Flood Risk Database (FRD) Data Model

March 31, 2011

FEMA

RiskMAP — Increasing Resilience Together

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Geodatabase Summary

Feature Classes (inside FRD_Spatial_Layers Feature Dataset)

- Polygon feature class S_HUC_Ar — WBD Subbasin Feature Class (Hydrologic Unit Boundaries)
- Point feature class S_Carto_Pt — Cartographic Points for Background on Flood Risk Map (FRM)
- Polygon feature class S_Carto_Ar — Cartographic Polygons for Background on Flood Risk Map (FRM)
- Line feature class S_Carto_Ln — Cartographic Lines for Background on Flood Risk Map (FRM)
- Polygon feature class S_FRD_Proj_Ar — Flood Risk Project Related Info
- Polygon feature class S_CSLF_Ar — Changes Since Last FIRM (CSLF)
  - Relationship class CSLF_New_Model (One to One) → Table Model_Info — Models Referenced by S_CSLF_Ar
  - Relationship class CSLF_Pre_Model (One to One) → Table Model_Info
  - Relationship class Model_Study (One to One): Model_Info → Table Study_Info — Study details about FIRMs
- Polygon feature class S_FRD_Pol_Ar — Political Areas within the Project Area
  - Relationship class PolAr_Claims (One to One) → Table L_Claims — Claims for Each Community / Watershed / Project
  - Relationship class PolAr_CSLF_Sum (One to many) → Table L_CSLF_Summary — CSLF Summary Table for Flood Risk Report (FRR) – One Record for Each Community / Watershed / Project
  - Relationship class PolAr_Exposure (One to One) → Table L_Exposure — Exposure Data for Each Community / Watershed / Project
  - Relationship class PolAr_RA_Summary (One to many) → Table L_RA_Summary — Risk Assessment – Summary by Community / Watershed / Project
- Polygon feature class S_CenBlk_Ar — US Census Blocks
  - Relationship class CenBlk_AAL (One to many) → Table L_RA_AAL — Average Annualized Loss Risk Assessment
  - Relationship class CenBlk_Refined (One to many) → Table L_RA_Refined — Refined Flood Risk Assessment
  - Relationship class CenBlk_Composite (One to many) → Table L_RA_Composite — Composite Flood Risk Assessment

Tables

- Table L_Source_Cit — Source Citation Table Combined from Multiple FIRMs

Depth and Analysis Rasters

Raster	Description
Depth_10pct	Flood Depth for 10% Event (10-yr)
Depth_04pct	Flood Depth for 4% Event (25-yr)
Depth_02pct	Flood Depth for 2% Event (50-yr)
Depth_01pct	Flood Depth for 1% Event (100-yr)
Depth_0_2pct	Flood Depth for 0.2% Event (500-yr)
PctAnnChance	Percent Annual Chance of Flooding
Pct30yrChance	30-yr Percent Chance of Flooding
Hillshade	Hillshade of Project Area

[E]nhanced / Optional

- Relationship class CenBlk_LocalGBS (One to one) → Table L_Local_GBS [E] — Updated General Building Stock Data from Local Sources
- Point feature class S_AOMI_Pt [E] — Area of Mitigation Interest
  - Relationship class PolAr_AOMI_Sum (One to many) → Table L_AOMI_Summary [E] — AOMI Summary Table for Flood Risk Report
- Point feature class S_UDF_Pt [E] — User Defined Facilities
  - Relationship class UDF_RA_UDF (One to many) → Table L_RA_UDF_Refined [E] — Refined Risk Assessment for User Defined Facilities

Raster	Description
WSE_10pct	Water Surface for 10% Event (10-yr)
WSE_04pct	Water Surface for 4% Event (25-yr)
WSE_02pct	Water Surface for 2% Event (50-yr)
WSE_01pct	Water Surface for 1% Event (100-yr)
WSE_0_2pct	Water Surface for 0.2% Event (500-yr)
WSE_Change	Water Surface Change Since Last FIRM
Vel_xxxpct	Velocity for xxx Percent Chance Event
CST_Dpthxxxpct	Coastal Depth for xxx Percent Chance Event
WSE__xxxpct	Water Surface Elevation for Additional Frequencies
Depth_xxxpct	Depth for Additional Frequencies
WSE_01plus	Water Surface for 1%-plus Condition
Depth_01plus	Depth for 1%-plus Condition

Submittal Catalog View

- FRD_YYRR1234S_YYYYMMDD
  - FRD_YYRR1234S.gdb
  - FRD_YYRR1234S_metadata.xml
  - Rasters
    - GeoTIFF
      - depth_01pct
      - depth_02pct
      - hillshade
      - pct30yrchance
      - etc...
      - Enhanced
        - depth_01plus
        - depth_xxxpct
        - veloc_xxxpct
        - wse_01pct
        - etc...
  - Map
    - FRM_YYRR1234S.pdf
  - Report
    - FRR_YYRR1234S.pdf
  - Shapefiles
    - S_CSLF_Ar
    - S_AOMI_Pt
    - L_RA_Summary.dbf
    - etc...

- FRD_<YYRR1234S>.gdb
  - CenBlk_AAL
  - CenBlk_Composite
  - CenBlk_LocalGBS
  - CenBlk_Refined
  - CSLF_New_Model
  - CSLF_Pre_Model
  - depth_0_2pct
  - depth_01pct
  - depth_02pct
  - depth_04pct
  - depth_10pct
  - hillshade
  - L_AOMI_Summary [E]
  - L_Claims
  - L_CSLF_Summary
  - L_Exposure
  - L_Local_GBS [E]
  - L_RA_AAL
  - L_RA_Composite
  - L_RA_Refined
  - L_RA_Summary
  - L_RA_UDF_Refined [E]
  - L_Source_Cit
  - Model_Info
  - Model_Study
  - pct30yrchance
  - pctannchance
  - Model_Study
  - PolAr_AOMI_Sum
  - PolAr_Claims
  - PolAr_CSLF_Sum
  - PolAr_Exposure
  - PolAr_RA_Summary
  - Study_Info
  - UDF_RA_UDF [E]
  - cst_dpthxxxpct [E]
  - depth_01plus [E]
  - depth_xxxpct [E]
  - veloc_xxxpct [E]
  - wse_0_2pct [E]
  - wse_01pct [E]
  - wse_02pct [E]
  - wse_04pct [E]
  - wse_10pct [E]
  - wse_change [E]
  - wse_xxxpct [E]
  - FRD_Spatial_Layers
    - S_AOMI_Pt [E]
    - S_Carto_Ar
    - S_Carto_Pt
    - S_Carto_Ln
    - S_CenBlk_Ar
    - S_CSLF_Ar
    - S_FRD_Pol_Ar
    - S_FRD_Proj_Ar
    - S_FRM_Callout_Ln
    - S_HUC_Ar
    - S_UDF_Pt [E]

Note: The YYRR1234S in the Submittal Catalog View is the naming convention based on the FEMA case number assigned to the project. This number represents the Year of the contract, the Region coordinating the project, a sequential number, followed by a suffix, usually 'S' indicating Study. When populating fields in the FRD, the format should be YY-RR-1234S.

