



**HOUSING COUNSELING SYSTEM
(HCS-F11)**

AGENCY REPORTING MODULE (ARM)

INTERFACE CONTROL DOCUMENT (ICD)

BETWEEN

**Client Management Systems and HUD's Housing
Counseling System**

***U.S. Department of Housing and Urban Development
January 14, 2009***

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Document Updated by Dynamic Systems Technology, Inc. (DysTech)*

Revision Sheet

Revision #	Date	Revision Description
1.0.0.0	10/20/2008	Initial Controlled Version.
1.0.0.1	11/14/2008	Corrections to XML tags descriptions
1.0.0.2	12/22/08	Corrections to XML tags and comments
1.0.0.3	01/14/009	Corrections to data validation rules

Section	Changes
4.0	Changed data requirements for the fiscal_year tag. Data type is changed to Numeric (2).
4.0	Default value for AMI_No_Response is changed to '0'.
4.0	Format mask for Client_Sales_Contract_Signed is changed to MM-DD- YYYY.
4.0	Default value is added to all AMI tags in Form 9902 dataset.
4.0	Changed description of <contact_title/> tag.
2.2.9	Changed Reference Data Service description. Salutation is replaced with Contact Title.

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1.0 GENERAL INFORMATION

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* Disclaimer - This Interface Document was provided to supply the CMS vendors with the appropriate technical information needed to build an interface between each CMS and the Housing Counseling System Agency Reporting Module (HCS ARM).

1.1 Purpose

The Single Family Housing (SFH) HCS project is intended to assess the state of the housing counseling industry. Since the industry uses Client Management Systems (CMS) to track their counseling activities and their data, HUD is developing an interface to receive the HUD 9902 form, agency profile and client-level data from those existing systems. HUD-Approved agencies participating in HUD's Housing Counseling Program are required to utilize a CMS product to automate their counseling services to collect, store, and transmit HUD require information. This document provides guidance and requirements for their CMS vendor to follow to conform to HUD's standards. Those CMS vendors that conform to the standards addressed in this document will be published as authorized vendors for agencies to select from. Any agency that uses a CMS product not listed will need to provide their CMS vendor this document to ensure their CMS can properly transmit HUD required data and reports.

1.2 Scope

This document summarizes the requirements necessary for this interface to be accomplished. It is a technical reference and therefore, its main audience is computer programmers, database administrators and analysts, who develop software to produce, analyze or handle data products that conform to this specification.

1.3 Points of Contact

HCS F11 POCs

The following table lists the HCS Points of Contact (POC's) that may be beneficial for future reference.

Contact Type	Contact	Phone	E-mail
Department of Housing and Urban Development, Project Leader	George Grotheer	202.402.2294	George.h.grotheer@hud.gov
Dynamic Systems Technology, Inc. (DysTech), Project Manager	Andrey Ignatov	571.321.0460 Ext. 109	AndreyI@dsti-it.com
Dynamic Systems Technology, Inc. (DysTech), System Consultant	Zack Jones	571.321.0460 Ext. 101	ZackJ@dsti-it.com

1.4 Project Reference

The following is a list of the references that were used in preparation of this document.

Reference	Date
CARS INTERFACE CONTROL DOCUMENT (ICD) 2.3.1	11/2007

1.5 Terms and Abbreviations

The following is a list of the terminology used in this document and the meaning of each.

Terminology	Definition
Agency	<p>HUD approved organization that performs housing counseling. They are responsible for sending required information to HUD.</p> <p>The levels are defined as:</p> <ul style="list-style-type: none"> ➤ National Intermediaries (NIs) and their affiliates and branches, ➤ Regional Intermediaries (RIs) and their affiliates and branches, ➤ Multi-State Organizations (MSO) and their affiliates and branches, ➤ State Housing Finance Agencies (SHFA's) and their sub-grantees, and ➤ HUD-approved Local Housing Counseling Agencies (LHCAs) and their branches.
Asynchronous / Synchronous	<p>In computer programs, asynchronous operation means that a process operates independently of other processes, whereas synchronous operation means that the process runs only as a result of some other process being completed or handing off operation. A typical activity that might use a synchronous protocol would be a transmission of files from one point to another. As each transmission is received, a response is returned indicating success or the need to resend. Each successive transmission of data requires a response to the previous transmission before a new one can be initiated.</p>
Client	<p>An individual that is seeking housing counseling at an agency.</p>
Client Management	<p>The company that makes and markets the CMS product.</p>

System (CMS) Vendor	
Queue	A collection of items in which only the earliest added item may be accessed. Also known as "first-in, first-out" or FIFO.
Webthority	A Single Sign-On tool used within HUD's enterprise architecture to prevent unauthorized access to specific applications and internal network. Each user ID is associated with specific levels of access granted to it.

The following is a list of the abbreviations used in this document and the meaning of each.

Abbreviation	Definition
ARM	Agency Reporting Module
CMS	Client Management System
CRI	Communications Resource, Inc
DTD	Document Type Definition
HECM	Home Equity Conversion Mortgage
HCS	Housing Counseling System
HUD	U.S. Department of Housing and Urban Development
JSP	JavaServer Pages
ICD	Interface Control Document
LHCA	Local Housing Counseling Agency
MSO	Multi-State Organization
NI	National Intermediary
POC	Points of Organizational Contact
OMB	Office of Management and Budget
RI	Regional Intermediary
SFH	Single Family Housing
SHFA	State Housing Finance Agency
SOAP	Simple Object Access Protocol
WSDL	Web Services Definition Language
WUI	Web User Interface
XML	Extensible Markup Language

2.0 OVERVIEW

2.0 OVERVIEW

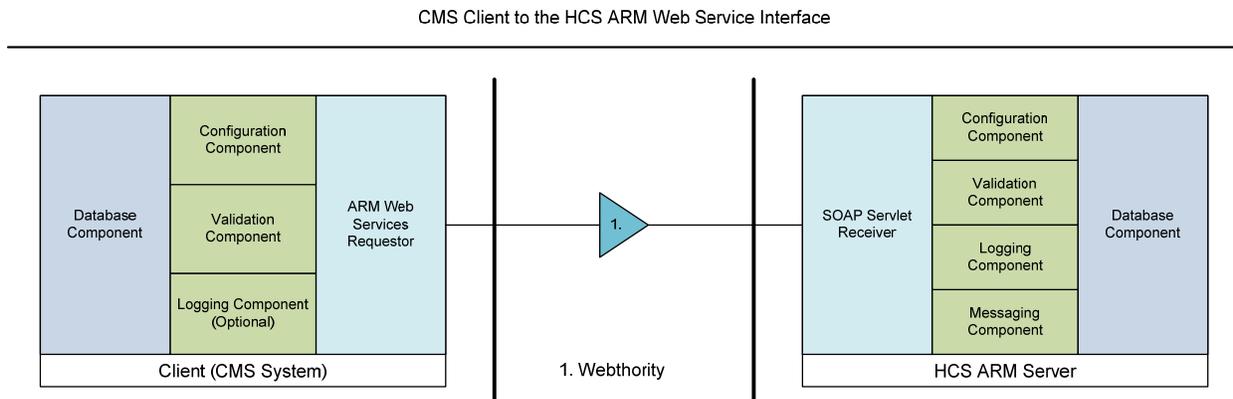
The following sections provide additional details on the functions of each subsystem, as well as input and output points, timing of processing through the HCS ARM interface and recovery parameters in the event of processing failure and/or complete system downtime.

2.1 System/Subsystem Description

The HCS ARM is a flexible and highly scalable data processing system based on Web Services technology Simple Object Access Protocol (SOAP). There are three major components to the ARM processing: the client side which is managed and performed independently by the client deployed at the CMS system; authentication at the enterprise architecture level; and the server side which is the actual “core” of the ARM processing and web service processing. Each of the three components is discussed in this section.

2.1.1 Justification for HCS ARM Web Services

The use of an architecture that is open enough for the system to provide both scalability and flexibility on the front end and back end will best fulfill the HCS solution and goals. Web Services, specifically SOAP, offer the requisite architecture. The high-level architecture composition is depicted in the image below. The image shows the CMS client submitting data to the ARM Web Service interface through the Webthority service. The image also shows the major components responsible for the inner workings of the Client and Server side, which will be discussed in more detail later.



There are several reasons for using a Web Services approach on an Agency Report submission, such as:

- Integration between various systems can be achieved quickly, efficiently and in a cost effective manner by using a standardized format. It would be difficult to accomplish complete integration within the timeline of the pilot without Web Services and the flexibility it offers. Furthermore, integrating such vastly disparate systems would necessitate an expensive production phase to support all of the CMS systems.

- Provides standardization to the submission process and validation of data as required, further improving the quality of reporting.
- Will have less impact on the agency's existing systems.
- Shortens the development cycle and simplifies the maintenance period.
- Offers the ARM interface neutrality.
- Mature, industry proven technological solution.

2.1.2 Client

The client component is fairly independent, which means its processing does not impact the HCS ARM server side components at all. The client component will be responsible for extracting the data out of the agency's CMS, regardless if the system is vendor-provided or home grown. It will log the event itself and submit the data to the ARM Web Service Requestor. The ARM Web Service Requestor will then format the client side (CMS data) into an ARM SOAP service compliant message to be transmitted to the HCS ARM server after authentication for validation and processing.

2.1.3 Authentication

The Reporting Request must comply with HUD's authentication requirements. Webthority provides the authentication gateway. HCS ARM authenticates by providing the agency ID, user ID and password. Only a successfully authenticated request can reach the HCS ARM processing components. All communications with HUD are through the HTTP over Secure Socket Layer (SSL) protocol.

HCS login ID, HCS Agency ID, and password should be provided by the Housing Counseling Agency that is participating in the Housing Counseling Program. This method is described in the Web Services Definition Language (WSDL) file listed in Appendix F of this document.

2.1.4 Server

The ARM web service, as mentioned previously, is based on SOAP and utilizes the SOAP specification where the data is contained in the attachments or body of the message. Certain client platform technologies support SOAP with Attachments and some do not. It is up to the CMS's to determine which type of data submission they are capable of handling.

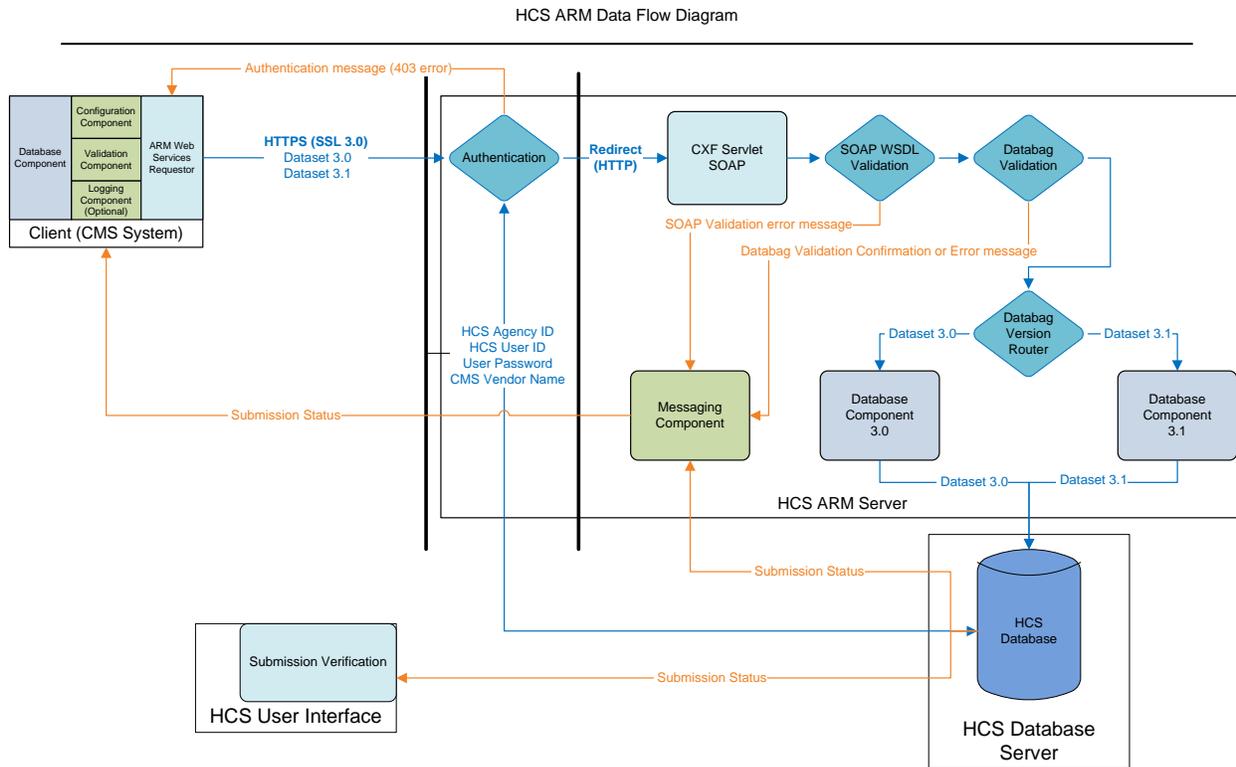
The server architecture is asynchronous in nature. The initial and immediate feedback send to CMS's on data submission calls is an acknowledgement of receipt. It does not specify whether the submission was processed successfully or not. The CMS's are required to make another call at a later time to retrieve the processing status of their submission.

