generate an ASM Cost Estimate, ASM will apply the answers provided on the ASM Cost Estimate Questionnaire to formulas created using historical data. An ASM Cost Estimate Questionnaire (Service Request Form) must be submitted for each survey project (like projects of all types).

13. ASM should work to change state laws and regulations so that it is required to do less in terms of collections intake. It should act more like a repository and less like a museum.

Response: ASM must work within the existing statutory and regulatory framework. This comment assumes that ASM's collections management policies and procedures differ to a large extent from those of other repositories and/or that the costs of ASM's non-repository functions (e.g., exhibitions) are borne by curation fees. Neither is true.

14. ASM should approach covering costs associated with the curation of objects by having a set per-box fee with two components: one based on labor costs and another based on curation in perpetuity. The latter should begin at \$1,000 per box. Both should be increased annually: the labor portion of the fee should increase at the rate of inflation and the curation in perpetuity portion of the fee should increase at twice the rate of inflation.

Response: If ASM had been historically recovering the costs associated with performance of these services, we would generally agree with this comment. However, historical rates and fees have grossly under recovered costs, requiring a substantially larger initial adjustment. Moving forward, CRM firms can expect to see increases in rates and fees more in line with inflation. ASM cannot propose a rate and fee structure that does not recover its costs. Project proponents must pay the costs associated with their projects. These costs may not be subsidized by ASM or another project proponent. The proposed rates and fees were set to meet these requirements.

15. Because CRM firms compete for contracts with prospective project sponsors, ASM will be in the position of developing estimates for multiple CRM firms vying for the same project. Who pays for the costs associated with this work? ASM should elucidate the estimate process to the extent that it can be independent from the museum, as it is not a good use of ASM staff

time.

Response: Information related to the job and proponent will be requested within the Request for Services form, allowing ASM to provide consistent quotes for the same project. Time spent generating quotes is not directly billed to any project proponent.

16. ASM should consider the linear inch as a billing unit for document curation.

Response: The revised draft proposal already uses the linear inch as a minimum billing unit to recover costs associated with the curation of documents in perpetuity.

17. Is there duplication of effort in curating documents at ASM and the State Archives?

Response: There is no duplication of effort in terms of duplicating documents associated with projects curated at ASM. State statute and rules, federal regulations, and best practices require that records be curated at the same institution as the objects with which they are associated.

18. ASM should postpone implementation of the new fee and rate structure until after it holds a stakeholder workshop to discuss options moving forward.

Response: ASM has engaged stakeholders in four public fora and a meeting of the Four Southern Tribes Cultural Resource Working Group since its initial response to public comments. A tribal summit is being planned for early September. Based on stakeholder feedback, these meetings have been successful in better aligning ASM's proposed new business practices with the business practices and needs of stakeholders. ASM is committed to continuing this process, regardless of any timetables related to SB 1418, and will be happy to help organize and participate in a broad-based approach to avoiding unintended consequences associated with increases in its rates and fees.

19. ASM did not adequately consider comments from industry, municipalities, and state agencies, does not meet the standards for addressing public comment as specified in statute at ARS § 15-1631(E)(4), and should not adopt the rate and fee structure presented in the revised draft proposal. Specifically, ASM did not address multiple comments related to efficiency and cost-savings. ASM must clearly explain measures taken to reduce costs and improve efficiency/avoid duplicate effort.

Response: ASM believes that its previous written response to public comments, this document, and the process the museum followed in both soliciting and responding to public comments actually exceeds the standards of ARS § 15-1631(E)(4):

If applicable, post on the website of the state museum a revised draft of the proposal to increase fees for services at the end of the public comment period. The revised draft shall

include a summary and response to any comments received during the public comment period and a summary of the alternatives that were considered and a rationale for why those alternatives were not selected.

ASM convened two stakeholder meetings, on 20 September 2016 and 12 December 2016, in advance of developing its initial draft proposal, which was posted 21 December 2016. Neither of these was required under ARS 15-1631. The first meeting was designed to introduce stakeholders to ASM's mandated responsibilities and the legal framework within which it operates, as these are the major factors that determine its costs in delivering services. The meeting in December addressed the relationship between ASM's costs and the charges assessed under its old rate and fee structure. In that same meeting, the basic tenets of ASM's new proposed rate and fee structure were introduced, and stakeholder comments were received. The clear consensus of stakeholders at the December meeting was that ASM's proposal to move from task-based billing to time-based billing (an alternative that more accurately scales project scope to costs incurred by ASM and project proponents) reflected initial stakeholder input and was a key desired stakeholder outcome of the SB 1418 process.

Regarding efficiency and cost-savings, ASM's draft proposal and revised draft proposal both include extensive sections addressing these issues (and an updated version appears in the final proposal). The following is an excerpt from the revised draft proposal (posted 17 April 2017):

Efforts to Avoid Fee Increases or Reduce Costs and/or Regulatory Burden

ASM's mandated mission consists of serving our stakeholders and communities in ensuring that construction or similar projects remain compliant with the regulatory framework to which they are subjected under federal and state law. Although the burden imposed upon such projects as a result of this regulatory framework is outside ASM's purview and well beyond the University's authority and control, the University and ASM have pursued several efforts to reduce the charges assessed to project sponsors in meeting our mutual responsibilities under the law.

There are substantial pools of costs that are allowable in the development of the proposed rates and fees that were not included in order to mitigate the burden borne by project sponsors and to keep charges as low as possible.

Cost Mitigation Efforts

RDI Business Support to ASM

ASM is provided accounting, human resource and other business service support by the RDI Business Center. The personnel, equipment, office supplies and other costs associated with the provision of these services were wholly excluded from the rates and fees for mandated programs in order to reduce charges to project sponsors.

