## Metadata Example

- Identification Information
- Data Quality Information
- Spatial Data Organization Information
- Spatial Reference Information
- Entity and Attribute Information
- Distribution Information
- Metadata Reference Information

## STANDARD DFIRM DATABASE, FLOOD COUNTY, USA

Identification Information:

Citation:

Citation Information:

Originator: Federal Emergency Management Agency

Publication Date: 20000505

Title: DIGITAL FLOOD INSURANCE RATE MAP DATABASE, FLOOD COUNTY,

USA

Geospatial Data Presentation Form: Vector and Raster Digital\_Data

Publication Information:

Publication\_Place: Washington, DC

Publisher: Federal Emergency Management Agency

Other Citation Details: Metadata File Name: 99009C19980915 metadata.htm

Online Linkage: http://www.msc.fema.gov/

Description:

Abstract: The Digital Flood Insurance Rate Map (DFIRM) Database depicts flood risk information and supporting data used to develop the risk data. The primary risk classifications used are the 1-percent-annual-chance flood event, the 0.2-percent-annual-chance flood event, and areas of minimal flood risk. The DFIRM Database is derived from Flood Insurance Studies (FISs), previously published Flood Insurance Rate Maps (FIRMs), flood hazard analyses performed in support of the FISs and FIRMs, and new mapping data, where available. The FISs and FIRMs are published by the Federal Emergency Management Agency (FEMA). The file is georeferenced to earth's surface using the UTM projection and coordinate system. The specifications for the horizontal control of DFIRM data files are consistent with those required for mapping at a scale of 1:12,000.

Purpose: The FIRM is the basis for floodplain management, mitigation, and insurance activities for the National Flood Insurance Program (NFIP). Insurance applications include enforcement of the mandatory purchase requirement of the Flood Disaster Protection Act, which "... requires the purchase of flood insurance by property owners who are being assisted by Federal programs or by Federally supervised, regulated or insured agencies or institutions in the acquisition or improvement of land facilities located or to be located in identified areas having special flood hazards," Section 2 (b) (4) of the Flood Disaster Protection Act of 1973. In addition to the identification of Special Flood Hazard Areas (SFHAs), the risk zones shown on the FIRMs are the basis for the establishment of premium rates for flood coverage offered through the NFIP.

The DFIRM Database presents the flood risk information depicted on the FIRM in a digital format suitable for use in electronic mapping applications. The DFIRM database is a subset of the Digital FIS database that serves to archive the information collected during the FIS.

Time Period of Content:

Time\_Period\_Information:

Single Date/Time:

Calendar Date: 19980701

```
Currentness Reference: FIRM and FIS effective date
Status:
   Progress: Complete
   Maintenance and Update Frequency: Irregular
Spatial Domain:
   Bounding Coordinates:
       West_Bounding Coordinate: -84.125
       East Bounding Coordinate: -84.25
       North Bounding Coordinate: 30.5
       South Bounding Coordinate: 30.625
Keywords:
   Theme:
       Theme Keyword Thesaurus: None
       Theme Keyword: FEMA Flood Hazard Zone
       Theme Keyword: DFIRM Database
       Theme Keyword: DFIRM
       Theme Keyword: Special Flood Hazard Area
       Theme Keyword: Digital Flood Insurance Rate Map
       Theme Keyword: CBRS
       Theme_Keyword: Coastal Barrier Resources System
       Theme Keyword: Riverine Flooding
       Theme Keyword: Coastal Flooding
       Theme Keyword: NFIP
       Theme Keyword: Base Flood Elevation
       Theme Keyword: SFHA
       Theme Keyword: Flood Insurance Rate Map
       Theme Keyword: FIRM
       Theme Keyword: Floodway
   Place:
       Place Keyword Thesaurus: None
       Place_Keyword: FLOOD COUNTY
       Place Keyword: USA
Access Constraints: None
```

Use\_Constraints: The hardcopy FIRM and DFIRM and the accompanying FISs are the official designation of SFHAs and Base Flood Elevations (BFEs) for the NFIP. For the purposes of the NFIP, changes to the flood risk information published by FEMA may only be performed by FEMA and through the mechanisms established in the NFIP regulations (44 CFR Parts 59-78).

These digital data are produced in conjunction with the hardcopy FIRMs and generally match the hardcopy map exactly. However the hardcopy flood maps and flood profiles are the authoritative documents for the NFIP.

