

Standard Digital Flood Insurance Rate Map (DFIRM) Database Guidelines and Specifications

Standard DFIRM Database Overview

The new FEMA GIS databases will store the digital data used in the map production process, as well as the back-up engineering data for the floodplain studies. These databases will provide a standard, systematic method for FEMA to distribute comprehensive details of its flood studies to the public in a digital format.

Storing and distributing these data in digital format has significant advantages for ease of storage, records search, and distribution. But the biggest advantage of the FEMA databases is that the data are stored as intelligent GIS data. The FEMA database can be used for automated analysis and map updates that are not possible with the current paper products.

For data submissions, FEMA will try to collect as much data as possible in GIS database format for each DFIRM map created. For publication of this data, FEMA will provide a simplified version of the database for end users who are not interested in the complete engineering backup data. This document describes the simplified product that FEMA will publish, the Standard DFIRM Database. This simplified version of the database is not intended to limit the scope of the GIS data collected and submitted to FEMA. In the future, FEMA plans to archive and make the complete engineering back up data package available in GIS database format to users who need these data.

FEMA's mapping process involves a number of participants. Depending on the flood study, FEMA's mapping partners may include Study Contractors (SCs), Flood Map Production Coordination Contractors (MCCs), Cooperating Technical Partners (CTPs – communities participating in the mapping process), and other government agencies. In the future, FEMA's mapping partners will use the database as the primary format for data exchange. The standard structure will facilitate the development, open exchange, and dissemination of DFIRM data and the rapid map update objectives of the Map Modernization Program. Currently FEMA is revising its guidelines and specifications to formulate new submission requirements for study contractors and other mapping partners that will be based on these new product formats. Beginning immediately, FEMA would prefer to have data submitted in this format.

For mapping partners who are creating finished DFIRM maps, all of the tables in this database are required if they apply to the DFIRM being created. Some tables, like those that depict coastal features, do not apply to every DFIRM. The creator of the DFIRM map is responsible for making sure that all of the applicable tables in the Standard DFIRM Database have been completed. Generally, the Standard DFIRM Database for a new DFIRM map will cover the map's entire jurisdiction.

For mapping partners who are performing other functions in the study process, FEMA would also prefer to receive data submittals in this format. However, for mapping partners who are not creating finished DFIRMs maps, not all the tables in the Standard DFIRM Database will apply. Likewise, mapping partners not creating finished DFIRMs

will often only submit data that covers the area covered by their work. The tables that are applicable to a flood hazard mapping activity will vary depending on the specific scope of the activity. The table below shows the Standard DFIRM Database tables that apply to specific components of a mapping activity. Bear in mind that the scope of a particular project could include several of these components and, therefore, all the tables from each of the components will likely apply. Most mapping activities should include a digital base map.

Mapping Partner Activity Table

Digital FIRM Preparation	Digital FIRM Maintenance	Hydrologic and Hydraulic Analyses and Floodplain Mapping	Redelineation of Floodplain Boundaries Using Updated Topographic Data	Refinement of Approximate Zone A Boundaries	Digital Topographic Data Development	Coastal Hazard Analyses and Floodplain Mapping	Digital Base Map Sharing
L_Comm_Info	L_Comm_Info	L_Riv_Model	L_Riv_Model	L_Wtr_Nm	S_Perm_Bmk	L_Cst_Model	L_Wtr_Nm
L_Cst_Model	L_Cst_Model	L_Wtr_Nm	L_Wtr_Nm	S_Fld_Haz_AR		L_Wtr_Nm	S_DOQ_Index
L_MTI_LOMC	L_MTI_LOMC	S_BFE	S_BFE	S_Fld_Haz_LN		S_BFE	S_Gen_Struct
L_Pan_Revis	L_Pan_Revis	S_Fld_Haz_AR	S_Fld_Haz_AR	S_LOMR		S_CBRS	S_Perm_Bmk
L_Pol_FHBM	L_Pol_FHBM	S_Fld_Haz_LN	S_Fld_Haz_LN	S_Perm_Bmk		S_Cst_Tsct_LN	S_PLSS_AR
L_Riv_Model	L_Riv_Model	S_Gen_Struct	S_Gen_Struct	S_Wtr_AR		S_Fld_Haz_AR	S_PLSS_LN
L_Wtr_Nm	L_Wtr_Nm	S_LOMR	S_LOMR	S_Wtr_LN		S_Fld_Haz_LN	S_Pol_AR
S_BFE	S_BFE	S_Perm_Bmk	S_Perm_Bmk			S_Gen_Struct	S_Pol_LN
S_CBRS	S_CBRS	S_Riv_Mrk	S_Riv_Mrk			S_LOMR	S_Quad
S_Cst_Tsct_Ln	S_Cst_Tsct_Ln	S_Stn_Start	S_Stn_Start			S_Perm_Bmk	S_Trnsport_Ld
S_DOQ_Index	S_DOQ_Index	S_Wtr_Ar	S_Wtr_Ar			S_Wtr_Ar	S_Trnsport_Ln
S_FIRM_Pan	S_FIRM_Pan	S_Wtr_Ln	S_Wtr_Ln			S_Wtr_Ln	S_Trnsport_Pt
S_Fld_Haz_Ar	S_Fld_Haz_Ar	S_XS	S_XS				S_Wtr_Ar
S_Fld_Haz_Ln	S_Fld_Haz_Ln						S_Wtr_Ln
S_Gen_Struct	S_Gen_Struct						
S_LOMR	S_LOMR						
S_Perm_Bmk	S_Perm_Bmk						
S_PLSS_Ar	S_PLSS_Ar						
S_PLSS_Ln	S_PLSS_Ln						
S_Pol_Ar	S_Pol_Ar						
S_Pol_Ln	S_Pol_Ln						
S_Quad	S_Quad						
S_Riv_Mrk	S_Riv_Mrk						
S_Stn_Start	S_Stn_Start						
S_Trnsport_Ld	S_Trnsport_Ld						
S_Trnsport_Ln	S_Trnsport_Ln						
S_Trnsport_Pt	S_Trnsport_Pt						
S_Wtr_Ar	S_Wtr_Ar						
S_Wtr_Ln	S_Wtr_Ln						
S_XS	S_XS						
STUDY_INFO	STUDY_INFO						

Spatial Data and Tabular Data

The complete Standard DFIRM Database product is a GIS database made up of spatial data describing the location of features on the earth and tabular data that describes the attributes of these spatial features. All of the tables described below that begin with “S_” have a spatial component associated with them. The descriptions below are for the attribute data.

If you order the Standard DFIRM Database product from FEMA, the databases are distributed in GIS formats where the links between the spatial data and the attribute data are inherent in the data structure.

Submitted and Distributed Versions of the Standard DFIRM Database

The Standard DFIRM Database has been developed in two versions – one that is submitted to FEMA by its mapping partners and one that is distributed by FEMA to the public. The use of domain tables is the primary difference between the two versions. The database version distributed to the public has a simpler structure for ease of use. This version of the database is described in FEMA’s Flood Hazard Spatial Databases document.

For FEMA’s mapping partners, the following discussion highlights the differences in versions. The use of domain tables in the submitted version is the primary difference between the two versions. However, depending on the scope of a mapping partner’s activities, one or more of the database tables may not apply to those activities. Refer to the Mapping Partner Activity Table for additional information regarding which tables apply to which mapping activities.

Domain tables (tables in the database that begin with D_) were established to assist FEMA’s mapping partners in their creation of the submitted database. These domain tables provide the creator with valid or preferred attribute values. A domain table also helps minimize entry differences by standardizing the value. While creating the S_Fld_Haz_Ar table, for instance, one user might describe an area feature as a “floodway” while another user might describe the same feature as a “FLDWY”. Since both of these entries reflect the same idea, their irregularity makes it difficult to group similar features together. Utilizing a domain table ensures that both of these records possessed the same value (e.g., floodway). However, to capture local characteristics not included in the domain table, mapping partners may also add and use their own value in the domain table (i. e., a more restrictive locally regulated floodway might be added in the same way that the Colorado River floodway is included). An example of a domain table is shown below.

FLDWAY_LID	FLOODWAY
1000	FLOODWAY
1010	COLORADO RIVER
1020	FLOODWAY CONTAINED IN CHANNEL
1030	FLOWAGE EASEMENT BOUNDARY
1040	STATE ENCROACHMENT
1050	AREA OF SPECIAL CONSIDERATION

Field names that end with “_LID” in the submitted database (e.g., FLDWAY_LID) refer to fields in domain tables. The corresponding field in the distributed database uses the second field name from the domain table (e.g., FLOODWAY). A user who is creating the S_Fld_Haz_Ar table will enter “1000” in that table as the FLDWAY_LID value. In this instance “1000” stands for “Floodway.” Before FEMA distributes the Standard DFIRM Database to the public, the individual spatial tables will be populated with the actual values from the domain tables. The distributed database will not include domain tables. Continuing with the S_Fld_Haz_Ar example, a record in the S_Fld_Haz_Ar submitted table that links to the domain table above, may contain a FLDWAY_LID value

of “1000”. When this table is subsequently distributed by FEMA, the FLDWAY_LID field becomes FLOODWAY, and the record value of “1000” becomes “Floodway”. In addition, the water name look-up table (L_Wtr_Nm) will be treated as a domain table, and the surface water feature names stored in it will be transferred to the appropriate field in the distributed Standard DFIRM Database.

Version for Submission Table Descriptions

Retrieve the MS Access file for the Standard DFIRM Database Submission Version at
http://www.fema.gov/mit/tsd/dl_dfta.htm

Table: S_BFE

The S_BFE table contains information about the Base Flood Elevations (BFE) within a study area. A spatial file with locational information also corresponds with this data table. BFE lines indicate the approximate water surface elevation of the 1% annual chance flood hazard.

The S_BFE table contains the following elements.

BFE_LN_ID	Primary key for table lookup. Assigned by table creator.
ELEV	Base Flood Elevation. The approximate elevation of the 1% annual chance flood. This is the value of the BFE that is printed next to the BFE line on the FIRM.
UNIT_LID	Unit Lookup Identification. A code that provides a link to a valid unit of measurement from the D_Units table. This unit indicates the measurement system used for the BFEs. Normally this would be feet.
V_DATM_LID	Vertical Datum Lookup Identification. A code that provides a link to a valid vertical datum from the D_V_Datum table. The vertical datum indicates the reference surface from which the flood elevations are measured. Normally this would be NAVD88 for new studies.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the S_BFE table.

Table: S_CBRS

The S_CBRS table contains information about the Coastal Barrier Resources System (CBRS) Areas within the study area if applicable. CBRS areas have restrictions on insurance coverage after specified dates for new or substantially improved structures. This table only applies to coastal areas with CBRS zones designated by Congress and shown on the FIRM. Authoritative CBRS locations are shown on Fish and Wildlife Service (FWS) maps. A spatial file with locational information also corresponds with this data table.

The S_CBRS table contains the following elements.

CBRS_ID	Primary key for table lookup. Assigned by table creator.
CBRS_LID	CBRS Lookup Identification. A code that provides a link to a valid CBRS type codes found in the D_CBRS_Typ table. The type code provides details of the types of prohibitions that apply to the area. Normally this would be Coastal Barrier Resources System (CBRS) Area or Otherwise Protected Area (OPA).
CBRS_DATE	CBRS Legislation Date. Date on which restrictions for the CBRS area began. This should be indicated on the FIRM as a note or fill pattern.
CBRS_TF	CBRS, True / False. This field is True if the area is a CBRS or an OPA.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the S_CBRS table.

Table: S_Cst_Tsct_Ln

The S_Cst_Tsct_Ln table contains information about the Coastal Transect Lines within the study area if applicable. The transect lines indicate the location that was used to provide representative topographic information for the coastal flood models used. A spatial file with locational information also corresponds with this data table.

