

FEMA Floodplain Guide

This document describes **how to prepare FEMA floodplain data** for submission.

Use this guide if you wish to use FEMA floodplain data in preparing a county-maintained floodplain zoning layer for submission, as outlined in the *V3 Submission Documentation*.

When to Use Data Standardize Tool	
	I have FEMA floodplain data for my county
EXPORT FORMAT OPTION	✓ This tool can assist
SEARCHABLE FORMAT OPTION	✓ This tool can assist

Why is This Guide Necessary?

The statewide zoning layers can be more consistent, understandable, searchable, maintainable, and user friendly if the data within is prepared in a standard manner.

How to Use This Guide

It is recommended you have the following materials at hand:

- The *V3 Submission Documentation* and *V3 webpage*
- The data participating in the searchable format submission, in file geodatabase format
- The county staff member(s) who will submit the data for V3
- The *FEMA Floodplain* data for your county

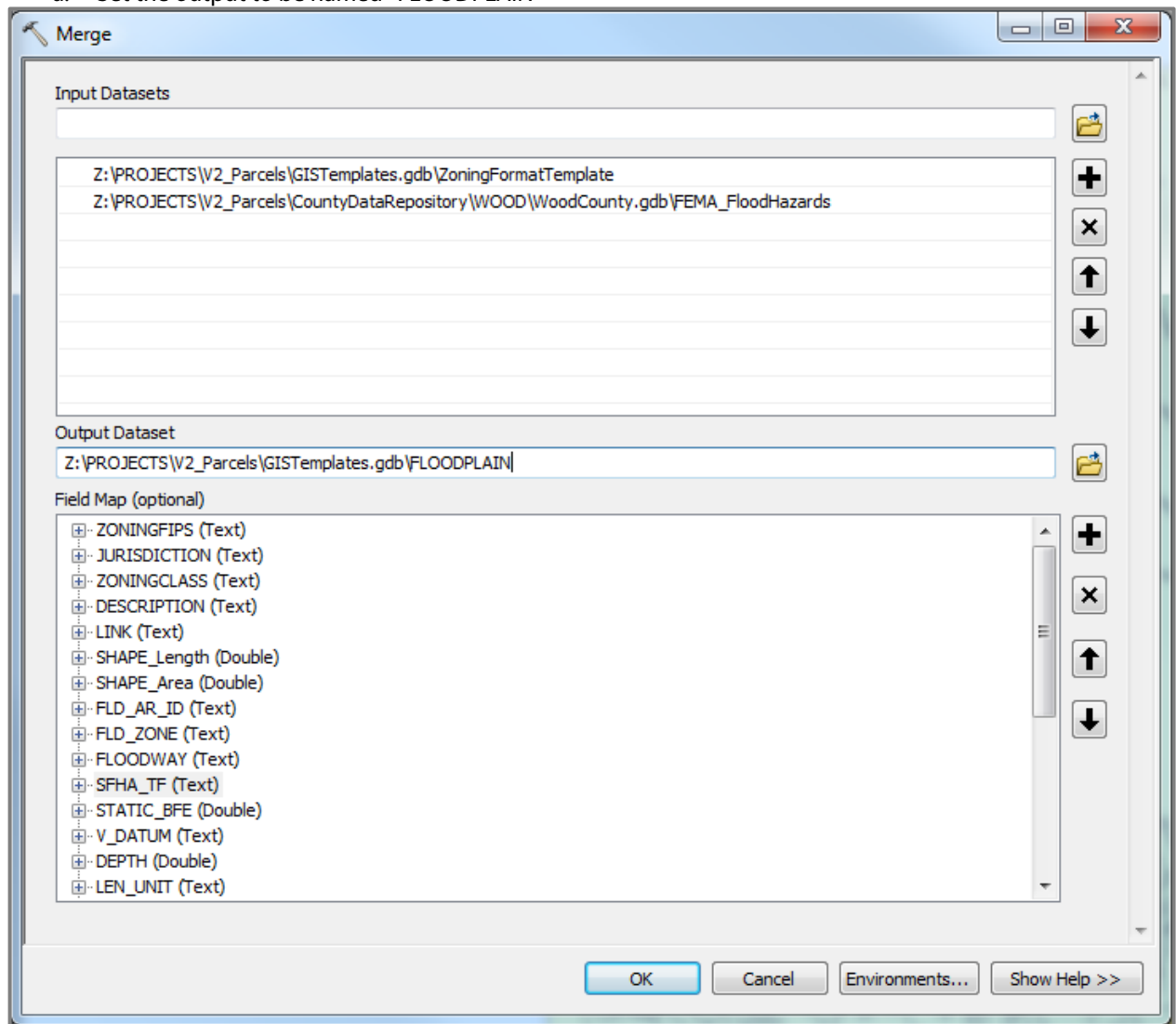
1 Inspect your FEMA floodplain data

1.1 Open the attribute table

Start by opening the FEMA floodplain dataset's attribute table. A typical layer of this type will look something like this:

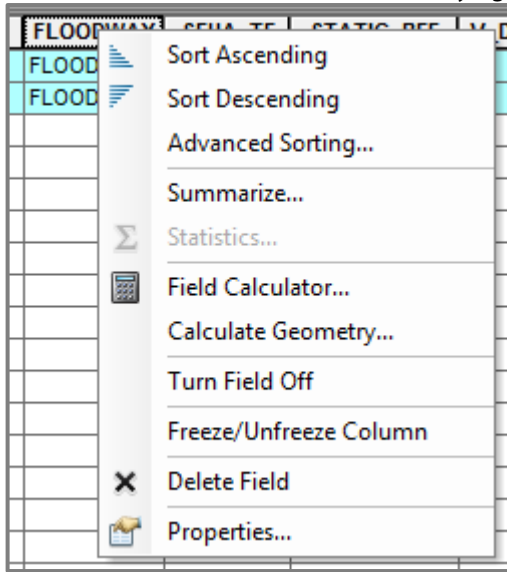
OBJECTID*	FLD_AR_ID	FLD_ZONE*	FLOODWAY	SFHA_TF	STATIC_BFE	V_DATUM	DEPTH	LEN_UNIT	VELOCITY	VEL_UNIT	AR_REVERT	BFE_REVERT	DEP_REVERT	SOURCE_CIT	HYDRO_ID	CST_MDL_ID
1 10	A			T	-9999	-9999	-9999		-9999		-9999	-9999	-9999	BASE3		
2 10	X			F	-9999	-9999	-9999		-9999		-9999	-9999	-9999	BASE3		
3 12	X			F	-9999	-9999	-9999		-9999		-9999	-9999	-9999	BASE3		
4 20	AE			T	-9999	-9999	-9999		-9999		-9999	-9999	-9999	FRM1		
5 56	A			T	-9999	-9999	-9999		-9999		-9999	-9999	-9999	BASE3		
6 56	X			F	-9999	-9999	-9999		-9999		-9999	-9999	-9999	BASE3		
7 63	X			F	-9999	-9999	-9999		-9999		-9999	-9999	-9999	BASE3		
8 64	A			T	-9999	-9999	-9999		-9999		-9999	-9999	-9999	BASE3		
