



# Department of Defense Legacy Resource Management Program

PROJECT 08-369

## **DoD Cultural Resources Business Data Standards Summary Report**

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## **Acronyms**

ACC	Air Combat Command
AEC	Army Environmental Center
AFB	Air Force Base
AFCEE	Air Force Center for Engineering and the Environment
AFSPC	Air Force Space Command
AIRFA	American Indian Religious Freedom Act
ANG	Air National Guard
ArCom	Archaeology Committee
ARPA	Archaeological Resources Protection Act
ASA-I&E	Assistant Secretary of the Army for Installations & Environment
CEG	Civil Engineer Group
CENTCOM	United States Central Command
CERL	Construction Engineering Research Laboratory
CR	Cultural Resources
CRSDSWG	Cultural Resources Spatial Data Standards Working Group
DISDI	Defense Installation Spatial Data Infrastructure
DLA	Defense Logistics Agency
DoD	Department of Defense
ERDC	Engineer Research and Development Center
FGDC	Federal Geographic Data Committee
HA	Heritage Asset
HPWG	Historic Preservation Working Group
HQ	Headquarters
ICRMP	Integrated Cultural Resources Management Plan
IGI&S	Installation Geospatial Information & Services
IMA	Installation Management Agency
IMCOM	Installation Management Command
MCB	Marine Corps Base
MCX-CMAC	Mandatory Center of Expertise for the Curation and Management of Archaeological Collections
NAGPRA	Native American Graves Protection and Repatriation Act
NAS	Naval Air Station
NAVFAC	Naval Facilities Engineering Command
NB	Naval Base
CNI	Commander, Navy Installations
NEPA	National Environmental Policy Act
NGB	National Guard Bureau
NHPA	National Historic Preservation Act
NPS	National Park Service
NR	National Register
NSA	Naval Support Activity
OACSIM	Office of the Assistant Chief of Staff, Installation Management
OASA-I&E	Office of the Assistant Secretary of the Army-Installations & Environment
OSD	Office of the Secretary of Defense
POC	Point of Contact
SDSFIE	Spatial Data Standards for Facilities, Infrastructure and Environment
SDSWG	Spatial Data Standards Working Group
USA	United States Army

USACE	United States Army Corps of Engineers
USAEC	United States Army Environmental Command
USAF	United States Air Force
USAR	United States Army Reserve
USMA	United States Military Academy
USMC	United States Marine Corps
USN	United States Navy
USNA	United States Naval Academy



## **1.0 Introduction**

Throughout the past decade, the Department of Defense (DoD) strove to achieve business transformation by implementing changes to technology, process, and governance. Part of this effort for each functional program is the definition of explicit business process standards that cross all component organizations. This report proposes a minimum set of Cultural Resources Business Data Standards for use in DoD cultural resources management programs. These draft standards represent the minimum set of data and associated attributes that DoD is recommended to collect and maintain in order to support its cultural resources management program. The standards were developed by assessing the current state of cultural resources data collection and management processes in the DoD and identifying all of the data elements associated with those processes. “Data Element” refers to any piece of data or information that may be needed as part of the DoD cultural resources program. These data elements will comprise individual entities and their associated attributes. An “entity” is any discrete object, place or area that DoD would wish to track in an individual database record (e.g. archaeological sites, historic buildings, survey reports). “Attributes” are those specific characteristics essential for describing a given entity. During the course of the project, Versar facilitated discussion of DoD cultural resources management processes and associated data needs through a working group formed at the DoD and Headquarters (HQ) Service level. This discussion developed minimum cultural resources business standards building on spatial data standards identified by Legacy Project 07-369 (Crane 2007). The present project was completed concurrently with a project to extensively revise the Spatial Data Standards for Facilities Infrastructure and Environment (SDSFIE, [www.sdsfie.org](http://www.sdsfie.org)). The standards outlined here are designed to parallel and complement the work of the SDSFIE revision.

## **2.0 Background**

The cultural resources management and reporting requirements for DoD necessitate a consistent approach to cultural resources data management. At present, the only standard for cultural resources data within DoD is the SDSFIE. The cultural resources component of the existing SDSFIE (version 2.6) is problematic and insufficient to support all of DoD’s cultural resources business data needs. The SDSFIE is currently undergoing a major overhaul to eliminate redundancies and improve its functionality. Plans to revise the SDSFIE envision minimizing the attributes associated with spatial feature classes. This means that many attributes of cultural resources spatial feature classes critical for cultural resources management will need to be included as a part of a cultural resources business data standard. Accordingly, the development of the Cultural Resources Business Data Standards was timed such that the proposed standards would be consistent with and complementary to what will be released as the SDSFIE Version 3.0.

This project drew on the lessons learned from previous Legacy funded projects, particularly the efforts since 1998 by the Air Force to develop a data model to be the cultural resources component of the enterprise information management system for environmental programs within the Air Force, and Legacy Project 07-369 which

developed minimum Cultural Resources Spatial Data Standards. These efforts provided valuable insights into DoD cultural resources management processes and the nature and extent of cultural resources electronic data in DoD, and identified the minimum cultural resources data elements that should be available in installation GIS layers.

### **3.0 Methods and Goals**

This report provides recommendations for establishing minimum Cultural Resources Business Data Standards. These recommendations were developed by building on the results of previous projects in consultation with a working group comprising cultural resources subject matter experts (SMEs) and Geographic Information System (GIS) experts. The members of the working group included Headquarters- and installation-level individuals from all four military services.

The aim of the project was to develop standards sufficient to support the full range of cultural resources management business processes common across the DoD, but flexible enough to allow for service and even installation specific needs. For this reason, emphasis was placed on identifying the minimum cultural resources entities and attributes needed, rather than attempting to accommodate the full range of all data used in cultural resources management. It is expected that some services and installations may wish to extend the proposed standard to accommodate these needs. This follows similar expectations that the SDSFIE will be profilable (users will select and use those feature classes applicable to them) and extensible (users will be able to add unique types of feature classes needed for their organization, but not common across the DoD).

The project was accomplished primarily through teleconferences with the Cultural Resources Business Standards Working Group (Working Group), and through communication with group members between meetings. Versar facilitated Working Group meetings to review cultural resources management processes and previously identified Cultural Resources Spatial Data Standards. Initially, Versar reviewed the results of Legacy Project 07-369, which developed Cultural Resources Spatial Data Standards, to identify a preliminary list of business (or non-spatial) data elements needed to support DoD cultural resources management work processes. The list was then distributed to members of the Working Group. Three conference calls were held to discuss and further develop the Cultural Resources Business Data Standards. These meetings are described in more detail below.

### **4.0 Previous Work Summary**

Legacy Project 07-369 approached the problem of identifying data elements critical to cultural resources management by first identifying all of the business processes involved in cultural resources management. “Process” is defined here as any activity carried out by DoD personnel in support of the cultural resources program. That project identified 26 individual processes. The effort to identify these processes began with a candidate list



generated by the Air Combat Command (ACC) during its effort to develop a cultural resources data management system for the Air Force (USAF 2006). Once the basic common cultural resources business processes were identified, the Cultural Resources Spatial Data Standards Working Group (CRSDSWG, the predecessor to the present Working Group) turned to the effort of breaking each process down into individual steps. Dividing each process into its component steps was necessary in order to identify the specific data needs involved for each. CRSDSWG review of the process steps and associated requirements yielded a preliminary list of data elements used to support cultural resources work. This list was distributed to the CRSDSWG for additional input, and then reviewed over the course of two teleconferences.