2.2 System/Subsystem Partitions and Functions

The following section describes the system/subsystem partitions and functions, documenting the traceability between the functional components and the data requirements for input and

processing. Also discussed is successful and failed logging of processed data messages through the submissions.

The high level system processing overview is below:



1. Authentication: Submission is sent over HTTPS (128 bit encryption) using the web services client (SOAP). Each submission needs to be authenticated first. The authentication request will pass through Webthority.

2. HTTPS Traffic Redirected: It is redirected to the internal web services interface (SOAP) and received by the “ARMSOAPReceiverServlet.” To perform a successful submission, a valid agency Id, user ID and password are required.

3. Soap Structure and Header Validation Confirmation Message: Once the submission is transmitted through ARM, two levels of validation occur. The first level will generate confirmation messages providing error codes and messages that were generated during validation of the Extensible Markup Language (XML) *structure and header*. The submitter is notified of these errors in an immediate and synchronous manner. These error codes and associated error descriptions are listed in the table below. The second level of validation is detailed in Step 4.

First Level of Validation: XML Structure and Header Validation Error Messages		
Error Code	Error Name	Error Description
101	AUTH_INTERNAL_ERROR	The authentication process encountered internal errors.
102	AUTH_BAD_CREDENTIALS	The system cannot authenticate the user because the User ID or Password is incorrect.
103	AUTH_ACCESS_RIGHT_NOT_ENOUGH	The Agency cannot be authenticated.
801	SOAPVALIDATE_SOAPPART_MISSED	The SOAP message is missing the required SOAP message XML tags and the SOAP message main tag.
802	SOAPVALIDATE_ENVELOPE_MISSED	The SOAP message is missing the required SOAPENVELOP tag.
803	SOAPVALIDATE_ENVELOPE_BODY_MISSED	The SOAP message is missing the required SOAP BODY tag.
804	SOAPVALIDATE_OPERATION_NOT_SUPPORTED	The requested SOAP operation is not supported on the HCS ARM Interface.
805	SOAPVALIDATE_ENVELOPE_BODY_EMPTY	The data contained within the SOAPENVELOP tags is missing or empty.
806	SOAPVALIDATE_AGC_HCS_ID_NOT_NUMBER	The Agency HCS ID data type must be numeric in the SOAP message header.
808	SOAPVALIDATE_SUBMISSION_ID_MISSED	The SOAP message is missing the required Submission ID value.
809	SOAPVALIDATE_SUBMISSION_ID_NOT_NUMBER	The SOAP message Submission ID value in the header is not numeric.
810	SOAPVALIDATE_SUB_TYPE_MISSED	The SOAP message header does not contain the submission type specification tag.
811	SOAPVALIDATE_INVALID_SUB_TYPE	The SOAP message header contains an invalid submission type.
812	SOAPVALIDATE_SYSTEM_NAME_MISSED	The SOAP message header does not contain the required system name value.
813	SOAPVALIDATE_AGC_NAME_MISSED	The SOAP message header does not contain the required Agency name value.
814	SOAPVALIDATE_ATTACHMENT_MISSED	The SOAP message header does not contain the XML attachment.
815	SOAPVALIDATE_WRONG_SYSTEM_NAME	The SOAP message header does not contain the correct system name value.
816	SOAPVALIDATE_SUBMISSION_ALREADY_POSTED	The SOAP message header contains a Submission ID value, which has been used in a previous submission.
817	SOAPVALIDATE_AGC_LOGIN_MISSED	The SOAP message header does not contain the correct Agency Login information.
818	SOAPVALIDATE_AGC_PASSWORD_MISSED	The SOAP message header does not contain the required Agency password value.
819	SOAPVALIDATE_AGC_HCS_ID_MISSED	The Agency HCS ID is missing in the SOAP message header.
820	SOAPVALIDATE_REFERENCE_ID_MISSING	The SOAP message header does not contain a reference data request id

First Level of Validation: XML Structure and Header Validation Error Messages		
Error Code	Error Name	Error Description
821	SOAPVALIDATE_REFEREN CE_ID_NOT_NUMBER	The SOAP message header contains a reference data request id that is not numeric.

4. Validation Notifications: During the second level of validation, submitted **data** is processed and validated according to the HCS ARM data format definition standard that is provided to every system and agency. The XML tags and the contained values will be validated per coded requirements and its respective attributes. If an error occurs as a result of the validation of the data, the error is recorded by the logging mechanism. The notification of these errors is asynchronous, meaning it may take a few seconds longer due to processing time. Refer to Step 5 for a detailed explanation on how the sender receives these errors.

5. Requesting and Receiving Submission Status and Errors: ARM provides a method to request the status of a submission and receive back a detailed message with the status, error code(s), and descriptions if any errors were generated. The request is called 'GetSubmissionInfo'. In order to use this method, the CMS must enable this functionality. This method is described in the WSDL file listed in Appendix F of this document.

The following table lists the error codes and the associated error descriptions for data validation that will be received when the "GetSubmissionInfo" method is executed:

Second Level of Validation: XML Tags and Data		
Error Code	Error Name	Error Description
201	VALIDATE_INTERNAL_BA DCONFIG	An error occurred due to a malformed configuration file.
202	VALIDATE_NO_PROFILE_ DEFINITION_FOUND	The profile contained within a high level XML tag is missing (Example: AgencyProfileData or AgencyAllData,).
203	VALIDATE_NO_DATA_SEC TION_FOUND	The required data section of the message was not populated.
204	VALIDATE_NO_XMLREF_F OUND	An XML tag referencing a description table was not found.
205	VALIDATE_XMLREFID_EM PTY	The value for the required XML tag reference ID is not found.
206	VALIDATE_NO_REFENCE D_PROFILE_FOUND	The reference tag profile was not found.
207	VALIDATE_WRONG_CONF IG	The wrong configuration was loaded.
208	VALIDATE_REQUIRED_FIE LD_MISSED	A required field XML tag was missed in the submitted XML message.
209	VALIDATE_NULL_VALUE	The field does not contain a value.
210	VALIDATE_REQUIRED_FIE LD_EMPTY	The required field is not populated.

Second Level of Validation: XML Tags and Data		
Error Code	Error Name	Error Description
211	VALIDATE_MAXLENGTH	The data entered exceeds the maximum allowed length of the field.
212	VALIDATE_MINLENGTH	The data entered does not satisfy the minimum allowed length of the field.
213	VALIDATE_FORMAT_MASK	The field value does not match the allowed value format.
214	VALIDATE_NOT_INT	The field value is not numeric.
215	VALIDATE_NOT_REAL	The field value is not a real data type.
216	VALIDATE_FIELD_DUPLICATED	The field XML tag is duplicated (agency profile datamap).
217	VALIDATE_PROPERTY_DUPLICATED	The XML "Property" tag is duplicated (9902, or Client).
218	VALIDATE_PROPERTY_ACTIVITY_ID_MISSED	The value of the activity type ID in 9902 is missing.
219	VALIDATE_PROPERTY_ACTIVITY_ID_NOT_ALLOWED	The value of the activity type ID in 9902 is not valid.
220	VALIDATE_DATAMAP_MAX_OCCURS_VIOLATION	The occurrence of a Datamap section has exceeded the allowed maximum.
221	VALIDATE_DATAMAP_MIN_OCCURS_VIOLATION	The required occurrence of Datamap sections is not met.
301	XMLPARSE_GENERALFAILURE	An unexpected XML parsing error has occurred.

6. Status Messages: Reports about the status of submissions can be viewed through the HCS system using the Report Submission Status page when proper user permissions are granted. This requires the user (agency) to have a valid HCS login and password. The user may also receive the status and associated error messages through the ARM Interface as described in Step 5 above.

2.2.1 HCS ARM SOAP Interface - Processing XML

The submitted XML can be sent as an attachment part of a SOAP message to HCS ARM if the requesting CMS supports SOAP with Attachments. This method is called "PostSubmission". If the submitting CMS does not support SOAP with Attachments the XML will be part of the message itself and reside inside the message body. This method is called "PostSubmissionInline". In the event the data is sent as an attachment, the data is taken as input and as a part of the SOAP message.

2.2.2 Web Service SOAP Interface Server

ARM SOAP web services are developed using Apache CXF, an open source web services framework. The ARM interface is described by arm.wsdl file, which is based on the Web Services Definition Language (WSDL). ARM web service requests are validated and processed according the WSDL definition and the XSD (XML Schema Definition) contained within the

WSDL. As mentioned previously, the WSDL and its associated XSD file can be found in Appendix F.

The format of the data submitted via ARM's *postSubmission* web service is described by the ARM databag XSD. The length of the document is too large for this document and therefore should be requested if not provided by HUD.

It is advised that all CMS's use the ARM databag XSD as a reference to validate the format of their xml data submission. There are two versions of the ARM databag XSD.

arm_databag_3_0.XSD and arm_databag_3_1.XSD

Both versions are the xml data document format for data submissions required of the CMS's as of January 1st, 2009.

Release of ARM currently supports both the arm_databag_3_0.XSD and arm_databag_3_1.XSD.

2.2.3 Web Services SOAP Client

The purpose of the SOAP client is to extract data from a particular CMS and submit a SOAP message to the defined ARM interface. The client side will extract data from the CMS, which is developed by the CMS vendors according to the provided template, and encapsulate the data in the SOAP message. Depending on the type of data (agency, 9902 form, or client level data) the SOAP client determines the appropriate format and may provide pre-validation (depending on the vendor's decision).

The client will then push the Agency Reporting data to the ARM SOAP web service over HTTPS protocol. When passed through an authentication gateway, the data is validated and processed using the ARM *postSubmission* service.

2.2.4 HCS ARM Security

The HCS ARM Web Services reside behind the security of the SUN enterprise architecture. Following parameters are required to authenticate:

- HCS User ID and Password
 - HCS User ID and Password are case sensitive
 - HCS User Password must be not expired
- The HCS Agency ID
 - Agency ID is case sensitive
 - Agency must have active status in HCS system
- CMS System Name
 - CMS System Name is case sensitive
 - CMS System Name must be authorized by HUD and registered in the HCS system.

The above Java and .NET examples demonstrate how to submit required authentication credentials when invoking the ARM service.

2.2.5 Apache CXF

ARM SOAP web services are developed and deployed using Apache CXF. Apache CXF is an open source services framework that provides support for building both web services and web service clients. It is highly recommended that developers of Java clients consider using Apache CXF. For more information, please see <http://cxf.apache.org>.

2.2.6 HCS ARM Databag Validation

ARM validates all databag transactions submitted via the *postSubmission* web service. Any submissions that do not validate against the *arm_databag_3_x.xsd* will be rejected and the client will receive a standard SOAP Fault indicating the validation rules(s) violated.

The following table contains a description of all XML Schema Definition (XSD) elements that can be used when creating valid XML documents based on the *arm_databag_3_x.xsd*.

HCS ARM Databag Element - DTD	Description	Utilization
SubmissionData	This element is the outermost element and indicates a submission to submit data, which coincides with the method called "PostSubmission" of the WebServices interface.	This element is defined in the ARM 3.0 and ARM 3.1 XSD as SubmissionData.
AgencyProfileData	This element defines a section related to the Agency Profile data section only.	This element is defined in the ARM 3.1 and 3.0 XSD as AgencyProfileData.
AgencyContacts	This element defines a section related to Agency Contact data associated with the agency.	This element is defined in the ARM 3.1 and 3.0 XSD as Agency_Contacts.
Counselor_Profiles	This element defines a section related to the Counselor Profile data section associated with the agency.	This element is defined in the ARM 3.1 and 3.0 XSD as Counselor_Profiles.

HCS ARM Databag Element - DTD	Description	Utilization
Counselor_Training_Courses	This element defines the course associated with Counselor_Trainings	This element is defined in the ARM 3.1 XSD as Counselor_Training_Courses
Counselor_Trainings	This element relates a Agency_Counselor and Counselor_Training_Courses to a Counselor_Training	This element is defined in the ARM 3.1 and 3.0 XSD as Counselor_Trainings
Group_Sessions	This element relates a Agency_Counselor and Attendees to a Group_Session	This element is defined in the ARM 3.1 XSD as Group_Sessions
Attendees	This element defines a data section related to Attendees of a Group_Session	This element is defined in the ARM 3.1 XSD as Attendees
Agency_Counselors	This element relates a Counselor_Profile to an Agency_Profile.	This element is defined in the ARM 3.1 and 3.0 XSD as Agency_Counselors
Client_Profiles	This element defines a section related to the Client Profile data.	This element is defined in the ARM 3.1 and 3.0 XSD as Client_Profiles.
Form_9902s	This element defines a section related to the 9902 Form data	 This element is defined in the ARM 3.1 and 3.0 XSD as Form_9902s.

