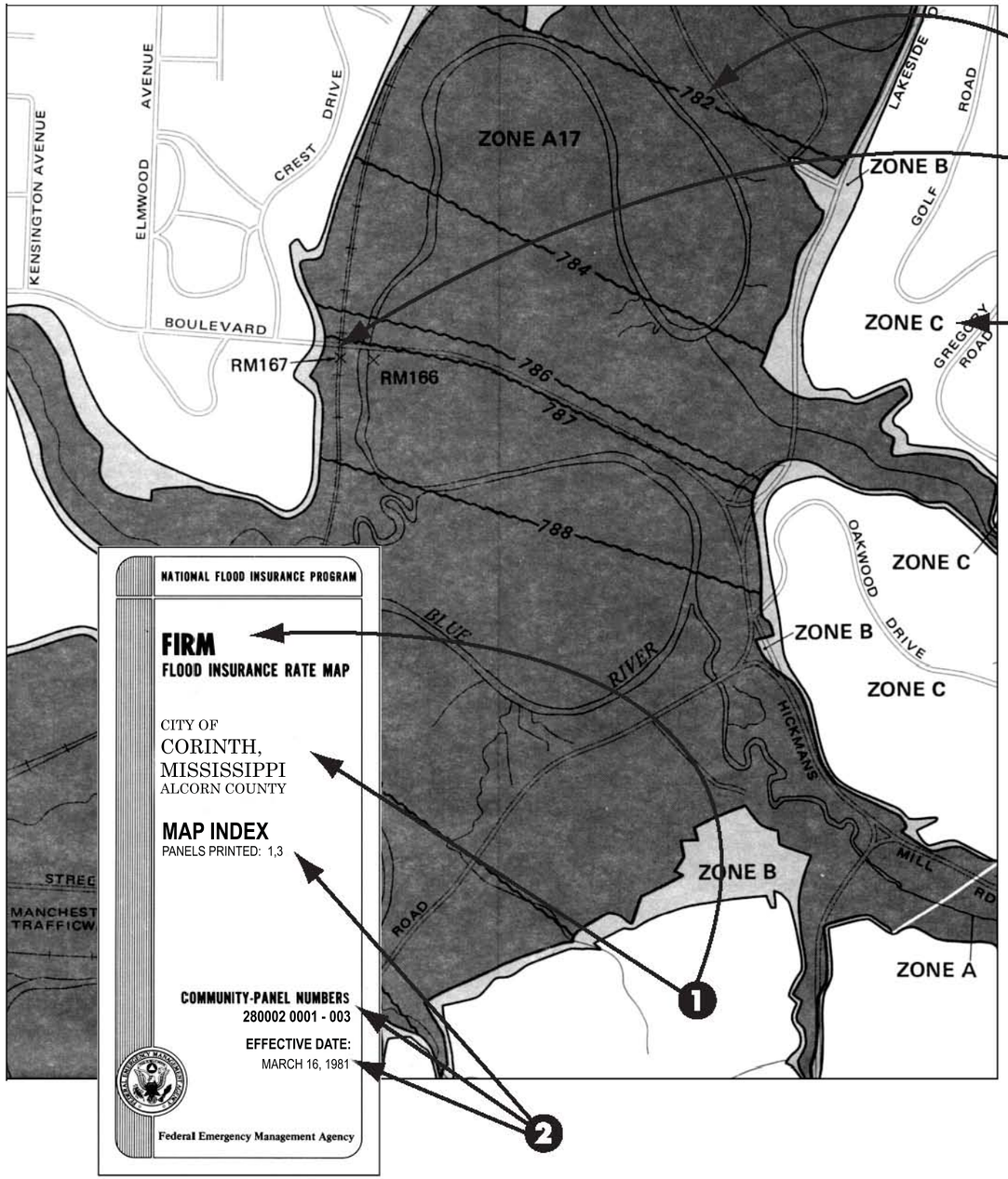
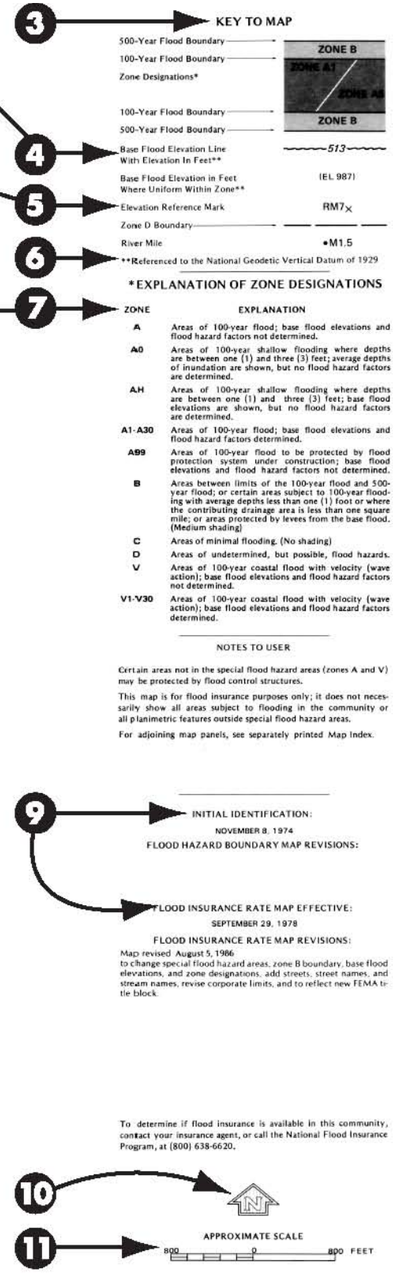
# Elements of a Flood Insurance Rate Map (Old Format)