9 76	A			T	-9999	-9999	-9999		-9999		-9999	-9999	-9999	BASE3		
10 79	A			T	-9999	-9999	-9999		-9999		-9999	-9999	-9999	BASE3		
11 83	X			F	-9999	-9999	-9999		-9999		-9999	-9999	-9999	FRM1		
12 98	A			T	-9999	-9999	-9999		-9999		-9999	-9999	-9999	BASE3		
13 105	A			T	-9999	-9999	-9999		-9999		-9999	-9999	-9999	BASE3		
14 108	A			T	-9999	-9999	-9999		-9999		-9999	-9999	-9999	BASE3		
15 118	A			T	-9999	-9999	-9999		-9999		-9999	-9999	-9999	BASE3		
16 139	A			T	-9999	-9999	-9999		-9999		-9999	-9999	-9999	BASE3		
17 145	A			T	-9999	-9999	-9999		-9999		-9999	-9999	-9999	BASE3		
18 157	A			T	-9999	-9999	-9999		-9999		-9999	-9999	-9999	BASE3		
19 170	A			T	-9999	-9999	-9999		-9999		-9999	-9999	-9999	BASE3		
20 172	X			F	-9999	-9999	-9999		-9999		-9999	-9999	-9999	FRM1		
21 192	X			F	-9999	-9999	-9999		-9999		-9999	-9999	-9999	FRM1		
22 200	X			F	-9999	-9999	-9999		-9999		-9999	-9999	-9999	BASE3		
23 200	A			T	-9999	-9999	-9999		-9999		-9999	-9999	-9999	BASE3		
24 214	X			F	-9999	-9999	-9999		-9999		-9999	-9999	-9999	FRM1		
25 216	A			T	-9999	-9999	-9999		-9999		-9999	-9999	-9999	BASE3		
26 251	0.2%			F	-9999	-9999	-9999		-9999		-9999	-9999	-9999	FRM1		
27 254	A			T	-9999	-9999	-9999		-9999		-9999	-9999	-9999	BASE3		
28 261	A			T	-9999	-9999	-9999		-9999		-9999	-9999	-9999	BASE3		
29 267	A			T	-9999	-9999	-9999		-9999		-9999	-9999	-9999	BASE3		
30 316	A			T	-9999	-9999	-9999		-9999		-9999	-9999	-9999	BASE3		
31 331	A			T	-9999	-9999	-9999		-9999		-9999	-9999	-9999	BASE3		
32 333	A			T	-9999	-9999	-9999		-9999		-9999	-9999	-9999	BASE3		
33 338	A			T	-9999	-9999	-9999		-9999		-9999	-9999	-9999	BASE3		
34 339	A			T	-9999	-9999	-9999		-9999		-9999	-9999	-9999	BASE3		
35 354	A			T	-9999	-9999	-9999		-9999		-9999	-9999	-9999	BASE3		
36 366	A			T	-9999	-9999	-9999		-9999		-9999	-9999	-9999	BASE3		
37 2	A			T	-9999	-9999	-9999		-9999		-9999	-9999	-9999	BASE3		
38 7	A			T	-9999	-9999	-9999		-9999		-9999	-9999	-9999	BASE3		