Leveraging ASM Expertise

ASM, as part of the University of Arizona, is also able to leverage the expertise of its faculty and staff in archaeology and museum conservation such that only a small percentage of each highly trained professional's effort is expended in supervising lower-cost employees who complete the great majority of the tasks comprising mandated cultural resource management services.

Compactor Shelving

ASM's utilization of compactor shelving significantly reduces the space costs associated with curation in perpetuity of both boxes of artifacts and linear feet of documentation. Excluding consideration of the necessary costs associated with environmental controls, the per-box or per-linear-foot savings from employing compactor shelving is a net present value of \$1,432.56. These savings are a direct result of the fact that compactor shelving makes 45% more efficient use of square footage of storage space than standard shelving. The cost differential between compactor and standard shelving is recuperated within the first 85 boxes of artifacts or linear feet of documentation curated, and each compactor carriage can store an average of 336 boxes or linear feet of documentation. These savings are incorporated in the proposed rates and fees, and the benefits passed on directly to the entities that engage ASM for services under mandated programs.

Future Curation in UA Warehouse

Currently all curation at ASM is carried out within two historic buildings on the University of Arizona campus. The curation fees for both boxes of artifacts and linear feet of documentation are based on facilities cost of \$25.19 per square foot per month, as calculated within the University's RCM Budget Model. This rate takes into account operations, utilities, and debt payments associated with facilities and grounds. Recently ASM submitted a 12D Funding Request through the Apache Gold Casino Resort for \$200,000 of the estimated \$1.6M necessary to secure and outfit 30,000 square feet of archaeological collections curation and research space in an off-campus facility. Once ASM is able to secure the remaining \$1.4M of funding, for which it is currently conducting a donor-based philanthropic campaign, this off-campus facility will be retrofitted to meet ASM's specific storage needs. This off-campus site will enable ASM to continue to meet its mission relating to the curation of artifacts and documents even as its historical space reaches capacity, and it is anticipated that this off-campus location can be operated at lower cost than the historical buildings that currently serve as the storage space. If realized, these cost reductions will be built into the rates and fees for mandated programs and the benefit passed through to project sponsors.

Consolidated Collections Information System

In September of 2016, ASM faculty submitted a grant proposal under the Humanities Collections and Reference Resources funding announcement offered by the National

Endowment for the Humanities' division of Preservation and Access. If funded, this grant will provide \$289,502 towards the total estimated cost of \$625,628 needed to replace ASM's current antiquated information system with a modern consolidated information system. This new system will enable ASM staff to more efficiently, accurately, and adequately complete the process of cataloguing its holdings, thereby minimizing costs to projects associated with processing artifacts deposited. The simplified infrastructure of the new consolidated system is also anticipated to drive reductions in IT costs associated with server maintenance and storage.

Independent IT Assessment for Museums

In December of 2015, ASM's parent organization, the University's Office for Research, Discovery & Innovation (RDI), engaged WTC Consulting to formulate a strategy for complex networking, IT & telecommunications to be implemented across ASM, the Center for Creative Photography and the University of Arizona Museum of Art. After their analysis of server and storage infrastructures, user systems, applications and data management, and existing IT support, WTC formulated a strategy to create a shared IT support model across the three RDI units, which leveraged existing University Information Technology Services (UITS) services with targeted internal IT support. RDI and ASM are currently implementing this plan in stages, including submission of the aforementioned CCIS grant to the National Endowment for the Humanities, and a reduction in direct IT support staff. The recommendations included within the strategy have assisted in reducing the costs associated with the provision of mandated services and providing greater security to ASM's digital records.

ASM's final rate and fee proposal (posted 25 August 2017) adds updated information on ASM's efforts in fundraising to support the creation of an off-campus archaeological repository:

To date, ASM has raised more than \$245,000 and has submitted five grant proposals requesting a total of \$1M toward the estimated \$1.6M necessary to secure and outfit 30,000 square feet of archaeological collections curation and research space in an off-campus facility. Once ASM is able to secure the remaining funding, this off-campus facility will be retrofitted to meet ASM's specific storage needs. This off-campus site will enable ASM to continue to meet its mission relating to the curation of artifacts and documents even as its historical space reaches capacity, and it is anticipated that this off-campus location can be operated at lower cost than the historical buildings that currently serve as the storage space. If realized, these cost reductions will be built into the rates and fees for mandated programs and the benefit passed through to project sponsors.

ASM and the UA Office for Research, Discovery, and Innovation (RDI), the unit to which ASM reports, are currently engaged in a number of efforts that could potentially lower costs and, therefore, lower ASM's fees and rates. RDI has initiated a process-mapping project to help streamline ASM business practices; ASM has recently completed time-saving upgrades to its existing collections database (while awaiting acquisition and implementation of a new system)

and has planned additional upgrades to be implemented before 1 July 2018; and RDI has initiated the transition of ASM's digital collections to less expensive storage models.

In response to stakeholder comments, ASM extended its second public comment period, initially scheduled for 17 April 2017 through 7 May 2017, to 18 August 2017. ASM also met face-to-face with stakeholders during the extended public comment period:

- 13 June 2017, CRM Forum held in conjunction with the Arizona Historic Preservation Conference, Oro Valley, AZ
- 15 June 2017, Presentation and Q&A at the Arizona Historic Preservation Conference, Oro Valley, AZ
- 20 July 2017, CRM Forum, hosted by the Arizona Department of Transportation, Phoenix, AZ
- 21 July 2017, Presentation and Q&A at the Four Southern Tribes Cultural Resource Working Group meeting, Salt River Pima-Maricopa Indian Community
- 3 August 2017, CRM Forum, Museum of Northern Arizona, Flagstaff, AZ

A tribal stakeholders summit, to be hosted by the Yavapai-Prescott Indian Tribe, has been scheduled for 8 September 2017, in Prescott, AZ.

Based on written comments and input received in the meetings just discussed, ASM has altered its rate and fee proposal and also its proposed business practices related to mandated programs (see ASM's responses to General Comments 10 and 11, above).