The S_Cst_Tsct_Ln table contains the following elements.

TRAN_LN_ID	Primary key for table lookup. Assigned by table creator.
TRAN_NO	Transect Number. Each transect is normally numbered sequentially.
CST_MDL_ID	Coastal Model Identification. This field is populated by a linking element to the L_Cst_Model table. The L_Cst_Model table contains detailed information about the coastal models that were used to determine the coastal flood hazard for the area of this transect line. This ID field will link the coastal transect to the model information.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the S_Cst_Tsct_Ln table.

Table: S_DOQ_Index

The S_DOQ_Index table contains information about the digital orthophotography if used as a base map for the study area. For standard USGS DOQs, polygons should match quarter-quad boundaries (excluding overedge). Otherwise, polygons should match the boundaries of the orthophotography used (excluding overedge if present). Required if applicable. Not applicable if DOQs not provided. A spatial file with locational information also corresponds with this data table.

Digital orthophotography can be used as a base map if a vector base map that meets the minimum base map specifications is not available.

The S_DOQ_Index table contains the following elements.

DOQ_ID	Primary key for table lookup. Assigned by table creator.
FILENAME	DOQ Filename. This filename should be assigned by the DOQ provider or the table creator.
DOQ_DATE	DOQ Date. This is the date that the DOQ was flown.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the S_DOQ_Index table.

Table: S_FIRM_Pan

The S_FIRM_Pan table contains information about the FIRM panel area. A spatial file with locational information also corresponds with this data table. The spatial extent of this data would depict the area covered by each FIRM panel within the study area.

The S_FIRM_Pan table contains the following elements.

FIRM_ID	Primary key for table lookup. Assigned by table creator.
ST_FIPS	State FIPS. This is the two-digit code that corresponds to the State Federal Information Processing Standard (FIPS) code. This is a standard numbering system that is used by the government. These two numbers correspond to the first two digits of the panel number.
PCOMM	Community or County Identification Number. This is the 3 rd through the 6 th digits of the panel number. For community based maps this corresponds to the FEMA Community Identification number. For county wide maps this is the county FIPS code with a "C".
PANEL	Panel Number. This is 7 th through the 10 th digits in the complete panel number. This is assigned by the scale of the map and the position within the community or county. The panel number scheme is described in detail in the DFIRM Graphic Specifications.
SUFFIX	Map Suffix. This is the final digit in the complete panel number. This is a letter suffix at the end of the panel number. They normally start with 'A' the first time the community or county was mapped and increase sequentially with each update to the map.
FIRM_PAN	FIRM Panel Number. This is the complete FIRM panel number which is made up of ST_FIPS, PCOMM, PANEL, and SUFFIX. This is the 11-digit FIRM panel number that is shown in the title block of the map.
PANEL_LID	Panel Lookup Identification. A code that provides a link to the D_Panel_Typ table. This field will indicate if the maps are community based, county wide, or an unmapped community.
EFF_DATE	Effective Date. This is the effective date of the current map revision. This field is not populated until the final FIRM is ready for hardcopy production by FEMA.

SCALE_LID	Map Scale Lookup Identification. A code that provides a link to a value in the D_Scale table. It is the denominator of the scale of the FIRM.
PNP_Reason	Panel Not Printed Reason. If the FIRM panel is not printed, this is the reason. This could include 'All Zone X' or other reasons.
NW_LAT	Northwest Latitude. This is the latitude of the northwest corner of the FIRM panel. This value is in degrees, minutes, seconds (DDD MM SS.SSS). This should correspond to the USGS DOQ or DOQQ.
NW_LONG	Northwest Longitude. This is the longitude of the northwest corner of the FIRM panel. This value is in degrees, minutes, seconds (DDD MM SS.SSS). This should correspond to the USGS DOQ or DOQQ.
SE_LAT	Southeast Latitude. This is the latitude of the southeast corner of the FIRM panel. This value is in degrees, minutes, seconds (DDD MM SS.SSS). This should correspond to the USGS DOQ or DOQQ.
SE_LONG	Southeast Longitude. This is the longitude of the southeast corner of the FIRM panel. This value is in degrees, minutes, seconds (DDD MM SS.SSS). This should correspond to the USGS DOQ or DOQQ.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the S_FIRM_Pan table.

Table: S_Fld_Haz_Ar

The S_Fld_Haz_Ar table contains information about the flood hazard within the study area. A spatial file with locational information also corresponds with this data table. These zones are used by FEMA to designate the Special Flood Hazard Area (SFHA), identify areas of coastal high hazard flooding, and for insurance rating purposes. These data are the flood hazard areas that are or will be depicted on the FIRM.

The S_Fld_Haz_Ar table contains the following elements.

FLD_AR_ID	Primary key for table lookup. Assigned by table creator.
ZONE_LID	Flood Zone Lookup Identification. A code that provides a link to a valid entry from the D_Zone table. This is the flood zone label / abbreviation for the area.
FLDWAY_LID	Floodway Lookup Identification. A code that provides a link to a valid entry from the D_Floodway table. Floodway areas are designated by FEMA to provide an area that will remain free of development to moderate increases in flood heights due to encroachment on the floodplain.
AR_REVERT	If the area is Zone AR, this field would hold the zone that the area would revert to if the AR zone were removed. This field is only populated if the area is Zone AR.
SFHA_TF	Special Flood Hazard Area, True / False. If the area is within SFHA this field would be True. This field will be true for any area that is coded for any A or V zone flood areas. It should be false for any X or D zone flood areas.
STATIC_BFE	Static Base Flood Elevation. For areas of constant base flood elevation, the base flood elevation is shown beneath the zone label rather than on a BFE line. In this situation the same BFE applies to the entire polygon. This is normally occurs in lakes or coastal zones.
V_DATM_LID	Vertical Datum Lookup Identification. A code that provides a link to a valid vertical datum from the D_V_Datum table. The vertical datum indicates the reference surface from which the flood elevations are measured. Normally this would be NAVD88 for new studies.
DEPTH	Depth Value for Zone AO Areas. This is shown beneath the zone label on the FIRM.

UNIT_LID	Unit Lookup Identification. A code that provides a link to a valid unit of measurement from the D_Units table. This unit indicates the measurement system used for the BFEs. Normally this would be feet.
VELOCITY	Velocity Measurement. For alluvial fan areas (certain Zone AO areas), this is shown beneath the zone label on the FIRM. This value represents the velocity of the flood flow in this area.
VEL_UNITS	Unit of Measurement for the Velocity Attribute. This is shown in the legend where alluvial fans are present.
EFF_DATE	Effective Date. This is the effective date on which this zone was added. Older FIRMs carry an initial effective date for each individual zone. This should be populated if there is already an effective FIRM for the study area.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the S_Fld_Haz_Ar table.

Table: S_Fld_Haz_Ln

The S_Fld_Haz_Ln table contains information about the flood hazard line features for the study area. A spatial file with locational information also corresponds with this data table. These data are the linear representation of the boundaries of the flood hazard areas that are or will be depicted on the FIRM.

The S_Fld_Haz_Ln table contains the following elements.

FLD_LN_ID	Primary key for table lookup. Assigned by table creator.
LN_LID	Line Lookup Identification. A code that provides a link to a valid entry from the D_Ln_Typ table. These line types describe the flood boundary and may be used to indicate how the feature should be depicted on the hardcopy FIRM.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the S_Fld_Haz_Ln table.

Table: S_Gen_Struct

The S_Gen_Struct table contains information about the hydraulic structures within the study area. For new studies it should include all structures shown in the flood profiles. In addition, levees, sea walls and other significant flood control structures should be included. A spatial file with locational information also corresponds with this data table.

The S_Gen_Struct table contains the following elements.

STRUCT_ID	Primary key for table lookup. Assigned by table creator.
STRUCT_LID	Structure Type Lookup Identification. A code that provides a link to a valid entry from the D_Struct_Typ table. This table contains entries for most major types of structures that would be found in hydraulic analyses.
STRUCT_NM	Structure Name. This is the name of the feature and the name that will be shown on the hardcopy FIRM.
WTR_NM_LID	Surface Water Feature Name Lookup Identification. A code that provides a link to the name of the water feature that the structure is associated with. The water feature name is taken from the table L_Wtr_Nm. This is a lookup table that is populated by the creator of the database.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the S_Gen_Struct table.

Table: S_Label_Ld

The S_Label_Ld table contains information about leader lines that would connect transportation and water labels to feature locations on base maps. A spatial file with locational information also corresponds with this data table.

The S_Label_Ld table contains the following element.

LEADER_ID Primary key for table lookup. Assigned by table creator.

Table: S_Label_Pt

The S_Label_Pt table contains information for point locations that would link transportation and water labels to base map features. A spatial file with locational information also corresponds with this data table.

The S_Trnsport_Pt table contains the following elements.

LABEL_ID	Primary key for table lookup. Assigned by table creator.
LABEL	Label for Transportation or Water Feature.
LABEL_TYPE	Identifies the type of feature or purpose of the label.
DEGREES	The degrees of rotation required for the placement of a transportation label onto a hard copy FIRM panel.

Table: S_LOMR

The S_LOMR table contains information about Letter of Map Revision (LOMR) areas that are incorporated into the FIRM. A spatial file with locational information also corresponds with this data table. The spatial information contains the bounding polygon for each LOMR area. This table is currently planned as a mechanism for DFIRM producers to communicate areas of the DFIRM data that were affected by LOMRs. It is not planned for distribution by FEMA once a complete map revision has incorporated these LOMRs into the effective FIRM panel.

The S_LOMR table contains the following elements.

LOMR_ID	Primary key for table lookup. Assigned by table creator.
EFF_DATE	Effective Date of the LOMR.
CASE_NO	Case Number. This is the case number of the LOMR that is assigned by FEMA. The case number is used to track the LOMR's supporting documentation.
SCALE_LID	Map Scale. A code that provides a link to a value in the D_Scale table. The linked value will contain the denominator of the effective scale of the LOMR.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the S_LOMR table.

Table: S_Perm_Bmk

The S_Perm_Bmk table contains information about Permanent Benchmarks that are associated with the study area. A spatial file with locational information also corresponds with this data table.

The S_Perm_Bmk table contains the following elements.

BM_ID	Primary key for table lookup. Assigned by table creator.
PID	Permanent Identifier. This should be the National Geodetic Survey (NGS) assigned or community assigned permanent identifier. It must be unique for each benchmark.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the S_Perm_Bmk table.

Table: S_PLSS_Ar

The S_PLSS_Ar table contains information about the Public Land Survey System (PLSS) areas that are associated with the study area if applicable. This would include the attributes for the range, township, and section areas. A spatial file with locational information also corresponds with this data table.

The S_PLSS_Ar table contains the following elements.

PLSS_AR_ID	Primary key for table lookup. Assigned by table creator.
RANGE	Range number. This is the range number assigned to the PLSS area shown. This attribute would also include the designation of E (east) or W (west) as part of the data. For example, 21W would be an acceptable value.
TWP	Township. This is the township number assigned to the PLSS area shown. This attribute would also include the designation of N (north) or S (south) as part of the data. For example, 14S would be an acceptable value.
SECTION	Section. This is the section number assigned to the PLSS area shown.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the S_PLSS_Ar table.

Table: S_PLSS_Ln

The S_PLSS_Ln table contains information about the boundary lines for the Public Land Survey System (PLSS) that is associated with the study area if applicable. This would include the attributes for the adjacent range and township areas. A spatial file with locational information also corresponds with this data table.

The S_PLSS_Ln table contains the following elements.