**1 TITLE BLOCK.**
Includes map type, community name, county, and state.

**2 IDENTIFICATION.**
Community and panel numbers, effective date of panel; revisions are noted by a letter after the panel number. The first revision is A, the second is B, and so on.

**3 KEY TO MAP.**
Legend describing lines, markings, and zones.

**4 BASE FLOOD ELEVATION (BFE).**
Water surface elevation (in feet above datum) of the base flood at specific locations (cross-sections).

**5 ELEVATION REFERENCE MARKS (RM).**
Points for which ground elevation data have been established and recorded on the FIRM or in the Flood Insurance Study.

**6 DATUM.**
Most older FIRMs are referenced to the National Geodetic Vertical Datum of 1929, but conversions are being made to the North American Vertical Datum of 1988. Occasionally, a community may have its own datum.

**7 FLOOD HAZARD ZONES.** Description of flood risk zone designations. Shading and letters/ numbers are used to designate different zones.

**8 CORPORATE BOUNDARY.**
Outlines the community's boundary, as last provided to FEMA.

**9 MAP DATES.**
**Initial Identification:** When flood-prone areas were first identified.

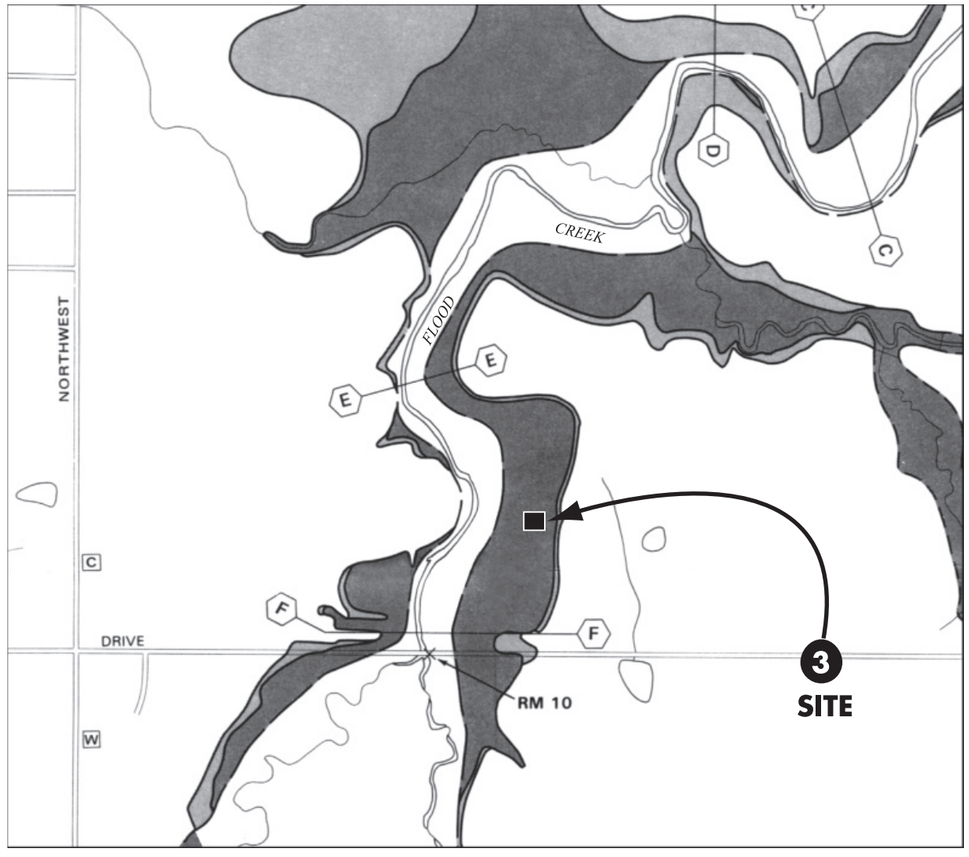
**Effective Date:** When panel was adopted (became effective).

**Revised Date:** When a change or addition, if any, took effect.

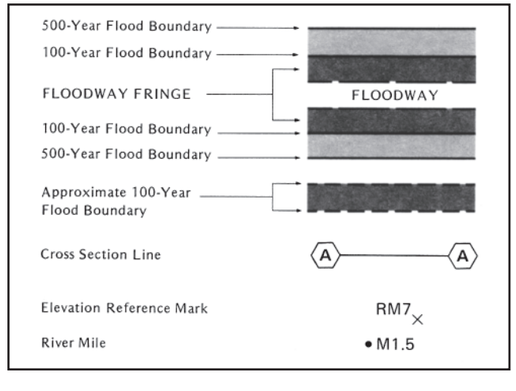
**10 NORTH ARROW.**
Shows direction to orient map users.

**11 MAP SCALE.**
NOTE that the scale can change from panel to panel.

Sample Floodway Boundary and Floodway Map (Portion)