ASM briefly addressed questions regarding perceptions of duplicative effort in its first response to public comments:

ASM does not perform the same tasks required of those submitting collections for curation. ASM, as a public repository pursuant to ABOR Policy 8□204(H), has the following responsibility:

All specimens and records resulting from the permitted activity must be accessioned, inventoried, and fully documented by the repository. Accession and catalog records are considered to be part of the records that must be permanently preserved.

The lists provided below include tasks completed by ASM staff, rather than staff of CRM firms or others submitting collections, for curation (many of these appeared in ASM's draft and revised notice).

Partial List of Tasks Completed by ASM Staff as Part of Collections Intake (Bulk Boxes):

- Reviewing the structure of the submitted electronic database, confirming it is compatible with ASM structure, loading it onto a server, and making format changes for upload into ASM's Collections Information System (CIS) software.
- Checking the contents of boxes against the inventory provided.
- Rehousing bulk material collections, using new bags and bag labels (tags), if necessary.

- Making hard-copies of the checked inventory data and distributing them to the individual boxes, the project accession file, and the repository files.
- Entering data about the collection into the CIS Box Collection table.
- Transferring the boxes to a collections storage area.
- Recording new storage locations for boxes, including updating the project accession file and the CIS.

Partial List of Tasks Completed by ASM Staff as Part of Collections Intake (Individually Catalogued Objects):

- Laying out individual objects and matching them to the submitted inventory and the submitted report illustration and/or text.
- Generate a unique catalog number for each item and label all pieces (if not previously done by those submitting the collection for curation)
- Creating a tracking document to locate each object and its progress through the cataloguing process.
- Creating digital images for documentation in the CIS and on Catalog Cards, including editing and labeling each image according to ASM guidelines .
- Creating a CIS Image Project record for the project (not each image).
- Creating a digital catalog card template for the project.
- Generating and customizing a catalog card for every individual specimen.
- Completing a descriptive record, documenting the recovery context, recording measurements, and embedding digital images into each catalog card.
- Editing draft catalog cards.
- Printing cards - double sided.
- Creating a CIS entry for each specimen.
- Creating museum-quality storage mounts when necessary.
- Generating storage inventory sheets.
- Recording storage locations in the CIS and on each catalog card.

In processing the collection, ASM staff may identify (based on best practices, accepted standards, and knowledge/expertise) objects not previously identified by those submitting the collection for curation as requiring individual cataloguing. Such objects must be catalogued.

By way of comparison, the tasks required of CRM firms in advance of submitting collections for curation, as detailed in the ASM Repository Manual (Griset et al. 2004), Sections 2.1 through 7.7, include:

- appropriate cleaning of all artifacts submitted (unless cleaning would cause damage or, in the case of selected specimens, such action would hamper scientific analyses, e.g., residue analysis);
- minimal efforts to stabilize objects in need of stabilization;
- labeling each individually catalogued item with its unique number (according to ASM standards);
- labeling bulk material with an accession number and field specimen number (according to ASM standards);
 - bulk items smaller than the size of a U.S. quarter coin are excepted from this rule, and need not be labeled.
 - for larger collections of bulk material (e.g., a large bag of 30 or more small sherds, a bag

- of 60 pieces of debitage), at least 10% of the items in the bag must be labeled.
- organizing the collection physically, according to site, major artifact class or analytical category, and intrasite provenience;
- inventorying the collection and producing inventory forms for each box, as well as an electronic and paper inventory of the entire collection;
- documentation of individually catalogued objects:
 - catalog number
 - object name (e.g., reconstructed Sacaton Red-on-buff jar)
 - number of specimens associated with each catalog number (e.g., 1 complete jar, 1 partial jar comprising 3 sections, 25 stone beads)
 - brief description of the object's significance (i.e., why it was selected for cataloguing)
 - associated image or illustration number in report;
- packing the artifact collection according to ASM standards, using archival quality materials;
- physically organizing and inventorying photographic images (including digital images);
- providing documentation for each image:
 - date of image
 - field number
 - subject (description of archaeological structures, features, procedures, equipment, artifacts, etc., as well as the names of any individuals in the photograph)
 - provenience (site number, site name, intrasite provenience, and orientation from which the photograph was taken, i.e., "looking to the Northwest"; include site-specific units of designation such as features, floor numbers, burial numbers, grid numbers, etc.)
 - photographer's full name;
- packing the photographic image collection according to ASM standards, using archival quality materials (if prints and negatives are present);
- physically organizing and inventorying all associated archival material (e.g., field notes, field forms, maps, profiles);
- providing documentation for each item of archival material, e.g.:
 - project name and project number
 - project map field number, if assigned
 - name of cartographer
 - date map was drafted
 - ASM site number and site name, if assigned
 - north arrow and scale
 - brief description of the map or profile
- packing the archival material according to ASM standards, using archival quality materials; and
- assigning box numbers and affixing numbered box labels with required information.

20. ASM's rates and fees are much higher than comparable institutions in the region. ASM should provide a detailed explanation as to why its services are so much more expensive.

Response: ASM has no control over the business practices of outside institutions in this region or any other. ASM must operate within its legal and regulatory framework. Detailed calculations of the rates, as well as descriptions and measures of the costs embedded within them were provided within our written response after the initial public comment period. Furthermore, the proposed rates and fees are strictly cost-based. They were set entirely independent of market

forces and are designed solely to recapture the costs incurred, as outlined within documentation previously provided.

21. How much revenue does ASM expect to generate based on the new rate and fee structure?

ASM could have covered its costs in 2016 using the average per-box fee charged by repositories in the intermountain west (\$633).