- 1) Download or navigate to the GIS templates file, unzip the file geodatabase, and use ArcCatalog to navigate to the **ZoningFormatTemplate** feature class.
- 2) Make a copy of the layer. Then, project your FEMA floodplain layer to the CRS from the V3 Submission Documentation.
- 3) Using the ArcGIS “Merge” tool in ArcCatalog (Toolboxes\System Toolboxes\Data Management Tools.tbx\General\Merge). Configure the tool to merge your FEMA floodplain layer with the empty template file.
 - a. Set the output to be named “FLOODPLAIN”



- 4) Optionally, configure the field mapping to only propagate the “**FLD_ZONE**” and “**FLOODWAY**” fields from the FEMA layer using the **X** button. Or, you can also delete excess fields later.
- 5) Navigate to the output feature class called FLOODPLAIN, and bring the layer into a new ArcMap session.
- 6) Open the FLOODPLAIN layer’s attribute table.
- 7) Populate the **Zoning Source Fips** and **Jurisdiction** fields as appropriate.

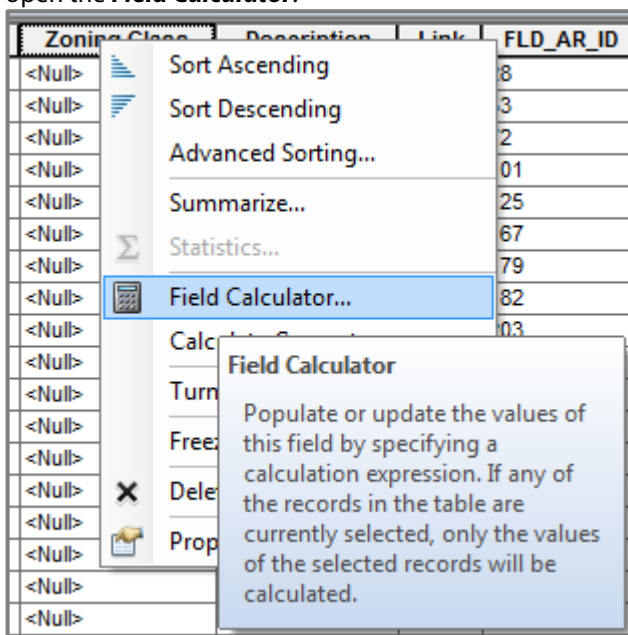
- 8) Sort the **FLOODWAY** field DECENDING by right clicking on the field name and choosing "Sort Descending."