The following table contains further details of the HCS ARM DATA format attributes as well as whether the attribute is required for a successful submission. The right-hand column of the table designates whether a particular validation is required by the CMS for a successful submission or

if it is a validation that is completed internally and therefore not required by the CMS. Attributes marked 'Validation' designate that the particular attribute must be validated for successful submission and *should* be considered by the CMS. Attributes marked 'Internal' are for internal processing only and *should not* be considered by the CMS.

Field Element Attributes	Attribute Description	Validation Attributes: Validation or Internal
id	For internal use only.	Internal
fieldname	This attribute defines the name of the field that corresponds to the actual XML element in the SOAP XML message.	Validation If submission does not use a correct field name as designated, it will fail.
encryptflg	This attribute is optional: when used its value is either "false" (not required to be encrypted) or "true" (required to be encrypted when stored).	Internal Used internally to describe an element that is encrypted in the database. Currently used for SSN.
source	This attribute is used for reference fields where reference key value needs to be retrieved. Not associated with format.	Internal Only internal reference
targetType	This attribute affects the format, defines what datatype the element is. Only one value can be selected - STRING REAL INTEGER DATE TIME	Validation The submission must match the targetType otherwise it fails.
fieldStatus	This attribute determines whether one element depends on another. Only one value can be assigned if present. If nothing is specified, the default is "O". Status are: mandatory ('M'), optional ('O'), conditional ('C'), inclusive ('I')	Validation If the field status is marked as "Mandatory" it needs to be populated and contained in the submission.
defaultValue	This attribute determines if the element has a default value and therefore does not have to be specified in the XML message.	Internal If the field in submission is left NULL the default value is assigned.
allowedValue	This attribute lists all possible values for the element. Anything	Validation

Field Element Attributes	Attribute Description	Validation Attributes: Validation or Internal
	different renders validation incorrect.	The attribute lists the allowed values and if any other value is used, it will cause validation error. This is critical for the enumerated values.
condition	This attribute defines the condition of the element's dependence.	Internal Used only internally to help HCS ARM to understand internal relational structure.
maxLength	This attribute defines the maximum length of the element. The value should not exceed this definition; otherwise an error in validation occurs.	Validation If maximum field length is exceeded in the field value a validation error will occur.
minLength	This attribute defines the minimum length of the element. The value should not be less than this definition; otherwise an error in validation occurs.	Validation If minimum field length is exceeded in the field value a validation error will occur.
formatMask	This attribute defines the pattern of string element type. For example, the pattern of a telephone number can be defined. A string value not matching the pattern creates an error in validation.	Validation The field value should follow the format mask structure.
autogenerated	This attribute is used internally by HCS ARM to autogenerate data, not related to data format.	Internal Used only internally by the HCS ARM system and not part of the submission structure.
dbReference	This attribute is used internally by HCS ARM to define the database dependency, not related to data format.	Internal Used only internally by the HCS ARM system and not part of the submission

Field Element Attributes	Attribute Description	Validation Attributes: Validation or Internal
		request.
dbReferenceKeyColName	This attribute that is used internally by HCS ARM as a pointer for reference tables, not related to data format.	Internal Used only internally by the HCS ARM system and not part of the submission request.
dbReferenceValueColName	This attribute is used internally by HCS ARM for processing, not related to data format.	Internal Used only internally by the HCS ARM system and not part of the submission request.
required	This attribute defines if the element is required or not. Possible values are "true" or "false": "true" = Required "false" = Not Required	Validation If the field is required and is not populated and no default is specified, it will produce a validation error.
xmlReference	This attribute is used internally by HCS ARM to reference a constraint; it is not related to data format.	Internal Used only internally by the HCS ARM system and not part of the submission request.
xmlReferenceKeyName	This attribute is used internally by HCS ARM to reference a constraint; it is not related to data format.	Internal Used only internally by the HCS ARM system and not part of the submission request.
minOccurs	This attribute defines the minimum occurrence of datamap sections required.	Validation If the minimum occurrence of the datamap section name is not met, it will produce a validation error.
activity_type_id; requiredActivityTypes	This attribute designates the 9902 Form column the required type_id value is associated with it. The	Validation If the value of the

Field Element Attributes	Attribute Description	Validation Attributes: Validation or Internal
	activity type id is required as 4, but 5 is disallowed since it is calculated by HCS ARM. (Refer to Section 4.0, Appendix A).	activity type ID is not valid, it will produce a validation error.

In addition, the actual databag definition (format) of the HCS ARM data types is documented in 'Appendix B: HCS ARM Format – Databag' of this document.

2.2.6.1 ARM databag XSD Document

The ARM databag XSD structure is being provided in electronic format as a supplemental document to the ICD as a HCS ARM data format specification. The XSD structure can be easier to use than the databag structure and is more advantageous to the CMS developers for the following reasons:

- Easier to understand than the custom HCS ARM databag
- Technical standard
- Developer can create or regenerate the XML template without any data present
- Used to pre-validate the data in the XML prior to submitting to HUD. This will help to identify any errors prior to an actual submittal

Both the databag and XSD structure are updated with any changes to the ICD based on new enhancements to HCS ARM. Attachment G was included as a reminder that the XSD structure is being provided as an .xsd attachment.

2.2.7 ARM WSDL

The description of HCS ARM web services interface is provided by the descriptions in the arm.wsdl file. This file contains the complete structure of requests and responses to and from the HCS ARM interface. For example, there is a method for submission and a method to request a status of the submission.

Refer to [Section 8.0](#), [Appendix E](#), of this document for the WSDL details.

2.2.8 HCS ARM Reporting

HCS provides two methods of viewing submission statuses.

- The first is the HCS ARM reporting interface accessible through a link on the HCS menu. However, the user must have the appropriate user permissions to be able to view the submission status. The purpose of the screens is to provide a view of the submissions by date and time, agency ID, and status of submission (failure or successful). Each criterion can be selected individually or multiple criteria can be selected. The user interface is dynamically rendered as Java Server Pages (JSP).

- The second is HCS itself. All agency and 9902 data submission information directly impacts the data which is displayed throughout HCS. If a submission is successful in updating HCS, the updated data will be viewable and usable through HCS.

An example of the submission status screen is displayed below:

Date	Status	HCS Agency Id	Agency Name	Type	CMS Name
Oct 16 2008 10:51	Successful	80724	CREDIT COUNSELING CENTERS OF OKLA.	9902:06	HUD
Oct 15 2008 7:02	Successful	80724	CREDIT COUNSELING CENTERS OF OKLA.	9902:06	HUD
Oct 15 2008 4:18	Successful	80724	CREDIT COUNSELING CENTERS OF OKLA.	9902:06	HUD
Oct 15 2008 3:48	Successful	80724	CREDIT COUNSELING CENTERS OF OKLA.	agency	HUD
Aug 22 2008 4:23	Failed	80246	CCCS OF SOUTHERN WEST VIRGINIA - KANAWHA VALLEY	9902:06	Paragon
Jul 23 2008 11:18	Successful	80245	CCCS OF THE MID-OHIO VALLEY	9902:06	Paragon
Jul 23 2008 11:18	Successful	80246	CCCS OF SOUTHERN WEST VIRGINIA - KANAWHA VALLEY	9902:06	Paragon
Jul 23 2008 11:18	Successful	80181	CONSUMER CREDIT COUNSELING SERVICE OF WNC, INC.	9902:06	Paragon
Jul 23 2008 11:18	Successful	83530	HORIZONS, A FAMILY SERVICE ALLIANCE (HORIZONS CCCS)	9902:06	Paragon
Jul 22 2008 3:22	Successful	80932	FAMILY COUNSELING SVC/CCC OF AURORA	9902:06	Paragon
Jul 22 2008 3:14	Successful	80242	Family Service Credit Counseling	9902:06	Paragon
Jul 22 2008 3:10	Successful	80180	CONSUMER CREDIT COUNSELING SERVICE OF FORSYTH COUNTY, INC.	9902:06	Paragon
Jul 22 2008 11:58	Successful	80244	CCCS OF NORTH CENTRAL WEST VIRGINIA	9902:06	Paragon
Jul 22 2008 11:47	Successful	80958	CCCS OF UNITED FAMILY SERVICES	9902:06	Paragon
Jul 22 2008 10:28	Successful	80971	CCCS OF THE CAROLINA Foothills, INC.	9902:06	Paragon
Jul 22 2008 10:28	Successful	82951	CCCS, A DIVISION OF TRIANGLE FAMILY SERVICES, INC.	9902:06	Paragon
Jul 22 2008 10:28	Successful	80155	Housing and Credit Counseling, Inc.	9902:06	Paragon
Jul 22 2008 10:28	Successful	82377	MOMENTIVE CONSUMER CREDIT COUNSELING SERVICE, INC.	9902:06	Paragon
Jul 22 2008 10:20	Successful	80726	CONSUMER CREDIT COUNSELING SERVICE OF THE BLACK HILLS	9902:06	Paragon

2.2.9 HCS ARM Reference Data Service

The HCS uses reference data extensively in its submissions. All reference data can be retrieved through ARM's *getReference* service. The following table lists all the reference data that is available through the *getReference* operation.

Reference ID	Reference Data	Comments
10	CMS Type	The authorized CMS's that can submit to HCS ARM
7	Contact Type	The different contact types associated with an agency
11	Counsel Termination	The different reasons for why counseling was terminated
12	Counsel Session Type	The different one on one counseling session types
2	Counseling Type	The different counseling categories
13	Education	The possible education levels
4	Ethnicity	Either Hispanic or Non-Hispanic from the HUD 9902 Form
14	Finance Type	The different financing types
15	Group Session Type	The possible group session/workshops from the HUD 9902 Form

16	Home Maintenance Outcome	The possible outcomes of home maintenance and financial management counseling from the HUD 9902 Form
17	Homeless Outcome	The possible outcomes of homeless counseling from the HUD 9902 Form
18	HUD Assistance	The possible options HUD provides assistance
19	HUD Grant Type	The possible grant types HUD provides
20	Income Level	The 5 categories of AMI from the HUD 9902 Form
1	Language	The possible languages
6	Marital Status	The possible marital statuses
21	Mortgage Delinquency Outcome	The outcome possibilities of mortgage delinquency prevention counseling from the HUD 9902 Form.
5	Mortgage Type	The possible mortgage types
22	Prepurchase Counsel Outcome	The outcome possibilities of prepurchase counseling from the HUD 9902 Form.
3	Race	The possible races of clients
23	Referred By	The possible ways a client was referred to agency
24	Rental Outcome	The outcome possibilities of rental counseling from the HUD 9902 Form
0	States	The States used by HUD
25	Contact Title	The list of business titles used by HUD
26	Training Organization	List of organizations providing counselor training
27	Training Sponsor	List of organizations providing counselor training sponsorship

3.0 ADDITIONAL HCS ARM INFORMATION

3.0 ADDITIONAL HCS ARM INFORMATION

- The HCS ARM Interface operates 24/7. The queue processing ensures that processing or the acceptance of data does not stop even if the back-end database experiences an outage. Processing continues after the database connection is reestablished.
- A failed submission needs to be resubmitted after the record is corrected on the CMS client side. The expectation is to make the correction in a single place, on the client side, since HCS is a repository of data.
- HCS ARM interface will allow the CMS systems to send web services requests as an XML message to receive in return web services responses with submission status information. The request will need to contain submission_ID (unique for each submission), datetime, agency_hcs_id, cms_system_name.
- The HCS ARM interface will only accept data in the following formats:
AgencyProfileData that validates against ARM XSD 3.1
AgencyProfileData that validates against ARM XSD 3.0
- The HCS ARM interface will accept data for the HUD 9902 Form Version 2006.

4.0 APPENDIX A: XML TAG DESCRIPTIONS

4.0 APPENDIX A: XML TAG DESCRIPTIONS

This appendix outlines the tags to identify the submission to HCS ARM and is required to be part of the ARM SOAP message body. These values are assumed to be static; therefore the values will not change with the number of submissions.

The following table details the XML specification for the ARM SOAP Header for submissions. Refer to the WSDL file in Section 8.0, [Appendix E](#), of this document for the details of the required heading tags for "GetSubmissionInfo" methods. See examples of these methods, including the header, in Section 2.2.2 of this document.

XML Tag Name - Header	XML Tag Description	Value Required Y = Yes N = No	Release Comments
<agc_hcs_id>	Agency ID from HCS system. This information is used for tracking and authentication.	Y	
<agc_name>	Agency name used in HCS. The value will be converted in upper case while processed	Y	
<system_name>	The CMS system ID.. <i>The value is an ID corresponding to your CMS System name stored in the HCS system, once CMS vendor is registered with HUD.</i> Important: The ID will be different in Pilot and Production applications. Please refer to Section 2.2.9 for reference to the web service to retrieve ID of your CMS system.	Y	Changed to numeric ID
<submission_ID>	Submission ID is produced and provided by the CMS Vendor. This can be used later on by the CMS implementation to retrieve the status of a submission through HCS ARM instead of using the HCS User Interface. Important: New submission ID is required for every submission attempted by agency, regardless was the previous submission for this agency successful or not.	Y	
<SubmissionData>	XML Header - It is the outer most XML tag which needs to be present in order for the system to recognize the "Submission" method.	Y	

XML Tag Name - Header	XML Tag Description	Value Required Y = Yes N = No	Release Comments
<DatasetVersion>	The version of the dataset used in submission. Values may be '3.0' or '3.1'.	Y	

All XML tags in the tables below must be included in a submission. Data identified in the "Value Required" column as "Y" are required for each successful submission. Data identified in the "Value Required" column as "N" are not required in a submission.