Response: ASM expects to generate revenue equal to the costs it incurs in providing state mandated services to its clients. As there is no time frame given in the question it is impossible to quantify a response. It is important to note that only a small fraction of the in-perpetuity fees collected in any given year will be recognized as revenue within that year. The remaining balance will be held as a liability in recognition of the future services ASM is required to provide in curating artifacts and documentation in perpetuity. Some portion of this liability will remain on the books until fully amortized. The amortization schedule for this liability (i.e., revenue recognition schedule) can be found within documentation provided after the initial public comment period.

Regarding the suggestion that “ASM could have covered its costs in 2016 using the average per-box fee charged by repositories in the intermountain west (\$633),” this is not accurate. The respondent assumes that ASM must only recover current year costs. ASM must recover both current year costs and the costs of curation in perpetuity. Also see ASM’s response to General Comments No. 13 and 14, above.

22. Some stakeholders are concerned with how the perpetuity fee, which is a new cost, is being calculated. Acknowledging that this method is used elsewhere in the country, the scale of the fee and the schedule for its implementation are not typical. ASM is using an accounting definition of “perpetuity” to argue that the cost of each box is above \$30,000 in a model that involves nearly two centuries. Further, the estimation incorporates the assumption of an interest-bearing account that provides a discount from \$30,000 to \$3,000 per box, which is unreasonable.

Response: The fee assessed for in-perpetuity storage is new to clients of ASM, but these have been costs to ASM ever since its inception, 125 years ago. There is only one definition for perpetuity, that being a stream of periodic cash flows that goes on forever, just as the cost of and obligation to curate artifacts goes on forever for ASM. Any amount of periodic cost without discounting thereby becomes an infinite sum. Due to the fact that we are collecting funds to defray all these future cash flows (i.e., costs) at a single point in time, discounting for the time-value of money was implemented, reducing this infinite sum to a finite measure. The formula utilized to accomplish this is used in the valuation of bonds and other annuities within credit markets worldwide, and the accounting proposed for these transactions is in accordance with Generally Accepted Accounting Principles (GAAP). ASM and the University of Arizona are working now to engage an outside accounting firm in an attestation on the proposed rates and

fees.

23. When the actual costs of collections intake and in-perpetuity curation of artifacts and associated records surpass a CRM contractor's initial estimates, developers may discontinue payment for projects once they are informed of the additional fees. As a result, there may be no funding to cover curation costs.

Response: Per state law and ABOR Rules, (1) costs of projects must be borne by project proponents; and (2) the CRM firm is responsible for securing payment from the project proponent and submitting it to the repository (ASM or some other public repository) under the terms of a curation agreement. If payment is not received, the CRM firm has violated the terms of its Arizona Antiquities Act permit. Regardless of whether the project proponent pays the CRM firm, the CRM firm has engaged ASM or some other public repository for services and has entered into a contract to pay for these services. ASM would hope that CRM firms would put in place contractual obligations for the project proponent to pay, and also honor their obligation to pay the repository that issued a curation agreement.

24. The new structure could discourage the leasing or purchasing of state land because of increased associated costs.

Response: As discussed in ASM's response to General Comment No. 17, above, stakeholders at the 3 August 2017 public forum suggested that the development of overarching plans (and Arizona, like New Mexico, would need multiple regional plans), with clearly defined research priorities, is a logical response to this possible, unintended consequence. As noted by land-managing agency stakeholders at that meeting, such plans can be very helpful, in that they make it easier to determine where proposed development projects are likely to be most expensive or least expensive (i.e., where such projects will be in the best economic interest of a land-managing agency, for example, the Arizona State Land Department).

25. ASM's proposed new rate and fee structure will have a significant impact on the cost of projects for which businesses have already made arrangements to curate materials at ASM.

Response: ASM understands the concerns of stakeholders who have already made business decisions based on ASM's current rate and fee structure. Contractual agreements between ASM and its clients that are in place prior to the implementation of the new rates will be honored.

26. Data that ASM has presented regarding national trends in repository fees are irrelevant because they cover the years 1997-2008 and refer to "relatively small increments, such as \$100-\$200 per cubic foot."

Response: These data are irrelevant in the sense that they have no bearing or impact on the

costs ASM incurs in order to provide services to its clients, and ASM's statutory mandate under ARS § 41-844 requires that "[t]he expense of any curation or reburial pursuant to this section that is required as the result of a construction project or similar project shall be borne by that project." This gives ASM a clear directive to pass its costs on to project proponents (via CRM firms or other clients) regardless of national trends in repository fees or increases thereof.

That said, the data were presented for two main reasons. The first was to place ASM's new proposed rate and fee structure in the context of the "curation crisis" that continues to affect all archaeological repositories in the United States (see, e.g., Childs and Benden 2017). The authors of the study describe the objectives of their article thus:

The first [objective] is to explain why the US archaeological community now spends significant resources on the curation of their collections when they did not previously. We provide this explanation by highlighting some of the findings from the most recent survey of repository fees in 2007/08 and by revealing some distinct trends evident over the decade of study. Our second goal is to make the archaeological, curatorial, and contracting communities aware of the impacts that the increased costs are having on archaeological projects and some related heritage management decisions that must soon be made (Childs et al. 2010:191).

The second reason ASM presented data and conclusions from this study was to show that ASM is in the mainstream, nationally, in terms of its curation practices, the way it proposes to structure rates and fees, and the costs that drive the charges in its proposals. Furthermore, the results of this national study demonstrate that ASM is a leader in attempting to create a sustainable business model (i.e., through the proposed use of an interest-bearing account to cover in-perpetuity costs, by using curation agreements and assessing project registration fees, by charging for the in-perpetuity curation of associated records, and by proposing and enforcing collections submission standards linked to institutional curation requirements set by state and federal law and regulations).