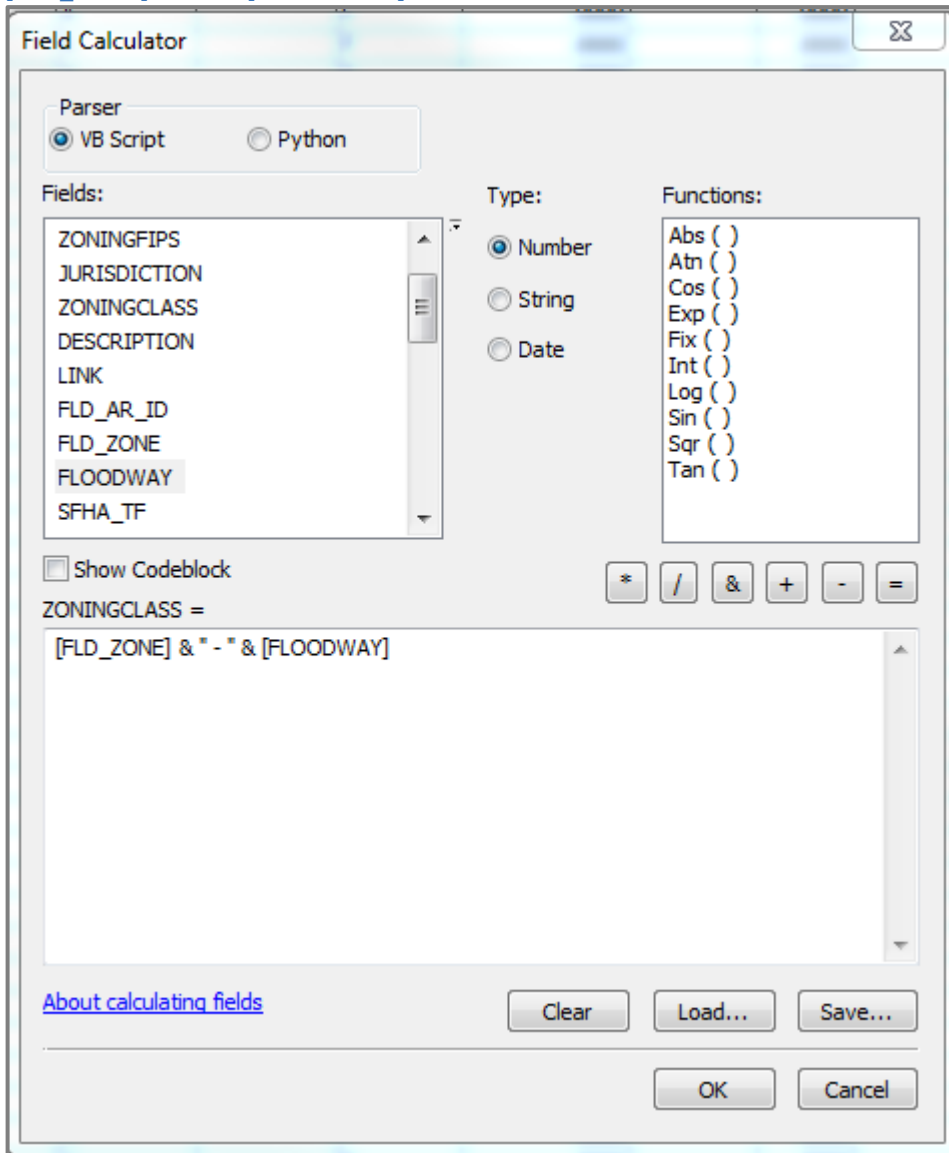
- 9) Select all rows that contain a value in the FLOODWAY column. It may only be a couple of rows:

OBJECTID *	Shape *	Zoning Source Fips	Jurisdiction	Zoning Class	Description	Link	FLD_AR_ID	FLD_ZONE	FLOODWAY	SFHA_TF
198	Polygon	<Null>	<Null>	<Null>	<Null>	<Null>	184	AE	FLOODWAY	T
277	Polygon	<Null>	<Null>	<Null>	<Null>	<Null>	183	AE	FLOODWAY	T
1	Polygon	<Null>	<Null>	<Null>	<Null>	<Null>	28	X		F
2	Polygon	<Null>	<Null>	<Null>	<Null>	<Null>	53	X		F
3	Polygon	<Null>	<Null>	<Null>	<Null>	<Null>	72	X		F
4	Polygon	<Null>	<Null>	<Null>	<Null>	<Null>	101	X		F
5	Polygon	<Null>	<Null>	<Null>	<Null>	<Null>	125	X		F

- 10) With the rows selected, populate the **Zoning Class** field by right clicking on the field name and choosing to open the **Field Calculator**.