PLSS_LN_ID	Primary key for table lookup. Assigned by table creator.
LN_LID	Line Lookup Identification. A code that provides a link to a valid entry from the D_Ln_Typ table. These line types describe the flood boundary and may be used to indicate how the feature should be depicted on the hardcopy FIRM.
E_RANGE	East Range Number. This is the range number assigned to the PLSS area shown to the east of the line feature. This number is shown on the hardcopy FIRM.
W_RANGE	West Range Number. This is the range number assigned to the PLSS area shown to the west of the line feature. This number is shown on the hardcopy FIRM.
N_TWP	North Township. This is the township number assigned to the PLSS area shown to the north of the line feature. This number is shown on the hardcopy FIRM.
S_TWP	South Township. This is the township number assigned to the PLSS area shown to the south of the line feature. This number is shown on the hardcopy FIRM.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the S_PLSS_Ln table.

Table: S_Pol_Ar

The S_Pol_Ar table contains information about the Political Areas within the study area. This would include the attributes for the political areas and other areas such as forests, parks, military lands, and Indian reservations. For the National Flood Insurance Program, it is important to know the jurisdiction that has land use authority over an area. Political jurisdictions individually agree to participate in the NFIP and availability of insurance, floodplain regulations and insurance rates may vary by political jurisdiction. A spatial file with locational information also corresponds with this data table.

The S_Pol_Ar table contains the following elements.

POL_AR_ID	Primary key for table lookup. Assigned by table creator.
POL_Name1	Political Area Name 1. This is the primary name of the area shown. For areas that have more than one name, this would be the primary name with subsequent names shown in fields below. This would correspond to the official name of this jurisdiction used by FEMA within the NFIP.
POL_Name2	Political Area Name 2. This is the secondary name of the area shown.
CO_FIPS	County FIPS Code. This is the three-digit county Federal Informational Processions Standard (FIPS) code.
ST_FIPS	State FIPS. This is the two-digit code that corresponds to the State Federal Information Processing Standard (FIPS) code. This is a standard numbering system that is used by the government. These two numbers correspond to the first two digits of the panel number.
CID	Community Identification Number. This is the number assigned by FEMA to each community for tracking purposes under the NFIP. On newer FIRMs the state FIPS and the CID appear below the community name where it is shown in the body of the map. For single jurisdiction FIRMs, this is the 3 rd through the 6 th digits of the panel number. This number can be obtained from the community status book which can be viewed at www.fema.gov/msc .
COMM_NO	Community Number. This is the six-digit community number assigned by FEMA. It is created by concatenating the state FIPS code with the CID.
ANI_TF	Area Not Included, True / False. This is a true / false field that contains information about the geographical area to determine if it

is included in the FIRM or not. Areas not included fall within the extents of the map, but no flood risk information is shown on this map. This is either because the area is mapped on another FEMA map or because the area is not mapped at all by FEMA.

COM_NFO_ID Community Information Identification. This attribute links to the table L_Comm_Info which contains information about the specific community.

SOURCE_CIT Source Citation. Abbreviation used in the metadata file when describing the source information for the S_Pol_Ar table.

Table: S_Pol_Ln

The S_Pol_Ln table contains information about the boundaries of Political Areas within the study area. This would include the attributes for the political areas and other areas such as forests, parks, military lands, and Indian reservations. A spatial file with locational information also corresponds with this data table.

The S_Pol_Ln table contains the following elements.

POL_LN_ID	Primary key for table lookup. Assigned by table creator.
LN_LID	Line Lookup Identification. A code that provides a link to a valid entry from the D_Ln_Typ table. These line types describe the jurisdictional boundary and can be used to how the feature should be depicted on the hardcopy FIRM.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the S_Pol_Ln table.

Table: S_Quad

The S_Quad table contains information about the US Geological Survey (USGS) 7.5-minute Topographic Quadrangle maps that cover the study area. While USGS Quads do not meet the new FEMA base map standards, they are often useful as a supplementary reference source. The quad information is provided as a convenience to users who may want to cross-reference this map series. A spatial file with locational information also corresponds with this data table.

The S_Quad table contains the following elements.

QUAD_ID	Primary key for table lookup. Assigned by table creator.
QUAD_NO	Quad Number. This is the eight-digit USGS alphanumeric quadrangle identifier. The list of values for each state is published by USGS in the State Indexes to Topographic and Other Map Coverage. This item is composed of three components: the latitude, rounded down to the nearest whole degree, of the 7.5-minute quadrangle map sheet; the longitude, rounded down to the nearest whole degree, of the 7.5-minute quadrangle map sheet; and the alphanumeric map sheet identifier used by USGS (i.e., A1 through H8).
QUAD_NM	Quad Name. This is the name of the quad that is assigned by USGS.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the S_Quad table.

Table: S_Riv_Mrk

The S_Riv_Mrk table contains information about the River Marks shown on the hardcopy FIRM if applicable. A spatial file with locational information also corresponds with this data table.

This table is normally not filled in for coastal analysis.

The S_Riv_Mrk table contains the following elements.

RIV_MRK_ID	Primary key for table lookup. Assigned by table creator.
START_ID	Start Identification. A code that provides a link to a point in the S_Stn_Start table at which the river mark distances start.
RIV_MRK_NO	River Mark Number. This attribute usually represents the distance from a known point (identified by START_ID), such as the confluence with another river, to the current river mark.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the S_Riv_Mrk table.

Table: S_Stn_Start

The S_Stn_Start table contains information about Station Points. These points indicate the reference point that was used as the origin for distance measurements along streams and rivers. This table is referenced by both the S_XS table that contains stream stationing information for cross section and by the S_Riv_Mrk table that contains river distance marker points. A spatial file with locational information also corresponds with this data table.

The S_Stn_Start table contains the following elements.

START_ID	Primary key for table lookup. Assigned by table creator.
START_DESC	Start Description. The description of the location of the station starting point. For example, the confluence with the Main Channel of the Big River.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the S_Stn_Start table.

Table: S_Trnsport_Ln

The S_Trnsport_Ln table contains information about the linear base map transportation features such as roads, railroads, and airports. A spatial file with locational information also corresponds with this data table.

The S_Trnsport_Ln table contains the following elements.

TRANS_ID	Primary key for table lookup. Assigned by table creator.
TRANS_LID	Transportation Lookup Identification. A code that provides a link to valid entries from the D_Trans_Typ table. These line types indicate how the feature should be depicted on the hardcopy FIRM.
RD_S_LID	Road Status Lookup Identification. A code that provides a link to valid entries in the D_Rd_Stat table.
PREFIX	Prefix of the Feature Name. Not all features will have an entry in this attribute. Valid entries might include N for a transportation feature named N Main Street.
FEAT_NM1	Feature Name 1. This is the primary name of the feature. For areas that have more than one name, this would be the primary name with subsequent names shown in fields below.
NM_LID	Name Lookup Identification. A code that provides a link to a feature name type from the table D_Nm_Typ table. Valid entries include items such as road, street, or avenue.
SUFFIX	Suffix of the Feature Name. Not all features will have an entry in this attribute. Valid entries might include NW for a transportation feature named Main Street NW.
FEAT_NM2	Feature Name 2. This is the secondary name of the feature.
FEAT_NM3	Feature Name 3. This is the tertiary name of the feature.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the S_Trnsport_Ln table.

Table: S_Wtr_Ar

The S_Wtr_Ar table contains information about surface water area features. A spatial file with locational information also corresponds with this data table.

The S_Wtr_Ar table contains the following elements.

WTR_AR_ID	Primary key for table lookup. Assigned by table creator.
WATER_LID	Surface Water Feature Lookup Identification. A code that provides a link to valid entries from the D_Wtr_Typ table. This type value describes the classification of the surface water feature. Valid entries include items such as lake, retention pond, and reservoir.
WTR_NM_LID	Surface Water Name Lookup Identification. A code that provides a link to the name of the surface water feature that the structure is associated with. The surface water feature name is taken from the table L_Wtr_Nm. This is a lookup table that is populated by the creator of the database.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the S_Wtr_Ar table.

Table: S_Wtr_Ln

The S_Wtr_Ln table contains information about surface water linear features. A spatial file with locational information also corresponds with this data table.

The S_Wtr_Ln table contains the following elements.

WTR_LN_ID	Primary key for table lookup. Assigned by table creator.
WATER_LID	Surface Water Feature Lookup Identification. A code that provides a link to valid entries from the D_Wtr_Typ table. The type value describes the kind of watercourse represented. Valid entries include items such as stream / river, channel, and shoreline / coastline.
CHAN_LID	Channel Lookup Identification. A code that provides a link to valid entries from the D_Chan_Rep table. This channel type value indicates whether a linear water feature is represented as a stream center line or represented as channel bank locations. Valid entries include single or double.
WTR_NM_LID	Water Name Lookup Identification. A code that provides a link to the name of the water feature that the structure is associated with. The water feature name is taken from the table L_Wtr_Nm. This is a lookup table that is populated by the creator of the database.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the S_Wtr_Ln table.

Table: S_XS

The S_XS table contains information about Cross Section lines. A spatial file with locational information also corresponds with this data table. These lines represent the locations of channel surveys performed for input into the hydraulic model used to calculate flood elevations. These locations are also shown on the flood profiles in the Flood Insurance Study report and can be used to cross reference the flood profiles to the planimetric depiction of the flood hazard.

The S_XS table contains the following elements.

XS_LN_ID	Primary key for table lookup. Assigned by table creator.
XS_LTR	Cross Section Letter. The letter that is assigned to the cross section on the hardcopy FIRM and in the Flood Insurance Study (FIS) profiles. This attribute is blank if the cross section is not shown on the FIRM. For a digital conversion, only cross sections that are shown on the FIRM will be available.
XS_NO	Cross Section Number. This attribute is used for all cross sections that are created during the engineering analysis. This should be populated with the number sequence that the SC or CTP uses during the engineering analysis. Each cross section should have a unique number. This attribute is not filled in for digital conversions.
START_ID	Start Identification. This is a link to the station start table. The station start describes the origin for the measurements in the STREAM_STN field.
STREAM_STN	Stream Station. This is the SC or CTP measurement along the stream to the cross section location. Normally this is information available in the floodway data table in the FIS so the attribute can be populated for digital conversions.
XS_LN_TYP	Cross Section Line Type. This attribute should contain 'LETTERED' for cross sections that are shown on the hardcopy FIRM. If the cross section will not be shown on the hardcopy FIRM is should contain 'NOT LETTERED' to indicate that it is part of the backup data for the study.
WTR_NM_LID	Surface Water Feature Name Lookup Identification. A code that provides a link to the name of the water feature that the cross section is associated with. The water feature name is taken from

the table L_Wtr_Nm. This is a lookup table that is populated by the creator of the database.

WSEL_100

Water Surface Elevation for the 1% Annual Chance Flood Event. This is the precise elevation of the regulatory BFE calculated at this cross section. This elevation exactly matches the published BFE in the flood profiles. This number is determined during the engineering analysis for the study. If this is a digital conversion, it can be obtained from the regulatory column in the floodway data table in the FIS.

RIV_MDL_ID

River Model Identification. A code that provides a link to the riverine model table, L_Riv_Model. The L_Riv_Model table will identify the hydrologic and hydraulic models used to calculate the flood hazard at the vicinity of this cross section line.

SOURCE_CIT

Source Citation. Abbreviation used in the metadata file when describing the source information for the S_XS table.

Table: Study_Info

The Study_Info table contains details about the study such as the study name, datum, projection, etc.

The Study_Info table contains the following elements.

