FEMA NFIP Metadata Profile[1] for Basemap Datasets

Version 1.0.1
April 6, 2006

Legend:

Required Elements:

> Boxed Text with Regular Font: Boxed elements that appear in regular font were *required* in the FGDC standard and ***remain required*** for NFIP purposes.

> **Boxed Text with Bold Font: Boxed elements that appear in bold font were *optional* in the FGDC standard but were <u>made *required*</u> for NFIP purposes.**

Optional Elements:

> Unboxed Text with Gray Font: Unboxed elements that appear in gray font were *optional* in the FGDC standard and ***remain optional*** for NFIP purposes.

FEMA Business Rules and Recommendations:

> Text highlighted in gray contains profile-specific comments, recommendations and business rules regarding the noted element.

Notes:

(1) An asterisk (*) after an element means that this element can be repeated an unlimited number of times. Example:

> 1.1.10 *OnLink** -- Online Linkage – etc. means onlink can be repeated. (Note that *OnLink* is the "official" abbreviation for Online Linkage and hence should be used as the column name in the database.)

(2) All required elements are shown in bold and regular text (no gray!). Optional elements (shown in gray text), if supplied are also supported.

(3) "MIP Submission Date" is the date on which an "intermediate" study artifact or Draft, Preliminary or Effective DFIRM dataset was entered into the MIP (Mapping Information Platform) database.

(4) Basemap metadata files should be named according to the convention: <CID>_BaseMap_metadata. The Community Identification (CID) number is a unique 6-digit number assigned to each community that has been identified under

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[1] Federal Geographic Data Committee (FGDC) Content Standard for Digital Geospatial Metadata (CSDGM), FGDC-STD-001-1998. Available at http://www.fgdc.gov/metadata/metadata.html.

the National Flood Insurance Program. Countywide CID numbers follow the format of a 2-digit state FIPS followed by the 3-digit county FIPS and the letter 'C' (e.g., 01097C). Community-based CID numbers follow a format of a 2-digit state FIPS followed by the 4-digit FEMA community ID number. For example, 200351 is a CID whose 6-digit number indicates that is it a community-based study, whereas a 5-digit number with 'C' would indicate a countywide study.

1 *idinfo* – Identification Information – Basic information about the data set. **This section is required for all FGDC-compliant metadata.**

1.1 *Citation* -- Citation -- information to be used to reference the data set
The Citation section describes the Data Package.

1.1.1 *Citeinfo* -- Citation Information -- the recommended reference to be used for the data set.
1.1.1.1 *Origin** -- Originator -- the name of an organization or individual that developed the data set.

Domain: free text **For existing data, Originator would be the data provider.** **For data developed for the study, Originator would be the responsible party, for example the IDIQ, CTP, or other federal agency.**

1.1.1.2 *Pubdate* -- Publication Date -- the date when the data set is published or otherwise made available for release.
Domain: free date **Must be in the form of YYYYMMDD** **For existing data, Publication Date would be the date the data was published by the originator.** **For data developed for the study, Publication Date would be the submittal date to the MIP.**

1.1.1.3 *Pubtime* -- Publication Time -- the time of day when the data set is published or otherwise made available for
Domain: "Unknown" free time

1.1.1.4 *Title* -- Title -- the name by which the data set is known.
Domain: **Title should be of format: "*name of data-package type* for *MIP Project Title*", where name of data-package type reflects this submission and the "MIP Project Title" follows rules for constructing MIP project titles (e.g. "Basemap Framework Submission for Alexandria VA").**

1.1.1.5 *Edition* -- Edition -- the version of the title.
Domain: free text

1.1.1.6 *Geoform* -- Geospatial Data Presentation Form -- the mode in which the geospatial data are represented.
Domain: ***"FGDC-Framework-Basemap"***

1.1.1.7 *Serinfo* -- Series Information -- the identification of the series publication of which the data set is a part.