In reviewing this list, several proposed entities were eliminated. For example, Real Property data (facility numbers, parcel numbers) are important in cultural resources reporting, but those datasets are maintained by Real Property personnel in accordance with their standards. Likewise, data related to slope, soils, and surface water, while important in cultural resources management, are datasets maintained by others outside cultural resources management. The CRSDSWG also eliminated the entity "Heritage Asset," since the term derives from Federal accounting practice (Statement of Federal Financial Accounting Standards (*SFFAS*) 29) but is not yet clearly defined within cultural resource management policy and the variable appears to be adequately covered by other entities. Similarly, the group recommended that the entity "Disturbed Areas" be subsumed under the entity "Cleared Areas." Other entities were considered useful, but either not strictly required, or too installation-specific to be an appropriate part of a standard. These included: test locations, Integrated Cultural Resources Management Plans (ICRMPs) Spatial Extent, Agreement Documents Spatial Extent, Historical Topography, Historical Water, Historical Events, and Historical Maps.

Additional CRSDSWG discussion focused on what spatial elements should be required as part of the standard. These discussions considered the topology needed to represent the data, whether certain entities could be combined with others, and what should be considered minimum attributes of each. The final teleconference for the CRSDSWG focused on discussing minimum attributes for the proposed data elements. The final report for the project was completed in June 2008.

## **5.0 Cultural Resources Spatial Data Standards Working Group**

The aim of the current project (08-369) was to expand on the results of Project 07-369 by identifying non-spatial data elements and by further developing the attributes needed to describe those data elements. The project consisted primarily of teleconference meetings that discussed the findings of Legacy Project 07-369 in conjunction with input from the working group revising the cultural resources portion of the SDSFIE, and with input from the Geospatial Data Subcommittee (GDS) – U.S. Central Command (CENTCOM) Historical/Cultural Advisory Group. The latter is engaged in developing standards and protocols for collecting and managing cultural resources data outside the U.S. needed for operational planning and heritage conservation.

The members of the Working Group as of August 2008 are shown in Table 1. Members were drawn from the CRSDSWG formed for Legacy Project 07-369, and represented a cross section of services. Members participated in the review of project materials via email and teleconference.

<b>Table 1: Cultural Resources Spatial Data Standards Working Group Participants</b>			
<b>Name</b>	<b>Service</b>	<b>Installation/Activity</b>	<b>Role</b>
Raymond Baker	USAF	Wright Patterson AFB	Member
Jim Barnes	USACE	MCX-CMAC Curation St Louis	Advisor
Robert Beardsley	USA	Fort Leavenworth	Member
Travis Beckwith	USA	USMA, later FE Warren AFB	Member
Serena Bellew	USA	IMA USAR	Advisor
Lou Ann Broad	USN	USNA	Member
Douglas Burkett	USAF	HQ USAF	Advisor
Virginia Busby	USA	USAEC	Advisor
Paul Cedfeldt	USACE	Portland District	Member
George Cole	USAF	Eglin AFB	Member
Jim Copeland	USN	NAS Meridian	Member
Brian Crane	Contractor	Versar, Inc.	Leader
Richard Davis	USA	Fort Campbell	Member
Jim Dolph	USN	Portsmouth Naval Shipyard	Member
Natalie Drew	USACE	St. Louis District	Member
Beth Erickson	USA	NGB	Advisor
Lee Foster	USA	OACSIM	Advisor
Andrew Gomolak	USAF	Holloman AFB	Member
Sue Goodfellow	USMC	HQ USMC	Advisor
Paul Green	USAF	HQ ACC, USAF	Leader
Brian Greer	USA	Fort Stewart	Member
Jennifer Groman	USA	AEC	Member
John Haynes	USMC	MCB Quantico	Member
Carol Heathington	USAF	Luke AFB	Member
Cheryl Huckerby	USA	NGB	Advisor
Dave Labranche	Contractor	DISDI	Leader
Kristin Leahy	USA	NGB	Advisor
Renee Lewis	USA	Fort Gordon	Member
Brian Lione	OSD	OSD	Leader
Gail Littlefield	USN	NAVFAC	Advisor
Brian Lusher	USN	NAVFAC	Advisor
George Mankowski	USN	NSA Crane	Member
Bill Manley	USN	NAVFAC Southwest	Member
Tom Mayes	USN	NAVFAC HQ	Member
Pat McCoy	USA	HQ IMA	Advisor

<b>Table 1: Cultural Resources Spatial Data Standards Working Group Participants</b>			
<b>Name</b>	<b>Service</b>	<b>Installation/Activity</b>	<b>Role</b>
Chris McDaid	USA	IMCOM-Northeast	Member
Meg McDonald	USMC	Yuma Proving Ground	Member
Kathleen McLaughlin	USN	NAVFAC	Advisor
Toni Patton-Williams	USA	OASA-I&E	Advisor
Brad Perkl	USACE	St. Paul District	Member
Brian Pettitt	USN	NAVFAC Far East	Member
Andrea Pierce	USN	Portsmouth Naval Shipyard	Member
Chris Pulliam	USACE	MCX Curation St Louis	Advisor
Rachel Quist	USA	Dugway Proving Ground	Member
Coral Rasmussen	USMC	MCB Hawaii	Member
Matthew Rector	USA	Fort Knox	Member
Leonard Richeson	OSD	OSD	Advisor
Paul Rubenstein	USACE	HQ USACE	Advisor
Jeffrey Rust	USA	Dugway Proving Ground	Member
William Sames	DLA	Fort Belvoir	Member
David Sanborn	OSD	OSD	Advisor
Hillori Schenker	OSD	OSD/Legacy	Advisor
Adam Smith	USACE	ERDC-CERL	Member
Bill Spicer	USN	CNI	Advisor
Sara Streff	USA	ASA-I&E	Advisor
Jay Thomas	USN	NAVFAC HQ	Member
Brian Thompson	USN	NAVFAC MidLant	Member
Michael K (Sonny) Trimble	USACE	St. Louis District	Member
Richard White	USA	HQ IMA USAR	Advisor
Jim Wilde	USAF	AFCEE	Member
Vicki Williams	USAF	HQ AFSPC/A7AN	Member
Mona Wright	USACE		Member
Jane Yagley	USAF	HQ ANG	Advisor

## **6.0 Cultural Resources Spatial Data Standards Working Group Meetings**

Three teleconference meetings were held between August and November 2008. In preparation for the meetings, discussion materials were distributed for comment, beginning with the report from Legacy Project 07-369 detailing proposed Cultural Resources Spatial Data Standards, a preliminary list of non-spatial data elements, and a list of potential associated attributes. These entities and attributes were discussed and edited during each of the meetings and then redistributed for further comment from the group.

## 6.1 Meeting 1: 08/25/08 1100 EST

Read aheads for the first meeting included summary materials from Project 07-369. These included the draft spatial data elements and associated attributes, a preliminary list of non-spatial data entities, and the list of cultural resources business processes. This meeting also took into consideration the results of the first SDSFIE meeting held on July 29, 2008. Particularly important was the decision to greatly reduce the number of attributes associated with feature classes in the revised SDSFIE, thus placing a greater burden on the cultural resources business data standards.

In reviewing the draft data elements from the read-ahead materials, the group suggested some additional data elements and suggested that others might be combined. Table 2 shows the results of these discussions. The group also began discussing data attributes. For example, the *Date of Significance* attribute for archaeological sites was criticized for sounding too specific (the attribute later was replaced with period of significance as a shared attribute for all cultural resources). *Original Design Category* was proposed for buildings (this later became *Original Use*). The Working Group resolved to discuss attributes more fully at the following meeting.