STD_NFO_ID	Primary key for table lookup. Assigned by table creator.
STUDY_PRE	Study Prefix. This is the prefix of the study name such as 'City of' or 'Town of'.
STUDY_NM	Study Name. This attribute contains the main portion of the study name which is shown in the title block of the hardcopy FIRM.
STATE_NM	State Name. This attribute contains the state name for the study and is shown in the title block of the hardcopy FIRM.
CNTY_NM	County Name. This is the county name that the study is related to. The county name is also shown in the title block section of the hardcopy FIRM.
JURIS_TYP	Political Jurisdiction Type. This attribute contains entries such as 'Unincorporated Areas' or 'All Jurisdictions' or 'and Incorporated Areas' or it is left empty. If there is data in this attribute, it is also shown in the title block section of the hardcopy FIRM.
LG_PAN_NO	Largest Panel Number. This is the highest panel number shown on the FIRM index for the area mapped. This number is shown in the title block section of the hardcopy FIRM.
OPP_TF	Only Panel Printed. This is a true / false field that is only True if the study has only one panel printed.
H_DATUM	Horizontal Datum. Valid entries for this attribute include NAD27 or NAD83. This is the datum of the printed FIRM. The horizontal datum describes the reference system on which the horizontal coordinate information shown on the FIRM is based. NAD83 is the preferred horizontal datum.
V_DATM_LID	Vertical datum Lookup Identification. A code that provides a link to valid vertical datum from the D_V_Datum table. This is the vertical datum of the printed FIRM. The vertical datum describes the reference surface from which elevation on the map is measured. Normally this would be NAVD88 for new studies.

PROJECTION	Map Projection used for Hardcopy FIRM Publication. The preferred projection of FEMA is UTM.
PROJ_ZONE	Projection Zone. When using many map projections, there is a zone associated with the area. This field is populated based on the projection selected for the final hardcopy map production.
CW_TF	Countywide, True / False. This attribute is true if the hardcopy FIRM includes all incorporated areas and any unincorporated areas of the county.
CBRS_PHONE	Coastal Barrier Resources System (CBRS) Phone Number. This is the phone number for the contact person / office for the CBRS legislative area.
CBRS_REG	CBRS Coordinator's Region. This attribute contains the Fish and Wildlife Service (FWS) region that the FIRM covers.
RTROFT_TF	Retrofit, True / False. Retrofit is an attribute that would show true if old study data were used with updated stream location data. If flood features were adjusted to fit new stream locations due to better base map information this attribute would be true as well.

Table: D_CBRS_Typ

The D_CBRS_Typ table lists valid types of Coastal Barrier Resource System (CBRS) areas and contains the following elements.

CBRS_LID Primary key for table lookup that links to the S_CBRS table.

CBRS_TYP Coastal Barrier Resource System Area Type. The type code provides details of the types of prohibitions that apply to the area. Valid entries are shown in the table below.

CBRS_LID	CBRS_TYP
1000	COASTAL BARRIER RESOURCES SYSTEM
1010	OTHERWISE PROTECTED AREA

Table: D_Chan_Rep

The D_Chan_Rep table lists valid channel representations and contains the following elements.

CHAN_LID Primary key for table lookup that links to the S_Wtr_Ln table.

CHAN_REP Channel Representation. Single means linear water features represented by a centerline. Double means linear water features represented by shorelines or channel banks.

Valid entries are shown in the table below.

CHAN_LID	CHAN_REP
1000	SINGLE
1010	DOUBLE

Table: D_Floodway

The D_Floodway table lists valid floodway representations and contains the following elements.

FLDWAY_LID Primary key for table lookup that links to the S_Fld_Haz_Ar table.

FLOODWAY Floodway Type. Floodway areas are designated by FEMA to provide an area that must be kept free of encroachment so that the 1 % annual chance event can be carried without substantial increase in flood heights. Normal floodway areas are 'floodway'. Special cases will have a note on the hardcopy FIRM.

Valid entries are shown in the table below.

FLDWAY_LID	FLOODWAY
1000	FLOODWAY
1010	COLORADO RIVER
1020	FLOODWAY CONTAINED IN CHANNEL
1030	FLOWAGE EASEMENT BOUNDARY
1040	STATE ENCROACHMENT
1050	AREA OF SPECIAL CONSIDERATION

Table: D_Hydra

The D_Hydra table lists valid hydraulic models and contains the following elements.

HYDRA_LID Primary key for table lookup that links to the L_Riv_Model table.

HYDRA_MDL Hydraulic Model. This is the name or abbreviation of the hydraulic model that was used for the engineering analysis.

Valid entries are shown in the table below.

HYDRA_LID	HYDRA_MDL
1000	ADLCPR
1001	DAMBRK
1002	E431
1003	FEQ
1004	FEQUTL
1005	FESWMS
1006	FLDWY
1007	HEC-2
1008	HEC-RAS
1009	J635
1010	NETWORK
1011	SWMM
1012	TABS2
1013	UNET
1014	WSP-2
1015	WSPG
1016	WSPRO

Table: D_Hydro

The D_Hydro table lists valid hydrologic models and contains the following elements.

HYDRO_LID Primary key for table lookup that links to the L_Riv_Model table.

HYDRO_MDL Hydrologic Model. This is the name or abbreviation of the hydrologic model that was used for the engineering analysis.

Valid entries are shown in the table below.

HYDRO_LID	HYDRO_MDL
2000	DR3M
2001	FAN
2002	HEC-1
2003	HEC-FFA
2004	HEC-IFH
2005	HEC-HMS
2006	HSPF
2007	HYMO
2008	PEAKFQ
2009	PSU-IV
2010	RATIONAL METHOD
2011	REGRESSION EQUATION
2012	TR-20
2013	TR-55

Table: D_Ln_Typ

The D_Ln_Typ table lists valid line types used to determine symbology and drawing order on the hardcopy FIRM and contains the following elements.

LN_LID Primary key for table lookup that links to the S_Fld_Haz_Ln table, the S_PLSS_Ln table, and the S_Pol_Ln table. Values 1000 thru 1999 are reserved for political lines, values 2000 thru 2999 are reserved for flood hazard lines, and values 3000 thru 3999 are reserved for PLSS lines.

LN_TYP Line Type. This is the boundary line type such as a floodplain boundary line, political boundary line, or PLSS boundary line. NOTE: The symbol ‘%’ is a reserved symbol in most software packages so the word ‘percent’ was abbreviated to ‘pct’.

Valid entries are shown in the table below.

LN_LID	LN_TYP
1010	AREA NOT INCLUDED
1020	CORPORATE
1021	EXTRATERRITORIAL JURISDICTION
1030	COUNTY
1040	FOREST
1041	PARK
1042	RESERVATION
1050	INTERNATIONAL
1060	STATE
1070	URBAN GROWTH BOUNDARY
1080	MUNICIPAL URBAN DRAINAGE DISTRICT
1090	LEVEE IMPROVEMENT DISTRICT
2000	0.2 pct ANNUAL CHANCE FLOOD HAZARD
2001	1 pct ANNUAL CHANCE FLOOD HAZARD
2002	ZONE D
2030	APPARENT LIMIT
2031	LIMIT OF DETAILED STUDY
2032	LIMIT OF FLOODWAY
2033	LIMIT OF STUDY
2040	FLOODWAY
2050	FLOWAGE EASEMENT BOUNDARY
2051	STATE ENCROACHMENT LINE
2052	ZONE BREAK
2053	DATE BOUNDARY
3000	QUARTER SECTION
3010	RANGE
3020	TOWNSHIP

3030	SECTION
9000	END OF SPATIAL EXTENT

Table: D_Nm_Typ

The D_Nm_Typ table lists valid transportation feature name types and contains the following elements.

NM_LID Primary key for table lookup that links to the S_Trnsport_Ln table.

NM_TYP Name Type. The transportation feature name type.

Valid entries are shown in the table below.

NM_LID	NM_TYP
1000	ALLEY
1001	ARCADE
1002	AVENIDA
1003	AVENUE
1004	BOULEVARD
1005	BYPASS
1006	CALLE
1007	CAUSEWAY
1008	CENTER
1009	CIRCLE
1010	COURT
1011	COVE
1012	CRESCENT
1013	CROSSING
1014	DRIVE
1015	ESTE
1016	EXPRESSO
1017	EXPRESSWAY
1018	FREEWAY
1019	HIGHWAY
1020	LANE
1021	LOOP
1022	MOTORWAY
1023	NORTE
1024	OESTE
1025	PARKWAY
1026	PASEO
1027	PASS
1028	PATH
1029	PIKE
1030	PLACE
1031	PLAZA
1032	ROAD
1033	ROW

1034	RUE
1035	SQUARE
1036	STREET
1037	SUR
1038	TERRACE
1039	THROUGHWAY
1040	TRAFFICWAY
1041	TRAIL
1042	TURNPIKE
1043	WAY

Table: D_Panel_Typ

The D_Panel_Typ table lists valid FIRM panel types and contains the following elements.

PANEL_LID Primary key for table lookup that links to the S_FIRM_Pan table.

PANEL_TYP Panel Type. The type of FIRM panel that identifies whether the panel is printed or not printed and whether it is community based or countywide mapping.

Valid entries are shown in the table below.

PANEL_LID	PANEL_TYP
1000	COUNTYWIDE, PANEL PRINTED
1010	COUNTYWIDE, NOT PRINTED
1020	COMMUNITY BASED, PANEL PRINTED
1030	COMMUNITY BASED, NOT PRINTED
1040	UNMAPPED COMMUNITY

Table: D_Rd_Stat

The D_Rd_Stat table lists valid road status values and contains the following elements.

RD_S_LID Primary key for table lookup that links to the S_Trnsport_Ln table.

RD_STAT Road Status.

Valid entries are shown in the table below.

RD_S_LID	RD_STAT
1000	PAVED
1010	PROPOSED
1020	UNDER CONSTRUCTION
1030	UNIMPROVED

Table: D_Runup_Mdl

The D_Runup_Mdl table lists valid wave runup models that can be used for the engineering analysis and contains the following elements.

RUNUP_LID Primary key for table lookup that links to the L_Cst_Model table.

RUNUP_MDL Runup Model. This is the name or abbreviation of the runup model that was used for the engineering analysis.

Valid entries are shown in the table below.

RUNUP_LID	RUNUP_MDL
1010	RUNUP
1020	ACES RUNUP
1030	GREAT LAKES WAVE RUNUP MODEL

Table: D_Scale

The D_Scale table lists valid FIRM scales and ratios and contains the following elements.

SCALE_LID Primary key for table lookup that links to the S_FIRM_Pan table and the S_LOMR table.

SCALE Map Scale. This is the denominator of the FIRM scale or effective LOMR scale as a ratio. For example, 24000 is the denominator for a 1" = 2000' map.

Valid entries are shown in the table below.

SCALE_LID	SCALE
1000	6000
1010	12000
1020	24000

Table: D_Struct_Typ

The D_Struct_Typ table lists valid structure types associated with general hydraulic structures and contains the following elements.

STRUCT_LID Primary key for table lookup that links to the S_Gen_Struct table.

STRUCT_TYP Structure Type. These are hydraulic structures within the study area.

Valid entries are listed in the table below.

STRUCT_LID	STRUCT_TYP
1000	AQUEDUCT
1001	BRIDGE
1002	CULVERT
1003	DAM
1004	DIKE
1005	DOCK
1006	FISH LADDER
1007	FOOTBRIDGE
1008	FLUME
1009	GATE
1010	JETTY
1011	LEVEE
1012	LOCH
1013	PENSTOCK
1014	PIER
1015	SEAWALL
1016	WEIR
1017	WING WALL

Table: D_Surge_Mdl

The D_Surge_Mdl table lists valid hurricane surge models that can be used during the engineering analysis and contains the following elements.

SURGE_LID Primary key for table lookup that links to the L_Cst_Model table.

SURGE_MDL Hurricane Surge Model. This is the name or abbreviation of the hurricane surge model that was used for the engineering analysis.

Valid entries are listed in the table below.