1.1.1.7.1 *Sername* -- Series Name -- the name of the series publication of which the data set is a part.
Domain: free text

1.1.1.7.2 *Issue* -- Issue Identification -- information identifying the issue of the series publication of which the data set is a part.
Domain: free text

1.1.1.8 *Pubinfo* -- Publication Information -- publication details for published data sets.
1.1.1.8.1 *Pubplace* -- Publication Place -- the name of the city (and state or province, and country, if needed to identify the city) where the data set was published or released.
Domain: free text

1.1.1.8.2 *Publish* -- Publisher -- the name of the individual or organization that published the data set.
Domain: free text **User has the option of specifying whether this data will be distributed directly by FEMA or by the user's organization (FEMA maintains an archived copy in this case). If the user will be distributing the data, then this contact information should be identical to the distribution contact information (Section 6).** **See also element 1.9 Point of Contact**

1.1.1.9 *Othercit* -- Other Citation Details -- other information required to complete the citation.
Domain: free text

1.1.1.10 *Onlink** -- Online Linkage -- the name of an online computer resource that contains the data set. Entries should follow the Uniform Resource Locator convention of the Internet.
Domain: free text

1.1.1.11 *Lworkcit* -- Larger Work Citation -- the information identifying a larger work in which the data set is included.
Lworkcit refers to the FEMA case under which the data package was uploaded. The 'lworkcit' element is a compound element and does not take a value.
1.1.1.11.1 Citeinfo

Note: This Citeinfo block is used to reference the FEMA Case study.

1.1.1.11.1.1 *Origin**
Domain: "Federal Emergency Management Agency"

1.1.1.11.1.2 *Pubdate*
Domain: "Unknown"

1.1.1.11.1.3 *Pubtime*

1.1.1.11.1.4 Title

Domain: Title must be "*FEMA CASE num*" where *num* is the case number associated to the project by FEMA of the form:
"*yy-rr-nnnnS*"
where:
***yy* = year**
***rr* = FEMA region number**
***nnnn* = 4 character project code**

1.1.1.11.1.5 *Edition*

1.1.1.11.1.6 *Geoform*

1.1.1.11.1.7 *Serinfo/sername & serinfo/issue*

1.1.1.11.1.8 *Pubinfo/pubplace & pubinfo/publish*

1.1.1.11.1.9 *Othercit*

1.1.1.11.1.10 *Onlink*

1.1.1.11.1.11 *Lworkcit*

1.2 *Descript* -- Description -- a characterization of the data set, including its intended use and limitations.

1.2.1 *Abstract* -- Abstract -- a brief narrative summary of the data set.

Domain:
"Basemap datasets comprise six of the seven FGDC themes of geospatial data that are used by most GIS applications (Note: the seventh framework theme, orthographic imagery, is packaged in a separate NFIP Metadata Profile): cadastral, geodetic control, governmental unit, transportation, general structures, hydrography (water areas and lines). These data include an encoding of the geographic extent of the features

	and a minimal number of attributes needed to identify and describe the features. (Source: Circular A-16, p. 13)"
1.2.2 *Purpose* -- Purpose -- a summary of the intentions with which the data set was developed.	
	Domain: *"The Basemap datasets reflect the reference features (i.e., roads, streets, hydrographic features, political jurisdiction boundaries) needed by users to locate properties on FIRMs. (Source: Guidelines and Specifications Vol 1, p. 68)"*

1.2.3 *Suppl* -- Supplemental Information -- other descriptive information about the data
        set.
        Domain: free text

1.3 *Timeperd* --Time Period of Content -- time period(s) for which the data set corresponds to the currentness reference. 1.3.1 *Timeinfo* – Time Period of Information – Information about date and time of event. 1.3.1.1 *Sngdate* – Single Date/Time – means of encoding a single date and time. 1.3.1.1.2 *Caldate* – Calendar Date – the year (and optionally month, or month and day)	
	Domain: single_date **Must be in the form of YYYYMMDD** **For Draft or Preliminary data, date should be MIP Submission Date. For Effective data, date should be Effective Date.**
1.3.2 *Current* -- Currentness Reference -- the basis on which the time period of content information is determined.	
	Domain: **For Draft or Preliminary data, Currentness Reference should be "MIP Submission Date". For Effective data, Currentness Reference should be "FIRM and FIS Effective Date".** **Currentness Reference must synchronize with Progress element (1.4.1), see guidance under element 1.4.1.**

1.4 *Status* -- Status -- the state of and maintenance information for the data set. 1.4.1 *Progress* -- Progress -- the state of the data set.	
	Domain: "Complete" "In work" **Note that the Progress element must synchronize with Currentness Reference (1.3.2) as follows: when Progress is "*In work*", Currentness Reference is "*MIP Submission Date*"; alternatively, when Progress is "*Complete*", Currentness Reference is "*FIRM and FIS Effective Date*".**

1.4.2 *Update* -- Maintenance and Update Frequency -- the frequency with which changes and additions are made to the data set after the initial data set is completed.