Submission Type – Agency Profile

Agency Profile is demographic and financial information that can be sent at any time. It can be sent as an individual submission or with a HUD 9902 submission.

Agency Profile - Section Header & Datamap

The following table lists and describes the section header and HCS ARM datamap section names as found in an Agency Profile XML submission message.

HCS ARM Datamap Section Name - DTD	Description	Utilization
<AgencyProfileData/>	Section Header	This section is to be used when submitting on the Agency Profile data. The submission type indicated in the header is "agency"
<agc_profile/>	It appears as <agency_profile id="1">	This is the section of the XML that defines the details of the agency profile.
<agency_contact/>	This datamap section defines a section related to the Agency Contact data section only.	Indicates a section of the submission related to the Agency's Contact. <i>CMS's are required to send minimum of three agency_contact sections, 'HUD Contact' contact type, 'Office Manager contact type and 'Office Executive' contact type. When only one person is available for HUD contact the information shall be</i>

HCS ARM Datamap Section Name - DTD	Description	Utilization
		<i>duplicated into other required contact types.</i>
<agency_language/>	This datamap section defines listing of languages that agency supports. Multiple agency languages are allowed. If the value is not available default it to 'English'.	Indicates a section of the submission related to the languages the agency supports.
<counselor_profile/>	This datamap section defines a section related to the Counselor Profile data section associated with the agency.	Indicates a section of the submission related to the Counselor Profile.
<agency_counselor />	This datamap section includes agency profile ID and counselor ID.	Indicates a section of the submission related to the Agency Counselor and is of internal use.
<cnslor_training/>	This datamap section includes counselor training session.	Indicates a section of the submission related to counselor training.
<cnslor_training_counselor/>	This datamap section includes counselor ID and training session ID.	Indicates a section of the submission related to counselor and training.

Agency Profile - Data Elements

The following table lists and describes the HCS ARM XML tag names with the respective "Value Required" attribute and release comments for all Agency Profile data elements.

XML Tag Name - Agency	XML Tag Description	Value Required Y = Yes N = No	Release Comments
<agc_name/>	Agency name used in HCS. The value will be converted in upper case while processed	Y	

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XML Tag Name - Agency	XML Tag Description	Value Required Y = Yes N = No	Release Comments
<agc_hcs_id/>	HCS system assigned Agency ID (unique number in HCS system)	Y	
<agc_ein/>	Agency federal employee identification number	Y	Also known as TIN (Tax Identification Number)
<fiscal_year/>	<p>Accepts a two digit year code value.</p> <p>Examples of the values are: 2008 2009</p>	Y	The application controls which fiscal year is open for transactions. By default the current and previous fiscal years are opened to accept transactions.
<reported_month/>	<p>Identifies what month the data is reported for.</p> <p>Allowed only numeric values:</p> <p>1 2 3 4 5 6 7 8 9 10 11 12</p> <p>Note: The numeric value maps to the corresponding month. Example "1" will be used for January.</p>	Y	
<agc_dun_nbr/>	<p>Agency Dunn & Bradstreet identification number</p> <p>If the value is not provided the system will default it to '000000000'.</p>	Y	The value is required to comply with anticipated regulatory changes.
<agc_address1/>	Agency's current physical street address	Y	
<agc_address2/>	Agency's current physical street address 2	N	

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XML Tag Name - Agency	XML Tag Description	Value Required Y = Yes N = No	Release Comments
<agc_address3/>	Agency's current physical street address 3	N	
<agc_address4/>	Agency's current physical street address 4	N	
<agc_city/>	Agency's current city	Y	
<agc_state/>	Agency's current state Allowed values: Please refer to Section 2.2.9 for reference to the web service to retrieve allowed values.	Y	
<agc_zip/>	Agency's current ZIP code. The ZIP code may be provided in short '00000' or full '00000-0000' format.	Y	
<agc_web_site/>	Agency's web site. If the value is not provided the system will default to 'N/A'.	N	
<agc_phone_nbr>	Agency's phone number For public information and inquiries. The phone number shall contain 3 digit area code and 7 digits phone.	Y	
<alternate_phone_nbr>	Agency's toll free number For public information and inquiries. The phone number shall contain 3 digit area code and 7 digits phone. Format value as '999-999-9999x999'	N	
<agc_fax_nbr>	Agency's fax number For public information and inquiries. The fax number shall contain 3 digit area code and 7 digits fax.	N	
<agc_email>	Agency's Email For public information and inquiries. If the value is not available default it to 'N/A'.	N	
<agc_faith_based_ind />	Indicator that identifies the agency as a faith based organization	Y	

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XML Tag Name - Agency	XML Tag Description	Value Required Y = Yes N = No	Release Comments
	Allowed values: 'Y'/'N' (upper case)		
<agc_colonias_ind />	Indicator of services provided to the Colonias population. Allowed values: 'Y'/'N' (upper case)	Y	
<agc_migrfarm_worker_ind />	Indicator that the agency serves migrant farm workers. Allowed values: 'Y'/'N' (upper case)	Y	
<agc_counselin_budget_amt />	Identifies Agency's total Housing Counseling Budget. The data shall contain integer numeric value only.	Y	
<agc_cms_type/>	The name of the client management system used by the agency. Allowed values: Please refer to Section 2.2.9 for reference to the web service to retrieve allowed values.	Y	
<contact_type/>	Identifies the type of agency personnel. Allowed values: Numeric String 2 Office Executive 3 Office Manager 11 HUD Contact	Y	
<contact_fname/>	Agency contact first name	Y	
<contact_lname/>	Agency contact last name	Y	

XML Tag Name - Agency	XML Tag Description	Value Required Y = Yes N = No	Release Comments																										
<contact_mname/>	Agency contact middle name. Middle initial is accepted	N																											
<contact_title/>	Numeric code of Agency contact business title Examples of the values are: <table border="0" data-bbox="574 533 964 968"> <tr> <td>Numeric</td> <td>String</td> </tr> <tr> <td>1</td> <td>'Chairman'</td> </tr> <tr> <td>2</td> <td>'Vice Chairman'</td> </tr> <tr> <td>3</td> <td>'CEO'</td> </tr> <tr> <td>4</td> <td>'COO'</td> </tr> <tr> <td>5</td> <td>'President'</td> </tr> <tr> <td>6</td> <td>'Vice President'</td> </tr> <tr> <td>7</td> <td>'Director'</td> </tr> <tr> <td>8</td> <td>'Superintendent'</td> </tr> <tr> <td>9</td> <td>'Manager'</td> </tr> <tr> <td>10</td> <td>'Supervisor'</td> </tr> <tr> <td>11</td> <td>'Senior Counselor'</td> </tr> <tr> <td>12</td> <td>'Counselor'</td> </tr> </table> Default value = 0 Please refer to Section 2.2.9 for reference to the web service to retrieve allowed values.	Numeric	String	1	'Chairman'	2	'Vice Chairman'	3	'CEO'	4	'COO'	5	'President'	6	'Vice President'	7	'Director'	8	'Superintendent'	9	'Manager'	10	'Supervisor'	11	'Senior Counselor'	12	'Counselor'	Y	
Numeric	String																												
1	'Chairman'																												
2	'Vice Chairman'																												
3	'CEO'																												
4	'COO'																												
5	'President'																												
6	'Vice President'																												
7	'Director'																												
8	'Superintendent'																												
9	'Manager'																												
10	'Supervisor'																												
11	'Senior Counselor'																												
12	'Counselor'																												
<contact_address1/>	Agency mailing street address line 1. <i>This address will be used by HUD to send official business correspondence.</i>	Y																											
<contact_address2/>	Agency mailing street address line 2. <i>This address will be used by HUD to send official business correspondence.</i>	N																											
<contact_city/>	Agency mailing city. <i>This address will be used by HUD to send official business correspondence.</i>	Y																											
<contact_state/>	Agency mailing state. <i>This address will be used by HUD to send official business correspondence.</i> Please refer to Section 2.2.9 for reference to the web	Y																											

XML Tag Name - Agency	XML Tag Description	Value Required Y = Yes N = No	Release Comments
	service to retrieve allowed values.		
<contact_zip_code/>	Agency mailing zip code. The ZIP code may be provided in short '00000' or full '00000-0000' format. <i>This address will be used by HUD to send official business correspondence.</i>	Y	
<contact_phone_nbr/>	Agency contact phone. The phone number shall contain 3 digit area code and 7 digits phone. Format value as '999-999-9999'	Y	
<contact_ext_nbr/>	Agency contact Phone Extension. Numeric value only.	N	
<contact_mobile_nbr/>	Agency contact Mobile Phone. The phone number shall contain 3 digit area code and 7 digits phone. Format value as '999-999-9999'	N	
<contact_fax_nbr/>	Agency contact FAX. The FAX number shall contain 3 digit area code and 7 digits FAX. Format value as '999-999-9999'	N	
<contact_email/>	Agency contact email address for further contacts and communications from HUD. <i>This email address will be used by HUD to send official business communications.</i> If the email is not available provide value 'N/A'.	Y	
<language/>	Unique identifier for language. This field explains the languages the agency supports Allowed values: Please refer to Section 2.2.9	Y	

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XML Tag Name - Agency	XML Tag Description	Value Required Y = Yes N = No	Release Comments
	for reference to the web service to retrieve allowed values. If the language is not available default it to English.		
<cms_counselor_id/>	Counselor ID associated with the agency <i>The agency generated counselor ID is required to link counselors with clients.</i>	Y	
<cnslor_fname/>	Agency counselor first name If the value is not available default it to 'N/A'	Y	
<cnslor_mname/>	Agency counselor middle name	N	
<cnslor_lname/>	Agency counselor last name If the value is not available default it to 'N/A'	Y	
<cnslor_emp_start_date/>	The employment start date	Y	Dataset 3.1.0.0 only
<cnslor_emp_end_date/>	The employment end date. The employment end date needed to be provided when the counselor services are terminated. If no value is provided the system will default it to NULL, and will assume that the counselor is currently employed with the agency.	N	Dataset 3.1.0.0 only
<cnslor_training_title/>	The title of the training course attended by the counselor If the value is not available default it to 'N/A'.	Y	Dataset 3.1.0.0 only
<cnslor_training_date/>	The date of the training course attended by the counselor If the value is not available default it to 'NULL'.	N	Dataset 3.1.0.0 only
<cnslor_training_cert/>	Indicates whether the counselor received a certificate from the training course attended If the value is not available default it to 'N/A'.	Y	Dataset 3.1.0.0 only

XML Tag Name - Agency	XML Tag Description	Value Required Y = Yes N = No	Release Comments
<cnslor_training_org/>	<p>The organization that provided the training course. Possible Values: Numeric String 1 N/A 2 NeighborWorks America 3 Other If the value is not available default it to 'N/A'.</p> <p>Please refer to Section 2.2.9 for reference to the web service to retrieve allowed values.</p>	Y	Dataset 3.1.0.0 only
<cnslor_training_org_other/>	Name of organization that provided the training course if cnslor_training_org value is set to 'Other'.	N	Dataset 3.1.0.0 only
<cnslor_training_sponsor/>	<p>The organization that sponsored the training course Possible Values: Numeric String 1 N/A 2 HUD 3 Other Please refer to Section 2.2.9 for reference to the web service to retrieve allowed values. If the value is not available default it to 'N/A'.</p>	Y	Dataset 3.1.0.0 only
<cnslor_training_sponsor_other/>	Name of organization that sponsored the training course if cnslor_training_org value is set to Other.	N	Will be added in Dataset 3.2.0.0 only (NEW VALUE)
<cnslor_language/>	<p>Language the counselor is able to speak Default value = 'English' Allowed values: Please refer to Section 2.2.9 for reference to the web service to retrieve allowed values. If the language is not available default it to English.</p>	Y	Will be added in Dataset 3.2.0.0 only (NEW VALUE)

XML Tag Name - Agency	XML Tag Description	Value Required Y = Yes N = No	Release Comments
<group_session_id/>	A unique id for an instance of a group session conducted by a counseling agency. <i>Agency shall generate unique id for group sessions.</i> If no group education occurred the value shall be set to '0'.	Y	Dataset 3.1.0.0 only
<group_session_title/>	The title of the group session conducted by a counseling agency. If no group education occurred the value shall be set to 'N/A'.	Y	Dataset 3.1.0.0 only
<group_session_date/>	The day the group session was conducted or the last day of the group session if session spanned multiple days. If no group education occurred the value shall be set to 'NULL'	Y	Dataset 3.1.0.0 only
<group_session_duration/>	The number of hours the group session took. <i>If the group session spans multiple days, then the aggregate number of hours through all the days of the session.</i> If no group education occurred the value shall be set to '0'.	Y	Dataset 3.1.0.0 only
<group_session_counselor_id />	The cms_counselor_id of the counselor that taught or led the group session. If no group education occurred the value shall be set to '0'.	Y	Dataset 3.1.0.0 only
<group_session_type/>	The topic covered in the group session. This provides the data for calculating HUD 9902 group session numbers. Possible Values: Please refer to Section 2.2.9 for reference web service to retrieve allowed values.	Y	Dataset 3.1.0.0 only. Replaces Client_Education_Group_Session data element from Client Profile.