Simple feature class S_Carto_Pt

Geometry *Point*; Contains M values *No*; Contains Z values *No*

Cartographic Points for Background on Flood Risk Map (FRM)

Field name	Data type	Default value	Domain	Precision	Scale	Length	
OBJECTID	Object ID						
SHAPE	Geometry						
CART_PT_ID	String					11	Primary Key – Unique Identifier
F_TYPE	Short integer	100	D_Carto_Typ	0			Subtypes for Symbolization on FRM
F_CODE	Long integer			0			Symbolization Code for Areal Features
NAME	String					80	Feature Name Used for Labeling on FRM
HUC8_CODE	String					8	8-digit HUC Identifier
CASE_NO	String					12	FEMA Case Number for Project
VERSION_ID	String					11	Version ID of Guidelines Used to Create Data
SOURCE_CIT	String					25	Source Citation

Subtypes of S_Carto_Pt — Subtype field *F_TYPE*; Default subtype *100*. List of defined default values and domains for subtypes in this class

Subtype Code	Subtype Description	Field name	Default value	Domain
100	HYDROGRAPHIC	F_CODE	3430	D_Carto_Hydro_Code
200	TRANSPORTATION	F_CODE	300	D_Carto_Trans_Code
900	USER-DEFINED	F_CODE		

Simple feature class S_Carto_Ar

Geometry *Polygon*; Contains M values *No*; Contains Z values *No*

Cartographic Polygons for Background on Flood Risk Map (FRM)

Field name	Data type	Default value	Domain	Precision	Scale	Length	
OBJECTID	Object ID						
SHAPE	Geometry						
CART_AR_ID	String					11	Primary Key – Unique Identifier
F_TYPE	Short integer	100	D_Carto_Typ	0			Subtypes for Symbolization on FRM
F_CODE	Long integer			0			Symbolization Code for Areal Features
NAME	String					80	Feature Name Used for Labeling on FRM
HUC8_CODE	String					8	8-digit HUC Identifier
CASE_NO	String					12	FEMA Case Number for Project
VERSION_ID	String					11	Version ID of Guidelines Used to Create Data
SOURCE_CIT	String					25	Source Citation
SHAPE_Length	Double			0	0		
SHAPE_Area	Double			0	0		

Subtypes of S_Carto_Ar — Subtype field *F_TYPE*; Default subtype *100*. List of defined default values and domains for subtypes in this class

Subtype Code	Subtype Description	Field name	Default value	Domain
100	HYDROGRAPHIC	F_TYPE	100	D_Carto_Typ
		F_CODE	4600	D_Carto_Hydro_Code
500	RESTUDY AREA	F_TYPE	500	D_Carto_Typ
		F_CODE		
900	USER DEFINED	F_TYPE	900	D_Carto_Typ
		F_CODE		

Simple feature class S_Carto_Ln

Geometry *Polyline*; Contains M values *No*; Contains Z values *No*

Cartographic Lines for Background on Flood Risk Map (FRM)

Field name	Data type	Default value	Domain	Precision	Scale	Length	
OBJECTID	Object ID						
SHAPE	Geometry						
CART_LN_ID	String					11	Primary Key – Unique Identifier
F_TYPE	Short integer	100	D_Carto_Typ	0			Subtypes for Symbolization on FRM
F_CODE	Long integer			0			Symbolization Code for Linear Features
NAME	String					80	Feature Name Used for Labeling on FRM
HWY_NUM	Short integer			0			Highway Number or Route to Place on Shield
HUC8_CODE	String					8	8-digit HUC Identifier
CASE_NO	String					12	FEMA Case Number for Project
VERSION_ID	String					11	Version ID of Guidelines Used to Create Data
SOURCE_CIT	String					25	Source Citation
SHAPE_Length	Double			0	0		

Subtypes of S_Carto_Ln — Subtype field *F_TYPE*; Default subtype *100*. List of defined default values and domains for subtypes in this class

Subtype Code	Subtype Description	Field name	Default value	Domain
100	HYDROGRAPHIC	F_TYPE	100	D_Carto_Typ
		F_CODE	4600	D_Carto_Hydro_Code
200	TRANSPORTATION	F_TYPE	200	D_Carto_Typ
		F_CODE	300	D_Carto_Trans_Code
900	USER-DEFINED	F_TYPE	900	D_Carto_Typ
		F_CODE		

Simple feature class S_CSLF_Ar

Geometry *Polygon*; Contains M values *No*; Contains Z values *No*

The Changes Since Last FIRM (S_CSLF_Ar) polygon dataset depicts changes in the 1% and 0.2% annual chance floodplains and floodways as a result of new and/or updated engineering or redelineation.

Field name	Data type	Default value	Domain	Precision	Scale	Length	
OBJECTID	Object ID						
Shape	Geometry						
CSLF_ID	String					11	Primary Key – Unique Identifier
CNMS_ID	String					12	Foreign Key to S_Studies_Ar (CNMS)
AREA_SF	Double			0	0		The Area of the Change Polygon Measured in Square Feet Based on Local Projection
PRE_ZONE	String		D_Zone			4	Previous Flood Zone Designation
PRE_ZONEST	String		D_ZoneSubtype			4	Previous Flood Zone Subtype Designation
PRE_MODEL	String					11	Foreign Key to Model Info Table for Models from Previous FIRM
PRE_TOPO	String		D_Topo_Typ			4	Topo Type Used to Delineate Floodplains in Previous FIRM
PRE_SRCCIT	String					25	Source Citation for Previous FIRM
NEW_ZONE	String		D_Zone			4	New Flood Zone Designation
NEW_ZONEST	String		D_ZoneSubtype			4	New Flood Zone Subtype Designation
NEW_MODEL	String					11	Foreign Key to Model Info Table for Models from New FIRM
NEW_TOPO	String		D_Topo_Typ			4	Topo Type Used to Delineate Floodplains in New FIRM
NEW_SRCCIT	String					25	Source Citation for New FIRM
PEAKDSCHG	String		D_Change			1	Significant Changes to Peak Discharges may have Impacted the Analysis.
MDLMETHODS	String		D_TrueFalse			1	Significant Changes in Modeling Methods (Tide Gage Analysis, etc.) may have Impacted the Analysis
FLD_CTRLCHG	String		D_Change			1	Significant Changes to Flood Control Structures may have Impacted the Analysis.
HYDSTRCHG	String		D_Change			1	Significant Changes to Hydraulic Structures (Bridges, Culverts, etc) may have Impacted the Analysis
SEDCHG	String		D_Change			1	Significant Sedimentation may have Impacted the Analysis
EROSIONCHG	String		D_Change			1	Significant Erosion may have Impacted the Analysis.
CHANNELCHG	String		D_TrueFalse			1	Significant Manmade Changes to the Channel (Realignment, Improvement, etc) may have Impacted the Analysis
RUNOFFCHG	String		D_Change			1	Significant Changes Occurred to Runoff (if any) may have Impacted the Analysis
DUNECHG	String		D_Change			1	Significant Changes to the Frontal Dunes (if Coastal Area) may have Impacted the Analysis
OTHCHG	String					25	Description of Other Significant Changes to Engineering Factors that may have Impacted the Analysis
SFHACHG	String		D_Change			1	Changes Since Last FIRM in SFHA
FLDWYCHG	String		D_Change			1	Changes Since Last FIRM in Floodway
NONSFHACHG	String		D_Change			1	Changes Since Last FIRM in non-SFHA Areas
STRUCTURES	Long integer			0			The Total Estimated Count of Affected Buildings Within the Area of Change [E]
POPULATION	Long integer			0			The Total Estimated Affected Population Within the Area of Change [E]
CID	String					6	Foreign Key to S_Pol_Ar
HUC8_CODE	String					8	8-digit HUC Identifier
CASE_NO	String					12	FEMA Case Number for Project
VERSION_ID	String					11	Version ID of Guidelines Used to Create Data
SOURCE_CIT	String					25	Source Citation from L_Source_Cit
Shape_Length	Double			0	0		
Shape_Area	Double			0	0		

Relationship class CSLF_New_Model — Type *Simple*; Cardinality *One to one*; Notification *None*; Forward label *New_Model_Info*; Backward label *CSLF*. Origin feature class: Name *S_CSLF_Ar*, Primary key *NEW_MODEL*, Foreign key *MDL_NFO_ID*. Destination table: Name *Model_Info*. No relationship rules defined.

Relationship class CSLF_Pre_Model — Type *Simple*; Cardinality *One to one*; Notification *None*; Forward label *Pre_Model_Info*; Backward label *CSLF*. Origin feature class: Name *S_CSLF_Ar*, Primary key *PRE_MODEL*, Foreign key *MDL_NFO_ID*. Destination table: Name *Model_Info*. No relationship rules defined.