Regarding the comment about "relatively small increments, such as \$100-\$200 per cubic foot," and how this might add up, discerning patterns at the national level, or indeed any sort of comparison, requires conversion to percentages, and that is what the authors of the study did (Childs et al. 2010). Also, in the sentences that directly follow the cited discussion of "relatively small increments," the authors make the following points:

More significantly, the percent change in the fees is almost always at least 100 percent and often quite a bit more (Figure 2).

The number of repositories charging curation fees nationwide, the amounts charged, and periodic increases are daunting, but are clearly correlated to a much better understanding of the actual costs of curation. Repository staffs are putting considerable effort into estimating

the real costs to properly care for the collections when developing or changing their fee structures, both for the artifacts and associated records (Lyons and Vokes this volume). The most frequent criterion now used to determine fees is the various costs to care for the collections according to federal standards, including building management and maintenance, processing collections, and computerization to maintain the collection accession and catalog records. Other factors include professional staff salaries, auxiliary storage fees, new equipment, and to cover increasing utility costs for environmental controls and general inflation.

This development is important because the primary criterion used to determine fees in the 1997/98 study was the fee structure of neighboring institutions. As a general rule, repository staff did not know their real costs and were not beginning to cover the true costs of curation in their fees. The staffs at 60 (63 percent) repositories acknowledged in the 2007/08 study that the in-perpetuity fees did not pay for the long-term upkeep of the collections, particularly regular inventory and inspection against physical degradation. The current trend for many repositories, however, is to know their real costs, but to keep their fees comparable to their neighbors. This decision may be a realistic business strategy, but what happens to the collections if repositories do not charge the full costs of curation and are forced to close down for financial reasons? (Childs et al. 2010:198-199)

References Cited in ASM's Response to Specific Comment No. 26

Childs, S. Terry, and Danielle M. Benden

2017 A Checklist for Sustainable Management of Archaeological Collections. *Advances in Archaeological Practice* 5(1):12-25.

available online **for a fee** at:

<https://www.cambridge.org/core/journals/advances-in-archaeological-practice/article/div-classtitlea-checklist-for-sustainable-management-of-archaeological-collectionsdiv/D4B309C185404132CE10E894917958CF>

Childs, S. Terry, Karolyn Kinsey, and Seth Kagan

2010 Repository Fees for Archaeological Collections. *Heritage Management* 3(2):189-212.

available online **for a fee** at:

<http://www.tandfonline.com/doi/abs/10.1179/hma.2010.3.2.189>

27. ASM's proposed per-box curation fee represents a 1200% increase since 2005.

Response: This statement incorrectly assumes that ASM previously recovered, through a per-box fee, the costs associated with curation in perpetuity. The current proposal sets the per-box fee for curation in perpetuity at \$3,004. This is separate from the per-box fee for collections intake, which has been in place since 2005.

In 2005, ASM charged a per-box fee of \$350 for collections intake. It was determined that this fee did not cover current-year expenses for collections intake tasks, and so the fee was raised to \$565 per box in 2007. Planned and announced 5% increases were instituted annually through the first half of 2015, bringing the per-box fee to \$785. Budget cuts and needs to acquire additional shelving (increased costs) forced ASM to increase this fee to \$1,000 per box in July of 2015. Based on a recent reanalysis of ASM's costs, the current ASM proposal fixes collections intake (assuming 2 half-boxes, 1 cataloged object, and 1 inch of documentation) at \$1,321. This represents a 277% increase ($(1321-350)/350*100$) over 13 years.

28. ASM is proposing to generate large sums of excess revenue to be placed in an interest-bearing account for mandated programs. There will be an incentive for ASM to use these funds for purposes related to mandated programs but unrelated to the curation of the items for which the fees were collected. There is little incentive for ASM to control costs and to increase efficiency. Stakeholders must make assumptions about the permitted uses of these funds, as the establishment, accounting, tracking, and public disclosure related to this interest-bearing account has not been well documented or explained. There is nothing to prevent transfers of these funds within the University of Arizona.

Response: This comment represents a misunderstanding of the accounting necessary under Generally Accepted Accounting Principles (GAAP) for the in-perpetuity fees. The majority of funds collected in relation to in-perpetuity fees are to be held as unearned revenue, which will only be recognized over the passage of time. The amortization schedule for this revenue recognition is provided within the documentation on the ASM website. If ASM or other entities within the University of Arizona were to appropriate these funds for other uses, a massive unfunded liability would remain on the books, representing the continued obligation of ASM and the University of Arizona to provide the services of curation and care for those artifacts over the 180-year amortization period, as discussed in response to other public comments.

29. This proposed rate and fee structure may encourage litigation by private entities who must comply with the Arizona Antiquities Act, Section 106 of the National Historic Preservation Act, and other legislation that protects cultural resources from destruction.

Response: ASM is uncertain as to how or why the proposed rate and fee structure might encourage litigation, or even what grounds such litigation may be based upon.

30. In a recent meeting of the Governor's Archaeology Advisory Commission (GAAC), when asked if ASM's revised draft proposal would change based on public comment, ASM responded in the negative. This means that the public comment process has been a waste of time for stakeholders.

Response: ASM believes this is an oversimplification of the discussion at the GAAC meeting

and ASM's comments in particular. There may have been confusion when ASM stated that, although the second public comment period had not yet ended, there had not yet been any stakeholder suggestions that could be applied to, and thus alter, the rate and fee proposal, aside from those changes reflected in the edits to the initial draft proposal (of 21 December 2016) that created the revised draft proposal (of 17 February 2017). These changes included moving from the one-cubic-foot box to the half-box (when appropriate) and from the linear foot to the linear inch of documents as minimum billing units. ASM reminded meeting participants that the bulk of stakeholder input and ASM response to date had focused on business practices and addressing possible unintended consequences.

