

DFIRM Verification Tool (DVT) and MIP Metadata Validation Process Update – Guidance and Tips

Updated 6/25/2014

DVT

- DVT conducts Primary Key and Secondary Key/Foreign Key validation for the 2011 and 2013 schema
- There are mistakes in the 2011 schema FIRM Database specifications and FIRM Database template. The field widths for the WATER_TYP field (multiple tables) and MTFCC field (Transportation lines) are limited to 25 characters; however, the 2011 Domain Tables Guide for these fields have acceptable domains listed in the D_WATER_TYP and D_MTFCC tables that are over 25 characters in length. If one of these domains is used, it must be truncated to 25 or less characters. Below are the two tables with their fields truncated to 25 characters:

Table D_MTFCC

This domain table is referenced in [Appendix L 2011](#)

Type of Transportation Feature	Description of Feature	Applies to Appendix
R1011	RAILROAD FEATURE (MAIN, S	L
R1051	CARLINE, STREETCAR TRACK,	L
R1052	COG RAIL LINE, INCLINE RA	L
S1100	PRIMARY ROAD	L
S1200	SECONDARY ROAD	L
S1400	LOCAL NEIGHBORHOOD ROAD,	L
S1500	VEHICULAR TRAIL (4WD)	L
S1630	RAMP	L
S1640	SERVICE DRIVE USUALLY ALO	L
S1710	WALKWAY/PEDESTRIAN TRAIL	L
S1720	STAIRWAY	L
S1730	ALLEY	L
S1740	PRIVATE ROAD FOR SERVICE	L
S1750	INTERNAL U.S. CENSUS BURE	L
S1780	PARKING LOT ROAD	L
S1820	BIKE PATH OR TRAIL	L
S1830	BRIDLE PATH	L
S2000	ROAD MEDIAN	L

Table D_Water_Typ

This domain table is referenced in Appendices L and M.

Type of Water Feature	Applies to Appendix
AREA OF COMPLEX CHANNELS	L, M
STREAM CENTERLINE	L, M
OPEN WATER AREA	L, M
WETLANDS	L, M
MANMADE WATER FEATURE	L, M
GLACIAL FEATURE	L, M
COASTLINE / ISLAND SHORE	L, M
INTERMITTENT RIVER / STRE	L, M

- For Risk MAP PMR studies you may need to clip your shapefiles based on the revised panels:
 - The following layers falling outside of S_FIRM_PAN will produce a WARNING:
S_DATUM_CONV_PT, S_GAGE S_HWM, S_HYDRO_REACH, S_LABEL_LD, S_LABEL_PT, S_NODES, S_PLSS_AR, S_POL_AR, S_PROFIL_BASLN, S_RIV_MRK, S_STN_START, S_SUBBASINS, S_SUBMITTAL_INFO, S_TOPO_CONFIDENCE, S_TRANSPORT_LN, S_TSCT_BASLN, and S_BASE_INDEX
 - The following layers falling outside of S_FIRM_PAN will produce an ERROR:
S_ALLUVIAL_FAN, S_BFE S_CBRS, S_CST_GAGE, S_CST_TSCT_LN, S_FLD_HAZ_AR, S_FLD_HAZ_LN, S_GEN_STRUCT, S_LEVEE S_LIMWA, S_PFD_LN, S_WTR_AR, S_WTR_LN, and S_XS
- All fields in a FIRM database must match the capitalization in the Technical Reference. For example, if a value is all capital letters (CAPS) in the Technical Reference or Guidelines and Standards Appendix, it should be CAPS in the database. If a value is upper and lower case (CLC) in the Technical Reference or Guidelines and Standards Appendix, it should be CLC in the database
- All previous guidance for processing watershed studies should continue to be followed:
 - [Risk MAP Products in the MIP](#)
 - [Guidance for Creating Basin-Wide Projects in the MIP](#)
- For FIRM databases based on the 2011 schema, DVT does validate the submission’s Flood Zone Types correctly match their Flood Zone Subtypes. Confirm your submissions using the following table:

2011 Flood Zone Type to Subtype Relationships

ZONE_SUBTY_ID	FLD_ZONE_ID	FLOOD_ZONE_TYPE	ZONE_SUBTYPE
100	123	A	
101	123	A	1 PCT ANNUAL CHANCE FLOOD HAZARD CONTAINED IN STRUCTURE
103	124	A99	
104	125	AE	
105	125	AE	1 PCT ANNUAL CHANCE FLOOD HAZARD CONTAINED IN STRUCTURE

ZONE_SUBTY_ID	FLD_ZONE_ID	FLOOD_ZONE_TYPE	ZONE_SUBTYPE
106	125	AE	1 PCT ANNUAL CHANCE FLOOD HAZARD CONTAINED IN CHANNEL
107	125	AE	ADMINISTRATIVE FLOODWAY
108	125	AE	AREA OF SPECIAL CONSIDERATION
109	125	AE	COLORADO RIVER FLOODWAY
110	125	AE	COMMUNITY ENCROACHMENT AREA
111	125	AE	DENSITY FRINGE AREA
112	125	AE	FLOODWAY
113	125	AE	FLOODWAY CONTAINED IN STRUCTURE
115	125	AE	FLOWAGE EASEMENT AREA
116	125	AE	NARROW FLOODWAY
117	125	AE	STATE ENCROACHMENT AREA
118	126	AH	
119	127	AO	
120	127	AO	FLOODWAY
121	128	AREA NOT INCLUDED	
122	129	D	
123	131	OPEN WATER	
124	132	V	
125	132	V	RIVERINE FLOODWAY SHOWN IN COASTAL ZONE
126	133	VE	
127	134	X	RIVERINE FLOODWAY SHOWN IN COASTAL ZONE
128	134	X	0.2 PCT ANNUAL CHANCE FLOOD HAZARD
130	134	X	0.2 PCT ANNUAL CHANCE FLOOD HAZARD CONTAINED IN CHANNEL
131	134	X	1 PCT DEPTH LESS THAN 1 FOOT
132	134	X	1 PCT DRAINAGE AREA LESS THAN 1 SQUARE MILE
134	134	X	1 PCT FUTURE CONDITIONS CONTAINED IN STRUCTURE
135	134	X	AREA OF MINIMAL FLOOD HAZARD
136	134	X	AREA WITH REDUCED FLOOD RISK DUE TO LEVEE

- D_SCALE domain table for use in the 2011 schema: Data producers should use the coded values for this table, the text values will not fit in the field length
- D_ORIENT domain table for use in the 2011 schema: Data Producers must truncate the acceptable domains to the 6 character field length, HORIZO and VERTIC
- PMR submissions must include a full S_FIRM_PAN layer. This is to comply with the DVT check between the highest FIRM Panel value in the STUDY_INFO table (and FIRM title block) and the

S_FIRM_PAN table. It also promotes improved data quality at QR2 and QR5 giving the reviewers an opportunity to check the full accuracy of the index image against the FIRM panel layer

- FIS_NM field in the STUDY_INFO table in 2011 is only 14 characters which is not long enough to follow the file naming guidance in the 2011 Appendix L. To satisfy the field requirement and meet the field length, simply leave off the file extension of the FIS report name, E.G. only 12345CV000A

Metadata Validation

- Flood Risk Database and Discovery metadata is not validated
- If more tables are listed in the metadata than the actual submitted FIRM database (DB), the submission will **fail**
- There are no issues with the metadata having more source citations than the FIRM DB. The metadata simply must have at least one