Domain: ***"Unknown"***

1.5 *Spdom* -- Spatial Domain - the geographic areal domain of the data set.

1.5.1 *Bounding* -- Bounding Coordinates - the limits of coverage of a data set expressed by latitude and longitude values in the order western-most, eastern-most, northern-most, and southern-most. For data sets that include a complete band of latitude around the earth, the West Bounding Coordinate shall be assigned the value -180.0, and the East Bounding Coordinate shall be assigned the value 180.0

1.5.1.1 *Westbc* -- West Bounding Coordinate -- western-most coordinate of the limit of coverage expressed in longitude.

Domain: -180.0 <= real number < 180.0

1.5.1.2 *Eastbc* -- East Bounding Coordinate -- eastern-most coordinate of the limit of coverage expressed in longitude.

Domain: -180.0 <= real number <= 180.0

1.5.1.3 *Northbc* -- North Bounding Coordinate -- northern-most coordinate of the limit of coverage expressed in latitude.

Domain: -90.0 <= real number <= 90.0;
North Bounding Coordinate >= South Bounding Coordinate

1.5.1.4 *Southbc* -- South Bounding Coordinate -- southern-most coordinate of the limit of coverage expressed in latitude.

Domain: -90.0 <= real number <= 90.0;
South Bounding Coordinate <= North Bounding Coordinate

1.5.2 *Dsgpoly** -- Data Set G-Polygon -- coordinates defining the outline of an area covered by a data set.

1.5.2.1 *Dsgpolyo* -- Data Set G-Polygon Outer G-Ring -- the closed nonintersecting boundary of an interior area.

1.5.2.2 *Dsgpolyx* -- Data Set G-Polygon Exclusion G-Ring -- the closed nonintersecting boundary of a void area (or "hole" in an interior area).

1.6 *Keywords* -- Keywords -- words or phrases summarizing an aspect of the data set.

1.6.1 *Theme** -- Theme -- subjects covered by the data set (for a list of some commonly-used thesauri, see Part IV: Subject/index term sources in Network Development and MARC Standards Office, 1988, USMARC code list for relators, sources, and description conventions: Washington, Library of Congress).

All metadata submissions must have two separate 'theme' elements, each referencing distinct topic category thesauri and keywords. The first theme element should reference the *"ISO 19115 Topic Category"* thesaurus (theme.themekt) and keywords (theme.themekey) . The second 'theme' element should reference the *"FEMA NFIP Topic Category"* thesaurus and keywords.

1.6.1.1 *Themekt* -- Theme Keyword Thesaurus -- reference to a formally registered thesaurus or a similar authoritative source of theme keywords.

Domain: "None" free text *"ISO 19115 Topic Category" and "FEMA NFIP Topic Category"*

1.6.1.2 *Themekey** -- Theme Keyword -- common-use word or phrase used to describe the subject of the data set.

Domain: **For the *"ISO 19115 Topic Category"* thesaurus, for FGDC-Framework-Basemap submissions, these keywords are required: *"transportation"*** **In addition, data producers should use the following additional ISO Topic Category keywords such as those from the following list that are applicable to this submission: *"farming" "biota" "environment" "boundaries" "economy" "elevation" "geoscientificInformation" "health" " boundaries" "climatologyMeteorologyAtmosphere" "imageryBaseMapsEarthCover" "intelligenceMilitary" "inlandWaters" "location" "oceans" "planningCadastre" "society" "structure" "utilitiesCommunication"*** ***For the "FEMA NFIP Topic Category" thesaurus, for FGDC-Framework-Basemap submissions, data producers can use any other keywords as free text.***

1.6.2 *Place** -- Place -- geographic locations characterized by the data set.