Key to Map





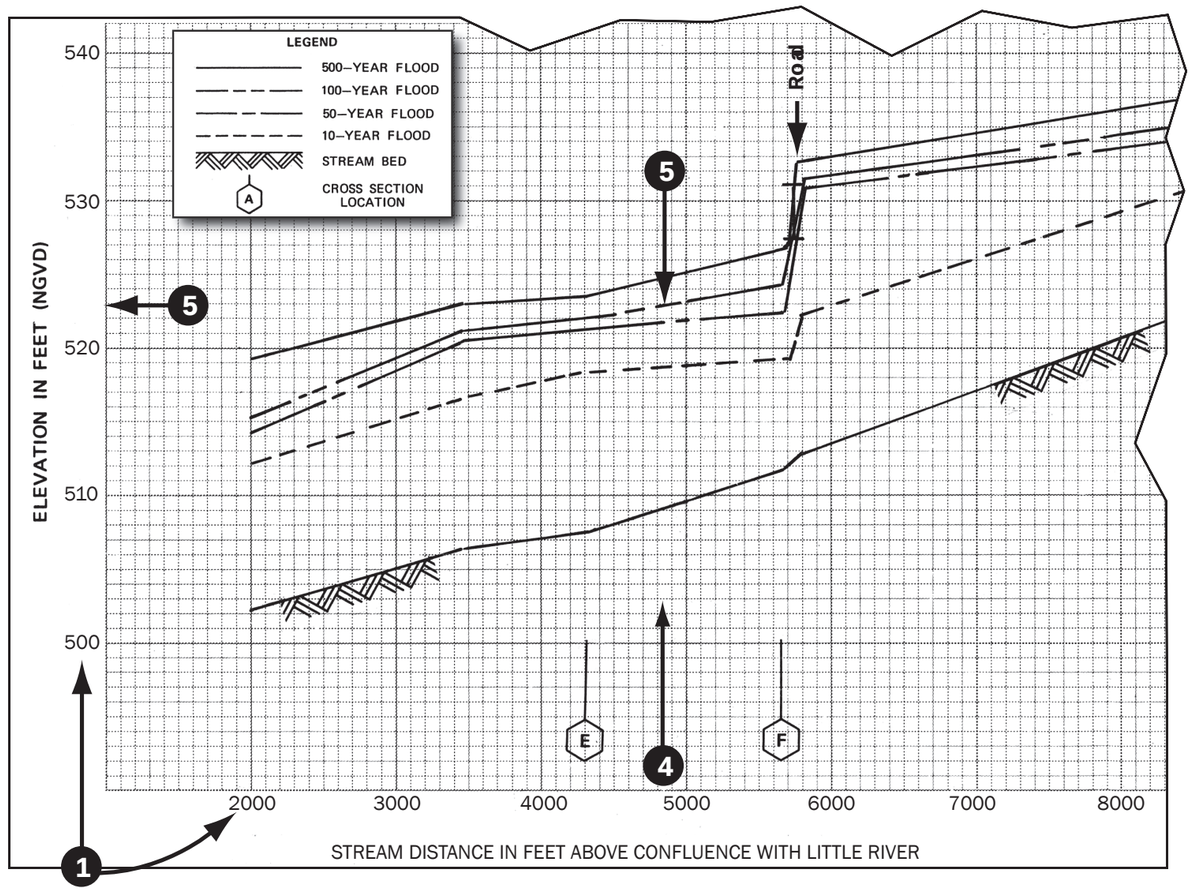
## READING A FLOOD PROFILE

The flood profile shows various elevations at locations along the waterway, including various water surface elevations computed for different flood events. The streambed is also shown, so you can get an idea of how deep the water will be above the bottom of the stream. Note especially how bridges or culverts can cause the water to backup, or to rise higher than you might expect under free-flowing conditions.