<b>Data Entity</b>	<b>Associated Processes (Appendix A)</b>	<b>Comments</b>
Artifact Inventory	1, 2, 3, 11, 20, 21, 24	May want to combine with NAGPRA collections (could also include Heritage Assets)
Human Remains Inventory	2, 11, 20, 21, 24	Re-title something like NAGPRA inventory
Building Contributing Elements	4, 10, 11	
Survey Reports	1, 3, 4, 5, 6, 7, 10, 11, 14, 15, 19, 22, 24	If this is to be inclusive of many document types it needs more generic title. Should be a Document Library
ARPA Violations	11, 12, 13, 24	Needs to be broader, to include ARPA permits, incidents, violations
Correspondence	1, 3, 11	Combine with documents
ICRMP	2, 11, 19, 21, 24, 25	Combine with documents
Affiliated Tribes	2, 8, 9, 11, 12, 16, 23	
Cultural Affiliations	2, 11	It could be broader, including any kind of cultural affiliation for descriptions; however, based on identified processes, "Affiliated Tribes" is the only entity that is actually required.
State Standards	4, 11	Could be made broader to include all standards and regulations.
Agreement Documents	4, 5, 6, 9, 10, 11, 12, 15, 16, 19, 21, 24	
POC list	9, 11, 12, 15, 16, 23	Can be used to track personnel training. Or ARPA certification. Privacy issues need to be checked.
Curatorial Facility	11, 20, 21, 24	

<b>Data Entity</b>	<b>Associated Processes (Appendix A)</b>	<b>Comments</b>
Historic Contexts	4, 11	
List of policies		Suggested by the group
Web pages, other informational resources		Suggested by the group
funding requirements		Suggested by the group

## **6.2 Meeting 2: 10/14/08 1300 EST**

The read-ahead materials for the second meeting were intended to describe the comments to the working data elements and attributes, and to diagram their relationship to the revised SDSFIE. One read-ahead for this meeting consisted of an entity relationship diagram showing the relationship between the working business standard and the working draft of the cultural portions of the SDSFIE revision. The second consisted of a working set of tables and attributes for all of the data elements in the working standard.

During the discussion, the Working Group opined that having separate entities for *Cultural Affiliations* and *Affiliated Tribes* was redundant, and that perhaps these could be combined. The group also felt that, rather than having a separate set of attributes related to historic context, the attributes used to describe *Documents* would be sufficient. External reference materials such as policies, state standards, and web page links were recommended for inclusion with *Documents*. Some additional thought may be needed for storing and displaying information about historic contexts, particularly their spatial extent. Spatial extent for historic contexts could be stored in a document library with links to specific identified cultural properties.

The group discussed whether the standard might need to accommodate information about mitigation measures. It was not clear in the model at this date where such information would be stored. The action of carrying out a mitigation-required study could fit in with data grouped together in *Study Areas*. Required documentation, such as HABS drawings, could go with *Documents*, as could any agreement documents generated as part of the action. Where information about other tangible requirements of a mitigation measure would go was less clear. For example, if maintaining a public display were a mitigation requirement, where would information about the display reside? No consensus was reached during the meeting, and the group resolved to return to this question later.

Other observations included that a given cultural resource can have one or more manifestations in associated tables: for example, a cemetery could also be recorded as an archaeological site as well as a sacred site, etc. The Working Group considered that *Contacts*, that is, names of persons relevant to cultural resources management in that context, may be better left as a recommended item for individual services and installations to add to the standard as an extension, rather than a formal part of the standard. *Version* and *Expiration Date* were added to *Documents*. Implementation steps also needed to be considered, and the group recommended making a formal presentation to the DoD Historic Preservation Working Group.

### 6.3 Meeting 3: 11/6/08 1100 EST

The final meeting focused on a limited number of unresolved issues. The read-aheads for the final meeting consisted of revised versions of the October meeting materials and a brief agenda. The SDSFIE Modeling Team asked the Working Group to discuss attributes and definitions for the *Restricted Access* feature class. The SDSFIE Core modeling team felt that this should be a Common/Cross-functional Feature Class (*RestrictedAccess*), and asked for the cultural SMEs to consider dropping the *RestrictionType* attribute from the SDSFIE and consider the use of the *RestrictionDescription* attribute for all the description needs for this feature class. The working group concluded that a *RestrictionType* attribute should be added to the Cultural Resources Business Data Standard if it is not to be in the SDSFIE.

The Working Group revisited the question about how to store information about certain tangible requirements of a mitigation measure. The Consensus was that these data should be included with information held in a documents table. The Working Group also considered whether an attribute for *Affiliation\_Dates* (Time period of affiliation) in the table *NativeAffiliation* was needed as part of a minimum standard, and decided that it was not.

At the time of the final meeting, *Cleared Areas* was still included in the working draft standard. *Cleared Areas* is conceptually the mirror of *Restricted Areas*. *Cleared Areas* would include all those areas of an installation removed from cultural resources consultation requirements for any reason (already surveyed and found not to have resources, shown to be heavily disturbed, or be unsurveyable because of slope, surface water, or significant safety concerns). *Restricted Areas* would include all those areas that require further cultural research or consultation, either because they are surveyable but not yet surveyed, or they contain eligible or unevaluated cultural resources. However, *Cleared Areas* was dropped by the SDSFIE Working Group in favor of retaining only *Restricted Areas*. The Working Group concluded that *Cleared Areas* should also be dropped from the business standard, partly to be consistent with the new SDSFIE, but also because some in the group felt that having an area labeled “cleared” was misleading, since even surveyed areas, or areas thought to include no archaeological sites, might subsequently prove to have unrecorded sites.

Lastly, the Working Group considered how to accommodate significance data from other nations, and decided to mirror the SDSFIE Working Group’s lead by incorporating an attribute for *Other Register*. This attribute could cover properties on the World Heritage list, or other host nation registers.

## 7.0 Cultural Resources Business Data Standards

The draft business data standards included here emerged from discussions held with the Working Group during the summer and fall of 2008. The following tables include all of

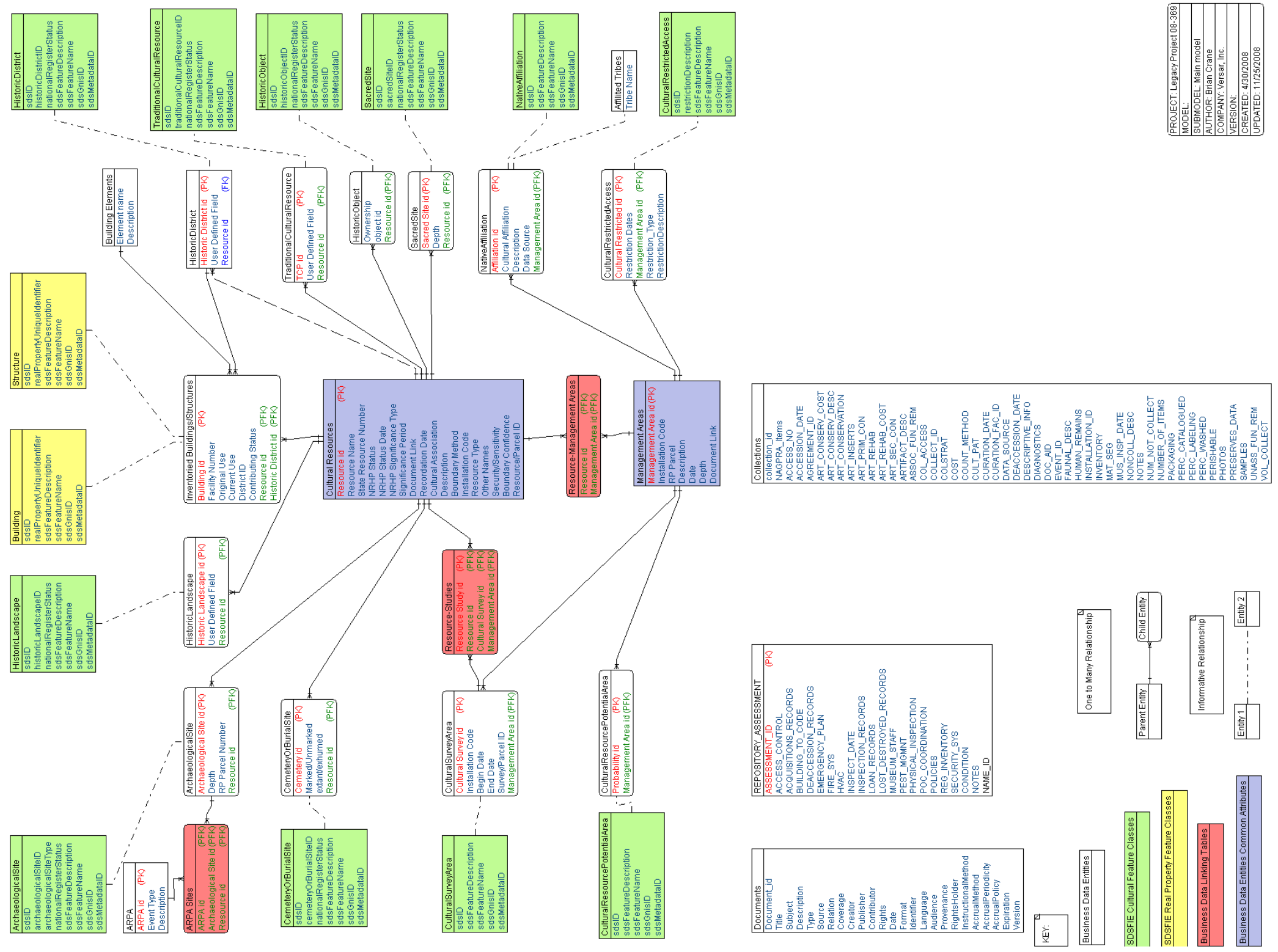
the cultural resources entities identified and elaborated upon by the working group, both spatial and nonspatial, along with the attributes identified.