In the area of business practices, ASM reminded the group that, to date, ASM has been responsive to stakeholder input in:

- committing to scope-dependent quotes for services, reducing budgetary uncertainty for project proponents, agencies, and CRM firms;
- developing an easy-to-use, online questionnaire for stakeholders to request quotes;
- committing to a two-day turn-around in issuing quotes;
- waiving previous plans to require a 15% deposit for estimated costs associated with all services to be provided up to collections intake and in-perpetuity curation; and
- changed its proposed billing system to a two-bill cycle instead of monthly billing events for each job.

Regarding possible unintended consequences, ASM reminded the group that it has been holding public fora and also meeting with groups representing Arizona's tribal communities. ASM's main goal in these efforts is to help organize and participate in a broad-based, community effort to help scientifically and ethically stem the unsustainable flow of collections into repositories. ASM asserts, however, that focusing effort solely on curation, at the downstream end of the cultural resource management process, rather than decisions made upstream, such as which sites are chosen for excavation and how much of each is subjected to data recovery, is a mistake. In this context, ASM expressed its support (and the support of many stakeholders in attendance at its public fora) for the development of overarching, regional mitigation plans that prioritize sites to be excavated (examples include the Fruitland Project Mitigation Plan and the Permian Basin Mitigation Program, both designed to prioritize archaeological data recovery in large portions of New Mexico).

31. ASM has not proven its need for funding at this scale and in this way.

Response: All costs within the rate and fee model are well substantiated and documented within the material already provided. This comment may reflect a misunderstanding of the difference between funds collected in the current year to defray future costs for in-perpetuity curation (i.e., unearned revenue) and current year revenues (revenues that will cover current-year costs).

32. The measures for addressing unintended consequences discussed thus far in ASM's public

fora (more avoidance of archaeological sites and the development of overarching regional research plans which better prioritize which sites should be excavated) are inadequate.

Response: ASM, as it has in its public fora, suggests that the for-profit CRM business model is somewhat at odds with the legal framework for historic preservation, in that the CRM firms have an incentive to excavate as much as possible and the legal framework is based on prioritizing the most important resources to be excavated, based on their research potential. In order to ethically and scientifically stem the unsustainable flow of collections into repositories, ASM contends that the cultural resource management/heritage preservation community must focus on decisions made early in the process, such as which sites are chosen for excavation and how much of each is subjected to data recovery (see ASM Response to Specific Comment No. 24 and General Comment No. 17, above).

33. The percentage of the average CRM budget that will now have to go toward in-perpetuity curation (or “money in university account to counter ASM’s accounting liabilities”) does not reflect scientific and economic values, the proper balancing of development and archaeology, or the proper balancing of science and the public good.

Response: The “accounting liabilities” referred to above are the costs of maintaining, in future years, the objects and associated records submitted for curation. ASM’s proper maintenance of its collections represents a substantial investment in scientific value, and the proposed in-perpetuity fees will enable ASM to maintain that value into the future. ASM recognizes that it may be difficult to appreciate the “economic value” of curatorial services performed by ASM on behalf of projects that have ended many years prior. However, were it not for the projects that unearthed those artifacts, ASM would not bear the burden of curation. The costs of those services must be borne by the project proponents, albeit based on the net present value of those future services. Failure to appreciate the value of the services to be provided in the future does not excuse clients from paying for them.

34. Statute and regulations (specifically, ARS § 41-844, “Duty to report discoveries; disposition of discoveries; definitions”) only allow fees associated with services related to human remains, not artifacts, historic sites, etc.

Response: The Arizona Legislature has set out language in ARS § 15-1631(C) that provides that “The Arizona Board of Regents shall adopt any fees for services performed by the state museum pursuant to title 41, chapter 4.1, article 4 and section 41-865.” This language clearly provides authority for the Board of Regents to adopt fees for services performed by the state museum for the entirety of Title 41, Chapter 4.1, Article 4, i.e., ARS §§ 41-841 through 41-847.

35. The proposed new fees include cost recovery for mandated services, including University of Arizona facilities and administration fees for collections to be curated in perpetuity. ARS § 15-1631(B) directs ABOR to “set apart sufficient space to accommodate” the Arizona State

Museum for the purposes of collection and preservation of archaeological resources. ARS § 15-1631(C) generally authorizes ABOR to recover costs associated with services mandated under ARS § 41-841 et seq., but does not specify compensation to the University of Arizona for its mandated requirement to set apart sufficient space to accommodate archaeological collections in perpetuity. Please provide clarification regarding the legal basis for ASM's recovery of in-perpetuity fees related to the University of Arizona's facilities.

Response: ARS § 15-1631 does, indeed, require ABOR to set aside space for the Arizona State Museum for the purposes of collection and preservation of archaeological resources. Such a reservation of space, however, does not imply that there will be no apportionment of carrying costs to ASM for the maintenance of that space, nor does it establish a requirement that ASM make that space available to external entities for curation free of charge. Furthermore, ARS § 41-844 requires that “[t]he expense of any curation or reburial pursuant to this section that is required as the result of a construction project or similar project shall be borne by that project.” There is no exclusion for space or any other University of Arizona overhead costs from this statutory mandate that construction or similar projects bear the costs of curation. Therefore, all relevant costs have been included within the calculation of rates and fees, including those for the space required to curate artifacts and associated records submitted for curation as a result of construction or similar projects.

36. ASM’s proposed new rate and fee structure will make business especially difficult for Arizona’s small, woman-owned CRM firms.

Response: We fail to see how universally applied rates and fees would create an environment any more difficult for one specific sector of ASM’s clients than any other.

37. ASM continues to “reprocess” the collections as it always has, by examining each bag and looking for additional specimens it deems interesting to add to the cataloged collection. In essence, it has been culling the repository collections to augment its research and exhibit collections. This may fulfill its mission as a state-funded public museum, but goes beyond the requirements for providing repository services. Landowners (whether public or private) should not be assessed the cost of developing museum collections. They are required to pay the cost of preserving archaeological materials and data disturbed on their lands. All CRM collections are submitted to ASM with digital inventories, field notes, photographs, and copies of the report. Future researchers can easily navigate the boxed collection when looking for specific items for their research. Because the cataloged items are boxed separately by contractors, even they could remain in that box until someone needs them for research or exhibit.