Acknowledgement of FEMA would be appreciated in products derived from these data. Point of Contact:

```
Int_or_Contact:

Contact_Information:
Contact_Organization_Primary:
        Contact_Organization: Federal Emergency Management Agency
Contact_Position: Federal Insurance and Mitigation Administration
Contact_Address:
        Address_Type: mailing address
        Address: 500 C Street, S.W.
        City: Washington
        State_or_Province: District of Columbia
        Postal_Code: 20472
        Country: USA
Contact Voice Telephone: 1-800-358-9616
```

Contact Electronic Mail Address: www.msc.fema.gov/

Native\_Data\_Set\_Environment: Original data development environment varies. Finishing of the data is done using ESRI's ARC/INFO software.

Cross Reference:

Citation Information:

Originator: Federal Emergency Management Agency

Publication Date: 19980701

Title: Flood Insurance Rate Map, FLOOD COUNTY, USA

Geospatial\_Data\_Presentation\_Form: map

Publication\_Information:

Publication Place: Washington, DC

Publisher: Federal Emergency Management Agency

Cross Reference:

Citation Information:

Originator: Federal Emergency Management Agency

Publication Date: 19980701

Title: Flood Insurance Study, FLOOD COUNTY, USA

Geospatial Data Presentation Form: document

Publication Information:

Publication Place: Washington, DC

Publisher: Federal Emergency Management Agency

Cross Reference:

Citation Information:

Originator: Federal Emergency Management Agency

Publication Date: 19980701

Title: Raster DFIRM, FLOOD COUNTY, USA

Geospatial Data Presentation Form: raster digital data

Publication Information:

Publication Place: Washington, DC

Publisher: Federal Emergency Management Agency

Data\_Quality\_Information:

Attribute\_Accuracy:

Attribute\_Accuracy\_Report: The DFIRM Database consists of countywide vector files and associated attributes produced in conjunction with the hard copy FEMA FIRM. The published effective FIRM and DFIRM maps are issued as the official designation of the SFHAs. As such they are adopted by local communities and form the basis for administration of the NFIP. For these purposes they are authoritative. Provisions exist in the regulations for public review, appeals and corrections of the flood risk information shown to better match real world conditions. As with any engineering analysis of this type, variation from the estimated flood heights and floodplain boundaries is possible. Details of FEMA's requirements for the FISs and flood mapping process that produces these data are available in the Guidelines and Specifications for Flood Hazard Mapping Partners. Attribute accuracy was tested by manual comparison of source graphics with hardcopy plots and a symbolized display on an interactive computer graphic system.

Independent quality control testing of FEMA's DFIRM database was also performed.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the FIS report that accompanies this DFIRM database. Users should be aware that BFEs shown in the S\_BFE table represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report must be used in conjunction with the FIRM for purposes of construction and/or floodplain

management. The 1-percent-annual-chance water-surface elevations shown in the S\_XS table match the regulatory elevations shown in the FIS report.

Logical\_Consistency\_Report: When FEMA revises an FIS, adjacent studies are checked to ensure agreement between flood elevations at the boundaries. Likewise flood elevations at the confluence of streams studied independently are checked to ensure agreement at the confluence. The FIRM and the FIS are developed together and care is taken to ensure that the elevations and other features shown on the flood profiles in the FIS agree with the information shown on the FIRM. However, the elevations as shown on the FIRM are rounded whole-foot elevations. They must be shown so that a profile recreated from the elevations on the FIRM will match the FIS profiles within one half of one foot.

Completeness\_Report: Data contained in the DFIRM Database files reflect the content of the source materials. Features may have been eliminated or generalized on the source graphic, due to scale and legibility constraints. With new mapping, FEMA plans to maintain full detail in the spatial data it produces. However, older information is often transferred from existing maps where some generalization has taken place.

Flood risk data are developed for communities participating in the NFIP for use in insurance rating and for floodplain management. Flood hazard areas are determined using statistical analyses of records of river flow, storm tides, and rainfall; information obtained through consultation with the communities; floodplain topographic surveys; and hydrological and hydraulic analysis. Both detailed and approximate analyses are employed. Generally, detailed analyses are used to generate flood risk data only for developed or developing areas of communities. For areas where little or no development is expected to occur, FEMA uses approximate analyses to generate flood risk data. Typically, only drainage areas that are greater than one square mile are studied.