- 11) Within field calculator, **concatenate the FLD_ZONE and FLOODWAY fields** with a formula similar to the following (be sure to use **"VB Script"** as the parser):
[\[FLD_ZONE\] & " - " & \[FLOODWAY\]](#)

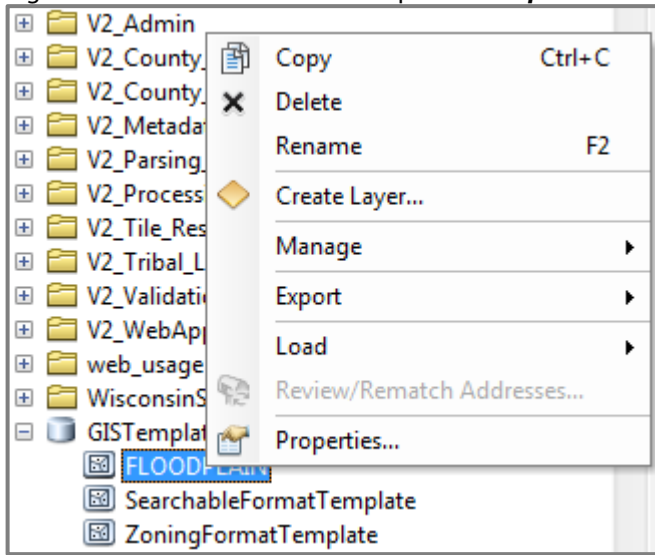


- 12) The result should be a concatenation of the FLD_ZONE value with the FLOODWAY value separated by a space hyphen space (such as **"AE - FLOODWAY"**):

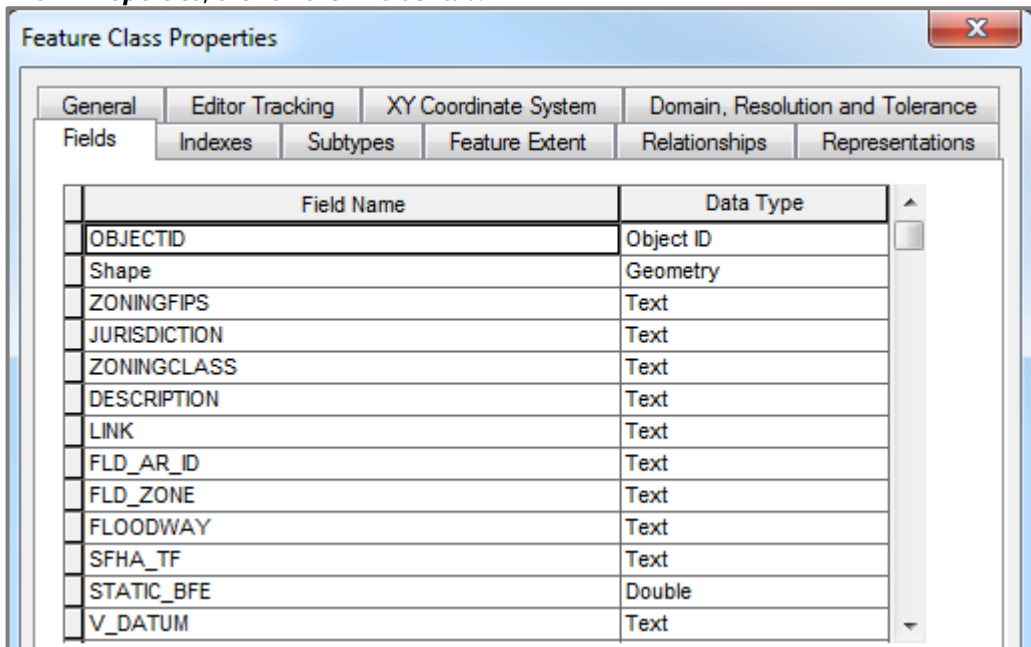
Jurisdiction	Zoning Class	Description
	AE - FLOODWAY	<Null>
	AE - FLOODWAY	<Null>
	<Null>	<Null>
	<Null>	<Null>
	<Null>	<Null>
	<Null>	<Null>
	<Null>	<Null>
	<Null>	<Null>
	<Null>	<Null>