1.6.2.1 *Placekt* -- Place Keyword Thesaurus -- reference to a formally registered thesaurus or a similar authoritative source of place keywords.

Domain: "None" "Geographic Names Information System" free text

1.6.2.2 *Placekey** -- Place Keyword -- the geographic name of a location covered by a data set.

Domain: The following six (6) Place Keywords are required for each Place (1.6.2) element:
• *"REGION num" where num is the FEMA Region number.* • *"STATE abbreviation" where abbreviation is the 2-letter FIPS-standard state abbreviation (e.g., "STATE VA" for Virginia).* • *"COUNTY name" where name is the name of the county.* • *"COUNTY-FIPS code" where code is the county FIPS code.* • *"COMMUNITY name" where name is name of the community.* • *"FEMA-CID code" where code is the FEMA Community ID code.*
Users may include additional Place Keyword elements using free text.

1.6.3 *Stratum** -- Stratum -- layered, vertical locations characterized by the data set.

1.6.3.1 *Stratkt* -- Stratum Keyword Thesaurus -- reference to a formally registered thesaurus or a similar authoritative source of stratum keywords.
Domain: "None" free text

1.6.3.2 *Stratkey** -- Stratum Keyword -- the name of a vertical location used to describe the locations covered by a data set.
Domain: free text

1.6.4 *Temporal** -- Temporal -- time period(s) characterized by the data set.

1.6.4.1 *Tempkt* -- Temporal Keyword Thesaurus -- reference to a formally registered thesaurus or a similar authoritative source of temporal keywords.
Domain: "None" free text

1.6.4.2 *Tempkey** -- Temporal Keyword -- the name of a time period covered by a data set.
Domain: free text

1.7 *Accconst* -- Access Constraints -- restrictions and legal prerequisites for accessing the data set. These include any access constraints applied to assure the protection of privacy or intellectual property, and any special restrictions or limitations on obtaining the data set.
Domain: *"Restricted" "View-only" "None"*

1.8 *Useconst* -- Use Constraints -- restrictions and legal prerequisites for using the data set after access is granted. These include any use constraints applied to assure the protection of privacy or intellectual property, and any special restrictions or limitations on using the data set.
Domain: "None" free text

1.9 *Ptcontac* -- Point of Contact -- contact information for an individual or organization that is knowledgeable about the data set.

The user may wish to provide Point of Contact information here (Section 1.9) in cases where the Originator (1.1.1) of the data set is not also the Distributor (6.1) of the data set, for whom Contact Information is provided in Section 6.1. In cases such as this, providing Contact Information here will facilitate contact with the Originator of the data set.

1.9.1 *Cntinfo* -- Contact Information -- Identity of, and means to communicate with, person(s) and organization(s) associated with the data set.

1.9.1.1 Cntperp[2] -- Contact Person Primary -- the name of the individual to which the contact type.

1.9.1.1.1 *Cntper* -- Contact Person -- the name of the individual to which the contact type applies.
Domain: free text
1.9.1.1.2 *Cntorg* -- Contact Organization -- the name of the organization to which the contact type applies.
Domain: free text

1.9.1.2 *Cntorgp* -- Contact Organization Primary -- the organization, and the member of the organization associated with the data set. Used in cases where the association of the organization to the data set is more significant than the association of the person to the data set.
Domain: Compound
1.9.1.2.1 *Cntorg* -- Contact Organization -- the name of the organization to which the contact type applies.
Domain: free text

1.9.1.2.2 Cntper -- Contact Person -- the name of the individual to which the contact type applies.
Domain: free text

1.9.1.3 *Cntpos* -- Contact Position -- the title of individual.
Domain: free text

1.9.1.4 *Cntaddr** -- Contact Address -- the address for the organization or individual.

1.9.1.4.1 *Addrtype* -- Address Type -- the information provided by the address.
Domain: "mailing" "physical" "mailing and physical", free text
1.9.1.4.2 *Address** -- Address -- an address line for the address.

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[2] Note: Use of the *Cntinfo.Cntperp* and *Cntinfo.Cntorgp* elements is mutually exclusive.