Table Model_Info

Information on Models Used in the Previous and New FIRMs

Field name	Data type	Default value	Domain	Precision	Scale	Length	
OBJECTID	Object ID						
MDL_NFO_ID	String					11	Primary Key – Unique Identifier
DFIRM_ID	String					6	Foreign Key to Study_Info Table
EFF_DATE	Date			0	0	8	Effective Date for FIRM Created with this Model
ANAL_DATE	Date			0	0	8	Analysis Date
STUDY_TYP	String		D_Study_Typ			4	Type of Study Model was Used For
HYDRO_MDL	String		D_Hydro_Mdl			4	Hydrologic Model Used (Null if Not Applicable)
HYDRA_MDL	String		D_Hydra_Mdl			4	Hydraulics Model Used (Null if Not Applicable)
SURGE_MDL	String		D_Surge_Mdl			4	Surge Model Used (Null if Not Applicable)
WAVEHT_MDL	String		D_Wave_Mdl			4	Wave Height Model Used (Null if Not Applicable)
RUNUP_MDL	String		D_Runup_Mdl			4	Runup Model Used (Null if Not Applicable)
HUC8_CODE	String					8	8-digit HUC Identifier
CASE_NO	String					12	FEMA Case Number for Project
VERSION_ID	String					11	Version ID of Guidelines Used to Create Data

Relationship class Model_Study — Type *Simple*; Cardinality *One to one*; Notification *None*; Forward label *Study_Info*; Backward label *Model_Info*. Origin table: Name *Model_Info*, Primary key *DFIRM_ID*, Foreign key *DFIRM_ID*. Destination table: Name *Study_Info*. No relationship rules defined.

Simple feature class S_CenBlk_Ar

Geometry *Polygon*; Contains M values *No*; Contains Z values *No*

U.S. Census Bureau Block Polygons with Asset Inventory Data (from HAZUS-MH data DVDs)

Field name	Data type	Default value	Domain	Precision	Scale	Length	
OBJECTID	Object ID						
Shape	Geometry						
CEN_BLK_ID	String					17	Census Block Identifier: a concatenation of state & county FIPS codes, census tract, block number, & block suffix.
POPULATION	Long integer			0			Population Count
ARV_BG_TOT	Long integer			0			Asset Replacement Value of Buildings of All Types
ARV_CN_TOT	Long integer			0			Asset Replacement Value of Content for All Structure Types
ARV_BG_RES	Long integer			0			Asset Replacement Value of Residential Buildings
ARV_CN_RES	Long integer			0			Asset Replacement Value of Content for Residential Structures
ARV_BG_COM	Long integer			0			Asset Replacement Value of Commercial Buildings
ARV_CN_COM	Long integer			0			Asset Replacement Value of Content for Commercial Structures
ARV_BG_OTH	Long integer			0			Asset Replacement Value of Other Structure Types
ARV_CN_OTH	Long integer			0			Asset Replacement Value of Content for Other Structure Types
NUM_BLDG	Long integer			0			Number of Buildings of All Types [E]
NUM_RES	Long integer			0			Number of Residential Buildings [E]
NUM_COM	Long integer			0			Number of Commercial Buildings [E]
NUM_OTH	Long integer			0			Number of Building of Other Types (Industrial, Education, Religious, Government, Agriculture) [E]
HUC8_CODE	String					8	8-digit HUC Identifier
CASE_NO	String					12	FEMA Case Number for Project
VERSION_ID	String					11	Version ID of Guidelines Used to Create Data
SOURCE_CIT	String					25	Source Citation from L_Source_Cit
Shape_Length	Double			0	0		
Shape_Area	Double			0	0		

Relationship class CenBlk_AAL — Type *Simple*; Cardinality *One to many*; Notification *None*; Forward label *AAL*; Backward label *CenBlk*. Origin feature class: Name *S_CenBlk_Ar*, Primary key *CEN_BLK_ID*, Foreign key *CEN_BLK_ID*. Destination table: Name *L_RA_AAL*. No relationship rules defined.

Table L_RA_AAL

Risk Assessment – Average Annualized Loss (AAL)

Field name	Data type	Default value	Domain	Precision	Scale	Length	
OBJECTID	Object ID						
CEN_BLK_ID	String					17	Census Block ID
HAZARD_TYP	String		D_Hazard_Typ			4	Hazard Type for which Analysis was Performed or 'TOTAL'
RETURN_PER	String		D_Event			6	Hazus Analysis Event or Annualized
TOT_LOSSES	Double			0	0		Total Losses
BL_TOT	Double			0	0		Building Losses - Total
CL_TOT	Double			0	0		Content Losses - Total
BL_RES	Double			0	0		Building Losses - Residential
CL_RES	Double			0	0		Content Losses - Residential
BL_COM	Double			0	0		Building Losses - Commercial
CL_COM	Double			0	0		Content Losses - Commercial
BL_OTH	Double			0	0		Building Losses - Other
CL_OTH	Double			0	0		Content Losses - Other
BUS_DISRPT	Double			0	0		Business Disruption Costs
CNT_RES	Long integer			0			Count of Residential Structures Damaged by Event [E]
CNT_COM	Long integer			0			Count of Commercial Structures Damaged by Event [E]
CNT_OTH	Long integer			0			Count of Other Structure Types Damaged by Event [E]
HUC8_CODE	String					8	8-digit HUC Identifier
CASE_NO	String					12	FEMA Case Number for Project
VERSION_ID	String					11	Version ID of Guidelines Used to Create Data

Relationship class CenBlk_Refined — Type *Simple*; Cardinality *One to many*; Notification *None*; Forward label *Refined*; Backward label *CenBlk*. Origin feature class: Name *S_CenBlk_Ar*, Primary key *CEN_BLK_ID*, Foreign key *CEN_BLK_ID*. Destination table: Name *L_RA_Refined*. No relationship rules defined.

Table L_RA_Refined

Risk Assessment - Refined

Field name	Data type	Default value	Domain	Precision	Scale	Length	
OBJECTID	Object ID						
CEN_BLK_ID	String					17	Census Block ID
HAZARD_TYP	String		D_Hazard_Typ			4	Hazard Type for which Analysis was Performed or 'TOTAL'
RETURN_PER	String		D_Event			6	Hazus Analysis Event or Annualized
TOT_LOSSES	Double			0	0		Total Losses
BL_TOT	Double			0	0		Building Losses - Total
CL_TOT	Double			0	0		Content Losses - Total
BL_RES	Double			0	0		Building Losses - Residential
CL_RES	Double			0	0		Content Losses - Residential
BL_COM	Double			0	0		Building Losses - Commercial
CL_COM	Double			0	0		Content Losses - Commercial
BL_OTH	Double			0	0		Building Losses - Other
CL_OTH	Double			0	0		Content Losses - Other
BUS_DISRPT	Double			0	0		Business Disruption Costs
CNT_RES	Long integer			0			Count of Residential Structures Damaged by Event [E]
CNT_COM	Long integer			0			Count of Commercial Structures Damaged by Event [E]
CNT_OTH	Long integer			0			Count of Other Structure Types Damaged by Event [E]
HUC8_CODE	String					8	8-digit HUC Identifier
CASE_NO	String					12	FEMA Case Number for Project
VERSION_ID	String					11	Version ID of Guidelines Used to Create Data

Relationship class CenBlk_Composite — Type *Simple*; Cardinality *One to many*; Notification *None*; Forward label *Composite*; Backward label *CenBlk*. Origin feature class: Name *S_CenBlk_Ar*, Primary key *CEN_BLK_ID*, Foreign key *CEN_BLK_ID*. Destination table: Name *L_RA_Composite*. No relationship rules defined.

Table L_RA_Composite

Risk Assessment - Composite

Field name	Data type	Default value	Domain	Precision	Scale	Length	
OBJECTID	Object ID						
CEN_BLK_ID	String					17	Census Block ID
HAZARD_TYP	String		D_Hazard_Typ			4	Hazard Type for which Analysis was Performed or 'TOTAL'
RETURN_PER	String		D_Event			6	Hazus Analysis Event or Annualized
RA_TYP	String		D_RA_TYP			3	Risk Assessment Type – AAL or Refined
TOT_LOSSES	Double			0	0		Total Losses
BL_TOT	Double			0	0		Building Losses - Total
CL_TOT	Double			0	0		Content Losses - Total
BL_RES	Double			0	0		Building Losses - Residential
CL_RES	Double			0	0		Content Losses - Residential
BL_COM	Double			0	0		Building Losses - Commercial
CL_COM	Double			0	0		Content Losses - Commercial
BL_OTH	Double			0	0		Building Losses - Other
CL_OTH	Double			0	0		Content Losses - Other
BUS_DISRUPT	Double			0	0		Business Disruption Costs
CNT_RES	Long integer			0			Count of Residential Structures Damaged by Event [E]
CNT_COM	Long integer			0			Count of Commercial Structures Damaged by Event [E]
CNT_OTH	Long integer			0			Count of Other Structure Types Damaged by Event [E]
HUC8_CODE	String					8	8-digit HUC Identifier
CASE_NO	String					12	FEMA Case Number for Project
VERSION_ID	String					11	Version ID of Guidelines Used to Create Data

Relationship class CenBlk_LocalGBS — Type *Simple*; Cardinality *One to one*; Notification *None*; Forward label *Local_GBS*; Backward label *CenBlk*. Origin feature class: Name *S_CenBlk_Ar*, Primary key *CEN_BLK_ID*, Foreign key *CEN_BLK_ID*. Destination table: Name *L_Local_GBS*. No relationship rules defined.