- 13) Calculate the **LINK** and/or **DESCRIPTION** fields as appropriate, according to schema definitions in the V3 Submission Documentation.

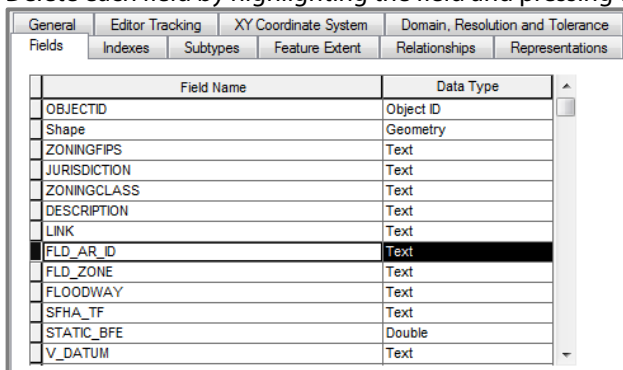
- 14) Close ArcMap (so there is not a lock on the file, which will prevent you from being able to modify the feature class.)
- 15) Using ArcCatalog, remove any excess fields.
 - a. Right- click on the feature class to open the **Properties** dialogue:



- b. Within **Properties**, click on the **Fields** tab:



- c. Select and delete all fields except those required by the statewide schema. These are: **OBJECTID, Shape, ZONINGFIPS, JURISDICTION, ZONINGCLASS, DESCRIPTION, LINK**
 - d. Delete each field by highlighting the field and pressing the “Delete” key on the keyboard.



1.2 Populate the LINK and DESCRIPTION fields

You must populate either the **LINK** or the **DESCRIPTION** field in order to follow the next steps.

FEMA's FIRM (Flood hazard areas identified on the Flood Insurance Rate Map) identifies areas as a Special Flood Hazard Areas (SFHA). Some counties use unaltered FEMA FIRM data while others use a modified version of FIRM, or another more customized floodplain GIS layer. **If your county has altered the FEMA feature class to the extent that it affects the data descriptions of this FEMA-created floodplain data, then follow the "Custom" directions below. Otherwise, follow the "FEMA" directions.**

Custom Data

Populate the LINK field with a custom link to a page that describes the values populating the ZONINGCLASS field. e.g., https://www.municode.com/library/wi/pepin_county/codes/code_of_ordinances?nodeld=CO_CH20FLZOCO
OR

Populate the DESCRIPTION field with a textual description of the ZONINGCLASS field on the given row of the attribute table (as pictured in the example below).

ZONINGCLASS	DESCRIPTION
X	AREA DETERMINED TO BE OUTSIDE 500 YEAR FLOOD
X	AREA DETERMINED TO BE OUTSIDE 500 YEAR FLOOD
X	AREA DETERMINED TO BE OUTSIDE 500 YEAR FLOOD
AE	1% ANNUAL CHANCE FLOOD HAZARD (PREVIOUSLY 100 YEAR FL
AE	1% ANNUAL CHANCE FLOOD HAZARD (PREVIOUSLY 100 YEAR FL
AE	1% ANNUAL CHANCE FLOOD HAZARD (PREVIOUSLY 100 YEAR FL
AE	1% ANNUAL CHANCE FLOOD HAZARD (PREVIOUSLY 100 YEAR FL
AE	1% ANNUAL CHANCE FLOOD HAZARD (PREVIOUSLY 100 YEAR FL
AE-FLOODWAY	1% ANNUAL CHANCE FLOOD HAZARD (PREVIOUSLY 100 YEAR FL

FEMA Data

Populate "LINK" field with the following URL: <https://www.fema.gov/flood-zones>

⑥ Proceed with data submission

Troubleshooting for Data Standardize Tool

Who can I contact for help?

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