Domain: free text

1.9.1.4.3 *City* -- City -- the city of the address.
Domain: free text

1.9.1.4.4 *State* -- State or Province -- the state or province of the address.
Domain: free text

1.9.1.4.5 *Postal* -- Postal Code -- the ZIP or other postal code of the address.
Domain: free text

1.9.1.4.6 *Country* -- Country -- the country of the address.
Domain: **USA**

1.9.1.5 *Cntvoice** -- Contact Voice Telephone -- the telephone number by which individuals can speak to the organization or individual.
Domain: free text

1.9.1.6 *Cnttdd** -- Contact TDD/TTY Telephone -- the telephone number by which hearing impaired individuals can contact the organization or individual.
Domain: free text

1.9.1.7 *Cntfax** -- Contact Facsimile Telephone -- the telephone number of a facsimile machine of the organization or individual.
Domain: free text

1.9.1.8 *Cntemail** -- Contact Electronic Mail Address -- the address of the electronic mailbox of the organization or individual.
Domain: free text

1.9.1.9 *Hours* -- Hours of Service -- time period when individuals can speak to the organization or individual.
Domain: free text

1.9.1.10 *Cntinst* -- Contact Instructions -- supplemental instructions on how or when to contact the individual or organization.
Domain: free text

1.10 *Browse** -- Browse Graphic -- a graphic that provides an illustration of the data set. The graphic should include a legend for interpreting the graphic.

1.10.1 *Browsen* -- Browse Graphic File Name -- name of a related graphic file that provides an illustration of the data set.
Domain: free text

1.10.2 *Browsed* -- Browse Graphic File Description -- a text description of the illustration.
Domain: free text

1.10.3 *Browset* -- Browse Graphic File Type -- graphic file type of a related graphic file.
Domain: domain values in the table below; free text

Value	Definition
"CGM"	Computer Graphics Metafile
"EPS"	Encapsulated Postscript format
"EMF"	Enhanced Metafile
"GIF"	Graphic Interchange Format
"JPEG"	Joint Photographic Experts Group format
"PBM"	Portable Bit Map format
"PS"	Postscript format
"TIFF"	Tagged Image File Format
"WMF"	Windows metafile
"XWD"	X-Windows Dump

1.11 *Datacred* -- Data Set Credit -- recognition of those who contributed to the data set.
      Domain: free text

1.12 *Secinfo* -- Security Information -- handling restrictions imposed on the data set because of national security, privacy, or other concerns.

> **Security information is optional; however, if some of the data contains sensitive information (bridges, dams, etc), the publisher can specify that information in this section**

1.12.1 *Secsys* -- Security Classification System -- name of the classification system.
      Domain: free text

1.12.2 *Secclass* -- Security Classification -- name of the handling restrictions on the data set.
      Domain: "Top secret" "Secret" "Confidential" "Restricted" "Unclassified" "Sensitive" free text

1.12.3 *Sechandl* -- Security Handling Description -- additional information about the restrictions on handling the data set.
      Domain: free text

1.13 *Native* -- Native Data Set Environment -- a description of the data set in the producer's processing environment, including items such as the name of the software (including version), the computer operating system, file name (including host-, path-, and filenames), and the data set size.
      Domain: free text

1.14 *Crossref** -- Cross Reference -- information about other, related data sets that are likely to be of interest.
> **The Cross Reference section is used to relate the Study Package to the Effective Map/FIS. This relationship is more generally established using the *COMMUNITY [name]* and *FEMA-CID [code]* in the place keyword elements list (see 1.6.2.2).**

1.14.1 *Citeinfo* – Citation Information -- the recommended reference to be used for the data set.

1.14.1.1 *Origin**

1.14.1.2 *Pubdate*

1.14.1.3 *Pubtime*

1.14.1.4 *Title*

1.14.1.5 *Edition*

1.14.1.6 *Geoform*

1.14.1.7 *Serinfo/sername & serinfo/issue*

1.14.1.8 *Pubinfo/pubplace & pubinfo/publish*

1.14.1.9 *Othercit*

1.14.1.10 *Onlink**

1.14.1.11 *lworkcit*

2 *dataqual* -- Data Quality Information -- General assessment of the quality of the data set
This section is required for all FGDC-Framework-Basemap submissions.

2.1 *Attracc* -- Attribute Accuracy -- an assessment of the accuracy of the identification of entities and assignment of attribute values in the data set.