XML Tag Name - Agency	XML Tag Description	Value Required Y = Yes N = No	Release Comments
<group_session_attribute_HUD_grant />	Indicates the type of the HUD Housing Counseling Grant that was used to fund the course. Example: 'Comprehensive', 'HECM', 'Training'. Possible Values: Please refer to Section 2.2.9 for reference web service to retrieve allowed values.	Y	Dataset 3.1.0.0 only.

Submission Type – HUD 9902 Form

The 9902 XML cannot be sent as an individual submission, it must contain the Agency Profile XML. During the pilot the client level XML is optional. Once the pilot phase has concluded, the client level XML will become a mandatory component.

9902 Form - Version 2006 – Data Elements

The following table lists and describes the HCS ARM XML tag names with the respective “Value Required” attribute and dataset version comments for all 9902 form Version 2006 data elements. These fields represent both columns on the 9902 form: “All Counseling and Education Activities” and “Counseling and Education Activities Attributed to HUD Housing Counseling Grant Funds”. ***The Grant Funds column (“Counseling and Education Activities Attributed to HUD Housing Counseling Grant Funds”) shall not be populated by the agency; these figures will be calculated through HCS and should not be submitted as part of the submission. (requiredActivityTypes=4)***

Form 9902 Position	XML Tag Name – 9902 Version 2006	XML Tag Definition	Value Required Y = Yes N = No	Dataset Version Comments
	<Form9902	Section Header	Y	

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Form 9902 Position	XML Tag Name – 9902 Version 2006	XML Tag Definition	Value Required Y = Yes N = No	Dataset Version Comments
	activity_type_id= 4 or 5	The activity types that are reported on the 9902 that are funded by HUD or other sources. Activity=4: All Counseling and Education Activities Activity=5: Counseling and Education Activities Attributed to HUD Housing Counseling Grant Funds	Y	
3.a	<Ethnicity_Clients_Counseling_Hispanic />	Sum of clients counseled with an ethnicity of "Hispanic"	Y	
3.b	<Ethnicity_Clients_Counseling_Non_Hispanic />	Sum of clients counseled with an ethnicity of "Not Hispanic"	Y	
3.c	<Ethnicity_Clients_Counseling_No_Response />	Sum of client counseled with an Ethnicity of "Chose not to respond"	Y	
	<Section_3_Total />	Section 3 Total	Y	
4.a	<Race_Clients_Counseling_American_Indian_Alaskan_Native />	Sum of clients counseled who are "American Indian/Alaskan Native"	Y	
4.b	<Race_Clients_Counseling_Asian />	Sum of clients counseled who are "Asian"	Y	
4.c	<Race_Clients_Counseling_Black_African_American />	Sum of clients counseled who are "Black or African American"	Y	
4.d	<Race_Clients_Counseling_Pacific_Islanders />	Sum of clients counseled who are "Native Hawaiian or Other Pacific Islander"	Y	
4.e	<Race_Clients_Counseling_White />	Sum of clients counseled who are "White"	Y	
4.f	<MultiRace_Clients_Counseling_AMINDWHT />	Sum of clients counseled who are "American Indian or Alaska Native <i>and</i> White"	Y	
4.g	<MultiRace_Clients_Counseling_ASIANWHT />	Sum of clients counseled who are "Asian <i>and</i> White"	Y	

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Form 9902 Position	XML Tag Name – 9902 Version 2006	XML Tag Definition	Value Required Y = Yes N = No	Dataset Version Comments
4.h	<MultiRace_Clients_Counseling_BLKWHT />	Sum of clients counseled who are “Black or African American <i>and</i> White”	Y	
4.i	<MultiRace_Clients_Counseling_AMRCIN DBLK />	Sum of clients counseled who are “American Indian or Alaska Native <i>and</i> Black or African American”	Y	
4.j	<MultiRace_Clients_Counseling_OtherML TRC />	Sum of clients counseled who are “Other multiple race”	Y	
4.k	<MultiRace_Clients_Counseling_NoResponse />	Sum of clients counseled who “Chose not to respond”	Y	
	<Section_4_Total />	Section 4 Total	Y	
5.a	<Lesser50_AMI_Level />	Sum of all clients with income levels “less than 50% of Area Median Income (AMI)”	Y	
5.b	<a50_79_AMI_Level />	Sum of all clients with income levels “between 50 – 79% of AMI” Default=0	Y	
5.c	<a80_100_AMI_Level />	Sum of all clients with income levels “between 80 – 100% of AMI” Default=0	Y	
5.d	<Greater100_AMI_Level />	Sum of all clients with income levels “greater than 100% AMI” Default=0	Y	
5.e	<AMI_No_Response />	Sum of all clients with income levels of “Chose not to respond” Default=0	Y	
	<Section_5_Total />	Section 5 Total	Y	
6.a	<Compl_Homebuyer_Educ_Workshop />	Sum of clients “Completed pre-purchase homebuyer education workshop”	Y	

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Form 9902 Position	XML Tag Name – 9902 Version 2006	XML Tag Definition	Value Required Y = Yes N = No	Dataset Version Comments
6.b	<Compl_Workshop_HomeFin_Credit_Repair />	Sum of clients “Completed financial literacy workshop, including home financing, budgeting and/or credit repair”	Y	
6.c	<Compl_Resolv_Prevent_Mortg_Deliq />	Sum of clients “Completed resolving or preventing mortgage delinquently workshop”	Y	
6.d	<Compl_HomeMaint_FinMngt />	Sum of clients “Completed non-delinquency post-purchase workshop, including home maintenance and/or financial management for homeowners”	Y	
6.e	<Compl_Help_FairHousing_Workshop />	Sum of clients “Completed fair housing workshop”	Y	
6.f	<Compl_Workshop_Predatory_Lend />	Sum of clients “Completed predatory lending workshop”	Y	
6.g	<Counseling_Rental_Workshop />	Sum of clients “Completed rental workshop”	Y	
6.h	<Compl_Other_Workshop />	Sum of clients completed “Other workshop”	Y	
	<Group_6_Total />	Section 6 Total	Y	
7.a.1	<Count_Prepurchase_Homebuyer_Counseling_PurchasedHousing />	Sum of clients “Seeking Pre-Purchase Homebuyer Counseling – Purchased housing”	Y	
7.a.2	<Count_Prepurchase_Homebuyer_Counseling_within_90 />	Sum of clients “Seeking Pre-Purchase Homebuyer Counseling – Client will be Mortgage Ready within 90 days”	Y	
7.a.3	<Count_Prepurchase_Homebuyer_Counseling_Readyafter_90 />	Sum of clients “Seeking Pre-Purchase Homebuyer Counseling – Client will be Mortgage Ready after 90 days and less than or equal to 180 days; entered debt management plan or some other type of long-term financial plan to prepare for homeownership”	Y	

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Form 9902 Position	XML Tag Name – 9902 Version 2006	XML Tag Definition	Value Required Y = Yes N = No	Dataset Version Comments
7.a.4	<Count_Prepurchase _Homebuyer_Counseling_Longterm_Counseling />	Sum of clients “Seeking Pre-Purchase Homebuyer Counseling – Receiving long term (greater than 180 days) pre-purchase counseling”	Y	
7.a.5	<Count_Prepurchase _Homebuyer_Counseling_Lease_Purchase_Program />	Sum of clients “Seeking Pre-Purchase Homebuyer Counseling – Entered lease purchase program”	Y	
7.a.6	<Count_Prepurchase _Homebuyer_Counseling_Prepurchase_NoPurchase />	Sum of clients “Seeking Pre-Purchase Homebuyer Counseling – Decided Not to purchase housing; no further effort to prepare needed”	Y	
7.a.7	<Count_Prepurchase _Homebuyer_Counseling_Prepurchase_Withdraw />	Sum of clients “Seeking Pre-Purchase Homebuyer Counseling - Withdrew from counseling”	Y	
7.a.8	<Count_Prepurchase _Homebuyer_Counseling_Other />	Sum of clients “Seeking Pre-Purchase Homebuyer Counseling – Other”	Y	
	<Section_7a_Total />	Section 7a Total	Y	
7.b.1	<Count_Prevent_Mortgage_Delinquency_Mortgage_Current />	Sum of clients “Seeking Help with Resolving or Preventing Mortgage Delinquency - Brought mortgage current”	Y	
7.b.2	<Count_Prevent_Mortgage_Delinquency_Mortgage_Refinanced />	Sum of clients “Seeking Help with Resolving or Preventing Mortgage Delinquency - Mortgage refinanced”	Y	
7.b.3	<Count_Prevent_Mortgage_Delinquency_Mortgage_Modified />	Sum of clients “Seeking Help with Resolving or Preventing Mortgage Delinquency - Mortgage modified”	Y	
7.b.4	<Count_Prevent_Mortgage_Delinquency_Second_Mortgage_Received />	Sum of clients “Seeking Help with Resolving or Preventing Mortgage Delinquency - Received second mortgage”	Y	
7.b.5	<Count_Prevent_Mortgage_Delinquency_Repayment_Plan_Initiated />	Sum of clients “Seeking Help with Resolving or Preventing Mortgage Delinquency - Initiated forbearance agreement/repayment plan”	Y	

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Form 9902 Position	XML Tag Name – 9902 Version 2006	XML Tag Definition	Value Required Y = Yes N = No	Dataset Version Comments
7.b.6	<Count_Prevent_Mortgage_Delinquency_Executed_Deed_Lieu />	Sum of clients “Seeking Help with Resolving or Preventing Mortgage Delinquency - Executed a deed-in-lieu”	Y	
7.b.7	<Count_Prevent_Mortgage_Delinquency_Sold_Property_Alternative />	Sum of clients “Seeking Help with Resolving or Preventing Mortgage Delinquency - Sold property/chose alternative housing solution”	Y	
7.b.8	<Count_Prevent_Mortgage_Delinquency_Pre_Foreclosure_Sale />	Sum of clients “Seeking Help with Resolving or Preventing Mortgage Delinquency – Pre-foreclosure sale”	Y	
7.b.9	<Count_Prevent_Mortgage_Delinquency_Mortgage_Foreclosed />	Sum of clients “Seeking Help with Resolving or Preventing Mortgage Delinquency – Mortgage foreclosed”	Y	
7.b.10	<Count_Prevent_Mortgage_Delinquency_Referred_to_Social_Service />	Sum of clients “Seeking Help with Resolving or Preventing Mortgage Delinquency – Counseled and referred to another social service or emergency assistance agency”	Y	
7.b.11	<Count_Prevent_Mortgage_Delinquency_Partial_Claim_FHA_Lender />	Sum of clients “Seeking Help with Resolving or Preventing Mortgage Delinquency – Obtained partial claim loan from FHA lender”	Y	
7.b.12	<Count_Prevent_Mortgage_Delinquency_Bankruptcy />	Sum of clients “Seeking Help with Resolving or Preventing Mortgage Delinquency – Bankruptcy”	Y	
7.b.13	<Count_Prevent_Mortgage_Delinquency_Debt_Manage_Plan />	Sum of clients “Seeking Help with Resolving or Preventing Mortgage Delinquency – Entered debt management plan”	Y	
7.b.14	<Count_Prevent_Mortgage_Delinquency_Referred_to_Legal />	Sum of clients “Seeking Help with Resolving or Preventing Mortgage Delinquency – Counseled and referred for legal assistance”	Y	
7.b.15	<Count_Prevent_Mortgage_Delinquency_Current_Foreclosure_Prevention />	Sum of clients “Seeking Help with Resolving or Preventing Mortgage Delinquency – Currently receiving foreclosure prevention/budget counseling”	Y	

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Form 9902 Position	XML Tag Name – 9902 Version 2006	XML Tag Definition	Value Required Y = Yes N = No	Dataset Version Comments
7.b.16	<Count_Prevent_Mortgage_Delinquency_Withdraw />	Sum of clients “Seeking Help with Resolving or Preventing Mortgage Delinquency – Withdrew from counseling”	Y	
7.b.17	<Count_Prevent_Mortgage_Delinquency_Other />	Sum of clients “Seeking Help with Resolving or Preventing Mortgage Delinquency – Other”	Y	
	<Section_7b_Total />	Section 7b Total	Y	
7.c.1	<Count_HomeMaintenance_Fin_Management_HECM_Obtained />	Sum of clients “Seeking Help with Home Maintenance and Financial Management for Homeowners – Obtained a Home Equity Conversion Mortgage (HECM)”	Y	
7.c.2	<Count_HomeMaintenance_Fin_Management_HECM_Counselor />	Sum of clients “Seeking Help with Home Maintenance and Financial Management for Homeowners – Counselor on HECM; decided not to obtain mortgage”	Y	
7.c.3	<Count_HomeMaintenance_Fin_Management_Non_Reverse_Mortgage />	Sum of clients “Seeking Help with Home Maintenance and Financial Management for Homeowners – Obtained a non-FHA reverse mortgage”	Y	
7.c.4	<Count_HomeMaintenance_Fin_Management_Homeequity_Loan />	Sum of clients “Seeking Help with Home Maintenance and Financial Management for Homeowners – Received home equity or home improvement loan or other home repair assistance”	Y	
7.c.5	<Count_HomeMaintenance_Fin_Management_Consumer_Loan />	Sum of clients “Seeking Help with Home Maintenance and Financial Management for Homeowners – Received consumer loan (unsecured)”	Y	
7.c.6	<Count_HomeMaintenance_Fin_Management_Mortgage_Refinanced />	Sum of clients “Seeking Help with Home Maintenance and Financial Management for Homeowners – Mortgage refinanced”	Y	