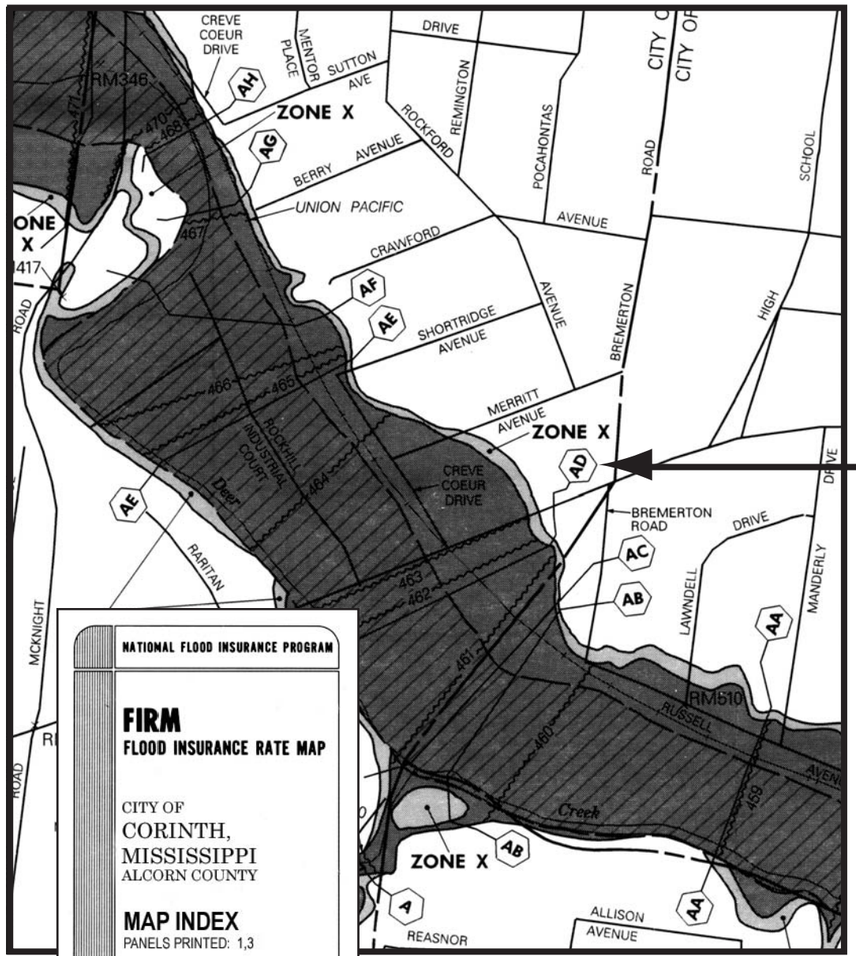
# Using the Flood Profile

To use the map and profile, follow these simple steps:

1. First, check the profile scale. On this example, each large grid block along the horizontal axis represents 1000 feet along the stream. The large grid blocks along the vertical axis represent 10 feet in elevation above the datum.
2. Next, check the map scale, which is 1" = 800' on this map. **NOTE!** The horizontal scales are different.
3. Locate the site by measuring how far it is from one of the cross-sections on the map. **NOTE!** You have to measure along the waterway, even where it meanders. Here, the site is about 900 feet downstream of cross-section F.
4. Now, go to the profile and find cross-section F. Move downstream, counting the grid blocks, until you find the point that is 900 feet downstream.
5. To find the BFE, trace straight up to the line representing the 100-year flood. For this site, the BFE is 523 NGVD. Note that the elevation of the 500-year flood is 525 NGVD, and the 10-year flood elevation is 518.5 NGVD.



Sample FIRM (New Format)




This figure shows a new format FIRM and the Floodway Data Table for the same waterway. Remember, if your community does not have the new format, you will have to check both the FIRM and the Floodway maps.

The Floodway defines the part of the floodplain that must be reserved to pass the flow of the base flood. What this means is that extreme care must be taken so that nothing built in this area obstructs or blocks the water, otherwise higher flooding is likely.

The patterned area between the flood fringes is the Floodway. In old format maps, the Floodway is a white area between the shaded flood fringes.

# New Format FIRM and Floodway Data

Cutting across the mapped SFHA are a series of lines, tagged with letters, called cross-sections. These are places where the topography or shape of the stream valley was found by survey. Since the shape of the valley is very important when determining how high floodwaters will rise, the location of the cross-sections is also important. The Floodway Data Table has a line of data for each cross-section.

Each cross-section shown is listed in alphabetical order. For example, cross-section AD is located 18,064 feet above (upstream from) the confluence with River Des Peres. The width of the floodway is 570 feet. Note that it is not always centered around the stream. The Section Area column shows the area of the floodway (width times average depth) you would see if you sliced along the cross-section. The Mean Velocity is the average velocity or speed of the water in the Floodway. For cross-section AD, the mean velocity is 6.6 feet per second.

The next three columns give information about the BFE, both with and without the floodway designation. The "without floodway" column shows the BFE if the fringe is left natural. The "with floodway" column shows the effects of the computer "squeezing in" or modeling fill in the fringe areas, which almost always makes the water surface elevation go up. What this means is that allowing the entire fringe area to be filled will increase BFEs as shown in the "increase column."