SURGE_LID	SURGE_MDL
1010	FEMA SURGE
1020	NEW ENGLAND TIDE PROFILE
1030	NOREASTER SURGE MODEL

Table: D_Trans_Typ

The D_Trans_Typ table lists valid transportation feature types for base map features and contains the following elements.

TRANS_LID Primary key for table lookup that links to the S_Trnsport_Ln table. Values 1000 thru 1999 are reserved for road types, values 2000 thru 2999 are reserved for railroads, values 3000 thru 3999 are reserved for airports, and values 4000 thru 4999 are reserved for water transportation.

TRANS_TYP Transportation Feature Type.

Valid entries are listed in the table below.

TRANS_LID	TRANS_TYP
1000	UNDEFINED RD
1001	PRIMARY RD
1002	SECONDARY RD
1003	TRAIL
1010	RD TUNNEL
1020	FORD
2000	UNDEFINED RR
2001	ACTIVE RR
2002	ABANDONED RR
2003	DISMANTLED RR
2010	RR TUNNEL
3000	AIRPORT
4000	FERRY

Table: D_Units

The D_Units table lists valid units of measurement throughout the database and contains the following elements.

UNIT_LID Primary key for table lookup that links to the S_BFE_Ln table and the S_Fld_Haz_Ar table.

UNITS Unit of Measurement. Varies depending on the variable that it is quantifying. The legend on the hardcopy FIRM should specify the units.

Valid entries are shown in the table below.

UNIT_LID	UNITS
1000	FEET
1010	METERS

Table: D_V_Datum

The D_V_Datum table lists valid vertical datums and contains the following elements.

V_DATM_LID Primary key for table lookup that links to the S_BFE_Ln table, the S_Fld_Haz_Ar table, and the Study_Info table.

V_DATUM Vertical Datum. NAVD88 is preferred.

Valid entries are shown in the table below.

V_DATM_LID	V_DATUM
1000	MSL
1010	NAVD88
1020	NGVD29

Table: D_Water_Typ

The D_Water_Typ table lists valid water feature types and contains the following elements.

WATER_LID Primary key for table lookup that links to the S_Wtr_Ar table and the S_Wtr_Ln table. Values 5000 thru 5999 are reserved for linear water features and values 6000 thru 6999 are reserved for polygonal water features.

WATER_TYP Surface Water Feature Type.

Valid entries are shown in the table below.

WATER_LID	WATER_TYP
5000	CHANNEL
5001	DITCH
5002	GLACIER
5003	GULCH
5004	HATCHERY
5005	PERENNIAL RIVER/STREAM
5006	RACE
5007	SHORELINE/COASTLINE
5008	WASH
5009	WATERFALL
5020	INTERMITTANT RIVER/STREAM
5021	PROFILE BASELINE
5022	WATER SEPARATION LINE
6000	LAKE
6001	BOG
6002	RESERVOIR
6003	RETENTION POND
6004	SWAMP
6005	TAILINGS POND

Table: D_Wave_Mdl

The D_Wave_Mdl table lists valid wave height models used during the engineering analysis and contains the following elements.

WAVE_LID Primary key for table lookup that links to the L_Cst_Model table.

WAVE_MDL Wave Height Model. This is the name or abbreviation of the wave height model that was used for the engineering analysis.

Valid entries are shown in the table below.

WAVE_LID	WAVE_MDL
1010	WHAFIS
1020	GREAT LAKES WHAFIS

Table: D_Zone

The D_Zone table lists valid FIRM flood zones and contains the following elements.

ZONE_LID Primary key for table lookup that links to the S_Fld_Haz_Ar table.

FLD_ZONE Flood Zone. This is the flood zone designation. These zones are used by FEMA to designate the Special Flood Hazard Area, identify areas of coastal high hazard flooding, and for insurance rating purposes. NOTE: The symbol '%' is a reserved symbol in most software packages so the word 'percent' was abbreviated to 'pct'.

Valid entries are shown in the table below.

ZONE_LID	FLD_ZONE
1000	A
1001	AE
1002	AH
1003	AO
1004	AR
1005	1 pct FLOOD HAZARD CONTAINED IN CHANNEL
1006	1 pct FLOOD HAZARD CONTAINED IN CULVERT
1007	1 pct FUTURE CONDITIONS
1008	A99
1009	V
1010	VE
2000	0.2 pct FLOOD HAZARD
2001	0.2 pct FLOOD HAZARD CONTAINED IN CHANNEL
2002	0.2 pct FLOOD HAZARD CONTAINED IN CULVERT
3000	AREA NOT INCLUDED
4000	D
4001	X PROTECTED BY LEVEE
4002	X
5000	OPEN WATER

Table: L_Comm_Info

The L_Comm_Info table is a lookup table that contains community map repository details and map history information that is shown on the FIRM legend or index.

The L_Comm_Info table contains the following elements.

COM_NFO_ID	Primary key for table lookup that links to the S_Pol_Ar table.
REPOS_ADR1	First line of the mailing or street address for the map repository. The map repository is the office the community has designated as responsible for maintaining copies of all the flood hazard information FEMA publishes for the community. The public may view copies of the current effective information at the map repository. This information is also displayed in the FIRM legend or index. For example, this line might read 'Division of Community and Economic Development'.
REPOS_ADR2	Second line of the mailing or street address for the map repository. This information is also displayed in the FIRM legend or index. For example, this line might read '226 W. Fourth Street'.
REPOS_ADR3	Third line of the mailing or street address for the map repository. This information is also displayed in the FIRM legend or index. For example, this line might read 'Suite 200'.
REPOS_CITY	City portion of the mailing or street address for the map repository. This information is also displayed in the FIRM legend or index. For example, this line might read 'Springfield'.
REPOS_ST	State portion of the mailing or street address for the map repository. This information is also displayed in the FIRM legend or index. For example, this line might read 'IL'.
REPOS_ZIP	ZIP Code portion of the mailing or street address for the map repository. This information is also displayed in the FIRM legend or index. For example, this line might read '62269'.
IN_ID_DAT	Initial identification date for the community as shown on the FIRM legend, index, or Flood Insurance Study (FIS) text. This information can also be obtained from FEMA.
IN_NFIP_DT	Initial date of the first NFIP map published by FEMA for this community. This can be obtained from the FIRM legend, index, or FIS text. This information can also be obtained from FEMA.

IN_FRM_DAT	Initial date FIRM was created. This can be obtained from the FIRM legend, index, or FIS text. This information can also be obtained from FEMA.
RECENT_DAT	Most recent panel date. This can be obtained from the FIRM index or the FEMA Community Status book at www.fema.gov/msc .

Table: L_Cst_Model

The L_Cst_Model table is a lookup table that contains information about the coastal models that were used during the engineering analysis. This table is only completed if coastal engineering analysis was completed.

The L_Cst_Model table contains the following elements.

CST_MDL_ID	Primary key for table lookup that links to the S_Cst_Tsct_Ln table.
WTR_NM_LID	Surface Water Feature Name Lookup Identification. This is the name of the water feature that the model is associated with. The water feature name is taken from the table L_Wtr_Nm. This is a lookup table that is populated by the creator of the database.
SURGE_LID	Hurricane Surge Model Lookup Identification. This is the name or abbreviation of the FEMA approved hurricane surge model that is associated with the coastal model for the engineering analysis. The surge model information is taken from the table D_Surge_Mdl.
EFF_SURGE	This is a yes / no field that indicates if this is the effective surge model for the area.
WAVE_LID	Wave Height Model Lookup Identification. This is the name or abbreviation of the FEMA approved wave height model that was used with the coastal model for the engineering analysis. The wave height model information is taken from the table D_Wave_Mdl.
EFF_WAVE	This is a yes / no field that indicates if this is the effective wave height model for the area.
RUNUP_LID	Runup Model Lookup Identification. This is the name or abbreviation of the FEMA approved runup model that was used with the coastal model for the engineering analysis. The runup model information is taken from the table D_Runup_Mdl.
EFF_RUNUP	This is a yes / no field that indicates if this is the effective runup model for the area.
SETUP_METH	Wave Setup Methodology. This information should detail the methodology used when setting up the wave models for the engineering analysis.

EFF_SETUP	This is a yes / no field that indicates if this is the effective wave setup methodology for the area.
EROS_TF	This is a true / false field to indicate if erosion treatment has been applied to the area.
EFF_EROS	This is a yes / no field that indicates if this is the effective erosion methodology for the area.
PFD_TF	This is a true / false field to indicate if primary frontal dune criteria were applied.
EFF_PFD	This is a yes / no field that indicates if this is the effective primary frontal dune methodology for the area.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the L_Cst_Model table.

Table: L_MT1_LOMC

The L_MT1_LOMC table is a lookup table that contains information about Letters of Map Change (LOMC) for the area. The LOMC includes property descriptions for areas designated by FEMA as being outside the Special Flood Hazard Area (SFHA). Generally, the amount of detail that can be shown on the map does not allow these areas to be shown explicitly as outside of the SFHA. Instead this information is communicated in the form of a LOMC. For data published by FEMA, this table would only include LOMAs and LOMR-Fs that have been revalidated following the map revision. That is these locations continue to be outside of the Special Flood Hazard Area regardless of the depiction of this area on the FIRM.

The L_MT1_LOMC table contains the following elements.

LOMC_ID	Primary key for table lookup that links to the S_FIRM_Pan table.
CASE_NO	Case Number. This is the case number of the LOMC that is assigned by FEMA. This should be filled in for reference back to the complete LOMC materials.
EFF_DATE	Effective Date of the LOMC.
FIRM_PAN	FIRM panel number that the LOMC is on. This is also a foreign key to the S_FIRM_Pan table.
LOMC_STAT	Status of the LOMC. Valid entries for this field include the following: 'superseded' 'revalidated' 'incorporated'

Only revalidated LOMCs are still in effect after a panel has been revised. All others should be superseded or incorporated into the new FIRM.

Table: L_Pan_Revis

The L_Pan_Revis table is a lookup table that contains information about historic revisions to each FIRM panel.

The L_Pan_Revis table contains the following elements.

FIRM_PAN	FIRM Panel Number. The primary key for table lookup that links to the S_FIRM_Pan table. This is the complete FIRM panel number, which is made up of ST_FIPS, PCOMM, PANEL, and SUFFIX, which are found in S_FIRM_Pan table. The FIRM panel number is the 11-digit FIRM panel number that is shown in the title block of the map.
REVIS_DATE	Revision Date. Effective dates of revision to the FIRM panel. These can be found in the FIRM legend or the FIS text.
REVIS_NOTE	Revision Note. Note describing the reason for the revision to the panel. This is shown under the effective date in the FIRM legend or in the FIS text. A list of standard revision notes appears in the DFIRM Graphic Specifications.

Table: L_Pol_FHBM

The L_Pol_FHBM table is a lookup table that contains a list of communities and Flood Hazard Boundary Map (FHBM) revisions.

The L_Pol_FHBM table contains the following elements.

COMM_NO	Community Number which is the primary key for table lookup that links to the S_Pol_Ar table. This is the six-digit community number assigned by FEMA. It is created by concatenating the state FIPS code with the CID.
FHBM_DATE	Flood Hazard Boundary Map (FHBM) Revision Date.
FHBM_NOTE	FHBM revision note that describes the reason for the revision. This is shown in the FIRM legend or FIS text. A list of standard revision notes appears in the DFIRM Graphic Specifications.

Table: L_Riv_Model

The L_Riv_Model table is a lookup table that contains a detailed information about the hydraulic and hydrologic models used in the engineering analysis for the area.

The L_Riv_Model table contains the following elements.