Table L_Local_GBS [E]

Updated General Building Stock Data from Local Sources

Field name	Data type	Default value	Domain	Precision	Scale	Length	
OBJECTID	Object ID						
CEN_BLK_ID	String					17	Census Block ID
POPULATION	Long integer			0			Population Count
ARV_BG_TOT	Long integer			0			Asset Replacement Value of Buildings of All Types
ARV_CN_TOT	Long integer			0			Asset Replacement Value of Content for All Structure Types
ARV_BG_RES	Long integer			0			Asset Replacement Value of Residential Buildings
ARV_CN_RES	Long integer			0			Asset Replacement Value of Content for Residential Structures
ARV_BG_COM	Long integer			0			Asset Replacement Value of Commercial Buildings
ARV_CN_COM	Long integer			0			Asset Replacement Value of Content for Commercial Structures
ARV_BG_OTH	Long integer			0			Asset Replacement Value of Other Structure Types
ARV_CN_OTH	Long integer			0			Asset Replacement Value of Content for Other Structure Types
NUM_BLDG	Long integer			0			Number of Buildings of All Types
NUM_RES	Long integer			0			Number of Residential Buildings
NUM_COM	Long integer			0			Number of Commercial Buildings
NUM_OTH	Long integer			0			Number of Building of Other Types (Industrial, Education, Religious, Government, Agriculture) [E]
HUC8_CODE	String					8	8-digit HUC Identifier
CASE_NO	String					12	FEMA Case Number for Project
VERSION_ID	String					11	Version ID of Guidelines Used to Create Data

Simple feature class S_FRD_Proj_Ar

Geometry *Polygon*; Contains M values *No*; Contains Z values *No*

Flood Risk Project Info (One Polygon Feature per Project)

Field name	Data type	Default value	Domain	Precision	Scale	Length	
OBJECTID	Object ID						
SHAPE	Geometry						
CASE_NO	String					12	FEMA Case Number for Project (YY-RR-1234S)
PROJ_NM	String					50	Project Name
H_DATUM	String	NAD83	D_Horiz_Datum			6	Horizontal Datum
V_DATUM	String	NAVD88	D_V_Datum			6	Vertical Datum
PROJECTION	String		D_Projection			6	Projection used for Project
PROJ_ZONE	String					4	State Plane or UTM Zone
PROJ_UNIT	String		D_Proj_Unit			6	Projection Units
META_NM	String					50	Metadata Filename
HAZUS_VER	String					4	Hazus Version used in Assessments
CENSUS	String	2000				4	Decennial Census Data Used
HUC8_CODE	String					8	HUC8 Code for Project (Use 'MULTI' if project contains multiple HUCs)
VERSION_ID	String					11	Version ID of Guidelines Used to Create Data
SOURCE_CIT	String					25	Source Citation from L_Source_Cit
SHAPE_Length	Double			0	0		
SHAPE_Area	Double			0	0		

Table L_Source_Cit

Citations for Data Sources. Note: Relationship Classes Exist Between all Feature Classes and L_Source_Cit. However They are Omitted for Clarity.

Field name	Data type	Default value	Domain	Precision	Scale	Length	
OBJECTID	Object ID						
SOURCE_CIT	String					25	Primary Key – Unique Identifier
DFIRM_ID	String					6	FIRM Study Identifier
ORIGINATOR	String					100	Originator of Source Data
PUB_DATE	Date			0	0	8	Publication Date of Source Data
TITLE	String					100	Title of Source
MEDIA	String					50	Media Type of Source Data
DATE1	Date			0	0	8	Date of Source Data
DATE_REF	String					50	Basis of Date
SRC_SCALE	String					12	Scale of Source Data (e.g. 1:24000)
CONTRIB	String					50	Contributors
VERSION_ID	String					11	Version ID of Guidelines Used to Create Data

Simple feature class S_AOMI_Pt [E]

Geometry *Point*; Contains M values *No*; Contains Z values *No*

Areas of Mitigation Interest. This layer includes areas and/or issues which contribute to flood losses, highlight flood issues and associated effects.

Field name	Data type	Default value	Domain	Precision	Scale	Length	
OBJECTID	Object ID						
SHAPE	Geometry						
AOMI_ID	String					11	Primary Key – Unique Identifier
CID	String					6	FEMA CID Assigned to Community
POL_NAME1	String					50	Primary Political Name for Community
AOMI_CLASS	String		D_AOMI_Class			4	Contributing Factor Class (e.g. Riverine, Coastal, Past Flood, etc)
AOMI_TYP	String		D_AOMI_Typ			4	Type of Mitigation Interest (e.g. Dam, Levee, Erosion, etc)
AOMI_SRCCAT	String		D_AOMI_SourceCat			4	Category of the Source of the Information
AOMI_SOURCE	String					50	Source of the Information (SHMO, NFIP, Local Agency, etc)
AOMI_INFO	String					254	Reason location is an AoMI
NOTES	String					1000	Comments Explaining Relevance of this Feature in more detail
HUC8_CODE	String					8	8-digit HUC Identifier
CASE_NO	String					12	FEMA Case Number for Project
VERSION_ID	String					11	Version ID of Guidelines Used to Create Data
SOURCE_CIT	String					25	Source Citation from L_Source_Cit

Table Study_Info

Study Detail About FIRMs Used in this Project

Field name	Data type	Default value	Domain	Precision	Scale	Length	
OBJECTID	Object ID						
DFIRM_ID	String					6	FIRM Study (Primary Key – Unique Identifier)
VERSION_ID	String					11	Version ID of Guidelines Used to Create Data
STD_NFO_ID	String					25	Unique Identifier for FIRM Study
STUDY_PRE	String		D_Study_Prefix			4	Study Prefix
STUDY_NM	String					128	Study Name
STATE_NM	String		D_State_Name			4	State
CNTY_NM	String					128	County Name
JURIS_TYP	String		D_Jurisdiction_Typ			4	Political Jurisdiction Type
LG_PAN_NO	String					4	Largest Panel Number
OPP_TF	String		D_TrueFalse			1	Only Panel Printed
H_DATUM	String		D_Horiz_Datum			6	Horizontal Datum
V_DATUM	String		D_V_Datum			6	Vertical Datum
PROJECTION	String		D_Projection			6	Map Projection
PROJ_ZONE	String					4	Projection Zone
PROJ_UNIT	String		D_Proj_Unit			6	Projection Unit
PROJ_SECND	String		D_Projection			6	Secondary Projection
PROJ_SUNIT	String		D_Proj_Unit			6	Units of the Secondary Projection
CW_TF	String		D_TrueFalse			1	County-wide Study
RTROFT_TF	String		D_TrueFalse			1	Retrofit
META_NM	String					50	Metadata Filename
FIS_NM	String					14	FIS Text Filename
LOGO_NM	String					50	Logo Filename
INITLCWEFF	Date			0	0	8	Initial Countywide Effective Date
ORIG_NFIP	String					100	Initial NFIP Map Date
ORIG_FHBM	String					100	FHBM Revision Dates for the Originating County
ORIG_FIRM	String					100	Initial FIRM Map Date for the Originating County
ORIG_REV	String					100	FIRM Revision Dates for the Originating County
INDX_EFFDT	Date			0	0	8	Index Effective Date
DBVRS_DT	Date			0	0	8	FIRM Database Version Date

Simple feature class S_UDF_Pt [E]

Geometry *Point*; Contains M values *No*; Contains Z values *No*

Locations of User Defined Facilities Used in Site-Specific Risk Assessment

Field name	Data type	Default value	Domain	Precision	Scale	Length	
OBJECTID	Object ID						
SHAPE	Geometry						
UDF_ID	String					11	Facility ID – Unique Identifier
CEN_BLK_ID	String					17	Census Block ID
OCCUP_TYP	String		D_Occupancy_Typ			5	Specific Occupancy Type from HAZUS Analysis
FACLTY_TYP	String		D_Facility_Typ			4	Facility Type
ARV_BLDG	Long integer			0			Asset Replacement Value of Facility
ARV_CNTNT	Long integer			0			Asset Replacement Value of Contents
ARV_INVENT	Long integer			0			Asset Replacement Value of Inventory
HUC8_CODE	String					8	8-digit HUC Identifier
CASE_NO	String					12	FEMA Case Number for Project
VERSION_ID	String					11	Version ID of Guidelines Used to Create Data
SOURCE_CIT	String					25	Source Citation

Relationship class UDF_RA_UDF — Type *Simple*; Cardinality *One to many*; Notification *None*; Forward label *Refined*; Backward label *UDF*. Origin feature class: Name *S_UDF_Pt*, Primary key *UDF_ID*, Foreign key *UDF_ID*. Destination table: Name *L_RA_UDF_Refined*. No relationship rules defined.

