ARPA and Site Confidentiality in the Digital Age
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Introduction
This paper will not introduce anything new or unknown to the symposium participants or audience. I believe we are all well aware of the confidentiality issues this paper outlines. It is time, however, to have a frank discussion about how we protect sensitive archeological site information and acknowledge the elements beyond our control that put the cultural resources we protect at risk. Once we recognize these outside threats, we can begin to formulate actions that may prevent or mitigate damage to these fragile resources.

Document Redaction and Release
Undoubtedly, all federal agencies can do a better job of removing site location information and other identifiable site information from archeological reports. Two federal laws exempt archeological information from FOIA and other public requests. 54 USC 307103 [formerly Section 304 of the National Historic Preservation Act (NHPA)] states: “The head of a Federal agency, or other public official receiving grant assistance pursuant to this division, after consultation with the Secretary, shall withhold from disclosure to the public information about the location, character, or ownership of a historic property if the Secretary and the agency determine that disclosure may—(1) cause a significant invasion of privacy; (2) risk harm to the historic property; or (3) impede the use of a traditional religious site by practitioners”. The Archaeological Resources Protection Act (ARPA), Section 9 states: “Information concerning the nature and location of any archaeological resource for which the excavation or removal requires a permit or other permission under this chapter or under any other provision of Federal law may not be made available to the public under subchapter II of chapter 5 of title 5 or under any other provision of law unless the Federal land manager concerned determines that such disclosure would—(1) further the purposes of this chapter or chapter 3125 of title 54, and (2) not create a risk of harm to such resources or to the site at which such resources are located”. Note that there is a significant difference between Title 54, which requires an assertion that publication could put historic resources in danger, and ARPA, which requires an assertion that publication of site information will not put sites in danger. The important point is ARPA assumes no information should be made public unless it is determined the release of information would not lead to harm to the resource. It contains a much stronger statement, requires a higher bar, and has greater latitude than Title 54 in keeping archeological information confidential. Therefore, we are bound by law to not release archeological data and it is important that we are vigilant in redacting archeological site information prior to releasing reports to the public.
The unintentional release of documents with site location and other information by agencies can also be an issue. Within the NPS, Director’s Order 11D requires that all cultural resource documents be archived with Denver’s Technical Information Center (TIC). The required digital archive is eTIC. eTIC also scans hard copy documents not found in a digital format and posts them electronically. Often parks without cultural resource specialists send sensitive documents without noting their confidential nature to eTIC for scanning. eTIC then posts those documents to its public website. We are working with eTIC to have sensitive documents removed from the public side and it is possible other agencies may have the same issue with their electronic archives.

Documents on Third Party Archive Sites
Once a document with confidential information is published publically by an agency it can be downloaded and published by a third party electronic archive. Unlike our agency archives, once up it is virtually impossible to remove a document from a third party archive. One example is the website [www.archive.org](http://www.archive.org). The website has published a number of federal agency archeological reports, including NPS reports, containing sensitive site information. All efforts to have NPS site reports removed from their website have proved futile and we cannot even get a response from the website owner. Maintaining document confidentiality remains an important part of protecting archeological resources on federal and tribal lands. We need to be cautious in our release of documents that may show up on third party websites.

Release of Data to Third Party Researchers
Requests for archeological site information for larger public web-based educational projects have risen in recent years. Two examples are the Digital Index of North American Archaeology (DINAA) project and cyberSW, both supported by National Science Foundation (NSF). Each of these projects provides important public access to archeological data and are supervised by well-known and highly professional archeologists and organizations. Each of these projects has gone to great lengths to protect sensitive archeological information. As agencies continue to share data with projects promoting public outreach, they need to be sure confidential and sensitive information is protected. Agencies sharing data should consider issuing an ARPA permit with provisions that require the appropriate use of confidential and sensitive information. A written agreement for the use of data that clearly outlines what will be shared, how it is to be used and secured, and that any data provided by the agency may not, under any circumstances, be shared with a third party. A signed agreement lets everyone knows exactly what is expected of them and gives the agency a legal document to point to should any misuse of the data occur. Of primary consideration is where the data will be stored, how it will be protected, who has access, and what happens to the raw data at the end of the project. A second concern is making sure the project displays the data in such a way that site locations are masked and not revealed to the general public. The agency and project manager need to define what is being shared with project researchers; locations only, locations with site information, or all material including site reports. A clear understanding of the project goals and planned outcomes is essential before data is shared.

Access to Spatial Data on the Internet
While we can control the archeological site data we collect from federal lands, there is little to nothing we can do about data collected by other parties. There are a number of public spatial
datasets, including nationwide LiDAR maps flown and published by the US Geological Survey. The best-known set of spatial maps, and perhaps the most useful for looters, is GoogleEarth. GoogleEarth maps are GPS based, have a relatively high resolution, and are free and available to anyone who uses the internet. The program does not mask federal or tribal lands and anyone can examine GoogleEarth to locate archeological sites on federal or tribal land. Individuals recreating on federal or tribal lands can upload photographs with geo-stamped locations into GoogleEarth and may inadvertently or intentionally reveal site locations. Map resolution is such that in some areas medium to large sites can be easily located. I understand that some Forest Service archeologists use GoogleEarth to find and map sites in national forests. This tool is, perhaps, the greatest concern regarding the confidentiality of sensitive site location information.

Social Media and Chat Rooms
Social media and chat rooms have brought disparate people together in communities of mutual interest. This aspect of the digital age is true for individuals who are interested in looting archeological sites for personal collections and to profit from artifact sales. Social media and chat rooms have allowed site looters to exchange information on site locations, looting tools and techniques, methods of eluding law enforcement, and a place to swap and sell artifacts. During the 2013 federal shutdown one “treasure hunter” chat room encouraged people to go loot in national parks since there would be no staff there to stop them. While we cannot stop this online activity, we should work with law enforcement to keep tabs on this websites and, where possible, respond to any illegal activity uncovered.

Use of Drones on Public Lands
Perhaps more of a technological rather than a digital innovation, drones allow individuals to produce highly accurate high-resolution aerial maps of a flight area. Drones can use a variety of cameras that can capture images in a variety of light spectrums and use different lenses to change mapping resolution. The recreational use of drones is banned in national parks but is allowed on other federal and tribal lands. Along with spatial maps that are digitally available on the internet, drone mapping constitutes a significant threat to confidentiality of site location information. Monitoring of drone use in the field and potential posting of drone obtained maps on the internet may become an essential part of protecting archeological sites and site location information.

Conclusion
The development of new on-line systems and other technologies have made it more difficult to maintain site location confidentially. While we have control over archeological data shared with the public, information outside of our control is putting archeological sites on federal and tribal lands at risk. We do, however, have some tools to combat site looting. We need to do better job of explaining the importance of archeological sites to both affiliated groups and to our shared cultural heritage. Developing federal land stewards can help put more eyes on the ground and monitor changes to archeological resources. We need to work with law enforcement to help monitor the web for discussions on site looting and the sale of looted artifacts. Archeologists need to also work closer with law enforcement to catch looters and bring those cases to trial.