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Form 9902 Position	XML Tag Name – 9902 Version 2006	XML Tag Definition	Value Required Y = Yes N = No	Dataset Version Comments
7.c.7	<Count_HomeMaintenance_Fin_Management_Other_Social_Agency />	Sum of clients “Seeking Help with Home Maintenance and Financial Management for Homeowners – Counseled and referred to other social service agency”	Y	
7.c.8	<Count_HomeMaintenance_Fin_Management_Sold_House />	Sum of clients “Seeking Help with Home Maintenance and Financial Management for Homeowners – Sold house/chose alternative housing solution”	Y	
7.c.9	<Count_HomeMaintenance_Fin_Management_Complete_Budget_Counseling/ />	Sum of clients “Seeking Help with Home Maintenance and Financial Management for Homeowners – Completed financial management/budget counseling”	Y	
7.c.10	<Count_HomeMaintenance_Fin_Management_Complete_Maintenance_counseling/ />	Sum of clients “Seeking Help with Home Maintenance and Financial Management for Homeowners – Completed home maintenance counseling”	Y	
7.c.11	<Count_HomeMaintenance_Fin_Management_Uilities_Current />	Sum of clients “Seeking Help with Home Maintenance and Financial Management for Homeowners – Counseled and utilities brought current”	Y	
7.c.12	<Count_HomeMaintenance_Fin_Management_Legal_Assistance />	Sum of clients “Seeking Help with Home Maintenance and Financial Management for Homeowners – Counseled and referred for legal assistance”	Y	
7.c.13	<Count_HomeMaintenance_Fin_Management_Receiving_Counseling />	Sum of clients “Seeking Help with Home Maintenance and Financial Management for Homeowners – Currently receiving counseling”	Y	
7.c.14	<Count_HomeMaintenance_Fin_Management_Withdrew_Counseling />	Sum of clients “Seeking Help with Home Maintenance and Financial Management for Homeowners – Withdrew from counseling”	Y	

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Form 9902 Position	XML Tag Name – 9902 Version 2006	XML Tag Definition	Value Required Y = Yes N = No	Dataset Version Comments
7.c.15	<Count_HomeMaintenance_Fin_Management_Other />	Sum of clients “Seeking Help with Home Maintenance and Financial Management for Homeowners – Other”	Y	
	<Section_7c_Total />	Section 7c Total	Y	
7.d.1	<Seeking_Help_Housing_Search_Assistance />	Sum of clients “Seeking Help in Locating, Securing, or Maintaining Residence in Rental Housing – Received housing search assistance”	Y	
7.d.2	<Seeking_Help_Housing_Temp_Rental_Relief />	Sum of clients “Seeking Help in Locating, Securing, or Maintaining Residence in Rental Housing – Obtained temporary rental relief”	Y	
7.d.3	<Seeking_Help_Housing_Referred_to_Rental_Assistance />	Sum of clients “Seeking Help in Locating, Securing, or Maintaining Residence in Rental Housing – Counseled and referred to agency with rental assistance program”	Y	
7.d.4	<Seeking_Help_Housing_Recertification_Subsidy_Program />	Sum of clients “Seeking Help in Locating, Securing, or Maintaining Residence in Rental Housing – Advised on recertification for HUD/other subsidy program”	Y	
7.d.5	<Seeking_Help_Housing_Referred_Other_Social_Agency />	Sum of clients “Seeking Help in Locating, Securing, or Maintaining Residence in Rental Housing – Counseled and referred to other social service agency”	Y	
7.d.6	<Seeking_Help_Housing_Referred_Legal_Aid_Agency />	Sum of clients “Seeking Help in Locating, Securing, or Maintaining Residence in Rental Housing – Counseled and referred to legal aid agency for fair housing assistance”	Y	
7.d.7	<Seeking_Help_Housing_Referred_Legal_Agency_Eviction />	Sum of clients “Seeking Help in Locating, Securing, or Maintaining Residence in Rental Housing – Counseled and referred to legal agency for assistance with eviction”	Y	

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Form 9902 Position	XML Tag Name – 9902 Version 2006	XML Tag Definition	Value Required Y = Yes N = No	Dataset Version Comments
7.d.8	<Seeking_Help_Housing_Found_Alternative_Housing />	Sum of clients “Seeking Help in Locating, Securing, or Maintaining Residence in Rental Housing – Found alternative rental housing”	Y	
7.d.9	<Seeking_Help_Housing_Remain_Currenthousing />	Sum of clients “Seeking Help in Locating, Securing, or Maintaining Residence in Rental Housing – Decided to remain in current housing situation”	Y	
7.d.10	<Seeking_Help_Housing_Resolved_Issue />	Sum of clients “Seeking Help in Locating, Securing, or Maintaining Residence in Rental Housing – Resolved issue in current tenancy”	Y	
7.d.11	<Seeking_Help_Housing_Debt_Mngmt_Entered />	Sum of clients “Seeking Help in Locating, Securing, or Maintaining Residence in Rental Housing – Entered debt management/repayment plan”	Y	
7.d.12	<Seeking_Help_Housing_Utilities_Current />	Sum of clients “Seeking Help in Locating, Securing, or Maintaining Residence in Rental Housing – Counseled and utilities brought current”	Y	
7.d.13	<Seeking_Help_Housing_Security_Dep_Dispute />	Sum of clients “Seeking Help in Locating, Securing, or Maintaining Residence in Rental Housing – Resolved security deposit dispute”	Y	
7.d.14	<Seeking_Help_Housing_Current_Counsel ed />	Sum of clients “Seeking Help in Locating, Securing, or Maintaining Residence in Rental Housing – Currently receiving counseling”	Y	
7.d.15	<Seeking_Help_Housing_Withdrew_Counseling />	Sum of clients “Seeking Help in Locating, Securing, or Maintaining Residence in Rental Housing – Withdrew from counseling”	Y	
7.d.16	<Seeking_Help_Housing_Other />	Sum of clients “Seeking Help in Locating, Securing, or Maintaining Residence in Rental Housing – Other”	Y	
	<Section_7d_Total />	Section 7d Total	Y	

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Form 9902 Position	XML Tag Name – 9902 Version 2006	XML Tag Definition	Value Required Y = Yes N = No	Dataset Version Comments
7.e.1	<Count_Occupied_Emergency_Shelter />	Sum of clients “Seeking Shelter or Services for the Homeless – Occupied emergency shelter”	Y	
7.e.2	<Count_Occupied_Transitional_Housing />	Sum of clients “Seeking Shelter or Services for the Homeless – Occupied transitional housing”	Y	
7.e.3	<Count_Occupied_PermanentHouse_RentAssist />	Sum of clients “Seeking Shelter or Services for the Homeless - Occupied permanent housing with rental assistance”	Y	
7.e.4	<Count_Occupied_PermanentHouse_wo_RentAssist />	Sum of clients “Seeking Shelter or Services for the Homeless - Occupied permanent housing without rental assistance”	Y	
7.e.5	<Count_Counseled_Ref_Other_SocialAgency />	Sum of clients “Seeking Shelter or Services for the Homeless – Counseled Referred to other social service agency”	Y	
7.e.6	<Count_Remained_Homeless />	Sum of clients “Seeking Shelter or Services for the Homeless – Remained homeless”	Y	
7.e.7	<Count_Currently_Receiving_Counsel />	Sum of clients “Seeking Shelter or Services for the Homeless – Currently receiving counseling”	Y	
7.e.8	<Count_Withdrew_Counseling />	Sum of clients “Seeking Shelter or Services for the Homeless - Withdrew from Counseling	Y	
7.e.9	<Count_Seek_Shelter_Other />	Sum of clients “Seeking Shelter or Services for the Homeless – Other”	Y	
	<Section_7e_Total />	Section 7e Total	Y	
	<Section_7a_e_Total />	Sum of “Individual Counseling / Section 7 a – e Total”	Y	

Submission Type – Client Level Data

Client Level Data – Includes demographic and counseling data about the agency’s client. It can only be submitted with 9902 and Agency Profile.

Client Level – Section Header & Datamap

The following table lists and describes the HCS ARM datamap section name as found in the Client Level Data portion of an XML submission message.

HCS ARM Datamap Section Name - DTD	Description	Utilization
<client_profile/>	This datamap section defines Client Profile data.	Indicates a section of the submission related to the Client Profile. This section is all client detail information for 1 on 1 counseling sessions.
<attendee/>	This datamap section defines attendees of group sessions.	Indicates a section of the submission related to the attendee. Attendees are those who received educational services as a group session/workshop.

Client Level – Data Elements

The following table lists and describes the HCS ARM XML tag names with the respective “Value Required” attribute and dataset version comments for all Client Level data elements. Client level data pertains to clients who received one on one counseling.

XML Tag Name – Client Data	XML Tag Description	Value Required Y = Yes N = No	Dataset Version Comments
Client_ID_Num	Unique identifier to identify a client within the CMS	Y	
Client_Case_Num	Agency’s file number or case number assigned to the counseling service.	Y	Dataset 3.1.0.0 only
<Client_SSN1 />	Client’s Social Security Number Format value as ‘123-45-6798’.	N	
<Client_SSN2 />	Client’s Social Security Number last four digits only	N	
<Client_First_Name />	Client’s first name	Y	
<Client_Last_Name />	Client’s last name	Y	

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XML Tag Name – Client Data	XML Tag Description	Value Required Y = Yes N = No	Dataset Version Comments
<Client_Middle_Name />	Client's middle name (Middle Initial accepted)	N	
<Client_Street_Addresses_1 />	Client's street address prior to and at the beginning of counseling. If the value is not available default it to 'N/A'.	Y	
<Client_Street_Addresses_2 />	Client's street address 2 prior to and at the beginning of counseling.	N	
<Client_City />	Client's City prior to and at the beginning of counseling	Y	
<Client_State />	Client's state prior to and at the beginning of counseling Allowed values: Please refer to Section 2.2.9 for reference to the web service to retrieve allowed values.	Y	
<Client_Zip />	Client's Zip Code prior to and at the beginning of counseling. The ZIP code may be provided in short '00000' or full '00000-0000' format.	Y	
<Client_New_Street_Address_1 />	Client's street address after counseling if different from before and up to receiving counseling. If the address is not available or not changed after counseling default it to same as <Client_Street_Address_1 />.	Y	Dataset 3.1.0.0 only
<Client_New_Street_Address_2 />	Client's street address after counseling if different from before and up to receiving counseling.	N	Dataset 3.1.0.0 only
<Client_New_City />	Client's City after counseling. Though, only the street address might have changed before and after counseling, specify City if street address has changed. If the address is not available or not changed after counseling default it to same as <Client_City />	Y	Dataset 3.1.0.0 only
<Client_New_State />	Client's State after counseling. Though, only the street address might have changed before and after counseling, specify State if street address has changed. If the address is not available or not changed after counseling default it to same as <Client_State />. Allowed values: Please refer to Section 2.2.9 concerning	Y	Dataset 3.1.0.0 only

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XML Tag Name – Client Data	XML Tag Description	Value Required Y = Yes N = No	Dataset Version Comments
	reference data retrieval using web services.		
<Client_New_Zip />	Client's Zip Code after counseling. Though, only the street address might have changed before and after counseling, specify Zip Code if street address has changed. If the address is not available or not changed after counseling default it to same as <Client_ZIP>.	Y	Dataset 3.1.0.0 only
<Client_Phone_Num />	Client's Phone Number. If the value is not available default it to 'N/A'.	Y	
<Client_Mobile_Phone_Num />	Client's Mobile Phone number	N	
<Client_Fax />	Client's fax number	N	
<Client_Email />	Client's email address	N	
<Client_Family_Size />	The number of individuals that live in the client's home. If the value is not available default it to '0'.	Y	
<Client_Gender />	Client's gender Allowed values: 'F'/'M' (upper case)	Y	Additional data format restriction
<Client_Marital_Status />	Client's marital status description Allowed values: Please refer to Section 2.2.9 for reference to the web service to retrieve allowed values. If the value is not available default it to 'Unknown'.	Y	
<Client_Race_ID />	Client's race Allowed values: Please refer to Section 2.2.9 for reference to the web service to retrieve allowed values. If the value is not available default it to 'Unknown'.	Y	
<Client_Ethnicity_ID />	Client's ethnicity Allowed values: Please refer to Section 2.2.9 for reference to the web service to retrieve allowed values. If the value is not available default it to 'Unknown'.	Y	