Table L_RA_UDF_Refined [E]

Refined Risk Assessment Results on User Defined Facilities

Field name	Data type	Default value	Domain	Precision	Scale	Length	
OBJECTID	Object ID						
UDF_ID	String					11	Facility ID – Unique Identifier
HAZARD_TYP	String		D_Hazard_Typ			4	Hazard Type for Which Analysis was Performed or 'TOTAL'
RETURN_PER	String		D_Event			6	Analysis Period
BLD_LOSS	Long integer			0			Asset Value Loss for Building
BLD_PCTDAM	Double			0	0		Percent Damage - Building
CNT_LOSS	Long integer			0			Value of Content Loss
CNT_PCTDAM	Double			0	0		Percentage of Content Value Loss
INV_LOSS	Long integer			0			Value of Inventory Loss
INV_PCTDAM	Double			0	0		Percentage of Inventory Value Loss
HUC8_CODE	String					8	8-digit HUC Identifier
CASE_NO	String					12	FEMA Case Number for Project
VERSION_ID	String					11	Version ID of Guidelines Used to Create Data

Simple feature class S_HUC_Ar

Geometry *Polygon*; Contains M values *No*; Contains Z values *No*

Hydrologic Unit Code Boundaries (HUC)

Field name	Data type	Default value	Domain	Precision	Scale	Length	
OBJECTID	Object ID						
SHAPE	Geometry						
HUC_CODE	String					14	HUC Identifier (Primary Key)
HUC_NAME	String					80	Name of the Subbasin
DIGITS	Short integer	8		0			Number of Digits in HUC_Code
CASE_NO	String					12	FEMA Case Number for Project
VERSION_ID	String					11	Version ID of Guidelines Used to Create Data
SOURCE_CIT	String					25	Source Citation
SHAPE_Length	Double			0	0		
SHAPE_Area	Double			0	0		

Subtypes of S_HUC_Ar — Subtype field *DIGITS*; Default subtype *8*. List of defined default values and domains for subtypes in this class

Subtype Code	Subtype Description	Field name	Default value	Domain
8	HUC8	No values set		
10	HUC10	No values set		
12	HUC12	No values set		
14	HUC14	No values set		

Table L_RA_Summary

Risk Assessment – Summary by Community

Field name	Data type	Default value	Domain	Precision	Scale	Length	
OBJECTID	Object ID						
SUMM_ID	String					12	FEMA CID - Primary Key (Foreign Key to S_Pol_Ar) or CASE_NO
POL_NAME1	String					50	Primary Political Name for Community
HAZARD_TYP	String		D_Hazard_Typ			4	Hazard Type for which Assessment was Performed or 'TOTAL'
RETURN_PER	String		D_Event			6	Hazus Analysis Event or Annualized
TOT_LOSSES	Double			0	0		Total Losses
BC_TOT	Double			0	0		Total Building and Content Losses
BC_RES	Double			0	0		Residential Building and Content Losses
BC_COM	Double			0	0		Commercial Building and Content Losses
BC_OTH	Double			0	0		Other Structure Types – Building and Content Losses
BUS_DISRPT	Double			0	0		Business Disruption Costs
LR_TOT	Double			0	0		Loss Ratio – Total
LR_BC	Double			0	0		Loss Ratio – All Buildings and Contents
LR_BC_RES	Double			0	0		Loss Ratio – Residential Buildings and Contents
LR_BC_COM	Double			0	0		Loss Ratio – Commercial Buildings and Contents
LR_BC_OTH	Double			0	0		Loss Ratio – Other Structure Types – Buildings and Contents
CNT_RES	Long integer			0			Count of Residential Structures Damaged by Event [E]
CNT_COM	Long integer			0			Count of Commercial Structures Damaged by Event [E]
CNT_OTH	Long integer			0			Count of Other Structure Types Damaged by Event [E]
AAL_PERCAP	Double			0	0		Average Annualized Loss Per Capita
HUC8_CODE	String					8	8-digit HUC Identifier
CASE_NO	String					12	FEMA Case Number for Project
VERSION_ID	String					11	Version ID of Guidelines Used to Create Data

Relationship class PolAr_RA_Summary — Type *Simple*; Cardinality *One to many*; Notification *None*; Forward label *RA_Summary*; Backward label *Pol_Ar*. Origin feature class: Name *S_FRD_Pol_Ar*, Primary key *CID*, Foreign key *SUMM_ID*. Destination table: Name *L_RA_Summary*. No relationship rules defined.

Relationship class PolAr_Claims — Type *Simple*; Cardinality *One to one*; Notification *None*; Forward label *Claims*; Backward label *Pol_Ar*. Origin feature class: Name *S_FRD_Pol_Ar*, Primary key *CID*, Foreign key *CLAIMS_ID*. Destination table: Name *L_Claims*. No relationship rules defined.

Table L_Claims

Claims for Each Community / Watershed / Project

Field name	Data type	Default value	Domain	Precision	Scale	Length	
OBJECTID	Object ID						
CLAIMS_ID	String					12	FEMA CID Assigned to Community or CASE_NO
POL_NAME1	String					50	Primary Political Name from S_Pol_Ar
CLAIMS	Long integer			0			Number of Claims
CLAIMS_VAL	Double			0	0		Total Claims Value
RLP_RES	Long integer			0			Repetitive Loss Properties - Residential
RLP_COM	Long integer			0			Repetitive Loss Properties - Commercial
RLV_RES	Double			0	0		Repetitive Loss Value - Residential
RLV_COM	Double			0	0		Repetitive Loss Value – Commercial
SRP_RES	Long integer			0			Severe Repetitive Loss Properties - Residential
HUC8_CODE	String					8	8-digit HUC Identifier
CASE_NO	String					12	FEMA Case Number for Project
VERSION_ID	String					11	Version ID of Guidelines Used to Create Data

Relationship class PolAr_Exposure — Type *Simple*; Cardinality *One to one*; Notification *None*; Forward label *Exposure*; Backward label *Pol_Ar*. Origin feature class: Name *S_FRD_Pol_Ar*, Primary key *CID*, Foreign key *EXPOS_ID*. Destination table: Name *L_Exposure*. No relationship rules defined.