Because many of the attributes identified by the Working Group for the individual data entities were similar, the proposed entities have been grouped together according to shared attributes. To assist in grouping related entities, two broader entity categories were introduced: *Cultural Resources* and *Management Areas*. The relationships among the proposed entities are shown in Figure 1. The entities proposed by the Working Group are shown in white, and the added entity categories in blue. *Archaeological Sites*, *Historic Landscapes*, *Burial Sites/Cemeteries*, *Districts*, *Objects*, *Traditional Cultural Resources*, and *Sacred Sites* are all grouped under *Cultural Resources*, with common attributes shown in the shared table. Entity-specific attributes (e.g. ownership for objects) are shown with their respective entities. *Area of Tribal Use or Occupation*, *Restricted Areas*, and *Probability Areas/Areas of Concern* are shown related to *Management Areas*.

The relationships between the proposed elements and their respective categories are one-to-one (1:1). Because some relationships are one-to-many (1:N) (e.g., between *Study Areas* and *Cultural Resources*), additional conceptual tables have been introduced into the model to break each one-to-many (1:N) relationship into two one-to-one (1:1) relationships. Figure 1 shows an entity relationship diagram of the entities and attributes. The text following Figure 1 lists the recommended minimum attributes for each of the entities, and presents the information in Figure 1 in tabular form. This text includes descriptions of the tables, attributes, and relationships in the draft standard, but is not intended to be a complete database design. It does not include information about potential data types, primary keys, or constraints as those were not defined by this project.

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PROJECT: Legacy Project 08-369  
 MODEL:  
 SUBMODEL: Main model  
 AUTHOR: Brian Crane  
 COMPANY: Versar, Inc.  
 VERSION:  
 CREATED: 4/30/2008  
 UPDATED: 11/25/2008

**Documents**

DocumentId
Title
Subject
Description
Type
Source
Relation
Coverage
Creator
Publisher
Rights
Date
Format
Identifier
Language
Audience
Provenance
RightsHolder
InstructionalMethod
AccrualMethod
AccrualPeriodicity
Expiration
Version

**REPOSITORY\_ASSESSMENT (FK)**

ASSESSMENT_ID
ACCESS_CONTROL
ACQUISITIONS_RECORDS
BUILDING_TO_CODE
DEACCESSION_RECORDS
EMERGENCY_PLAN
FIRE_SYS
HWAC
INSPECT_DATE
INSPECTION_RECORDS
LOAN_RECORDS
LOST_DESTROYED_RECORDS
MUSEUM_STAFF
PEST_MGMT
PHYSICAL_INSPECTION
POC_COORDINATION
POLICIES
REG_INVENTORY
SECURITY_SYS
CONDITION
NOTES
NAME_ID

**Collections**

collection_id
NAGPRA_Items
ACCESS_NO
ACCESSION_DATE
AGREEMENT_ID
DEACCESSION_RECORDS
ART_CONSERV_COST
ART_CONSERV_DESC
ART_CONSERVATION
ART_INSERTS
ART_INSPTS
ART_REHAB_COST
ART_REHAB
ART_REHAB_COST
ART_SEC_CON
ARTIFACT_DESC
ASSOC_FUN_REM
COL_ACCESS
COLLECT_ID
COLSTRAT
COST
COUNT_METHOD
CULT_PAT
CURATION_DATE
CURATION_FAC_ID
DATA_SOURCE
DEACCESSION_DATE
DESCRIPTIVE_INFO
DIAGNOSTICS
DOC_AID
EVENT_ID
FAUNAL_DESC
HUMAN_REMAINS
INSTALLATION_ID
INVENTORY
MAT_SEG
MUS_INSP_DATE
NONCOLL_DESC
NOTES
NUM_NOT_COLLECT
NUMBER_OF_ITEMS
PACKAGING
PERC_CATALOGUED
PERC_LABELING
PERC_WASHED
PERISHABLE
PHOTOS
PRESERVES_DATA
SAMPLES
UNASS_FUN_REM
VOL_COLLECT

**KEY:**

- Business Data Entities
- SDSFE Cultural Feature Classes
- SDSFE Real Property Feature Classes
- Business Data Linking Tables
- Business Data Entities Common Attributes

**Relationships:**

- One to Many Relationship
- Parent Entity
- Child Entity
- Informative Relationship
- Entity 1
- Entity 2

Figure 1: Entity Relationship diagram. Note PK = Primary Key, FK = Foreign Key.

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## 7.1 Resource-Related Tables

The following tables contain attributes related to cultural resources.

**Cultural Resources:** This table groups common attributes for *Districts*, *Inventoried Buildings/Structures*, *Historic Landscapes*, *Archaeological Sites*, and *Cemeteries and Burial Sites*. A given cultural resource can have one or more manifestations in associated tables: for example, an archaeological site could also be considered a sacred site, or have a component that is a cemetery or burial site. How the National Register of Historic Places (NRHP) status field will relate to the SDSFIE and to real property records needs to be considered during an implementation phase.

Column name	Comments
Resource_id	Primary Key
Resource_Name	Name other than State-assigned identification, if any
State_Resource Number	Identification number assigned by SHPO.
NRHP_Status	NRHP Status codes specified by DoD. Need to resolve how this will relate to data in real property inventory.
NRHP_Status_Date	Date of current NRHP status designation.
NRHP_Significance Type	NRHP eligibility criteria (a, b, c, d)
Significance_Period	Historical Period of Significance.
Document_Link	Link to associated document file
Recordation_Date	Date the resource was first recorded with SHPO
Cultural_Association	Historical culture associated with the resource.
Description	Description of the resource
Boundary_Method	Not discussed by working group. May be part of metadata instead of attributes. Probably intrinsically clear for buildings/structures. But needs to be explicit for archaeological sites, cemeteries, sacred sites, landscapes, etc.
Installation_Code	Installation identification
Resource_Type	Object, archaeological site, district, landscape, burial site, sacred site, building, or traditional cultural resource
Other_Names	other names the resource is known by
Security_Sensitivity	Is information about the site potentially sensitive (e.g. as for archaeological sites, burial sites, sacred sites).
Boundary_Confidence	How clearly defined is the boundary. Some resources (e.g. sacred sites) may not have clearly defined boundaries.
Resource_Parcel_ID	Link to a table matching cultural resources ids with real property parcel ids. The relationship between cultural resources and parcels will be N:N, and it will be necessary in a db design to break those into 1:N relationships.
Other Register Status	Host Country, or other relevant register status.