**SAMPLE FLOODWAY DATA TABLE**

| FLOODING SOURCE | | FLOODWAY | | | BASE FLOOD WATER SURFACE ELEVATION | | | |
|---|---|---|---|---|---|---|---|---|
| CROSS SECTION | DISTANCE[1] | WIDTH (FEET) | SECTION AREA (SQUARE FEET) | MEAN VELOCITY (FEET PER SECOND) | REGULATORY | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| | | | | | (FEET NGVD) | | | |
| Deer Creek | | | | | | | | |
| AA | 16,374 | 450 | 4,013 | 4.2 | 459.0 | 459.0 | 459.9 | 0.9 |
| AB | 17,376 | 507 | 2,536 | 6.7 | 459.4 | 459.4 | 460.3 | 0.9 |
| AC | 17,534 | 560 | 2,453 | 7.0 | 460.6 | 460.6 | 460.9 | 0.3 |
| AD | 18,064 | 570 | 2,579 | 6.6 | 461.9 | 461.9 | 462.3 | 0.4 |
| AE | 19,020 | 645 | 2,262 | 7.5 | 464.4 | 464.4 | 465.3 | 0.9 |
| AF | 20,100 | 520 | 2,434 | 7.0 | 466.7 | 466.7 | 467.3 | 0.6 |
| AG | 20,435 | 200 | 1,923 | 8.9 | 467.1 | 467.1 | 467.8 | 0.7 |
| AH | 20,770 | 240 | 1,756 | 9.7 | 468.0 | 468.0 | 468.6 | 0.6 |
| AI | 21,120 | 550 | 5,178 | 3.3 | 470.9 | 470.9 | 471.0 | 0.1 |
| AJ | 21,520 | 700 | 3,763 | 4.6 | 471.0 | 471.0 | 471.1 | 0.1 |
| AK | 22,105 | 800 | 5,572 | 3.1 | 471.8 | 471.8 | 472.2 | 0.4 |
| AL | 22,665 | 1,000 | 3,378 | 4.5 | 472.0 | 472.0 | 472.5 | 0.5 |
| AM | 23,711 | 174 | 1,670 | 9.8 | 472.9 | 472.9 | 473.8 | 0.9 |
| AN | 23,966 | 198 | 2,065 | 7.9 | 474.3 | 474.3 | 474.9 | 0.6 |
| AO | 24,661 | 390 | 3,987 | 4.1 | 476.2 | 476.2 | 476.5 | 0.3 |
| AP | 26,086 | 400 | 3,163 | 3.6 | 477.2 | 477.2 | 478.0 | 0.8 |
| AQ | 27,386 | 450 | 3,495 | 3.2 | 478.5 | 478.5 | 479.4 | 0.9 |
| AR | 28,546 | 400 | 2,492 | 4.5 | 480.2 | 480.2 | 481.0 | 0.8 |
| AS | 29,596 | 250 | 1,990 | 5.6 | 483.1 | 483.1 | 483.8 | 0.7 |
| AT | 30,834 | 350 | 2,085 | 5.4 | 487.5 | 487.5 | 488.2 | 0.7 |
| AU | 31,586 | 330 | 2,285 | 5.0 | 490.1 | 490.1 | 490.8 | 0.7 |
| AV | 32,456 | 175 | 1,279 | 8.9 | 493.8 | 493.8 | 494.2 | 0.4 |
| AW | 33,436 | 175 | 1,456 | 7.3 | 499.3 | 499.3 | 499.8 | 0.5 |
| AX | 34,220 | 275 | 1,965 | 5.4 | 504.1 | 504.1 | 504.2 | 0.1 |
| AY | 35,310 | 175 | 1,754 | 5.6 | 506.3 | 506.3 | 507.1 | 0.8 |
| AZ | 37,000 | 275 | 1,724 | 5.7 | 510.5 | 510.5 | 511.3 | 0.8 |

[1]Feet Above Confluence With River Des Peres

TABLE 8 — FEDERAL EMERGENCY MANAGEMENT AGENCY — CITY OF CORINTH, MS — FLOODWAY DATA — PHILLIPS CREEK