Table L_Exposure

Exposure Data for Each Community / Watershed / Project

Field name	Data type	Default value	Domain	Precision	Scale	Length	
OBJECTID	Object ID						
EXPOS_ID	String					12	FEMA CID Assigned to Community or CASE_NO
POL_NAME1	String					50	Primary Political Name from S_Pol_Ar
NUM_BLDG	Long integer			0			Number of All Buildings
ARV_TOT	Double			0	0		Total Asset Replacement Value for All Structure Types, Including Content
NUM_RES	Long integer			0			Number of Residential Buildings
ARV_RES	Double			0	0		Asset Replacement Value of Residential Buildings, Including Content
NUM_COM	Long integer			0			Number of Commercial Buildings
ARV_COM	Double			0	0		Asset Replacement Value of Commercial Buildings, Including Content
NUM_OTH	Long integer			0			Number of Other Buildings (Industrial, Education, Religious, Government, Agriculture)
ARV_OTH	Double			0	0		Asset Replacement Value for Other Buildings, Including Content
HUC8_CODE	String					8	8-digit HUC Identifier
CASE_NO	String					12	FEMA Case Number for Project
VERSION_ID	String					11	Version ID of Guidelines Used to Create Data

Simple feature class S_FRD_Pol_Ar

Geometry *Polygon*; Contains M values *No*; Contains Z values *No*

Political Areas Within the Project Area Created from FIRM S_Pol_Ar

Field name	Data type	Default value	Domain	Precision	Scale	Length	
OBJECTID	Object ID						
SHAPE	Geometry						
POL_AR_ID	String					25	Primary Key – Unique Identifier
DFIRM_ID	String					6	DFIRM_ID from which Political Areas were Created
CID	String					6	FEMA CID Assigned to Community
POL_NAME1	String					50	Primary Official Name of the Jurisdiction Used by FEMA.
POL_NAME2	String					50	Secondary Name
CO_FIPS	String					3	County FIPS code (3-digit)
ST_FIPS	String		D_State_FIPS			2	State FIPS code (2-digit)
COMM_NO	String					4	4-digit Number Assigned by FEMA to Each Community.
ANI_TF	String		D_TrueFalse			1	Area Not Included (True/False)
ANI_DFIRM	String					6	DFIRM_ID of Database Containing the ANI Community's SFHA Data
COM_NFO_ID	String					6	Community Identifier
POPULATION	Long integer			0			Community Population in this Project
TOT_POP	Long integer			0			Total Population of Community
PRC_POP	Double			0	0		Percent of Communities Population in this Project
LND_AR_SM	Double			0	0		Area of Community in Square Miles in this Project
TOT_LND_AR	Double			0	0		Total Area of Community in Square Miles
PRC_LND_AR	Double			0	0		Percent of Community Area in Project
NFIPSTATUS	String		D_TrueFalse			1	NFIP Status (Y/N)
CRS_RATING	Short integer		D_CRS_Rating	0			Community Rating System Class (1 through 10)
PASTDECLAR	Long integer			0			Number of Past Declarations
FLD_POLICY	Long integer			0			Number of Flood Insurance Policies
POLICY_COV	Double			0	0		Total Dollar Value of Coverage
HMP_STATUS	String		D_TrueFalse			1	Community Participates in Hazard Mitigation Plan
HMP_NAME	String					100	Name of Plan
HMP_EXPIRE	Date			0	0	8	Expiration Date of Plan
POL_TYP	String		D_Pol_Typ			3	Political Type (Local, County, State, Federal)
HUC8_CODE	String					8	8-digit HUC Identifier
CASE_NO	String					12	FEMA Case Number for Project
VERSION_ID	String					11	Version ID of Guidelines Used to Create Data
SOURCE_CIT	String					25	Source Citation (Link to L_Source_Cit)
SHAPE_Length	Double			0	0		
SHAPE_Area	Double			0	0		

Relationship class PolAr_CSLF_Sum — Type *Simple*; Cardinality *One to many*; Notification *None*; Forward label *CSLF_Summary*; Backward label *Pol_Ar*. Origin feature class: Name *S_FRD_Pol_Ar*, Primary key *CID*, Foreign key *SUMM_ID*. Destination table: Name *L_CSLF_Summary*. No relationship rules defined.

Table L_CSLF_Summary

Changes Since Last FIRM (CSLF) Summary Table for Each Community / Watershed / Project

Field name	Data type	Default value	Domain	Precision	Scale	Length	
OBJECTID	Object ID						
SUMM_ID	String					12	FEMA CID Assigned to Community or CASE_NO
POL_NAME1	String					50	Primary Political Name from S_Pol_Ar
LOCATION	String		D_SFHA_FLDWY			7	SFHA, non-SFHA or Floodway
AREA_SM	Double			0	0		Area in Square Miles of SFHA, non-SFHA, or Floodway for Community
AREA_INCR	Double			0	0		Total Increase in Area (sq. mi.) for Community in SFHA, non-SFHA or Floodway
AREA_DECR	Double			0	0		Total Decrease in Area (sq. mi.) for Community in SFHA, non-SFHA or Floodway
AREA_NET	Double			0	0		Net Change in Area (sq. mi.) for Community in SFHA, non-SFHA or Floodway
POP_INCR	Long integer			0			Total Increase in Population for Community in SFHA, non-SFHA or Floodway [E]
POP_DECR	Long integer			0			Total Decrease in Population for Community in SFHA, non-SFHA or Floodway [E]
POP_NET	Long integer			0			Net Change in Population for Community in SFHA, non-SFHA or Floodway [E]
BLDG_INCR	Long integer			0			Total Increase in Building Count for Community in SFHA, non-SFHA or Floodway [E]
BLDG_DECR	Long integer			0			Total Decrease in Building Count for Community in SFHA, non-SFHA or Floodway [E]
BLDG_NET	Long integer			0			Net Change in Building Count for Community in SFHA, non-SFHA or Floodway [E]
HUC8_CODE	String					8	8-digit HUC Identifier
CASE_NO	String					12	FEMA Case Number for Project
VERSION_ID	String					11	Version ID of Guidelines Used to Create Data

Relationship class PolAr_AOMI_Sum — Type *Simple*; Cardinality *One to many*; Notification *None*; Forward label *AOMI_Summary*; Backward label *Pol_Ar*. Origin feature class: Name *S_FRD_Pol_Ar*, Primary key *CID*, Foreign key *SUMM_ID*. Destination table: Name *L_AOMI_Summary*. No relationship rules defined.

Table L_AOMI_Summary [E]

Area of Mitigation Interest (AOMI) Summary Table for Each Community / Watershed / Project

Field name	Data type	Default value	Domain	Precision	Scale	Length	
OBJECTID	Object ID						
SUMM_ID	String					12	FEMA CID Assigned to Community or CASE_NO
POL_NAME1	String					50	Primary Political Name from S_Pol_Ar
AOMI_CLASS	String		D_AOMI_Class			4	Class of AOMI (Riverine, Coastal, etc)
AOMI_TYP	String		D_AOMI_Typ			4	Type of AOMI (Dam, Leveee, etc)
AOMI_SRCCAT	String		D_AOMI_SourceCat			4	Category of Source of AOMI Information
AOMI_SOURCE	String					50	Source of AOMI Information
TOTAL	Long integer			0			Count of each unique combination of Class, Type, and Source
HUC8_CODE	String					8	8-digit HUC Identifier
CASE_NO	String					12	FEMA Case Number for Project
VERSION_ID	String					11	Version ID of Guidelines Used to Create Data

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Coded value domains

D_Event — Description *HAZUS Period of Analysis (Return Period)*; Field type *String - Shape Field Width = 20*; Split policy *Default value*; Merge policy *Default value*

Code	Description
AvgAnn	Average Annual
0_2pct	0.2% Chance Event (500-yr)
0_5pct	0.5% Chance Event (200-yr)
01pct	1.0% Chance Event (100-yr)
02pct	2.0% Chance Event (50-yr)
04pct	4.0% Chance Event (25-yr)
10pct	10.0% Chance Event (10-yr)
20pct	20.0% Chance Event (5-yr)
50pct	50.0% Chance Event (2-yr)

D_Horiz_Datum — Description *Horizontal Datum*; Field type *String - Shape Field Width = 35*; Split policy *Default value*; Merge policy *Default value*

Code	Description
NAD27	North American Datum 1927
NAD83	North American Datum 1983
WGS84	World Geodetic System 1984
83HARN	North American Datum 1983 HARN

D_Hydra_Mdl — Description *Hydraulics Model*; Field type *String - Shape Field Width = 100*; Split policy *Default value*; Merge policy *Default value*