Resource-specific attributes are grouped together in the following tables.

**ArchaeologicalSite:** The location of a recorded archaeological site.

Column name	Comments
Archaeological_Site_id	Primary Key
Depth	Depth of the archaeological deposit below the surface. This could be a range, or it could be the minimum depth below surface (important for

Column name	Comments
	assessing potential landuse impacts).
RP_Parcel_Number	Parcel number from real property
Resource_id	Foreign Key link to the Resources Table

**Inventoried Buildings Structures:** This entity includes those buildings and structures that have been evaluated for NRHP status. This table would map to the SDSFIE feature classes *Building* and *Structure*.

Column name	Comments
Building_id	Primary key
Facility_Number	Facility number as defined by real property
Original_Use	Original use of the building or structure.
Current_Use	Current use of the building
District_ID	As needed to show contributing/non contributing buildings to a district
Contributing_Status	Whether building/structure contributes to an associated historic district.
Resource_id	Foreign Key link to the Resources Table
Historic_District_id	Foreign Key link to the Historic District Table

**Building Elements:** Elements of a building (roof, fenestration, walls, etc.) that may, or may not be original or contribute to a building's NRHP eligibility. This information is useful for tracking maintenance plans, or portions of an agreement document that address specific building features.

Column name	Comments
Element_id	Primary Key
Element_name	Name of architectural element that contributes to the significance of the building or structure of which it is a part (front door, windows, chimney, etc.).
Description	Description of contributing architectural element, and how it is significant.

**CemeteryOrBurialSite:** General descriptive information regarding cemeteries and burial sites (marked and unmarked).

Column name	Comments
Cemetery_id	Primary Key
Marked_Unmarked	Is the burial ground marked?
extant_exhumed	Has the cemetery/burial ground been exhumed/moved?
Resource_id	Foreign Key link to the Resources Table

**HistoricDistrict:** A geographically definable area, urban or rural, possessing a significant concentration, linkage, or continuity of sites, landscapes, structures, or objects, united by past events or aesthetically by plan or physical developments. A district may also be composed of individual elements separated geographically but linked by association or history.

Column name	Comments
Historic_District_id	Primary Key
User_Defined_Field	Installation-specific requirements
Resource_id	Foreign Key link to the Resources Table

**HistoricLandscape:** A geographic area (including both cultural and natural resources and the wildlife or domestic animals therein), associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values. There are four general types of cultural landscapes, not mutually exclusive: historic sites, historic designed landscapes, historic vernacular landscapes, and ethnographic landscapes.

Column name	Comments
Historic_Landscape_id	Primary Key
User_Defined_Field	Place for installation-specific requirements
Resource_id	Foreign Key link to the Resources Table

**HistoricObject:** This table is intended primarily for monuments and similar items, generally following the definition in 36 CFR 60.3(j). Under certain circumstances, it might also be used to describe displays required as a mitigation measure by an agreement document.

Column name	Comments
Ownership	Note whether an object is owned by the installation, or by another service entity such as a service museum.
object_id	Primary Key
Resource_id	Foreign Key link to the Resources Table

**SacredSite:** Executive Order 13007 defines a Sacred Site as any specific, discrete, narrowly delineated location on federal land that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion; provided that the tribe or appropriately authoritative representative of an Indian religion has informed the agency of the existence of such a site.

Column name	Comments
Sacred_Site_id	Primary key
Depth	Depth range if applicable.
Resource_id	Primary key from associated resource record.

**TraditionalCulturalResource:** A cultural resource associated with cultural practices or beliefs of a living community that are rooted in that community's history, and are important in maintaining the continuing cultural identity of the community.

Column name	Comments
TCP_id	Primary Key
User_Defined_Field	Installation-specific requirements
Resource_id	Foreign Key link to the Resources Table

## 7.2 Curation-Related Tables

The following tables contain attributes related to artifact collections, and the monitoring requirements associated with them.

**Collections:** This table is for archaeological collections falling under the requirements of 36 CFR 79.

Column Name	Comments
Collection_Id	Primary Key
NAGPRA_Items	Processes 2, 11, 20, 21, 24
Access_No	Accession or other location number
Accession_Date	Date collection was accessioned
Agreement_Id	Foreign key ID link to management_docs for a curation agreement document
Art_Conserv_Cost	Estimated cost of artifact conservation treatments
Art_Conserv_Desc	Description of needed artifact conservation
Art_Conservation	Is any conservation needed?
Art_Inserts	Acid-free secondary inserts?
Art_Prim_Con	Appropriate primary Containers?
Art_Rehab	Level of rehabilitation required (partial 1 or 2 tasks; complete=3 or more tasks)
Art_Rehab_Cost	Estimated cost of artifact rehabilitation
Art_Sec_Con	Appropriate secondary containers?
Artifact_Desc	Description of the artifacts
Assoc_Fun_Rem	Associated funerary remains
Col_Access	Does the Repository provide access to the collection in accordance with § 79.10?
Collect_Id	Primary key
Colstrat	Collection strategy
Cost	Cost in dollars for curating collection
Count_Method	Way total number of artifacts was determined.
Cult_Pat	Objects of cultural patrimony
Curation_Date	Date collection was curated
Curation_Fac_Id	Foreign key for curation institution (institution.name_id)
Data_Source	Source for data in this record.
Deaccession_Date	Date collection was deaccessioned
Descriptive_Info	Does the Repository maintain descriptive information?
Diagnostics	Diagnostic artifacts within the collection
Doc_Aid	Finding aid available
Event_Id	Foreign key (events.event_id) for event that produced collection
Faunal_Desc	Description of faunal material in collection
Human_Remains	Human remains in the collection
Installation_Id	ID of associated installation
Inventory	Is there an inventory?
Mat_Seg	Are archaeological materials and associated documentation segregated by material class within a collection, and stored in environments appropriate to each material class?
Mus_Insp_Date	Date of last museum official's inspection of the collection
Noncoll_Desc	Description of noncollected materials
Notes	Notes
Num_Not_Collect	Number of items recorded in the field, but not collected.
Number_Of_Items	Total number of artifacts in collection
Packaging	Materials, methods used for packaging
Perc_Catalogued	Percent of collection formally inventoried and catalogued
Perc_Labeling	Percent of collection labelled
Perc_Washed	Percent of the collection that has been washed
Perishable	Perishable items
Photos	Does the Repository maintain photographs
Preserves_Data	Does the Repository preserve data that may be studied in future laboratory

Column Name	Comments
	analyses?
Samples	Description of samples taken (soil, pollen, etc.)
Unass_Fun_Rem	Unassociated funerary remains
Vol_Collect	Cubic feet of artifacts

**Repository Assessment:** This table includes the assessment of how a curation facility meets the requirements of 36 CFR 79.