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XML Tag Name – Client Data	XML Tag Description	Value Required Y = Yes N = No	Dataset Version Comments
<Client_Household_Head />	Household Head indicator. Indicator for whether the client files as the Head of Household on their taxes. Allowed values: 'Y'/'N' (upper case)	Y	Additional data format restriction
<Client_Household_Gross_Monthly_Income />	Household's gross monthly income. Integer numeric value only. Default value '0'	Y	Additional data format restriction
<Client_Birth_DT />	Client's date of birth Format data as 'MM-DD-YYYY'.	N	Additional data format restriction
<Client_Counselor_ID />	Identifies the Counselor's ID who provided assistance to the client. Refer to <cms_counselor_id> element.	Y	
<Client_Highest_Education_Grade />	Client's description of the highest education received Possible Values: Please refer to Section 2.2.9 for reference to the web service to retrieve allowed values. If the value is not available default it to 'Unknown'.	Y	UPDATED to convert from free form text to discrete values
<Client_Farm_Worker />	Indicator of whether or not the client is a migrant farm worker Allowed values: 'Y'/'N' (upper case)	Y	Additional data format restriction
<Client_Colonias_Resident />	Indicator of whether or not client is a Colonias Resident Allowed values: 'Y'/'N' (upper case)	Y	Additional data format restriction
<Client_HUD_Assistance />	Type of additional HUD programs the client is receiving. If the value is not available default it to 'Not Applicable'. Must select a single value from list below: Allowed Values: Numeric String 2 Rental Voucher 3 Place Based Rental Assistance 4 Home Ownership Voucher 5 Purchase REO Property 6 Down Payment Assistance	Y	Dataset 3.1.0.0 only

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XML Tag Name – Client Data	XML Tag Description	Value Required Y = Yes N = No	Dataset Version Comments
	<p>7 Other HUD Program 8 Not Applicable Please refer to Section 2.2.9 for reference to the web service to retrieve allowed values.</p>		
<Client_Disabled />	<p>Indicator of whether or not the client is disabled Allowed values: 'Y'/'N' (upper case)</p>	Y	Additional data format restriction
<Client_Dependents_Num />	<p>Describes number of individuals in the household that rely on client's support. If the value is not available default it to '0'.</p>	Y	
<Client_Intake_DT />	<p>Date of client's intake into the Agency's program. Format as 'MM-DD-YYYY'.</p>	Y	
<Client_Counsel_Session_DT_Start />	<p>Client Counsel Session Start Date and Time (date/time). If counseling session spans multiple days, record the first day of the session. Format as 'MM-DD-YYYY HH24:MI'.</p>	Y	Additional data format restriction
<Client_Counsel_Session_DT_End />	<p>Client Counsel Session End Date and Time (date/time). If counseling session spans multiple days, record the last day of the session. Format as 'MM-DD-YYYY HH24:MI'.</p>	Y	Additional data format restriction
<Client_Language_Spoken />	<p>The language spoken by the client If the value is not available default it to 'English'. Allowed values: Please refer to Section 2.2.9 for reference to the web service to retrieve allowed values.</p>	Y	
<Client_Session_Duration />	<p>Client total session duration in minutes – all session minutes of the client per a single type of counseling.</p>	Y	
<Client_Counseling_Type />	<p>The method by which the counseling session was conducted (Face to Face; Phone). A single value must be selected from below: Allowed values: Please refer to Section 2.2.9 for reference to the web service to retrieve allowed values.</p>	Y	Changed all enumerated types for Dataset 3.1.0.0
<Client_Counseling_Termination />	<p>The reason for counseling termination. A single value must be selected. Allowed Values: Please refer to Section 2.2.9 9 for reference to the web service to retrieve allowed values. If the value is not available default it to 'Ongoing'.</p>	Y	Dataset 3.1.0.0 only

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XML Tag Name – Client Data	XML Tag Description	Value Required Y = Yes N = No	Dataset Version Comments
<Client_Counseling_Fee/>	The amount client paid for counseling service. Only integer numeric value shall be provided. If the value is not available default it to '0'.	Y	Dataset 3.1.0.0 only Additional data format restriction
<Client_Attribute_HUD_Grant />	Indicates the type of HUD Housing Counseling Grant that was used to service the counseling case. Allowed Values: Please refer to Section 2.2.9 for reference to the web service to retrieve allowed values. If the value is not available default it to 'N/A'.	Y	Added for Dataset 3.1.0.0, replaces Client_Other_HUD_Funding.
<Client_HECM_Certificate />	Indicator of whether client received HUD issued HECM certificate or not Allowed values: Y/ N If the value is not available default it to 'N'.	Y	
<Client_HECM_Certificate_Issue_Date/>	The date the HECM certificate takes effect. Format as 'MM-DD-YYYY'.	N	Dataset 3.1.0.0 only Additional data format restriction
<Client_HECM_Certificate_Expiration_Date/>	The date the HECM certificate expires. Format as 'MM-DD-YYYY'.	N	Dataset 3.1.0.0 only
<Client_HECM_Certificate_ID/>	The HECM Certificate ID	N	Dataset 3.1.0.0 only
<Client_Predatory_Lending />	Indicator of whether or not the client is a victim of predatory lending practices Allowed values: Y/ N	Y	
<Client_Mortgage_Type />	Indicates the client's mortgage type before counseling. Allowed values Please refer to Section 2.2.9 for reference to the web service to retrieve allowed values. If the value is not available default it to 'N/A'.	Y	Added additional allowed values of 40 year fixed, 2 year ARM, and NA
<Client_Mortgage_Type_After/>	Indicates the client's mortgage type after receiving counseling. Allowed values Please refer to Section 2.2.9 for reference to the web service to retrieve allowed values. If the value is not available default it to 'N/A'.	Y	Dataset 3.1.0.0 only

XML Tag Name – Client Data	XML Tag Description	Value Required Y = Yes N = No	Dataset Version Comments												
<Client_Finance_Type_Before />	<p>Indicates the type of financing the client had prior to receiving counseling.</p> <p>Allowed Values</p> <table border="0"> <tr> <td>Numeric</td> <td>String</td> </tr> <tr> <td>6</td> <td>N/A</td> </tr> <tr> <td>8</td> <td>FHA</td> </tr> <tr> <td>9</td> <td>VA</td> </tr> <tr> <td>10</td> <td>Conventional</td> </tr> <tr> <td>11</td> <td>USDA</td> </tr> </table> <p>Please refer to Section 2.2.9 for reference to the web service to retrieve allowed values. If the value is not available default it to 'N/A'.</p>	Numeric	String	6	N/A	8	FHA	9	VA	10	Conventional	11	USDA	Y	Dataset 3.1.0.0 only
Numeric	String														
6	N/A														
8	FHA														
9	VA														
10	Conventional														
11	USDA														
<Client_Finance_Type_After />	<p>Indicates the type of financing the client had after end of counseling.</p> <p>Allowed Values</p> <table border="0"> <tr> <td>Numeric</td> <td>String</td> </tr> <tr> <td>6</td> <td>N/A</td> </tr> <tr> <td>8</td> <td>FHA</td> </tr> <tr> <td>12</td> <td>VA</td> </tr> <tr> <td>13</td> <td>Conventional</td> </tr> <tr> <td>14</td> <td>USDA</td> </tr> </table> <p>Please refer to Section 2.2.9 for reference to the web service to retrieve allowed values. If the value is not available default it to 'N/A'.</p>	Numeric	String	6	N/A	8	FHA	12	VA	13	Conventional	14	USDA	Y	Dataset 3.1.0.0 only
Numeric	String														
6	N/A														
8	FHA														
12	VA														
13	Conventional														
14	USDA														
<Client_FirstTime_Home_Buyer />	<p>Indicator of whether the client is a first time home buyer before receiving counseling and is seeking to be a first time home buyer. Y/N</p> <p>'Yes' indicates the client has never previously owned a home. 'No' indicates the client has previously owned a home.</p>	Y	Dataset 3.1.0.0 only												
<Client_Discrimination_Victim />	<p>Indicator of whether the client is a victim of discrimination in housing</p> <p>Allowed values: Y/N Default value 'N'</p>	Y													
<Client_Mortgage_Closing_Cost />	<p>Client's closing cost on the obtained mortgage Integer numeric value only.</p>	N	Additional data format restriction												
<Client_Mortgage_Interest_Rate />	<p>Client's mortgage interest rate. Numeric value with 3 digits after decimal point.</p>	N	Additional data format restriction												

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AGENCY REPORTING MODULE**

4.0 Appendix A

XML Tag Name – Client Data	XML Tag Description	Value Required Y = Yes N = No	Dataset Version Comments																		
<Client_Referred_By />	<p>Indicates the source of reference the client learned about the program</p> <p>Allowed Values:</p> <table border="0"> <tr> <td>Numeric</td> <td>String</td> </tr> <tr> <td>2</td> <td>HUD Outreach</td> </tr> <tr> <td>3</td> <td>Agency Outreach</td> </tr> <tr> <td>4</td> <td>Another Person</td> </tr> <tr> <td>5</td> <td>Lender</td> </tr> <tr> <td>6</td> <td>Another Agency</td> </tr> <tr> <td>7</td> <td>Real Estate Agent</td> </tr> <tr> <td>8</td> <td>Other</td> </tr> <tr> <td>9</td> <td>N/A</td> </tr> </table> <p>Please refer to Section 2.2.9 for reference to the web service to retrieve allowed values. If the value is not available default it to 'N/A'.</p>	Numeric	String	2	HUD Outreach	3	Agency Outreach	4	Another Person	5	Lender	6	Another Agency	7	Real Estate Agent	8	Other	9	N/A	Y	Added for Dataset 3.1.0.0. Replaces all yes and no data elements concerning client referral.
Numeric	String																				
2	HUD Outreach																				
3	Agency Outreach																				
4	Another Person																				
5	Lender																				
6	Another Agency																				
7	Real Estate Agent																				
8	Other																				
9	N/A																				
<Client_Sales_Contract_Signed />	Indicates if the sales contract has been signed. Please specify a Date value (MM-DD- YYYY)	N	Updated for Dataset 3.1.0.0																		
<Client_Credit_Score />	The client's FICO score from a major credit reporting agency	N																			
<Client_Job_Duration />	Length of time on job in months. If the value is not available default it to '0'.	Y																			
<Client_Household_Debt />	Monthly household liabilities. If the value is not available default it to '0'. Integer numeric value only.	Y	Additional data format restriction																		
<Client_Mortgage_Delinquency />	Mortgage payments missed Allowed values: Y/N Default value 'N'	N																			
<Client_Spouse_First_Name />	Client's Spouse First Name	N																			
<Client_Spouse_Last_Name />	Client's Spouse Last Name	N																			

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XML Tag Name – Client Data	XML Tag Description	Value Required Y = Yes N = No	Dataset Version Comments																				
<Client_Spouse_Middle_Name />	Client's Spouse Middle Name	N																					
<Client_Spouse_SSN />	Client's Spouse SSN Format value as '123-45-6798'.	N																					
<Client_Income_Level />	<p>The client's income level compared to the Average Medium Income (AMI) for the area.</p> <p>Allowed Values:</p> <table border="0"> <tr> <td>Numeric</td> <td>String</td> </tr> <tr> <td>2</td> <td>< 50% of Area Median Income (AMI)</td> </tr> <tr> <td>3</td> <td>50 to 79% of AMI</td> </tr> <tr> <td>4</td> <td>80 to 100% of AMI</td> </tr> <tr> <td>5</td> <td>> 100% AMI</td> </tr> <tr> <td>6</td> <td>Chose not to respond</td> </tr> </table> <p>Please refer to Section 2.2.9 for reference to the web service to retrieve allowed values.</p>	Numeric	String	2	< 50% of Area Median Income (AMI)	3	50 to 79% of AMI	4	80 to 100% of AMI	5	> 100% AMI	6	Chose not to respond	Y	Added for Dataset 3.1.0.0. Replaces all yes and no data elements concerning client income level.								
Numeric	String																						
2	< 50% of Area Median Income (AMI)																						
3	50 to 79% of AMI																						
4	80 to 100% of AMI																						
5	> 100% AMI																						
6	Chose not to respond																						
<Client_Prepurchase_Counsel />	<p>Client's seeking pre-purchase homebuyer counseling and outcomes.</p> <p>Allowed Values:</p> <table border="0"> <tr> <td>Numeric</td> <td>String</td> </tr> <tr> <td>2</td> <td>Purchased Housing</td> </tr> <tr> <td>3</td> <td>Client will be mortgage ready within 90 days</td> </tr> <tr> <td>4</td> <td>Client will be Mortgage Ready after 90 Days; entered debt management plan or some other type of long-term financial plan to prepare for homeownership</td> </tr> <tr> <td>5</td> <td>Receiving long term pre-purchase counseling</td> </tr> <tr> <td>6</td> <td>Entered lease purchase program</td> </tr> <tr> <td>7</td> <td>Decided Not to purchase housing; no further effort to prepare needed</td> </tr> <tr> <td>8</td> <td>Withdrew from counseling</td> </tr> <tr> <td>9</td> <td>Other</td> </tr> <tr> <td>10</td> <td>N/A</td> </tr> </table> <p>Please refer to Section 2.2.9 for reference to the web service to retrieve allowed values. If the value is not available default it to 'N/A'.</p>	Numeric	String	2	Purchased Housing	3	Client will be mortgage ready within 90 days	4	Client will be Mortgage Ready after 90 Days; entered debt management plan or some other type of long-term financial plan to prepare for homeownership	5	Receiving long term pre-purchase counseling	6	Entered lease purchase program	7	Decided Not to purchase housing; no further effort to prepare needed	8	Withdrew from counseling	9	Other	10	N/A	Y	Added for Dataset 3.1.0.0. Replaces all yes and no data elements concerning clients who received Pre-Purchase counseling.
Numeric	String																						
2	Purchased Housing																						
3	Client will be mortgage ready within 90 days																						
4	Client will be Mortgage Ready after 90 Days; entered debt management plan or some other type of long-term financial plan to prepare for homeownership																						
5	Receiving long term pre-purchase counseling																						
6	Entered lease purchase program																						
7	Decided Not to purchase housing; no further effort to prepare needed																						
8	Withdrew from counseling																						
9	Other																						
10	N/A																						
<Client_Prevent_Mortgage_Delinquency />	Client's seeking help in resolving or preventing mortgage delinquency and outcome.	Y	Added for Dataset 3.1.0.0. Replaces all yes and no data																				