Code	Description
0110	CHAN for Windows v. 2.03 (1997)
0120	Culvert Master v. 2.0 (September 2002) and up
0140	FAN
0260	MIKE Flood HD (2002 D and 2004)
0270	NETWORK (June 2002)
0280	PondPack v. 8 (May 2002) and up
0300	S2DMM (February 2005)
0310	StormCAD v.4 (June 2002) and up
0322	SWMM 5 Version 5.0.005 (May 2005) and up
0360	XP-SWMM 8.52 and up
0370	Xpstorm 10.0 (May 2006)
1000	ADVANCED ICPR 2.20 (Oct 2000) and 3.02 (Nov 2002)
1001	DHM 21 and 34 (AUGUST 1987)
1002	FEQ 8.92 (1999) and FEQ 9.98 (2005)
1003	FEQUTL 4.68 (1999) and FEQUTL 5.46 (2005)
1004	FESWMS 2DH 1.1 and up (JUNE 1995)
1005	FLDWAV (NOVEMBER 1998)
1007	FLO-2D V.2003.6, 2004.10 and 2006.1
1008	GAGE ANALYSIS
1009	HCSWMM 4.31B (AUGUST 2000)
1010	HEC-2 4.6.2 (MAY 1991)
1012	HEC-RAS 3.1.1 and up
1013	HY8 4.1 (November 1992) and up
1015	MIKE 11 HD (2002 D, 2004)
1017	QUICK-2 1.0 (January 1995) and up
1021	SWMM 4.30 (MAY 1994)
1022	SWMM 4.31 (JANUARY 1997)
1023	TABS-RMA2 V.4.3 (OCTOBER 1996)
1024	TABS-RMA4 V.4.5 (JULY 2000)
1026	WSPGW 12.96 (OCTOBER 2000)
1027	WSPRO (JUNE 1988) and up
9999	Other

D_Jurisdiction_Typ — Description *Jurisdiction Types*; Field type *String - Shape Field Width = 22*; Split policy *Default value*; Merge policy *Default value*

Code	Description
0100	All Jurisdictions
0200	And Incorporated Areas
0300	Independent City
0900	Unincorporated Areas

D_Hydro_Mdl — Description *Hydrology Model*; Field type *String - Shape Field Width = 100*; Split policy *Default value*; Merge policy *Default value*

Code	Description
0190	PondPack v.8 (May 2002) and up
0200	PRMS Version 2.1 (January 1996)
0222	SWMM 5 Version 5.0.005 (May 2005) and up
0231	TR-20 Win 1.00.002 (January 2005)
0240	TR-55 (JUNE 1986)
0250	XP-SWMM 8.52 and up
0260	Xpstorm 10.0 (May 2006)
2000	AHYMO 97 (AUGUST 1997)
2001	CUHPF/PC (MAY 1996 and May 2002)
2005	HEC-FFA 3.1 (February 3.1)
2006	HEC-1 4.0.1 (May 1991) and up
2008	HEC-HMS 1.1 (March 1998) and up
2018	HSPF 10.10 (December 1993) and up
2022	MIKE 11 RR (2002 D and 2004)
2023	MIKE 11 UHM (2002 D and 2004)
2024	PEAKFQ 2.4 (APRIL 1998) and up
2029	REGRESSION EQUATIONS
2031	SWMM (RUNOFF) 4.30 (MAY 1994)
2032	SWMM (RUNOFF) 4.31 (JANUARY 1997)
2033	TR-20 (FEBRUARY 1992)
2034	Win TR-55 1.0.08 (January 2005)
9999	Other

D_Proj_Unit — Description *Projection Unit*; Field type *String - Shape Field Width = 25*; Split policy *Default value*; Merge policy *Default value*

Code	Description
USFT	US SURVEY FEET
INTLFT	INTERNATIONAL FEET
METER	METERS
DECDEG	DECIMAL DEGREES

D_Runup_Mdl — Description *Runup Models*; Field type *String - Shape Field Width = 24*; Split policy *Default value*; Merge policy *Default value*

Code	Description
1010	ACES 1.07 (1992)
1030	EROSION (1998)
1040	GLWRM (1992)
1050	RUNUP 2.0 (1990)
1020	CHAMP / RUNUP 2.0 (2007)
1015	CEM - OTHER (2003)
1060	TAW METHOD
1070	SPM (USACE 1984)
1080	DIM
9999	Other

D_State_FIPS — Description *State FIPS Codes*; Field type *String - Shape Field Width = 2*; Split policy *Default value*; Merge policy *Default value*

Code	Description
01	01 - Alabama
02	02 - Alaska
04	04 - Arizona
11	11 - District of Columbia
60	60 - American Samoa
64	64 - Micronesia
66	66 - Guam
68	68 - Marshall Islands
69	69 - Northern Mriana Islands
70	70 - Palau
72	72 - Puerto Rico
74	74 - US Minor Islands
78	78 - Virgin Islands

D_State_Name — Description *State Names*; Field type *String - Shape Field Width = 24*; Split policy *Default value*; Merge policy *Default value*

Code	Description
AL	Alabama
AK	Alaska
AZ	Arizona
AR	Arkansas
CA	California
AS	American Samoa
FM	Federated States of Micronesia
FU	Guam
MH	Marshal Islands
MP	Northern Mariana Islands
PW	Palau
PR	Puerto Rico
UM	US Minor Outlying Islands
VI	Virgin Islands

D_Projection — Description *Projections*; Field type *String - Shape Field Width = 128*; Split policy *Default value*; Merge policy *Default value*

Code	Description
UTM	UNIVERSAL TRANSVERSE MERCATOR
0101H	HARN STATE PLANE TRANSVERSE MERCATOR, ALABAMA EAST ZONE
0102H	HARN STATE PLANE TRANSVERSE MERCATOR, ALABAMA WEST ZONE
0202H	HARN STATE PLANE TRANSVERSE MERCATOR, ARIZONA CENTRAL ZONE
0201H	HARN STATE PLANE TRANSVERSE MERCATOR, ARIZONA EAST ZONE
0203H	HARN STATE PLANE TRANSVERSE MERCATOR, ARIZONA WEST ZONE
0101	STATE PLANE TRANSVERSE MERCATOR, ALABAMA EAST ZONE
0102	STATE PLANE TRANSVERSE MERCATOR, ALABAMA WEST ZONE
5001	STATE PLANE HOTINE OBLIQUE MERCATOR, ALASKA 1 ZONE
5010	STATE PLANE LAMBERT CONFORMAL CONIC, ALASKA 10 ZONE
0202	STATE PLANE TRANSVERSE MERCATOR, ARIZONA CENTRAL ZONE
0201	STATE PLANE TRANSVERSE MERCATOR, ARIZONA EAST ZONE
0203	STATE PLANE TRANSVERSE MERCATOR, ARIZONA WEST ZONE
5300	STATE PLANE LAMBERT CONFORMAL CONIC, AMERICAN SAMOA ZONE
5201	STATE PLANE LAMBERT CONFORMAL CONIC, PUERTO RICO ZONE
5202	STATE PLANE LAMBERT CONFORMAL CONIC, PR VIRGIN I ST CROIX ZONE
9999	Other

D_Study_Prefix — Description *Study Prefixes*; Field type *String - Shape Field Width = 20*; Split policy *Default value*; Merge policy *Default value*

Code	Description
0100	Borough of
0200	City and County of
0300	City of
0400	Municipality of
0500	Town of
0600	Township of
0700	Village of
0800	Town and Village of
9999	Other

D_Study_Typ — Description *Study Types*; Field type *String - Shape Field Width = 30*; Split policy *Default value*; Merge policy *Default value*

Code	Description
1000	SFHAs with Low Flood Risk
1010	SFHAs with Medium Flood Risk
1020	SFHAs with High Flood Risk
1100	Redelineation
1200	Digital Conversion
9999	Other

D_Surge_Mdl — Description *Surge Model*; Field type *String - Shape Field Width = 40*; Split policy *Default value*; Merge policy *Default value*

Code	Description
0100	ADCIRC (2003)
0110	DELFT 3D
1010	DYNLET
1020	FEMA SURGE (1988)
1040	MIKE 21 HD/NHD
1050	NEW ENGLAND TIDE PROFILE
1080	TABS RMA V.4.3 (OCTOBER 1996)
1090	USACE GREAT LAKES TIDE PROFILE (1988)
9999	Other

D_TrueFalse — Description *True, False, Unknown Constraint*; Field type *String - Shape Field Width = 1*; Split policy *Default value*; Merge policy *Default value*

Code	Description
T	True (Yes)
F	False (No)
U	Unknown

D_V_Datum — Description *Vertical Datum*; Field type *String - Shape Field Width = 20*; Split policy *Default value*; Merge policy *Default value*

Code	Description
MSL	Mean Sea Level
NAVD88	North American Vertical Datum 1988
NGVD29	National Geodetic Vertical Datum 1929
TIDAL	Local Tidal Datum
MLW	Mean Low Water Datum
MLLW	Mean Lower Low Water Datum