RIV_MDL_ID	River Model Identification. The primary key for table lookup that links to the S_XS table.
WTR_NM_LID	Surface Water Feature Name Lookup Identification. This is the name of the water feature that the structure is associated with. Foreign key for table lookup that links to the L_Wtr_Nm table.
HYDRA_LID	Hydraulic Model Lookup Identification. Foreign key for table lookup that links to the D_Hydra table.
EFF_HYDRA	This is a yes / no field that indicates if this is the effective hydraulic model for the area.
HYDRA_DATE	Hydraulic Model Run Date. This is the date that the hydraulic model was run.
HYDRO_LID	Hydrologic Model Lookup Identification. Foreign key for table lookup that links to the D_Hydro table.
EFF_HYDRO	This is a yes / no field that indicates if this is the effective hydrologic model for the area.
HYDRO_DATE	Hydrologic Model Run Date. This is the date that the hydrologic model was run.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the L_Riv_Model table.

Table: L_Wtr_Nm

The L_Wtr_Nm table is a lookup table that contains the name of the surface water feature shown on the FIRM and referenced throughout the database.

The L_Wtr_Nm table contains the following elements.

WTR_NM_ID	Surface Water Feature Name Lookup Identification. The primary key that links to the L_Cst_Model table, L_Riv_Model table, S_Gen_Struct table, S_Wtr_Ar table, S_Wtr_Ln table, and S_XS table.
WTR_NM	Surface Water Feature Name. This is the formal name of the surface water feature as it will appear on the hardcopy FIRM.

Version for Distribution Table Descriptions

Retrieve the MS Access file for the Standard DFIRM Database Distribution Version at
http://www.fema.gov/mit/tsd/dfm_dfta.htm

Table: S_BFE

The S_BFE table contains information about the Base Flood Elevations (BFE) within a study area. A spatial file with locational information also corresponds with this data table. BFE lines indicate the approximate water surface elevation of the 1% annual chance flood hazard.

The S_BFE table contains the following elements.

BFE_LN_ID	Primary key for table lookup. Assigned by table creator.
ELEV	Base Flood Elevation. The approximate elevation of the 1% annual chance flood. This is the value of the BFE that is printed next to the BFE line on the FIRM.
UNITS	BFE Units. This unit indicates the measurement system used for the BFEs. Normally this would be feet.
V_DATUM	Vertical Datum. The vertical datum indicates the reference surface from which the flood elevations are measured. Normally this would be NAVD88 for new studies.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the S_BFE table.

Table: S_CBRS

The S_CBRS table contains information about the Coastal Barrier Resources System (CBRS) Areas within the study area if applicable. CBRS areas have restrictions on insurance coverage after specified dates for new or substantially improved structures. This table only applies to coastal areas with CBRS zones designated by Congress and shown on the FIRM. Authoritative CBRS locations are shown on Fish and Wildlife Service (FWS) maps. A spatial file with locational information also corresponds with this data table.

The S_CBRS table contains the following elements.

CBRS_ID	Primary key for table lookup. Assigned by table creator.
CBRS_TYP	CBRS Type. The type code provides details of the types of prohibitions that apply to the area. Normally this would be Coastal Barrier Resources System (CBRS) Area or Otherwise Protected Area (OPA).
CBRS_DATE	Legislation Date on which restrictions for the CBRS area began. This should be indicated on the FIRM as a note or fill pattern.
CBRS_TF	This field is True if the area is a CBRS or an OPA.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the S_CBRS table.

Table: S_Cst_Tsct_Ln

The S_Cst_Tsct_Ln table contains information about the Coastal Transect Lines within the study area if applicable. The transect lines indicate the location that was used to provide representative topographic information for the coastal flood models used. A spatial file with locational information also corresponds with this data table.

The S_Cst_Tsct_Ln table contains the following elements.

TRAN_LN_ID	Primary key for table lookup. Assigned by table creator.
TRAN_NO	Transect Number. Each transect is normally numbered sequentially.
CST_MDL_ID	Coastal Model Identification. This field is populated by a linking element to the L_Cst_Model table. The L_Cst_Model table contains detailed information about the coastal models that were used to determine the coastal flood hazard for the area of this transect line. This ID field will link the coastal transect to the model information.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the S_Cst_Tsct_Ln table.

Table: S_DOQ_Index

The S_DOQ_Index table contains information about the digital orthophotography if used as a base map for the study area. For standard USGS DOQs, polygons should match quarter-quad boundaries (excluding overedge). Otherwise, polygons should match the boundaries of the orthophotography used (excluding overedge if present). Required if applicable. Not applicable if DOQs not provided. A spatial file with locational information also corresponds with this data table.

Digital orthophotography can be used as a base map if a vector base map that meets the minimum base map specifications is not available.

The S_DOQ_Index table contains the following elements.

DOQ_ID	Primary key for table lookup. Assigned by table creator.
FILENAME	DOQ Filename. This filename should be assigned by the DOQ provider or the table creator.
DOQ_DATE	DOQ Date. This is the date that the DOQ was flown.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the S_DOQ_Index table.

Table: S_FIRM_Pan

The S_FIRM_Pan table contains information about the FIRM panel area. A spatial file with locational information also corresponds with this data table. The spatial extent of this data would depict the area covered by each FIRM panel within the study area.

The S_FIRM_Pan table contains the following elements.

FIRM_ID	Primary key for table lookup. Assigned by table creator.
ST_FIPS	State FIPS. This is the two-digit code that corresponds to the State Federal Information Processing Standard (FIPS) code. This is a standard numbering system that is used by the government. These two numbers correspond to the first two digits of the panel number.
PCOMM	Community or County Identification Number. This is the 3 rd through the 6 th digits of the panel number. For community based maps this corresponds to the FEMA Community Identification number. For county wide maps this is the county FIPS code with a "C".
PANEL	Panel Number. This is 7 th through the 10 th digits in the complete panel number. This is assigned by the scale of the map and the position within the community or county. The panel number scheme is described in detail in the DFIRM Graphic Specifications.
SUFFIX	Map Suffix. This is the final digit in the complete panel number. This is a letter suffix at the end of the panel number. They normally start with 'A' the first time the community or county was mapped and increase sequentially with each update to the map.
FIRM_PAN	FIRM Panel Number. This is the complete FIRM panel number which is made up of ST_FIPS, PCOMM, PANEL, and SUFFIX. This is the 11-digit FIRM panel number that is shown in the title block of the map.
PANEL_TYP	Panel Type. The type of FIRM panel that identifies whether the panel is printed or not printed and whether it is community based or countywide mapping.
EFF_DATE	Effective Date. This is the effective date of the current map revision. This field is not populated until the final FIRM is ready for hardcopy production by FEMA.

SCALE	Map Scale. This is the denominator of the FIRM scale as a ratio. For example, 24000 is the denominator for a 1" = 2000' map.
PNP_Reason	Panel Not Printed Reason. If the FIRM panel is not printed, this is the reason. This could include 'All Zone X' or other reasons.
NW_LAT	Northwest Latitude. This is the latitude of the northwest corner of the FIRM panel. This value is in degrees, minutes, seconds (DDD MM SS.SSS). This should correspond to the USGS DOQ or DOQQ.
NW_LONG	Northwest Longitude. This is the longitude of the northwest corner of the FIRM panel. This value is in degrees, minutes, seconds (DDD MM SS.SSS). This should correspond to the USGS DOQ or DOQQ.
SE_LAT	Southeast Latitude. This is the latitude of the southeast corner of the FIRM panel. This value is in degrees, minutes, seconds (DDD MM SS.SSS). This should correspond to the USGS DOQ or DOQQ.
SE_LONG	Southeast Longitude. This is the longitude of the southeast corner of the FIRM panel. This value is in degrees, minutes, seconds (DDD MM SS.SSS). This should correspond to the USGS DOQ or DOQQ.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the S_FIRM_Pan table.

Table: S_Fld_Haz_Ar

The S_Fld_Haz_Ar table contains information about the flood hazard within the study area. A spatial file with locational information also corresponds with this data table. These zones are used by FEMA to designate the Special Flood Hazard Area (SFHA), identify areas of coastal high hazard flooding, and for insurance rating purposes. These data are the flood hazard areas that are or will be depicted on the FIRM.

The S_Fld_Haz_Ar table contains the following elements.

FLD_AR_ID	Primary key for table lookup. Assigned by table creator.
FLD_ZONE	Flood Zone. This is a flood zone designation. These zones are used by FEMA to designate the Special Flood Hazard Area, identify areas of coastal high hazard flooding, and for insurance rating purposes. NOTE: The symbol '%' is a reserved symbol in most software packages so the word 'percent' was abbreviated to 'pct'.
FLOODWAY	Floodway Type. Floodway areas are designated by FEMA to provide an area that will remain free of development to moderate increases in flood heights due to encroachment on the floodplain. Normal floodway areas are 'floodway'. Special cases will have a note on the hardcopy FIRM.
AR_REVERT	If the area is Zone AR, this field would hold the zone that the area would revert to if the AR zone were removed. This field is only populated if the area is Zone AR.
SFHA_TF	Special Flood Hazard Area. If the area is within SFHA this field would be True. This field will be true for any area that is coded for any A or V zone flood areas. It should be false for any X or D zone flood areas.
STATIC_BFE	Static Base Flood Elevation. For areas of constant base flood elevation, the base flood elevation is shown beneath the zone label rather than on a BFE line. In this situation the same BFE applies to the entire polygon. This is normally occurs in lakes or coastal zones.
V_DATUM	Vertical Datum. The vertical datum indicates the reference surface from which the flood elevations are measured. Normally this would be NAVD88 for new studies.

DEPTH	Depth Value for Zone AO Areas. This is shown beneath the zone label on the FIRM.
UNITS	BFE Units. This unit indicates the measurement system used for the BFEs. Normally this would be feet.
VELOCITY	Velocity Measurement. For alluvial fan areas (certain Zone AO areas), this is shown beneath the zone label on the FIRM. This value represents the velocity of the flood flow in this area.
VEL_UNITS	Unit of Measurement for the Velocity Attribute. This is shown in the legend where alluvial fans are present.
EFF_DATE	Effective Date. This is the effective date on which this zone was added. Older FIRMs carry an initial effective date for each individual zone. This should be populated if there is already an effective FIRM for the study area.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the S_Fld_Haz_Ar table.

Table: S_Fld_Haz_Ln

The S_Fld_Haz_Ln table contains information about the flood hazard line features for the study area. A spatial file with locational information also corresponds with this data table. These data are the linear representation of the boundaries of the flood hazard areas that are or will be depicted on the FIRM.

The S_Fld_Haz_Ln table contains the following elements.

FLD_LN_ID	Primary key for table lookup. Assigned by table creator.
LN_TYP	Line Type. These line types describe the flood boundary and may be used to indicate how the feature should be depicted on the hardcopy FIRM. NOTE: The symbol '%' is a reserved symbol in most software packages so the word 'percent' was abbreviated to 'pct'.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the S_Fld_Haz_Ln table.

Table: S_Gen_Struct

The S_Gen_Struct table contains information about the hydraulic structures within the study area. For new studies it should include all structures shown in the flood profiles. In addition, levees, sea walls and other significant flood control structures should be included. A spatial file with locational information also corresponds with this data table.

The S_Gen_Struct table contains the following elements.

STRUCT_ID	Primary key for table lookup. Assigned by table creator.
STRUCT_TYP	Structure Type. Hydraulic structures within the study area.
STRUCT_NM	Structure Name. This is the name of the feature and the name that will be shown on the hardcopy FIRM.
WTR_NM	Surface Water Feature Name. This is the formal name of the surface water feature as it will appear on the hardcopy FIRM.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the S_Gen_Struct table.

Table: S_Label_Ld

The S_Label_Ld table contains information about leader lines that would connect transportation and water labels to feature locations on base maps. A spatial file with locational information also corresponds with this data table.

The S_Label_Ld table contains the following element.

LEADER_ID Primary key for table lookup. Assigned by table creator.