Positional Accuracy:

Horizontal\_Positional\_Accuracy:

Horizontal\_Positional\_Accuracy\_Report: The DFIRM Database consists of countywide vector files and associated attributes produced in conjunction with the hardcopy FEMA FIRM. The published effective FIRM and DFIRM are issued as the official designation of the SFHAs. As such they are adopted by local communities and form the basis for administration of the NFIP. For these purposes they are authoritative. Provisions exist in the regulations for public review, appeals and corrections of the flood risk information shown to better match real world conditions. As with any engineering analysis of this type, variation from the estimated flood heights and floodplain boundaries is possible. Details of FEMA's requirements for the FISs and flood mapping process that produces these data are available in the Guidelines and Specifications for Flood Hazard Mapping Partners. Horizontal accuracy was tested by manual comparison of source graphics with hardcopy plots and a symbolized display on an interactive computer graphic system.

Independent quality control testing of FEMA's DFIRM database was also performed. Vertical Positional Accuracy:

Vertical\_Positional\_Accuracy\_Report: The DFIRM Database consists of countywide vector files and associated attributes produced in conjunction with the hardcopy FEMA FIRM. The published effective FIRM and DFIRM maps are issued as the official designation of the SFHAs. As such they are adopted by local communities and form the basis for administration of the NFIP. For these purposes they are authoritative. Provisions exist in the regulations for public review, appeals and corrections of the flood risk information shown to better match real world conditions. As with any engineering analysis of this type, variation from the estimated flood heights and floodplain boundaries is possible. Details of FEMA's requirements for the FISs and flood mapping process that produces these data are available in the Guidelines and Specifications for Flood Hazard Mapping Partners. Vertical accuracy was tested by manual comparison of source graphics with hardcopy plots and a symbolized display on an interactive computer graphic system.

```
Lineage
    Source Information:
        Source Citation:
            Citation Information:
                Originator: Federal Emergency Management Agency
                Publication Date: 1987
                Title: Flood Insurance Study, FLOOD COUNTY USA (Unincorporated areas).
                Geospatial Data Presentation Form: map
                Publication Information:
                    Publication Place: Washington, DC
                    Publisher: Federal Emergency Management Agency
                Other Citation Details: The hydrologic and hydraulic analyses for the FIS
                   dated April 17, 1987, were prepared by the U.S. Army Corps of Engineers
                   (USACE), Springfield District, for the Federal Emergency Management
                   Agency (FEMA), under Inter-Agency Agreement No. EMW-84-E-1506.
                            work
                                    was
                                               completed
                                                              in
                                                                     December
                   Denominator of Source Scale: 2400-12000.
        Source Scale Denominator: 12,000
        Type of Source Media: paper
        Source Time Period of Content:
            Time Period Information:
                Single Date/Time:
                    <u>Calendar</u> Date: 19870601
            Source Currentness Reference: Effective Date
        Source Citation Abbreviation: FISI
        Source Contribution:
                               Spatial and attribute information, floodplain widths, BFEs,
            floodplain location.
    Source Information:
        Source Citation:
            Citation Information:
                Originator: Federal Emergency Management Agency
                Publication Date: 1987
                Title: Flood Insurance Study, FLOODVILLE, Town of
                Geospatial Data Presentation Form: map
                Publication Information:
                    Publication Place: Washington, DC
                    Publisher: Federal Emergency Management Agency
                Other Citation Details: The hydrologic and hydraulic analyses for the FIS
                   report dated April 17, 1987, were prepared by the USACE, Springfield
                   District, for the FEMA, under Inter-Agency Agreement No. EMW-84-E-
                   1506, Project Order No. 1, Amendment No. 4. That work was completed in
                   December 1985. Denominator of Source Scale: 2400-12000.
        Source Scale Denominator: 12,000
        Type of Source Media: paper
        Source Time Period of Content:
            Time Period Information:
                Single Date/Time:
                    Calendar Date: 19870601
            Source Currentness Reference: Effective Date
        Source Citation Abbreviation: FIS2
                              Spatial and attribute information, floodplain widths, BFEs,
        Source Contribution:
            floodplain location.
    Source Information:
```

Source Citation:

Independent quality control testing of FEMA's DFIRM database was also performed.

```
Originator: Federal Emergency Management Agency
            <u>Publication Date: 1998</u>
            Title: Flood Insurance Study Report, FLOOD COUNTY, USA and
            Incorporated areas.
            Geospatial Data Presentation Form: map
            Publication Information:
                Publication Place: Washington, DC
                Publisher: Federal Emergency Management Agency
            Other Citation Details: For this countywide FIS, the hydrologic and hydraulic
               analyses were prepared by USACE for FEMA, under Inter-Agency
               Agreement No. EMW-94-C-0019. This work was completed in October
               1995. Denominator of Source Scale: 2400-12000.
    Source Scale Denominator: 12000
    Type of Source Media: paper
    Source Time Period of Content:
        Time Period Information:
            Single Date/Time:
                Calendar_Date: 19980701
        Source Currentness Reference: Effective Date
    Source Citation Abbreviation: FIS3
                          Spatial and attribute information, floodplain widths, BFEs,
    Source Contribution:
        floodplain location.
Source Information:
    Source Citation:
        Citation Information:
            Originator: Town of Floodville Stormwater Management Department, 126
               Royal Oaks Drive, Suite 201, Floodville, USA 99150
            Publication Date: 1995
            Title: Base map for Floodville, USA
            Geospatial Data Presentation Form: vector digital data
            Publication Information:
                Publication Place: Floodville, USA
                Publisher: Town of Floodville Stormwater Management
            Other Citation Details: These files were photogrammetrically compiled at
               scales of 1"=200' (urban areas) and 1"=400' (rural areas) from aerial
               photographs.
    Source Scale Denominator: 4,800
    Type of Source Media: CD-ROM
    Source Time Period of Content:
        Time Period Information:
            Single Date/Time:
                Calendar Date: 19950301
        Source Currentness Reference: ground conditions
    Source Citation Abbreviation: BASE1
    Source Contribution: Location of roads, railroads, bridges, streams and other physical
        features shown.
Source Information:
    Source Citation:
        Citation Information:
            Originator: Flood County Geographic Information Systems Department, 1110
               South Road, Suite 205, Floodville, USA 99150
            Publication Date: 1995
            Title: Base map for Flood County, USA
            Geospatial Data Presentation Form: vector digital data
            Publication Information:
```

Citation Information:

Publication Place: Floodville, USA

Publisher: Flood County Geographic Information Systems Department

Other Citation Details: These files were photogrammetrically compiled at scales of 1"=200' (urban areas) and 1"=400' (rural areas) from aerial photographs.

Source Scale Denominator: 4,800 Type of Source Media: CD-ROM

Source Time Period of Content:

Time Period Information:

Single Date/Time:

Calendar Date: 19950301

Source Currentness Reference: ground conditions

Source Citation Abbreviation: BASE2

Source Contribution: Location of roads, railroads, bridges, streams and other physical

features shown.

Source Information:

Source Citation:

Citation Information:

Originator: U.S. Geological Survey

Publication Date: 1998

Title: Digital Orthophoto Quadrangle

Geospatial Data Presentation Form: remote-sensing image

Publication Information:

Publication Place: Reston, VA
Publisher: U.S. Geological Survey

Other Citation Details: The digital orthophoto quadrangle (DOQ) is a 1-meter ground resolution, quarter-quadrangle (3.75-minutes of latitude by 3.75-minutes of longitude) image cast on the Universal Transverse Mercator Projection (UTM) on the North American Datum of 1983 (NAD83). The imagery is based on panchromatic black and white (or color infra-red) NAPP or NAPP-like photography.

Source Scale Denominator: 12,000

Type of Source Media: CD-ROM

Source Time Period of Content:

Time Period Information:

Single Date/Time:

<u>Calendar Date:</u> 19970301

Source Currentness Reference: ground conditions

Source Citation Abbreviation: BASE3

Source Contribution: Location of roads, railroads, bridges, streams and other physical features shown.

Process Step:

<u>Process Description:</u> The DFIRM Database is compiled in conjunction with the hardcopy FIRM and the final FIS report. The specifics of the hydrologic and hydraulic analyses performed are detailed in the FIS report. The results of these studies are submitted in digital format to FEMA. These data and unrevised data from effective FIRMs are compiled onto the base map used for DFIRM publication and checked for accuracy and compliance with FEMA standards.

Source Used Citation Abbreviation: FIS1-FIS3, BASE1-BASE3

Process Date: 1996

Spatial Data Organization Information:

Direct Spatial Reference Method: Vector and raster

Point\_and\_Vector\_Object\_Information:

SDTS Terms Description:

SDTS Point and Vector Object Type: Point

SDTS Terms Description:

```
SDTS Point and Vector Object Type: String
                SDTS Terms Description:
                    SDTS Point and Vector Object Type: GT-polygon composed of chains
            Raster Object Information:
                Raster Object Type: Pixel
Spatial Reference Information:
        Horizontal Coordinate System Definition:
            Planar:
                Grid Coordinate System:
                    Grid Coordinate System Name: Universal Transverse Mercator
                    Universal Transverse Mercator:
                        UTM Zone Number: 16
                        Transverse Mercator:
                            Scale Factor at Central Meridian: 0.9996
                            Longitude of Central Meridian: -87.0
                            Latitude of Projection Origin: 0.0
                            False Easting: 500000
                            False Northing: 0.0
                Planar Coordinate Information:
                    Planar Coordinate Encoding Method: Coordinate Pair
                    Coordinate Representation:
                        Abscissa Resolution: 0.061
                        Ordinate Resolution: 0.061
                    Planar Distance Units: meters
            Geodetic Model:
                Horizontal Datum Name: North American Datum 1983
                Ellipsoid Name: Geodetic Reference System 80
                Semi-major Axis: 6378206.4
                Denominator of Flattening Ratio: 294.98
        Vertical Coordinate System Definition:
            Altitude System Definition:
                Altitude Datum Name: North American Vertical Datum of 1988
                Altitude Resolution: 0.03
                Altitude Distance Units: feet
                Altitude Encoding Method: Attribute Values
Entity and Attribute Information:
        Overview Description:
```

Entity and Attribute Overview: The DFIRM Database is made up of several data themes containing both spatial and attribute information. These data together represent the current flood risk for the subject area as identified by FEMA. The attribute tables include SFHA locations, flood zone designations, BFEs, political entities, cross-section locations, FIRM panel information, and other data related to the NFIP.

Entity and Attribute Detail Citation: Appendix L of FEMA's Guidelines and Specifications for FEMA Flood Hazard Mapping Partners contains a detailed description of each attribute code and a reference to other relevant information.

The following tables are included in this data set:

S BFE S Fld Haz Ar S Fld Haz Ln S Gen Struct S LOMR  $L_Stn_Start$ S XSL Wtr Nm

S Base Index

```
S Perm Bmk
                S PLSS Ar
                S PLSS Ln
                S Pol Ar
                S Pol Ln
                S Quad Index
                S Label Ld
                S_Trnsport_Ln
                S Label Pt
Distribution Information:
        Distributor:
            Contact Information:
                Contact Organization Primary:
                    Contact Organization: FEMA, Map Service Center
                    Contact Address:
                        Address Type: mailing address
                        Address: P.O. Box 1038
                        City: Jessup
                        State or Province: Maryland
                        Postal_Code: 20794-1038
                        Country: USA
                    Contact Voice Telephone: 1-800-358-9616
                    Contact Electronic_Mail_Address: www.msc.fema.gov/
                    Contact Instructions: Data requests must include the full name of the community or
                       county and the FIRM panel number(s) or the 7.5- minute series quadrangle sheet
                       area(s) covered by the request.
        Distribution Liability: No warranty expressed or implied is made by FEMA regarding the utility
          of the data on any other system nor shall the act of distribution constitute any such warranty.
          FEMA will warrant the delivery of this product in a computer-readable format, and will offer
          appropriate adjustment of credit when the product is determined unreadable by correctly
          adjusted computer input peripherals, or when the physical medium is delivered in damaged
          condition. Requests for adjustment of credit must be made within 90 days from the date of this
          shipment from the ordering site.
        Standard Order Process:
            Non-digital Form: Printed DFIRMs that match this data set are available from FEMA at the
               Map Service Center, cited above.
            Digital Form:
                Digital Transfer Information:
                    Format Name: ESRI Shapefile
                    Format Version Number: 1
                Digital Transfer Option:
                    Offline Option:
                        Offline Media: CD-ROM
                        Recording Format: ISO 9660
            Digital Form:
                Digital Transfer Information:
                    Format Name: MapInfo Interchange file (MIF)
                    Format Version Number: 1
                Digital Transfer Option:
                    Offline Option:
                        Offline Media: CD-ROM
                        Recording Format: ISO 9660
            Digital Form:
                Digital Transfer Information:
                    Format Name: ARCE
                    Format Version Number: 1
```

## Digital\_Transfer\_Option:

Offline Option:

Offline\_Media: CD-ROM Recording Format: ISO 9660

Fees: Contact Distributor

Metadata Reference Information:

Metadata Date: 19980509

Metadata\_Contact:

Contact Information:

Contact Organization Primary:

Contact\_Organization: Federal Emergency Management Agency Contact Position: Federal Insurance and Mitigation Administration

Contact Address:

Address\_Type: mailing address Address: 500 C Street, S.W.

City: Washington

State\_or\_Province: District of Columbia

Postal\_Code: 20472 Country: USA

Contact\_Voice\_Telephone: 1-800-358-9616

Contact Electronic Mail Address: www.msc.fema.gov/

Metadata\_Standard\_Name: FGDC Content Standards for Digital Geospatial Metadata

Metadata\_Standard\_Version: FGDC-STD-001-1998