D_Wave_Mdl — Description *Wave Models*; Field type *String - Shape Field Width = 23*; Split policy *Default value*; Merge policy *Default value*

Code	Description
1020	MIKE 21 (OSW)
1030	MIKE 21 (NSW)
1040	RCPWAVE (1986)
1050	WHAFIS 3.0 (1988)
1060	WHAFIS 3.0 GL (1993)
1010	DELFT 3D
1070	STWAVE (LATEST VERSION)
1080	SWAN
1065	WHAFIS 4.0 (2007)
9999	Other

D_Zone — Description *Floodzones*; Field type *String - Shape Field Width = 20*; Split policy *Default value*; Merge policy *Default value*

Code	Description
A	A
AE	AE
AH	AH
AO	AO
ARR	AR
A99	A99
V	V
VE	VE
ANI	AREA NOT INCLUDED
D	D
X	X
OW	OPEN WATER

D_ZoneSubtype — Description *Flood zone subtypes*; Field type *String - Shape Field Width = 60*; Split policy *Default value*; Merge policy *Default value*

Code	Description
0100	COASTAL
0110	RIVERINE
0200	1 PCT ANNUAL CHANCE FLOOD HAZARD CONTAINED IN CHANNEL
0210	1 PCT ANNUAL CHANCE FLOOD HAZARD CONTAINED IN CULVERT
0300	1 PCT FUTURE CONDITIONS
0310	1 PCT FUTURE CONDITIONS CONTAINED IN CHANNEL
0320	1 PCT FUTURE CONDITIONS CONTAINED IN CULVERT
0400	1 PCT DEPTH LESS THAN 1 FOOT
0410	1 PCT DRAINAGE AREA LESS THAN 1 SQUARE MILE
0500	0.2 PCT ANNUAL CHANCE FLOOD HAZARD
0510	0.2 PCT ANNUAL CHANCE FLOOD HAZARD CONTAINED IN CHANNEL
1000	PROTECTED BY LEVEE
1010	ADMINISTRATIVE FLOODWAY
1020	AREA OF SPECIAL CONSIDERATION
1030	COMMUNITY ENCROACHMENT AREA
1040	COLORADO RIVER
1050	DENSITY FRINGE AREA
1100	FLOODWAY
1110	FLOODWAY CONTAINED IN CHANNEL
1120	FLOODWAY CONTAINED IN CULVERT
1200	FLOWAGE EASEMENT BOUNDARY
1210	STATE ENCROACHMENT
1220	RIVERINE FLOODWAY SHOWN IN COASTAL ZONE
1300	UNSHADED
9999	Other

D_AOMI_Class — Description *AOMI Class*; Field type *String - Shape Field Width = 30*; Split policy *Default value*; Merge policy *Default value*

Code	Description
RIV	Riverine
COAS	Coastal
OTH	Other
PAST	Past Claims and Mitigation

D_AOMI_SourceCat — Description *AOMI Source Category*; Field type *String - Shape Field Width = 30*; Split policy *Default value*; Merge policy *Default value*

Code	Description
0100	Community
0200	State
0300	FEMA
0400	Other Federal Agency (OFA)
9999	Other

D_AOMI_Typ — Description *AOMI Type*; Field type *String - Shape Field Width = 60*; Split policy *Default value*; Merge policy *Default value*

Code	Description
0100	Dams
0200	Non-Accredited Levees
0210	Accredited Levees
0300	Coastal Structures
0400	Under Capacity Culvert or Bridge Openings
0500	Key Emergency Routes Overtopped
0600	Past Claims Hot Spot
0700	Individual Assistance (IA) or Public Assistance (PA)
0800	Significant Land Use Change
0900	Areas of Significant Erosion
1000	Significant Non-Levee Embankments
1100	At Risk Essential Facilities
2000	Other Flood Risk Areas
3000	Areas of Mitigation Success
9999	Other

D_Carto_Hydro_Code — Description *Cartographic Code Used for Symbolization*; Field type *Long integer – Shape Field Width = 25*; Split policy *Default value*; Merge policy *Default value*

Code	Description
3360	CANAL / DITCH
3430	DAM / WEIR
3900	LAKE / POND
4280	PIPELINE
4360	RESERVOIR
4450	SEA / OCEAN
4600	STREAM / RIVER
4780	TUNNEL
4200	UNDERGROUND CONDUIT
5680	LEVEES
5990	NON-LEVEE EMBANKMENT
8000	COASTAL STRUCTURE
9999	OTHER

D_Carto_Trans_Code — Description *Cartographic Code Used for Symbolization*; Field type *Long integer – Shape Field Width = 15*; Split policy *Default value*; Merge policy *Default value*

Code	Description
100	INTERSTATES
200	US HIGHWAYS
300	STATE HIGHWAYS
500	LOCAL ROADS
700	RAILROADS
800	AIRPORTS
900	USER-DEFINED
9999	OTHER

D_Carto_Typ — Description *Cartographic Subtypes*; Field type *Short integer - Shape Field Width = 15*; Split policy *Default value*; Merge policy *Default value*

Code	Description
100	HYDROGRAPHIC
200	TRANSPORTATION
500	RESTUDY AREA
900	USER DEFINED
9999	Other

D_Change — Description *Indicates Direction of Change*; Field type *String - Shape Field Width = 12*; Split policy *Default value*; Merge policy *Default value*

Code	Description
I	Increase
D	Decrease
N	Negligible
Z	None (Zero)
U	Unknown

D_CRS_Rating (Range domain) — Description *Community Rating System*; Field type *Short integer*; Split policy *Default value*; Merge policy *Default value*

Minimum value	Maximum value
1	10

D_Facility_Typ — Description *User Defined Facility Type*; Field type *String - Shape Field Width = 12*; Split policy *Default value*; Merge policy *Default value*

Code	Description
RES	Residential
COM	Commercial
OTH	Other

D_Hazard_Typ — Description *Hazard Type*; Field type *String - Shape Field Width = 8*; Split policy *Default value*; Merge policy *Default value*

Code	Description
RIV	Riverine
COAS	Coastal
LEV	Levee
TOT	Total

D_Occupancy_Typ — Description *HAZUS Occupancy Type*; Field type *String - Shape Field Width = 40*; Split policy *Default value*; Merge policy *Default value*

Code	Description
COM1	Retail Trade
COM2	Wholesale Trade
COM3	Personal and Repair Services
COM4	Professional/Technical Services
COM5	Banks
EDU1	Grade Schools and Admin Offices
EDU2	Colleges and Universities
GOV1	Government - General Services
GOV2	Government - Emergency Response
IND1	Heavy Industrial
IND2	Light Industrial
REL1	Churches and Non-Profit Orgs
RES1	Single Family Dwellings
RES2	Manufactured Housing
	Above is partial list from HAZUS Manuals

D_Pol_Typ — Description *Political Boundary Type*; Field type *String - Shape Field Width = 8*; Split policy *Default value*; Merge policy *Default value*

Code	Description
LOC	Local
CO	County
ST	State
FED	Federal

D_RA_TYP — Description *Risk Assesment Type*; Field type *String - Shape Field Width = 25*; Split policy *Default value*; Merge policy *Default value*

Code	Description
AAL	Average Annualized Loss
REF	Refined

D_SFHA_FLDWY — Description *SFHA or Floodway*; Field type *String - Shape Field Width = 25*; Split policy *Default value*; Merge policy *Default value*

Code	Description
SFHA	Special Flood Hazard Area
FLDWY	Floodway
NONSFHA	Non-Special Flood Hazard Area

D_Topo_Typ — Description *Topographic Data Source Type*; Field type *String String - Shape Field Width = 20D*; Split policy *Default value*; Merge policy *Default value*

Code	Description
1000	10 meter DEM
1010	30 meter DEM
2000	2' Contour
2010	4' Contour
2020	10' Contour
2030	20' Contour
3000	LiDAR 9.25 cm RMSEz
3010	LiDAR 18.5 cm RMSEz
9999	Other

Note: Some of the domains shown (D_State_FIPs, D_State_Name, and D_Projections) are not complete lists, but typical values are shown.

Note: All Domains common with Appendix L & M need coordination with that team for consistency in assignment of coded values and descriptions. The FRD requires that additional items be added to some of the Domains (e.g. D_Event).