Table: S_Label_Pt

The S_Label_Pt table contains information for point locations that would link transportation and water labels to base map features. A spatial file with locational information also corresponds with this data table.

The S_Trnsport_Pt table contains the following elements.

LABEL_ID	Primary key for table lookup. Assigned by table creator.
LABEL	Label for Transportation or Water Feature.
LABEL_TYPE	Identifies the type of feature or purpose of the label.
DEGREES	The degrees of rotation required for the placement of a transportation label onto a hard copy FIRM panel.

Table: S_LOMR

The S_LOMR table contains information about Letter of Map Revision (LOMR) areas that are incorporated into the FIRM. A spatial file with locational information also corresponds with this data table. The spatial information contains the bounding polygon for each LOMR area. This table is currently planned as a mechanism for DFIRM producers to communicate areas of the DFIRM data that were affected by LOMRs. It is not planned for distribution by FEMA once a complete map revision has incorporated these LOMRs into the effective FIRM panel.

The S_LOMR table contains the following elements.

LOMR_ID	Primary key for table lookup. Assigned by table creator.
EFF_DATE	Effective Date of the LOMR.
CASE_NO	Case Number. This is the case number of the LOMR that is assigned by FEMA. The case number is used to track the LOMR's supporting documentation.
SCALE	Map Scale. This is the denominator of the effective LOMR scale as a ratio. For example, 24000 is the denominator for a 1" = 2000' map.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the S_LOMR table.

Table: S_Perm_Bmk

The S_Perm_Bmk table contains information about Permanent Benchmarks that are associated with the study area. A spatial file with locational information also corresponds with this data table.

The S_Perm_Bmk table contains the following elements.

BM_ID	Primary key for table lookup. Assigned by table creator.
PID	Permanent Identifier. This should be the National Geodetic Survey (NGS) assigned or community assigned permanent identifier. It must be unique for each benchmark.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the S_Perm_Bmk table.

Table: S_PLSS_Ar

The S_PLSS_Ar table contains information about the Public Land Survey System (PLSS) areas that are associated with the study area if applicable. This would include the attributes for the range, township, and section areas. A spatial file with locational information also corresponds with this data table.

The S_PLSS_Ar table contains the following elements.

PLSS_AR_ID	Primary key for table lookup. Assigned by table creator.
RANGE	Range Number. This is the range number assigned to the PLSS area shown. This attribute would also include the designation of E (east) or W (west) as part of the data. For example, 21W would be an acceptable value.
TWP	Township. This is the township number assigned to the PLSS area shown. This attribute would also include the designation of N (north) or S (south) as part of the data. For example, 14S would be an acceptable value.
SECTION	Section. This is the section number assigned to the PLSS area shown.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the S_PLSS_Ar table.

Table: S_PLSS_Ln

The S_PLSS_Ln table contains information about the boundary lines for the Public Land Survey System (PLSS) that is associated with the study area if applicable. This would include the attributes for the adjacent range and township areas. A spatial file with locational information also corresponds with this data table.

The S_PLSS_Ln table contains the following elements.

PLSS_LN_ID	Primary key for table lookup. Assigned by table creator.
LN_TYP	Line Type. This describes the flood boundary and may be used to indicate how the feature should be depicted on the hardcopy FIRM.
E_RANGE	East Range Number. This is the range number assigned to the PLSS area shown to the east of the line feature. This number is shown on the hardcopy FIRM.
W_RANGE	West Range Number. This is the range number assigned to the PLSS area shown to the west of the line feature. This number is shown on the hardcopy FIRM.
N_TWP	North Township. This is the township number assigned to the PLSS area shown to the north of the line feature. This number is shown on the hardcopy FIRM.
S_TWP	South Township. This is the township number assigned to the PLSS area shown to the south of the line feature. This number is shown on the hardcopy FIRM.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the S_PLSS_Ln table.

Table: S_Pol_Ar

The S_Pol_Ar table contains information about the Political Areas within the study area. This would include the attributes for the political areas and other areas such as forests, parks, military lands, and Indian reservations. For the National Flood Insurance Program, it is important to know the jurisdiction that has land use authority over an area. Political jurisdictions individually agree to participate in the NFIP and availability of insurance, floodplain regulations and insurance rates may vary by political jurisdiction. A spatial file with locational information also corresponds with this data table.

The S_Pol_Ar table contains the following elements.

POL_AR_ID	Primary key for table lookup. Assigned by table creator.
POL_Name1	Political Area Name 1. This is the primary name of the area shown. For areas that have more than one name, this would be the primary name with subsequent names shown in fields below. This would correspond to the official name of this jurisdiction used by FEMA within the NFIP.
POL_Name2	Political Area Name 2. This is the secondary name of the area shown.
CO_FIPS	County FIPS Code. This is the three-digit county Federal Informational Processions Standard (FIPS) code.
ST_FIPS	State FIPS. This is the two-digit code that corresponds to the State Federal Information Processing Standard (FIPS) code. This is a standard numbering system that is used by the government. These two numbers correspond to the first two digits of the panel number.
CID	Community identification number. This is the number assigned by FEMA to each community for tracking purposes under the NFIP. On newer FIRMs the state FIPS and the CID appear below the community name where it is shown in the body of the map. For single jurisdiction FIRMs, this is the 3 rd through the 6 th digits of the panel number. This number can be obtained from the community status book which can be viewed at www.fema.gov/msc .
COMM_NO	Community Number. This is the six-digit community number assigned by FEMA. It is created by concatenating the state FIPS code with the CID.
ANI_TF	Area Not Included True / False. This is a true / false field that contains information about the geographical area to determine if it

is included in the FIRM or not. Areas not included fall within the extents of the map, but no flood risk information is shown on this map. This is either because the area is mapped on another FEMA map or because the area is not mapped at all by FEMA.

COM_NFO_ID	Community Information Identification. This attribute links to the table L_Comm_Info which contains information about the specific community.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the S_Pol_Ar table.

Table: S_Pol_Ln

The S_Pol_Ln table contains information about the boundaries of Political Areas within the study area. This would include the attributes for the political areas and other areas such as forests, parks, military lands, and Indian reservations. A spatial file with locational information also corresponds with this data table.

The S_Pol_Ln table contains the following elements.

POL_LN_ID	Primary key for table lookup. Assigned by table creator.
LN_TYP	Line Type. This describes the jurisdictional boundary and can be used to how the feature should be depicted on the hardcopy FIRM.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the S_Pol_Ln table.

Table: S_Quad

The S_Quad table contains information about the US Geological Survey (USGS) 7.5-minute Topographic Quadrangle maps that cover the study area. While USGS Quads do not meet the new FEMA base map standards, they are often useful as a supplementary reference source. The quad information is provided as a convenience to users who may want to cross-reference this map series. A spatial file with locational information also corresponds with this data table.

The S_Quad table contains the following elements.

QUAD_ID	Primary key for table lookup. Assigned by table creator.
QUAD_NO	Quad Number. This is the eight-digit USGS alphanumeric quadrangle identifier. The list of values for each state is published by USGS in the State Indexes to Topographic and Other Map Coverage. This item is composed of three components: the latitude, rounded down to the nearest whole degree, of the 7.5-minute quadrangle map sheet; the longitude, rounded down to the nearest whole degree, of the 7.5-minute quadrangle map sheet; and the alphanumeric map sheet identifier used by USGS (i.e., A1 through H8).
QUAD_NM	Quad Name. This is the name of the quad that is assigned by USGS.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for S_Quad table.

Table: S_Riv_Mrk

The S_Riv_Mrk table contains information about the River Marks shown on the hardcopy FIRM if applicable. A spatial file with locational information also corresponds with this data table.

This table is normally not filled in for coastal analysis.

The S_Riv_Mrk table contains the following elements.

RIV_MRK_ID	Primary key for table lookup. Assigned by table creator.
START_ID	Start Identification. A code that provides a link to a point in the S_Stn_Start table at which the river mark distances start.
RIV_MRK_NO	River Mark Number. This attribute usually represents the distance from a known point (identified by START_ID), such as the confluence with another river, to the current river mark.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the S_Riv_Mrk table.

Table: S_Stn_Start

The S_Stn_Start table contains information about Station Points. These points indicate the reference point that was used as the origin for distance measurements along streams and rivers. This table is referenced by both the S_XS table that contains stream stationing information for cross section and by the S_Riv_Mrk table that contains river distance marker points. A spatial file with locational information also corresponds with this data table.

The S_Stn_Start table contains the following elements.

START_ID	Primary key for table lookup. Assigned by table creator.
START_DESC	Start Description. The description of the location of the station starting point. For example, the confluence with the Main Channel of the Big River.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the S_Stn_Start table.

Table: S_Trnsport_Ln

The S_Trnsport_Ln table contains information about the linear base map transportation features such as roads, railroads, and airports. A spatial file with locational information also corresponds with this data table.

The S_Trnsport_Ln table contains the following elements.

TRANS_ID	Primary key for table lookup. Assigned by table creator.
TRANS_TYP	Transportation Feature Type. These line types indicate how the feature should be depicted on the hardcopy FIRM.
RD_STAT	Road Status.
PREFIX	Prefix of the Feature Name. Not all features will have an entry in this attribute. Valid entries might include N for a transportation feature named N Main Street.
FEAT_NM1	Feature Name 1. This is the primary name of the feature. For areas that have more than one name, this would be the primary name with subsequent names shown in fields below.
NM_TYP	Name Type. Transportation feature name type. Valid entries include items such as road, street, or avenue.
SUFFIX	Suffix of the Feature Name. Not all features will have an entry in this attribute. Valid entries might include NW for a transportation feature named Main Street NW.
FEAT_NM2	Feature Name 2. This is the secondary name of the feature.
FEAT_NM3	Feature Name 3. This is the tertiary name of the feature.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the S_Trnsport_Ln table.

Table: S_Wtr_Ar

The S_Wtr_Ar table contains information about surface water area features. A spatial file with locational information also corresponds with this data table.

The S_Wtr_Ar table contains the following elements.

WTR_AR_ID	Primary key for table lookup. Assigned by table creator.
WATER_TYP	Surface Water Feature Type. This type value describes the classification of the surface water feature. Valid entries include items such as lake, retention pond, and reservoir.
WTR_NM	Surface Water Feature Name. This is the formal name of the surface water feature as it will appear on the hardcopy FIRM.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the S_Wtr_Ar table.

Table: S_Wtr_Ln

The S_Wtr_Ln table contains information about surface water linear features. A spatial file with locational information also corresponds with this data table.

The S_Wtr_Ln table contains the following elements.

WTR_LN_ID	Primary key for table lookup. Assigned by table creator.
WATER_TYP	Surface Water Feature Type. The type value describes the kind of watercourse represented. Valid entries include items such as stream / river, channel, and shoreline / coastline.
CHAN_REP	Channel Representation. Single means linear water features represented by a centerline. Double means linear water features represented by shorelines or channel banks.
WTR_NM	Surface Water Feature Name. This is the formal name of the surface water feature as it will appear on the hardcopy FIRM.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the S_Wtr_Ln table.

Table: S_XS

The S_XS table contains information about Cross Section lines. A spatial file with locational information also corresponds with this data table. These lines represent the locations of channel surveys performed for input into the hydraulic model used to calculate flood elevations. These locations are also shown on the flood profiles in the Flood Insurance Study report and can be used to cross reference the flood profiles to the planimetric depiction of the flood hazard.

The S_XS table contains the following elements.