Response: This comment seems to reflect a misunderstanding of ASM’s responsibilities under ABOR Rules, best professional practices for collections management, and federal curation standards. It also seemingly ignores the fact that repository collections are curated for the

purposes of research, exhibit, and use in public educational programs.

As described in ASM's Repository Manual (Griset et al. 2004), ASM separates archaeological object collections into three major categories: catalog specimens, bulk materials, and survey collections. This separation is based on ASM's need to provide appropriate care (conservation) and security for objects (per best practices and curation standards), to preserve their research value, and to facilitate research use of the collections. Physical separation also eases inventory, required under best professional practices and federal curation standards (see below).

Here, ASM provides relevant excerpts from its Repository Manual, federal curation standards, and a professional museum standards document focused on collections security. These excerpts demonstrate that ASM is following best practices and professional standards in its collections management procedures. These best practices and standards allow ASM to meet the requirements of ABOR Rules 8-201 (Rules Implementing ARS § 15-1631 and § 41-841, et seq., The Arizona Antiquities Act – General) and 8-204 (Disposition of Collections and Records), which specify the required activities and standards to be maintained by public repositories in Arizona.

The following is an excerpt from ASM's Repository Manual:

3.2.2 Selection, Organization, and Documentation of Collection

As discussed in Section 1, artifacts submitted to ASM typically fall into one of three major collection categories: catalog specimens, bulk materials, and survey collected materials. These categories of material are stored in different areas of ASM in accordance with their anticipated use and significance.

- Catalog specimens consist of artifacts that have particular aesthetic or research value. It is expected that these items will require special treatment or receive significant research attention. These items are tracked individually and stored in [locked cabinet] drawers by ASM site number, or, in the case of large items or whole pots, on shelves [in locked, climate-controlled vaults].
- Bulk materials contain high volumes of sherds, lithic debitage, groundstone fragments, manufacturing debris, broken glass, metal fragments, soil samples, and so on. Bags of materials are tracked within boxes. These materials may or may not have been analyzed, but in any event it is expected that they will receive moderate or more intermittent research attention. Bulk materials are stored in boxes on shelves.
- Survey collected materials can be organized and stored one of two ways : 1) large-scale systematic collection surveys are boxed by site and stored with the bulk materials because they are packed in larger boxes and because it is expected that they may be reviewed more frequently; 2) items recovered during non-collection or limited collection surveys are boxed by site and stored on shelves sequentially by quad.

The following subsections indicate the proper treatment for each of these three categories.

3.2.2.1 Catalog Specimens

Selection

Specimens that are technologically, chronologically, or aesthetically significant are typically segregated from the bulk materials and catalogued. These objects are frequently displayed in exhibits, illustrated in publications, used for teaching, and subjected to more intensive research attention. They are stored in a high security area that is easily accessible to curatorial staff....

Table 3.4, Guidelines for Selecting Catalog Specimens

DO include:

- Items illustrated in the project report(s), either in plates or figures
- Items highlighted in papers or presentations at professional meetings or public lectures
- Artifacts discussed in detail in the project report(s)
- Temporally diagnostic artifacts (e.g., projectile points of recognized type)
- Whole or reconstructed ceramic, glass, or stone vessels, both plain and decorated
- All perishable artifacts (e.g., sandals, baskets, mats), whether complete or fragmentary
- All samples submitted for special analysis (e.g., petrography, XRF, ICPS, neutron activation); include both the sample and any remnants of the sampled artifact
- Examples of any newly defined ceramic types
- Examples of "project-specific" artifact types (e.g., "Type II Projectile Points")
- Examples of any newly defined artifact forms (e.g., a new projectile point type)
- Particularly fragile or sensitive artifacts (e.g., glass light bulbs, leather shoes)
- Objects with exceptional cultural or aesthetic qualities....

The following is a series of excerpts from *Curation of Federally Owned and Administered Archaeological Collections* (36 CFR 79):

§ 79.9 Standards to determine when a repository possesses the capability to provide adequate long-term curatorial services.

The Federal Agency Official shall determine that a repository has the capability to provide adequate long-term curatorial services when the repository is able to:

- (a) Accession, label, catalog, store, maintain, inventory and conserve the particular collection on a long-term basis using professional museum and archival practices....
- (2) Dedicate the requisite facilities, equipment and space in the physical plant to properly store, study and conserve the collection. Space used for storage, study, conservation and, if exhibited, any exhibition must not be used for non-curatorial purposes that would endanger or damage the collection;
- (3) Keep the collection under physically secure conditions within storage, laboratory, study and any exhibition areas by:
 - (v) Providing fragile or valuable items in a collection with additional security such as

- locking the items in a safe, vault or museum specimen cabinet, as appropriate;...
- (5) Handle, store, clean, conserve and, if exhibited, exhibit the collection in a manner that:
- (i) Is appropriate to the nature of the material remains and associated records;
 - (ii) Protects them from breakage and possible deterioration from adverse temperature and relative humidity, visible light, ultraviolet radiation, dust, soot, gases, mold, fungus, insects, rodents and general neglect; and
 - (iii) Preserves data that may be studied in future laboratory analyses....

§ 79.11 Conduct of inspections and inventories....

- (5) Material remains and records of a valuable nature should be inventoried on a more frequent basis than other less valuable remains or records.

The following is an excerpt from *Suggested Practices for Museum Collections Space Security* (Cultural Properties Council of ASIS International and the American Alliance of Museums 2013):

VI. Physical Security Measures and Practices

A. Principles

Physical security measures are considered the physical characteristics (equipment, construction methods, or location) of collections space that are used to mitigate the risk to collections located within. These measures are intended to deter, detect, and/or delay unauthorized access to a collections space and allow Security staff to respond in an appropriate manner....