Column Name	Comments
Assessment_Id	Primary Key
Access_Control	Does the Repository limit and control access?
Acquisitions_Records	Does Repository maintain records on acquisitions?
Building_To_Code	Does the Repository meet local electrical, fire, building, health and safety codes?
Deaccession_Records	Does the Repository maintain records on any deaccessions and subsequent transfers, repatriations or discards?
Emergency_Plan	Does the Repository have an emergency management plan?
Fire_Sys	Does the Repository have a fire detection and suppression system?
Hvac	Does the Repository have HVAC?
Inspect_Date	Date of last inspection by qualified federal agency professionals.
Inspection_Records	Does the Repository maintain Inventory and inspection records, including any environmental monitoring records?
Repository_Id	Primary Key
Loan_Records	Does the Repository maintain approved loans?
Lost_Destroyed_Records	Does the Repository maintain Records on lost, deteriorated, damaged or destroyed Government property?
Museum_Staff	Does the Repository maintain a staff of qualified museum professionals?
Pest_Mgmt	Does the Repository have a pest management system.
Physical_Inspection	Does the Repository inspect its physical plant?
Poc_Coordination	Do Repository staff make decisions affecting the condition of archaeological materials or associated documentation without first consulting the appropriate DoD installation POC?
Policies	Does the Repository have written collections management policies in place?
Reg_Inventory	Does the Repository conduct inventories in accordance with § 79.11?
Security_Sys	Does the Repository maintain an intrusion detection and deterrent system?
Condition	Does repository maintain records on condition?
Notes	Additional important information

### 7.3 Events-Related Tables

The following tables group attributes that are related to cultural resource management events.

**ARPA:** ARPA incidents and or permits. For areas outside the United States, this could hold information about unauthorized excavation or other damage to an archaeological site.

Column name	Comments
ARPA_id	Primary Key
Event_Type	What type of ARPA related event is this? ARPA permit, incident? violation?
Description	Does this need to be detailed enough to complete LOOT form?

*CulturalSurveyArea*: Areas of cultural resources investigations.

Column name	Comments
Cultural_Survey_id	Primary Key
Installation_Code	Installation identification code.
Begin_Date	Start date of the study.
End_Date	End date of the study.
Survey_Parcel_ID	Real Property ID(s) of the parcel(s) included in the study.
Management_Area_id	Foreign Key link to the Management Area Table

#### 7.4 Context-Related Tables

The following tables group attributes that are related to historic and cultural contexts and associations.

*Affiliated Tribes or Groups*: Federally recognized Tribes, Alaska Native Villages or Corporations, or Native Hawaiian Organizations with current or past affiliations with DoD lands.

Column name	Comments
Tribe_Name	Official name of a federally recognized Indian tribe, Alaska Native village or corporation, or Native Hawaiian organization.

*NativeAffiliation*: Areas that may once have been used or occupied by native peoples in the past. The intent of this table is to provide information to support government-to-government consultation with federally recognized tribes, Native Hawaiian organizations, and Native Alaskan villages and corporations. In areas outside the United States, this could include information about any ethnic groups with affiliation to the areas in question.

Column name	Comments
Affiliation_id	Primary Key
Cultural_Affiliation	Federally recognized tribe, Alaska Native Village, or Native Hawaiian organization.
Data_Source	Source of information for the affiliation cited.
Description	Description of the association
Management_Area_id	Foreign Key link to the Management Area Table

#### 7.5 Land Management Tables

The following tables group attributes that relate to management areas (areas that have been surveyed, or have cultural resources related restrictions, etc.).



**Management Areas:** Common attributes for areas for which a particular management condition applies (survey, restriction, probability, etc.).

Column name	Comments
Management_Area_id	Primary Key
Installation_Code	Installation id
RP_Parcel	This may need to be a link to another table. One record in this table may relate to many parcels
Description	Description indicating the type of management area (cleared, restricted, etc.).
Date	Beginning and end dates of the management area. The end date would be used if there is a projected date when the restriction or other management ends.
Depth	Depth (or depth range) for which the management category applies.
Document_Link	Foreign Key link to associated document file

**CulturalResourcePotentialArea:** These would be estimates of archaeological potential on an installation or other defined geographic area.

Column name	Comments
Probability_id	Primary Key
Management_Area_id	Foreign Key link to the Management Area Table

**CulturalRestrictedAccess:** This mirrors the SDSFIE cross-functional RestrictedAccess feature class. This would include any areas where some kind of restriction applies because of cultural resources concerns. This could include areas that have not been surveyed for archaeological sites, areas that have identified sites, but which have not yet been evaluated for NRHP eligibility, or any other similar concern.

Column name	Comments
Cultural_Restricted_id	Primary Key
Restriction_Dates	Date range for which the restriction applies.
Management_Area_id	Foreign Key link to the Management Area Table

## 7.6 Program Management Tables

The following tables group attributes that are related to management of an installation cultural resources program.

**Contacts:** This consisted of a contact list for cultural resources management requirements included in early working drafts of the standard (e.g. State Historic Preservation Office or SHPO, tribal POCs, etc.). The Working Group considered that this is better left as a recommended item for individual services and installations to add to the standard as an extension, rather than a formal part of the standard.

**Documents:** Cultural resources management documents. This would include investigation reports, ICRMPs, agreement documents, correspondence, historic contexts, themes, defined property types,, or any other document related to cultural resources management. Other potential document types recommended by the Working Group

include cultural resources related policies, state standards, web page citations, and other informational resources. The current attribute set is taken directly from the Dublin Core metadata standard (Dublin Core Metadata Initiative 2008) with some additions to reflect requirements for tracking management or agreement documents such as ICRMPs, MOAs, and PAs (documents that may have an expiration date, for example). *Version* and *Expiration Date* were recommended as additional attributes. Some additional thought may be needed for storing and displaying information about historic contexts, particularly their spatial extent. Some spatial extent for historic contexts stored in a document library would be provided indirectly via links to specific identified cultural properties.

Column name	Comments
Document_id	Primary key
Title	The name given to the resource. Typically, a Title will be a name by which the resource is formally known.
Subject	The topic of the content of the resource. Typically, a Subject will be expressed as keywords or key phrases or classification codes that describe the topic of the resource. Recommended best practice is to select a value from a controlled vocabulary or formal classification scheme.
Description	An account of the content of the resource. Description may include but is not limited to: an abstract, table of contents, reference to a graphical representation of content or a free-text account of the content.
Type	The nature or genre of the content of the resource. Type includes terms describing general categories, functions, genres, or aggregation levels for content. Recommended best practice is to select a value from a controlled vocabulary (for example, the DCMIType vocabulary ). To describe the physical or digital manifestation of the resource, use the FORMAT element.
Source	A Reference to a resource from which the present resource is derived. The present resource may be derived from the Source resource in whole or part. Recommended best practice is to reference the resource by means of a string or number conforming to a formal identification system.
Relation	A reference to a related resource. Recommended best practice is to reference the resource by means of a string or number conforming to a formal identification system.
Coverage	The extent or scope of the content of the resource. Coverage will typically include spatial location (a place name or geographic co-ordinates), temporal period (a period label, date, or date range) or jurisdiction (such as a named administrative entity). Recommended best practice is to select a value from a controlled vocabulary (for example, the Thesaurus of Geographic Names [Getty Thesaurus of Geographic Names, <a href="http://www.getty.edu/research/tools/vocabulary/tgn/">http://www.getty.edu/research/tools/vocabulary/tgn/</a> ]). Where appropriate, named places or time periods should be used in preference to numeric identifiers such as sets of co-ordinates or date ranges.
Creator	An entity primarily responsible for making the content of the resource. Examples of a Creator include a person, an organization, or a service. Typically the name of the Creator should be used to indicate the entity.
Publisher	The entity responsible for making the resource available. Examples of a Publisher include a person, an organization, or a service. Typically, the name of a Publisher should be used to indicate the entity.
Contributor	An entity responsible for making contributions to the content of the resource. Examples of a Contributor include a person, an organization or a service. Typically, the name of a Contributor should be used to indicate the entity.
Rights	Information about rights held in and over the resource. Typically a Rights element will contain a rights management statement for the resource, or