XS_LN_ID	Primary key for table lookup. Assigned by table creator.
XS_LTR	Cross Section Letter. The letter that is assigned to the cross section on the hardcopy FIRM and in the Flood Insurance Study (FIS) profiles. This attribute is blank if the cross section is not shown on the FIRM. For a digital conversion, only cross sections that are shown on the FIRM will be available.
XS_NO	Cross Section Number. This attribute is used for all cross sections that are created during the engineering analysis. This should be populated with the number sequence that the SC or CTP uses during the engineering analysis. Each cross section should have a unique number. This attribute is not filled in for digital conversions.
START_ID	Start Identification. This is a link to the station start table. The station start describes the origin for the measurements in the STREAM_STN field.
STREAM_STN	Stream Station. This is the SC or CTP measurement along the stream to the cross section location. Normally this is information available in the floodway data table in the FIS so the attribute can be populated for digital conversions.
XS_LN_TYP	Cross Section Line Type. This attribute should contain 'LETTERED' for cross sections that are shown on the hardcopy FIRM. If the cross section will not be shown on the hardcopy FIRM is should contain 'NOT LETTERED' to indicate that it is part of the backup data for the study.
WTR_NM	Surface Water Feature Name. This is the formal name of the surface water feature as it will appear on the hardcopy FIRM.

WSEL_100	Water Surface Elevation for the 1% Annual Chance Flood Event. This is the precise elevation of the regulatory BFE calculated at this cross section. This elevation exactly matches the published BFE in the flood profiles. This number is determined during the engineering analysis for the study. If this is a digital conversion, it can be obtained from the regulatory column in the floodway data table in the FIS.
RIV_MDL_ID	River Model Identification. A code that provides a link to the riverine model table, L_Riv_Model. The L_Riv_Model table will identify the hydrologic and hydraulic models used to calculate the flood hazard at the vicinity of this cross section line.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the S_XS table.

Table: Study_Info

The Study_Info table contains details about the study such as the study name, datum, projection, etc.

The Study_Info table contains the following elements.

STD_NFO_ID	Primary key for table lookup. Assigned by table creator.
STUDY_PRE	Study Prefix. This is the prefix of the study name such as 'City of' or 'Town of'.
STUDY_NM	Study Name. This attribute contains the main portion of the study name which is shown in the title block of the hardcopy FIRM.
STATE_NM	State Name. This attribute contains the state name for the study and is shown in the title block of the hardcopy FIRM.
CNTY_NM	County Name. This is the county name that the study is related to. The county name is also shown in the title block section of the hardcopy FIRM.
JURIS_TYP	Political Jurisdiction Type. This attribute contains entries such as 'Unincorporated Areas' or 'All Jurisdictions' or 'and Incorporated Areas' or it is left empty. If there is data in this attribute, it is also shown in the title block section of the hardcopy FIRM.
LG_PAN_NO	Largest Panel Number. This is the highest panel number shown on the FIRM index for the area mapped. This number is shown in the title block section of the hardcopy FIRM.
OPP_TF	Only Panel Printed. This is a true / false field that is only True if the study has only one panel printed.
H_DATUM	Horizontal Datum. Valid entries for this attribute include NAD27 or NAD83. This is the datum of the printed FIRM. The horizontal datum describes the reference system on which the horizontal coordinate information shown on the FIRM is based. NAD83 is the preferred horizontal datum.
V_DATUM	Vertical Datum. This is the vertical datum of the printed FIRM. The vertical datum describes the reference surface from which elevation on the map is measured. Normally this would be NAVD88 for new studies.

PROJECTION	Map Projection Used for Hardcopy FIRM Publication. The preferred projection of FEMA is UTM.
PROJ_ZONE	Projection Zone. When using many map projections, there is a zone associated with the area. This field is populated based on the projection selected for the final hardcopy map production.
CW_TF	Countywide, true / false. This attribute is true if the hardcopy FIRM includes all incorporated areas and any unincorporated areas of the county.
CBRS_PHONE	Coastal Barrier Resources System (CBRS) Phone number. This is the phone number for the contact person / office for the CBRS legislative area.
CBRS_REG	CBRS Coordinator's region. This attribute contains the Fish and Wildlife Service (FWS) region that the FIRM covers.
RTROFT_TF	Retrofit, True / False. Retrofit is an attribute that would show true if old study data were used with updated stream location data. If flood features were adjusted to fit new stream locations due to better base map information this attribute would be true as well.

Table: L_Comm_Info

The L_Comm_Info table is a lookup table that contains community map repository details and map history information that is shown on the FIRM legend or index.

The L_Comm_Info table contains the following elements.

COM_NFO_ID	Primary key for table lookup that links to the S_Pol_Ar table.
REPOS_ADR1	First line of the mailing or street address for the map repository. The map repository is the office the community has designated as responsible for maintaining copies of all the flood hazard information FEMA publishes for the community. The public may view copies of the current effective information at the map repository. This information is also displayed in the FIRM legend or index. For example, this line might read 'Division of Community and Economic Development'.
REPOS_ADR2	Second line of the mailing or street address for the map repository. This information is also displayed in the FIRM legend or index. For example, this line might read '226 W. Fourth Street'.
REPOS_ADR3	Third line of the mailing or street address for the map repository. This information is also displayed in the FIRM legend or index. For example, this line might read 'Suite 200'.
REPOS_CITY	City portion of the mailing or street address for the map repository. This information is also displayed in the FIRM legend or index. For example, this line might read 'Springfield'.
REPOS_ST	State portion of the mailing or street address for the map repository. This information is also displayed in the FIRM legend or index. For example, this line might read 'IL'.
REPOS_ZIP	ZIP Code portion of the mailing or street address for the map repository. This information is also displayed in the FIRM legend or index. For example, this line might read '62269'.
IN_ID_DAT	Initial identification date for the community as shown on the FIRM legend, index, or Flood Insurance Study (FIS) text. This information can also be obtained from FEMA.
IN_NFIP_DT	Initial date of the first NFIP map published by FEMA for this community. This can be obtained from the FIRM legend, index, or FIS text. This information can also be obtained from FEMA.

IN_FRM_DAT	Initial date FIRM was created. This can be obtained from the FIRM legend, index, or FIS text. This information can also be obtained from FEMA.
RECENT_DAT	Most recent panel date. This can be obtained from the FIRM index or the FEMA Community Status book at www.fema.gov/msc .

Table: L_Cst_Model

The L_Cst_Model table is a lookup table that contains information about the coastal models that were used during the engineering analysis. This table is only completed if coastal engineering analysis was completed.

The L_Cst_Model table contains the following elements.

CST_MDL_ID	Primary key for table lookup that links to the S_Cst_Tsct_Ln table.
WTR_NM	Surface Water Feature Name. This is the formal name of the surface water feature as it will appear on the hardcopy FIRM.
SURGE_MDL	Hurricane Surge Model. This is the name or abbreviation of the FEMA approved hurricane surge model that is associated with the coastal model for the engineering analysis.
EFF_SURGE	This is a yes / no field that indicates if this is the effective surge model for the area.
WAVE_MDL	Wave Height Model. This is the name or abbreviation of the FEMA approved wave height model that was used with the coastal model for the engineering analysis.
EFF_WAVE	This is a yes / no field that indicates if this is the effective wave height model for the area.
RUNUP_MDL	Runup Model. This is the name or abbreviation of the FEMA approved runup model that was used with the coastal model for the engineering analysis. The runup model information is taken from the table D_Runup_Mdl.
EFF_RUNUP	This is a yes / no field that indicates if this is the effective runup model for the area.
SETUP_METH	Wave Setup Methodology. This information should detail the methodology used when setting up the wave models for the engineering analysis.
EFF_SETUP	This is a yes / no field that indicates if this is the effective wave setup methodology for the area.
EROS_TF	This is a true / false field to indicate if erosion treatment has been applied to the area.

EFF_EROS	This is a yes / no field that indicates if this is the effective erosion methodology for the area.
PFD_TF	This is a true / false field to indicate if primary frontal dune criteria were applied.
EFF_PFD	This is a yes / no field that indicates if this is the effective primary frontal dune methodology for the area.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the L_Cst_Model table.

Table: L_MT1_LOMC

The L_MT1_LOMC table is a lookup table that contains information about Letters of Map Change (LOMC) for the area. The LOMC includes property descriptions for areas designated by FEMA as being outside the Special Flood Hazard Area (SFHA). Generally, the amount of detail that can be shown on the map does not allow these areas to be shown explicitly as outside of the SFHA. Instead this information is communicated in the form of a LOMC. For data published by FEMA, this table would only include LOMAs and LOMR-Fs that have been revalidated following the map revision. That is these locations continue to be outside of the Special Flood Hazard Area regardless of the depiction of this area on the FIRM.

The L_MT1_LOMC table contains the following elements.

LOMC_ID	Primary key for table lookup that links to the S_FIRM_Pan table.
CASE_NO	Case Number. This is the case number of the LOMC that is assigned by FEMA. This should be filled in for reference back to the complete LOMC materials.
EFF_DATE	Effective Date of the LOMC.
FIRM_PAN	FIRM panel number that the LOMC is on. This is also a foreign key to the S_FIRM_Pan table.
LOMC_STAT	Status of the LOMC. Valid entries for this field include the following: 'superseded' 'revalidated' 'incorporated'

Only revalidated LOMCs are still in effect after a panel has been revised. All others should be superseded or incorporated into the new FIRM.

Table: L_Pan_Revis

The L_Pan_Revis table is a lookup table that contains information about historic revisions to each FIRM panel.

The L_Pan_Revis table contains the following elements.

FIRM_PAN	FIRM Panel Number. The primary key for table lookup that links to the S_FIRM_Pan table. This is the complete FIRM panel number, which is made up of ST_FIPS, PCOMM, PANEL, and SUFFIX, which are found in S_FIRM_Pan table. The FIRM panel number is the 11-digit FIRM panel number that is shown in the title block of the map.
REVIS_DATE	Revision Date. Effective dates of revision to the FIRM panel. These can be found in the FIRM legend or the FIS text.
REVIS_NOTE	Revision Note. Note describing the reason for the revision to the panel. This is shown under the effective date in the FIRM legend or in the FIS text. A list of standard revision notes appears in the DFIRM Graphic Specifications.

Table: L_Pol_FHBM

The L_Pol_FHBM table is a lookup table that contains a list of communities and Flood Hazard Boundary Map (FHBM) revisions.

The L_Pol_FHBM table contains the following elements.

COMM_NO	Community Number which is the primary key for table lookup that links to the S_Pol_Ar table. This is the six-digit community number assigned by FEMA. It is created by concatenating the state FIPS code with the CID.
FHBM_DATE	Flood Hazard Boundary Map (FHBM) revision date.
FHBM_NOTE	FHBM revision note that describes the reason for the revision. This is shown in the FIRM legend or FIS text. A list of standard revision notes appears in the DFIRM Graphic Specifications.

Table: L_Riv_Model

The L_Riv_Model table is a lookup table that contains a detailed information about the hydraulic and hydrologic models used in the engineering analysis for the area.

The L_Riv_Model table contains the following elements.

RIV_MDL_ID	River Model Identification. The primary key for table lookup that links to the S_XS table.
WTR_NM	Surface Water Feature Name. This is the formal name of the surface water feature as it will appear on the hardcopy FIRM.
HYDRA_MDL	Hydraulic Model. This is the name or abbreviation of the hydraulic model that was used for the engineering analysis.
EFF_HYDRA	This is a yes / no field that indicates if this is the effective hydraulic model for the area.
HYDRA_DATE	Hydraulic Model Run Date. This is the date that the hydraulic model was run.
HYDRO_MDL	Hydrologic Model. This is the name or abbreviation of the hydrologic model that was used for the engineering analysis.
EFF_HYDRO	This is a yes / no field that indicates if this is the effective hydrologic model for the area.
HYDRO_DATE	Hydrologic Model Run Date. This is the date that the hydrologic model was run.
SOURCE_CIT	Source Citation. Abbreviation used in the metadata file when describing the source information for the L_Riv_Model table.