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XML Tag Name – Client Data	XML Tag Description	Value Required Y = Yes N = No	Dataset Version Comments																																						
	<p>Allowed Values:</p> <table border="0"> <tr> <td>Numeric</td> <td>String</td> </tr> <tr> <td>2</td> <td>Brought mortgage current</td> </tr> <tr> <td>3</td> <td>Mortgage refinanced</td> </tr> <tr> <td>4</td> <td>Mortgage modified</td> </tr> <tr> <td>5</td> <td>Received second mortgage</td> </tr> <tr> <td>6</td> <td>Initiated forbearance agreement/repayment plan</td> </tr> <tr> <td>7</td> <td>Executed a deed-in-lieu</td> </tr> <tr> <td>8</td> <td>Sold property/chose alternative housing solution</td> </tr> <tr> <td>9</td> <td>Pre-foreclosure sale</td> </tr> <tr> <td>10</td> <td>Mortgage foreclosed</td> </tr> <tr> <td>11</td> <td>Counseled and referred to another social service or emergency assistance agency</td> </tr> <tr> <td>12</td> <td>Obtained partial claim loan from FHA lender</td> </tr> <tr> <td>13</td> <td>Bankruptcy</td> </tr> <tr> <td>14</td> <td>Entered debt management plan</td> </tr> <tr> <td>15</td> <td>Counseled and referred for legal assistance</td> </tr> <tr> <td>16</td> <td>Currently receiving foreclosure prevention/budget counseling</td> </tr> <tr> <td>17</td> <td>Withdrew from counseling</td> </tr> <tr> <td>18</td> <td>Other</td> </tr> <tr> <td>19</td> <td>N/A</td> </tr> </table> <p>Please refer to Section 2.2.9 for reference to the web service to retrieve allowed values. If the value is not available default it to 'N/A'.</p>	Numeric	String	2	Brought mortgage current	3	Mortgage refinanced	4	Mortgage modified	5	Received second mortgage	6	Initiated forbearance agreement/repayment plan	7	Executed a deed-in-lieu	8	Sold property/chose alternative housing solution	9	Pre-foreclosure sale	10	Mortgage foreclosed	11	Counseled and referred to another social service or emergency assistance agency	12	Obtained partial claim loan from FHA lender	13	Bankruptcy	14	Entered debt management plan	15	Counseled and referred for legal assistance	16	Currently receiving foreclosure prevention/budget counseling	17	Withdrew from counseling	18	Other	19	N/A		elements concerning clients seeking counseling on mortgage delinquency prevention.
Numeric	String																																								
2	Brought mortgage current																																								
3	Mortgage refinanced																																								
4	Mortgage modified																																								
5	Received second mortgage																																								
6	Initiated forbearance agreement/repayment plan																																								
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8	Sold property/chose alternative housing solution																																								
9	Pre-foreclosure sale																																								
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13	Bankruptcy																																								
14	Entered debt management plan																																								
15	Counseled and referred for legal assistance																																								
16	Currently receiving foreclosure prevention/budget counseling																																								
17	Withdrew from counseling																																								
18	Other																																								
19	N/A																																								
<Client_Home_Maint_Fin_Mgmt/>	<p>Related to section 7 of the 9902 counseling. Client Seeking Help with Home Maintenance and Financial Management for Homeowners.</p> <p>Allowed Values:</p> <table border="0"> <tr> <td>Numeric</td> <td>String</td> </tr> <tr> <td>2</td> <td>Obtained a Home Equity Conversion Mortgage (HECM)</td> </tr> <tr> <td>3</td> <td>Counseled on HECM; decided not to obtain mortgage</td> </tr> <tr> <td>4</td> <td>Obtained a non-FHA reverse mortgage</td> </tr> <tr> <td>5</td> <td>Received home equity or home improvement loan or other home repair assistance</td> </tr> <tr> <td>6</td> <td>Received consumer loan (unsecured)</td> </tr> <tr> <td>7</td> <td>Mortgage refinanced</td> </tr> </table>	Numeric	String	2	Obtained a Home Equity Conversion Mortgage (HECM)	3	Counseled on HECM; decided not to obtain mortgage	4	Obtained a non-FHA reverse mortgage	5	Received home equity or home improvement loan or other home repair assistance	6	Received consumer loan (unsecured)	7	Mortgage refinanced	Y	Added for Dataset 3.1.0.0. Replaces all yes and no data elements concerning clients counseled on Home Maintenance and Financial Management.																								
Numeric	String																																								
2	Obtained a Home Equity Conversion Mortgage (HECM)																																								
3	Counseled on HECM; decided not to obtain mortgage																																								
4	Obtained a non-FHA reverse mortgage																																								
5	Received home equity or home improvement loan or other home repair assistance																																								
6	Received consumer loan (unsecured)																																								
7	Mortgage refinanced																																								

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XML Tag Name – Client Data	XML Tag Description	Value Required Y = Yes N = No	Dataset Version Comments
	8 Counseled and referred to other social service agency 9 Sold house/chose alternative housing solution 10 Completed financial management/budget counseling 11 Completed home maintenance counseling 12 Counseled and utilities brought current 13 Counseled and referred for legal assistance 14 Currently receiving counseling 15 Withdrew from counseling 16 Other 17 N/A Please refer to Section 2.2.9 for reference to the web service to retrieve allowed values. If the value is not available default it to 'N/A'.		
<Client_Seeking_Help_Housing />	Related to section 7 of the 9902 counseling. Client Seeking Help in Locating, Securing, or Maintaining Residence in Rental Housing. Allowed Values: Numeric String 2 Received housing search assistance 3 Obtained temporary rental relief 4 Counseled and referred to agency with rental assistance program 5 Advised on recertification for HUD/other subsidy program 6 Counseled and referred to other social service agency 7 Counseled and referred to legal aid agency for fair housing assistance 8 Counseled and referred to legal aid agency for assistance with eviction 9 Found alternative rental housing 10 Decided to remain in current housing situation 11 Resolved issue in current tenancy 12 Entered debt	Y	Added for Dataset 3.1.0.0. Replaces all rental housing counseling client Yes and No data elements.

XML Tag Name – Client Data	XML Tag Description	Value Required Y = Yes N = No	Dataset Version Comments
	13 management/repayment plan Counseled and utilities brought current 14 Resolved security deposit dispute 15 Currently receiving counseling 16 Withdrew from counseling 17 Other 18 N/A Please refer to Section 2.2.9 for reference to the web service to retrieve allowed values. If the value is not available default it to 'N/A'.		
<Client_Occupied />	Related to section 7.e of the 9902 counseling. Client Seeking Shelter or Services for the Homeless. Allowed Values: Numeric String 2 Occupied emergency shelter 3 Occupied transitional housing 4 Occupied permanent housing with rental assistance 5 Occupied permanent housing without rental assistance 6 Counseled Referred to other social service agency 7 Remained homeless 8 Currently receiving counseling 9 Withdrew from counseling 10 Other 11 N/A Please refer to Section 2.2.9 for reference to the web service to retrieve allowed values. If the value is not available default it to 'N/A'.	Y	Added for Dataset 3.1.0.0. Replaces all Yes and No data elements concerning homeless counseling clients.

Attendee Level – Data Elements

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4.0 Appendix A

The following table lists and describes the HCS ARM XML tag names with the respective “Value Required” attribute and release comments for all attendee level data elements. Attendees are group session/workshop education participants.

<Attendee_fname>	Attendee's first name	Y	Check the session ID. All attendee must be connected to the group session.
<Attendee_lname>	Attendee's last name	Y	
<Attendee_mname>	Attendee's middle name	N	
<Attendee_Fee_Amount />	The amount client paid for course. If the value is not available default it to '0'. Integer numeric value only.	Y	Dataset 3.1.0.0 only Additional data format restriction
<Attendee_Referred_By />	Indicates the source of reference the attendee learned about the program Allowed Values: Please refer to Section 2.2.9 for reference to the web service to retrieve allowed values.	Y	Dataset 3.1.0.0 only
<Attendee_FirstTime_Home_Buyer />	Indicator of whether the attendee is a first time home buyer before receiving education and is seeking to be a first time home buyer. Y/N 'Yes' indicates the attendee has never previously owned a home. 'No' indicates the attendee has previously owned a home.	Y	Dataset 3.1.0.0 only
<Attendee_Address_1 />	Attendee's street address of residence	Y	Dataset 3.1.0.0 only
<Attendee_Address_2 />	Attendee's street address of residence	N	Dataset 3.1.0.0 only
<Attendee_City />	Attendee's City of residence	Y	Dataset 3.1.0.0 only

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<Attendee_State />	Attendee's state of residence Allowed values: Please refer to Section 2.2.9 for reference to the web service to retrieve allowed values.	Y	Dataset 3.1.0.0 only
<Attendee_Zip_Code />	Attendee's Zip Code of residence	Y	Dataset 3.1.0.0 only
<Attendee_Race_ID />	Attendee's race Allowed values: Please refer to Section 2.2.9 for reference to the web service to retrieve allowed values.	Y	Dataset 3.1.0.0 only
<Attendee_Ethnicity_ID />	Client's ethnicity Allowed values: Please refer to Section 2.2.9 for reference to the web service to retrieve allowed values.	Y	Dataset 3.1.0.0 only
<Attendee_Income_Level />	Allowed Values: Please refer to Section 2.2.9 for reference to the web service to retrieve allowed values.	Y	Dataset 3.1.0.0 only.

**5.0 APPENDIX B: HCS ARM SOFTWARE DEVELOPMENT KIT
(SDK)**

5.0 APPENDIX B: HCS ARM SOFTWARE DEVELOPMENT KIT (SDK)

The software Development Kit (SDK) is a stand-alone mock of the HCS ARM interface. It is created to help developers building and testing client software. The SDK contains several JUnit tests that demonstrate how to connect to and invoke methods on the ARM Service. It also contains the latest versions of the ARM WSDL and XSD, and the ARM Databag XSDs.

The latest version of SDK may be downloaded from HUD – HCS website. Please look at the content box on the right side of the following webpage.

<http://www.hud.gov/offices/hsg/sfh/hcc/hccprof21.cfm>

6.0 APPENDIX C: HCS ARM URL TO SUBMIT DATA

6.0 APPENDIX C: HCS ARM URL TO SUBMIT DATA

The SOAP message should be submitted to the following **HSC ARM Pilot URL for testing of compliance with ARM interface specification**. The URL for the production HCS ARM will be delivered to the CMS system or Agency via email upon request.

The URL points to redirecting service which routes connection to appropriate HCS ARM server.

Once the CMS system or Agency is ready to perform submissions to HUD by agency, the URL for submission should be changed to the production HCS ARM (**test data must not be submitted to this URL**).

The URL for the production HCS ARM will be delivered to the CMS system or Agency via email upon successful completion of interface tests and submitting of the Nondisclosure Agreement.

7.0 APPENDIX D: HCS ARM XSD DOCUMENT

7.0 APPENDIX D: HCS ARM XSD DOCUMENT

The arm_databag_3_x.xsd file with reference XSD documents may be downloaded from HUD – HCS website. Please look at the content box on the right side of the following webpage.

<http://www.hud.gov/offices/hsg/sfh/hcc/hccprof21.cfm>

8.0 APPENDIX E: HCS ARM WSDL FILE

8.0 APPENDIX E: HCS ARM XSD DOCUMENT

The following section describes the currently available methods in the HCS ARM Web Services interface. If any changes are made as a result of the Pilot, the WSDL will be regenerated and republished.

The latest WSDL file may be downloaded from HUD – HCS website. Please look at the content box on the right side of the following webpage.

<http://www.hud.gov/offices/hsg/sfh/hcc/hccprof21.cfm>