Column name	Comments
	reference a service providing such information. Rights information often encompasses Intellectual Property Rights (IPR), Copyright, and various Property Rights. If the rights element is absent, no assumptions can be made about the status of these and other rights with respect to the resource.
Date	A date associated with an event in the life cycle of the resource. Typically, Date will be associated with the creation or availability of the resource. Recommended best practice for encoding the date value is defined in a profile of ISO 8601 [Date and Time Formats, W3C Note, <a href="http://www.w3.org/TR/NOTE-datetime">http://www.w3.org/TR/NOTE-datetime</a> ] and follows the YYYY-MM-DD format.
Format	The physical or digital manifestation of the resource. Typically, Format may include the media-type or dimensions of the resource. Examples of dimensions include size and duration. Format may be used to determine the software, hardware or other equipment needed to display or operate the resource.
Identifier	An unambiguous reference to the resource within a given context. Recommended best practice is to identify the resource by means of a string or number conforming to a formal identification system. Examples of formal identification systems include the Uniform Resource Identifier (URI) (including the Uniform Resource Locator (URL), the Digital Object Identifier (DOI) and the International Standard Book Number (ISBN).
Language	A language of the intellectual content of the resource. Recommended best practice for the values of the Language element is defined by RFC 3066 [RFC 3066, <a href="http://www.ietf.org/rfc/rfc3066.txt">http://www.ietf.org/rfc/rfc3066.txt</a> ] which, in conjunction with ISO 639 [ISO 639, <a href="http://www.oasis-open.org/cover/iso639a.html">http://www.oasis-open.org/cover/iso639a.html</a> ], defines two- and three-letter primary language tags with optional subtags. Examples include "en" or "eng" for English, "akk" for Akkadian, and "en-GB" for English used in the United Kingdom.
Audience	A class of entity for whom the resource is intended or useful. A class of entity may be determined by the creator or the publisher or by a third party.
Provenance	A statement of any changes in ownership and custody of the resource since its creation that are significant for its authenticity, integrity and interpretation. The statement may include a description of any changes successive custodians made to the resource.
RightsHolder	A person or organization owning or managing rights over the resource. Recommended best practice is to use the URI or name of the Rights Holder to indicate the entity.
InstructionalMethod	A process, used to engender knowledge, attitudes and skills, that the resource is designed to support. Instructional Method will typically include ways of presenting instructional materials or conducting instructional activities, patterns of learner-to-learner and learner-to-instructor interactions, and mechanisms by which group and individual levels of learning are measured. Instructional methods include all aspects of the instruction and learning processes from planning and implementation through evaluation and feedback.
AccrualMethod	The method by which items are added to a collection. Recommended best practice is to use a value from a controlled vocabulary.
AccrualPeriodicity	The frequency with which items are added to a collection. Recommended best practice is to use a value from a controlled vocabulary.
AccrualPolicy	The policy governing the addition of items to a collection. Recommended best practice is to use a value from a controlled vocabulary.
Version	Draft, final, etc.
Expiration Date	For agreement documents.

## 7.7 Linking Tables

The following tables would not be part of a data standard per se, but would be needed in a database implementation of a standard. These tables would provide the link between two other tables with a complex relationship. For example, archaeological sites and survey areas would not have a one-to-one relationship. A given site might be included in several studies. Conversely, a given study might include one or more archaeological sites. An intervening table would be needed to break this ‘many-to-many’ relationship into ‘one-to-one’ relationships, matching up individual archaeological sites with individual studies.

**ARPA Sites:** In a database, this table would provide the link between ARPA records and individual site records.

Column name
ARPA_id
Archaeological_Site_id
Resource_id

**Resource-Management Areas:** In a database, this table would match specific management areas with specific identified cultural resources.

Column name
Resource_id
Management_Area_id

**Resource-Studies:** In a database, this would be a table that matched specific investigations with specific identified cultural resources that investigation included.

Column name
Resource_Study_id
Resource_id
Cultural_Survey_id
Management_Area_id

## 8.0 Next Steps

Now that the draft standard has been developed, the next step toward implementation should be vetting the proposed standard more widely. One possible first step towards broader vetting of the standard might be to brief the DoD Archaeological Committee (ArCom) and the Defense Installation Spatial Data Infrastructure (DISDI) staff. The ArCom may be able to make recommendations for any further vetting that might be needed across the services. The preparation of explanatory materials would be an important part of this process. Additional briefings could include the National Park Service Cultural Resources Geographical Information System Facility staff in their role as leads for developing the cultural resources data standard for the Federal Geographic

Data Committee, as well as the cultural resources staff of other land managing agencies such as the Bureau of Land Management, the Fish and Wildlife Service, the United States Forest Service, and the Department of Energy.

In addition to broader vetting, next steps for the standard might include preparing estimates for the level of effort that would be needed to convert existing data to the new standard. This could include conducting inventories of existing DoD electronic data, and entry of data into a trial database structure consistent with the draft standard.

Version 3.0 of the SDSFIE is scheduled to be released early in 2009. Once the new SDSFIE has been released and circulated, comments from the user community may suggest further revisions that would be applicable to the cultural resources business standard.

## **9.0 References**

Crane, Brian

2007 Artifact Collection Data Integration MCRAD Phase II, Summary Report. Legacy Project 06-318.

Dublin Core Metadata Initiative

2008 DCMI Element Set, ISO Standard 15836. <http://dublincore.org/documents/dces/>

United States Air Force

2006 Military Cultural Resources Analysis Database Progress Summary Report. Langley AFB, Virginia: HQ Air Combat Command/A7VS. Author: Brian Crane.

**Appendix A**

**Cultural Resources Processes and Process Steps**

**Table A.1 Cultural Resources Mangement Processes and Citation**

	<b>Process Description</b>	<b>Resource Type</b>	<b>Statutory/Regulatory Citation</b>	<b>DoD Citation</b>	<b>USAF Citation</b>	<b>USA Citation</b>	<b>USN Citation</b>	<b>Marine Corps Citations</b>
<b>Inventory</b>								
1	Identify all types of cultural resources and evaluate them for National Register eligibility	All types of cultural resources (including Sacred Sites, Historic Properties, Cultural Landscapes, etc.)	NHPA Sec 106 and Sec 110; 36 CFR 800.4(b); E.O. 11593, Sec 2(a); ARPA Sec 14(a),(b); NEPA	DoDI 4715.3: D.3.a, D.3.d., F(1)(h)(3)	AFI 32-7065: 2.1-2.2	AR 200-1	SECNAVINST 4000.35A: 5.d, f; 6.h; OPNAV 5090.1B	MCO 590.2A
2	Develop inventory of human remains and associated funerary objects; develop summary of unassociated funerary objects, sacred objects and cultural patrimony	NAGPRA Cultural Items	NAGPRA Sec 5-6	DoDI 4710.02: E.3.2	AFI 32-7065: 2.1.6.	AR 200-1		MCO 590.2A
3	Inventory historic and cultural resources in areas under DoD control; take into account any property listed on the World Heritage List or on the foreign host nation's equivalent of the National Register of Historic Places	All types of cultural resources		DoD 4715.05-G, C12.3			OPNAV 5090.1B	
<b>Project Review</b>								
4	Avoid, minimize, or mitigate adverse effects (Section 106 Review)	All types of NRHP Eligible cultural resources and sacred sites	NHPA Sec 106; 36 CFR 800; E.O. 13007, Sec 1		AFI 32-7065: 3.1, 4.15.3; AFI 32-1001, Sec C, 6.4	AR 200-1	SECNAVINST 4000.35A: 5.d; OPNAVINST 1100.17; OPNAV 5090.1B	MCO 590.2A