B. Physical Security Measures....

5. Separation of Collections (separate space)

Collections management staff should consider separating collections spaces by department or by access requirements. This more readily enables the unit to reduce the frequency of legitimate access to the space and also divides the target assets, making them more difficult to locate and gain access by unauthorized persons.

6. Separation of Collections (within the same space)

Staff should also consider additional separation of collections within a collections space. Small or easily pilferable (or easily concealed) items should be reasonably separated and secured to both restrict unauthorized access and support inventory practices. Additionally, if a[n individual] collection contains relatively few (or physically small) High Risk items, it may be more efficient to store those items in a separate cabinet or safe, within another, lower risk collections space. The cabinet or safe should meet all of the High Risk physical security requirements in this instance.

Regarding the suggestions that ASM “reprocesses” collections and that ASM is “culling the repository collections to augment its research and exhibit collections,” these are not true. ASM is required to ensure that its collections submission standards are met, and also to ensure that

fragile and/or especially valuable (both in terms of scientific and commercial value) artifacts are afforded the proper storage from the standpoint of standards and best practices relating to conservation and security. Also see ASM's response to Specific Comment No. 19.

References Cited in ASM Response to Specific Comment No. 37.

Code of Federal Regulations

1990 *Title 36 Part 79: Curation of Federally Owned and Administered Archaeological Collections*. Government Printing Office, Washington, D.C.

<https://www.gpo.gov/fdsys/search/pagedetails.action?collectionCode=CFR&browsePath=Title+36%2FChapter+I%2FPart+79&granuleId=CFR-2012-title36-vol1-part79&packageId=CFR-2012-title36-vol1&collapse=true&fromBrowse=true>

Cultural Properties Council of ASIS International and the American Alliance of Museums
2013 *Suggested Practices for Museum Collections Space Security*. ASIS International, Alexandria, Virginia, and the American Alliance of Museums, Washington, D.C.

<http://aam-us.org/docs/default-source/professional-resources/suggested-practices-for-museum-collections-space-security.pdf?sfvrsn=0>

Griset, Suzanne, Arthur W. Vokes, and Catherine Sarther, with contributions by Teresa Moreno
2004 *Requirements for the Preparation of Archaeological Project Collections for Submission to the Arizona State Museum*. Collections Division, Arizona State Museum, University of Arizona, Tucson.

http://www.statemuseum.arizona.edu/media/statemuseum/file/repository_manual.pdf

38. The box fee should be calculated to cover the cost of that volume for a specified number of years in the future, using averaged federal Cost of Living percentages as a projection for that period of time. The registration/intake activities (assigning the number, issuing the number, receiving the collection, spot inventoring to verify that all boxes are accounted for and have a box list, transferring the collection to deep storage, and adding the digital data and paper copies to the files) should be assessed on a fixed/sliding scale based on the number of boxes.

Response: ASM and the University of Arizona are actively engaging an outside accounting firm to review and attest to its calculation of in-perpetuity fees and hourly rates. See, also, the other discussions of in-perpetuity fees, above (General Comment No. 14, Specific Comment No. 22, and Specific Comment No. 35, as well as ASM's responses). The method of estimating time necessary for registration/intake activities will be to assess an amount of time based on historic averages on a per-box basis. Essentially exactly what this commentator is suggesting. By not setting a specific fee for the activity, but per unit time, we have the opportunity to adjust downward the cost of these activities as more efficient methods of performing intake tasks are developed and implemented.

39. ARS § 41-1008 states that an agency shall not “(1) Charge or receive a fee or make a rule establishing a fee unless the fee for the specific activity is expressly authorized by statute or tribal state gaming compact; [and shall not] (2) Make a rule establishing a fee that is solely based on a statute that generally authorizes an agency to recover its costs or to accept gifts or donations.” ARS 15-1631(C) generally authorizes ABOR to recover costs associated with services mandated under 41-841 et seq. ARS 15-1631(C) and ARS 41-844(I) do not identify a specific activity nor expressly authorize a fee by statute.

Response: The Arizona Legislature has set out language in ARS § 15-1631(C) that provides that “The Arizona Board of Regents shall adopt any fees for services performed by the state museum pursuant to title 41, chapter 4.1, article 4 and section 41-865.” This language clearly provides authority for the Board of Regents to adopt fees for services performed by the state museum for the entirety of Title 41, Chapter 4.1, Article 4, i.e., ARS. §§ 41-841 through 41-847.

Furthermore, ARS § 41-844(I) requires that “[t]he expense of any curation or reburial pursuant to this section that is required as the result of a construction project or similar project shall be borne by that project.” The section to which ARS § 41-844(I) refers is section (i.e., §) 41-844 as a whole, which gives direction to ASM to recover these costs, which it intends to do via the proposed rates and fees (see ASM’s response to Specific Comment No. 34, above).

40. The draft proposal cites “ARS Titles 15 and 35, and Article 9, Section 7 of the Arizona State Constitution” as justification for not gifting or subsidizing. There is no clear reference to gifting or subsidy by a state entity to another state entity in Titles 15 and 35, and Article 9 Section 7 of the State Constitution only pertains to financial gifts to individuals, associations, and corporations.

Response: The Gift Clause of the Arizona Constitution applies to the Arizona Board of Regents, and has been taken into consideration with respect to the process of determining and setting of ASM rates and fees. Furthermore, regardless of applicability of the Gift Clause to transactions between governmental or public bodies within Arizona, there is no language that would require ASM to provide such gifts. Furthermore, the language of ARS § 41-844 does not provide allowances for construction projects entered into at the behest of other state agencies. Therefore, those state agencies should be assessed charges to recover the costs of the provision of those services, consistent with any other client.