**Table A.1 Cultural Resources Mangement Processes and Citation**

	<b>Process Description</b>	<b>Resource Type</b>	<b>Statutory/Regulatory Citation</b>	<b>DoD Citation</b>	<b>USAF Citation</b>	<b>USA Citation</b>	<b>USN Citation</b>	<b>Marine Corps Citations</b>
5	Provide data for use in the NEPA process	All types of significant cultural resources	40 CFR 1500-1508; 32 CFR 651	DoDI 4715.3: 4.1.11; DoDI 4715.9: 4	AFI 32-7061; AFI 32-1001, Sec C, 6.4; also AFI 35-101, Public Affairs, fig. 9.3, PA review of EIAP documents	AR 200-2; AR 200-1	SECNAVINST 4000.35A: 5.b	
6	Provide data for use in CERCLA/ERP process	All types of significant cultural resources	EPA CERCLA Compliance with Other Laws Manual, Part II.					
7	Provide data for use in military construction, maintenance and repair, family housing economic analyses, and DD 1391 development	All types of cultural resources			AFI 32-1021, 2.1.7, Figure 2.1, item 7, 4.2.; AFI 32-1032: 5.1.2.3; AFMAN 32-1089: 2.5.1/.4/.6/.8; 3.4.1.2; 4.2.1	AR 200-1	SECNAVINST 4000.35A: 5.b	
8	Provide data for use when dealing with inadvertent discoveries or emergency situations	Archaeological resources; NAGPRA Cultural Items	NAGPRA Sec 3(d); NHPA		AFI 32-7065: 3.9	AR 200-1	OPNAV 5090.1B	
9	Provide data to address requests for access to sacred sites	Sacred Sites	E.O. 13007, Sec 1	DoDI 4710.02: 6.3;	AFI 32-7065: 1.3.4., 4.1.5	AR 200-1		
10	Provide data to evaluate real property acquisition, disposal, or use proposals	Historic monuments; Historical Real Property; significant scientific prehistoric, historic or archaeological data		DoDI 4715.3(F)(1)(I)	AFI 32-9001: 1.3; AFI 32-9003: 1.8.14, 1.24; AFI 32-9004: 1.7.2 and A2.1.1, A2.1.2, A2.14; AFH 32-9007: 3.17, 3.28.17, 4.5.3, 4.22; Section 4D; Atch 15/ A15.1.1, A15.14; 40 USC 484(k)(3); and AF Form 300,	AR 405-80: 4-8, 4-15	SECNAVINST 4000.35A: 5.b	

**Table A.1 Cultural Resources Mangement Processes and Citation**

	<b>Process Description</b>	<b>Resource Type</b>	<b>Statutory/Regulatory Citation</b>	<b>DoD Citation</b>	<b>USAF Citation</b>	<b>USA Citation</b>	<b>USN Citation</b>	<b>Marine Corps Citations</b>
					including Item 11 certification			
<b>Management (Planning/ Protection)</b>								
11	Include lists and descriptions of cultural resources in the Integrated Cultural Resource Management Plan (ICRMP)	All types of cultural resources		DoDD 4710; DoDI 4715.3: D.3.c.; 4.3.3.	AFI 32-7065: 4.10	AR 200-1	OPNAV 5090.1B	
12	Develop, coordinate, issue and monitor ARPA permits affecting archaeological resources	Archaeological Resources	32 CFR 229 (deleted 2006; refer to ARPA)		AFI 32-7065: 4.2	AR 200-1; AR 405-80	SECNAVINST 4000.35A: 5.f.; 6.c.10 and f.4; OPNAV 5090.1B	
13	Document and report ARPA violations associated with particular resources	Archaeological Resources	ARPA Sec 14(c)		AFI 32-7065: 4.14.2	AR 200-1		
14	Provide data to operational community for use in developing and evaluating requests for new or modifications to existing test and training areas	All types of cultural resources; Indian reservations and lands		DoDD 3200.15: 4.2.2	AFI 13-201: 2.6.1.4.7; AFI 13-212, Vol 1: 3.3.2.2.5.			

Table A.1 Cultural Resources Management Processes and Citation

	Process Description	Resource Type	Statutory/Regulatory Citation	DoD Citation	USAF Citation	USA Citation	USN Citation	Marine Corps Citations
15	Provide data for consideration in Integrated Natural Resource Management Plan processes	All types of cultural resources		DoDI 4715.3: E.7.1.9.; DoDi 4715.3(F)(1)(b)	AFI 32-7064: 2.3.4; AFI 32-7065: 4.3	AR 200-3: 2-17, 3-3.a., 4-8.j., 8-1.d.; AR 200-1	SECNAVINST 4000.35A: 5.b	
16	Provide data for use in comprehensive or master planning	All types of cultural resources			AFI 32-7062: 2.3.3.-4.; Table A5.1		SECNAVINST 4000.35A: 5.b	
17	Provide data to real property managers for accountability of assets; real property records and forms, property cards	Historic buildings; archeological sites			AFH 32-9007: 5.36, 5.39, 5.42.1.10	AR 405-45: 3-17		
18	Access resource database to evaluate Freedom of Information Act (FOIA) requests; maintain confidentiality of site locations	Important archaeological and traditional resources	NHPA Sec 304; ARPA Sec 4, 6-8, 9	DoD Regulation 5400.7/Air Force Supplement, 24 June 2002, "DoD Freedom of Information Act Program," Section C3.2.1.3	DoD Regulation 5400.7/Air Force Supplement, 24 June 2002, "DoD Freedom of Information Act Program," Section C3.2.1.3		SECNAVINST 4000.35A: 5.g	
19	Provide data for use in installation self assessment processes	All types of cultural resources		DoDI 4715.3: D.1.c.	AFI 32-7045: Atch 3	AR 200-1		
20	Provide data to military museums for coordination on identification of official service historical property and artifacts	Historical properties; artifacts			AFI 84-103: 6-2	AR 870-20		
21	Maintain collections of artifacts, records and data according to federal standards	Prehistoric and historic artifacts and records	NHPA Sec 101(a)(7)(A), NHPA Sec 112(a)(2), ARPA Sec 5		AFI 32-7065: 1.4.7.8., 1.4.10.9, 4.9	AR 200-1	SECNAVINST 4000.35A: 5.f.	

**Table A.1 Cultural Resources Mangement Processes and Citation**

	<b>Process Description</b>	<b>Resource Type</b>	<b>Statutory/Regulatory Citation</b>	<b>DoD Citation</b>	<b>USAF Citation</b>	<b>USA Citation</b>	<b>USN Citation</b>	<b>Marine Corps Citations</b>
22	Provide cultural resource data to interface with environmental budgeting process	All types of cultural resources		DoDi4715.3 Programming And Budgeting Priorities For Conservation Programs	AFI 32-7065: 4.8; AFI 32-7001; AF/ILEV memo	AR 200-1	SECNAVINST 4000.35A: 5.b	
23	Provide data for use in public awareness activities in archaeology and other types of cultural resources	All types of cultural resources	ARPA Sec 10(c)	DoDI 4715.3: D.1.i	AFI 32-7065: 1.4.10.7, 3.1.1.6, 4.13			
24	Provide data for use in preparing required status reports on all types of cultural resources and heritage assets	All types of cultural resources	ARPA Sec 5(c); AHPA; E.O. 13287, Sec 3(c); CFOA	DoDI 4165.14; DoDI 4715.3 Conservation Measures of Merit	AFI 32-7065: 4.14.1	AR 200-1	SECNAVINST 4000.35A: 6.h.(7)	
25	Establish measures sufficient to protect known historic, cultural and archaeological resources until appropriate mitigation or preservation can be completed	All types of cultural resources		DoD 4715.05-G, C12.3.5.2.; C12.3.5.3.				
26	Establish measures to prevent DoD personnel from disturbing or removing historic or cultural resources without permission of the host nation	All types of cultural resources		DoD 4715.05-G, C12.3.6.				