2.1.1 *Attraccr* -- Attribute Accuracy Report -- an explanation of the accuracy of the identification of the entities and assignments of values in the data set and a description of the tests used.
Domain: free text

2.1.2 *Qattracc** -- Quantitative Attribute Accuracy Assessment -- a value assigned to summarize the accuracy of the identification of the entities and assignments of values in the data set and the identification of the test that yielded the value.

2.1.2.1 *Attraccv* -- Attribute Accuracy Value -- an estimate of the accuracy of the identification of the entities and assignments of attribute values in the data set.
Domain: "Unknown" free text

2.1.2.2 *Attracce* -- Attribute Accuracy Explanation -- the identification of the test that yielded the Attribute Accuracy Value.
Domain: free text

2.2 *Logic* -- Logical Consistency Report -- an explanation of the fidelity of relationships in the data set and tests used.

Domain:
"Polygons intersecting the neatline are closed along the border. Segments making up the outer and inner boundaries of a polygon tie end-to-end to completely enclose the area. Line segments are a set of sequentially numbered coordinate pairs. No duplicate features exist nor duplicate points in a data string. Intersecting lines are separated into individual line segments at the point of intersection. Point data are represented by two sets of coordinate pairs, each with the same coordinate values. Tests for logical consistency are performed by DFIRM tools topology verification software."

2.3 *Complete* -- Completeness Report -- information about omissions, selection criteria, generalization, definitions used, and other rules used to derive the data set.

Domain:
"The Basemap datasets represents all the features utilized during the study mapping process to spatially position the DFIRM information and highlights the specific prioritization process laid out in the Guidelines

and Specifications Vol 1, p. 69 in their selection for use. The final selection criteria, and rational for inclusion should be outlined here, along with rational for exclusion of use of specific base map datasets if applicable."

2.4 *Posacc* -- Positional Accuracy -- an assessment of the accuracy of the positions of spatial objects.

2.4.1 *Horizpa* -- Horizontal Positional Accuracy -- an estimate of accuracy of the horizontal positions of the spatial objects.

2.4.1.1 *Horizpar* -- Horizontal Positional Accuracy Report -- an explanation of the accuracy of the horizontal coordinate measurements and a description of the tests used.

Domain: free text

"The NSSDA is used to report the horizontal accuracy of the base map data used by FEMA to produce a FIRM. The NSSDA uses radial accuracy (Accuracyr) to report the radius of a circle of uncertainty, such that the true or theoretical location of a point falls within that circle 95 percent of the time. (Guidelines and Specifications Vol 1, p. 70)"

2.4.1.2 *Qhorizpa** -- Quantitative Horizontal Positional Accuracy Assessment -- numeric value assigned to summarize the accuracy of the horizontal coordinate measurements and the identification of the test that yielded the value.

2.4.1.2.1 *Horizpav* -- Horizontal Positional Accuracy Value -- an estimate of the accuracy of the horizontal coordinate measurements in the data set expressed in (ground) meters.

Domain: free real

"*11.5824*" meters (38 feet)

2.4.1.2.2 *Horizpae* -- Horizontal Positional Accuracy Explanation – the identification of the test that yielded the Horizontal Positional Accuracy Value.

Domain: free text

"The minimum horizontal positional accuracy for new FIRM base map data is that of the default base map, the USGS DOQs, which have an NSSDA radial accuracy of 38 feet. Data that meet higher accuracy standards are also acceptable. Accuracyr of 38 feet is the same as radial root mean square error (RMSEr) of 22 feet. (Guidelines and Specifications Vol 1, p. 70)"

2.4.2 *Vertacc* -- Vertical Positional Accuracy -- an estimate of accuracy of the vertical positions in the data set.

2.4.2.1 *Vertaccr* -- Vertical Positional Accuracy Report -- an explanation of the accuracy of the vertical coordinate measurements and a description of the tests used.
Domain: free text

2.4.2.2 *Qvertpa** -- Quantitative Vertical Positional Accuracy Assessment -- numeric value assigned to summarize the accuracy of vertical coordinate measurements and the identification of the test that yielded the value.

2.4.2.2.1 *Vertaccv* -- Vertical Positional Accuracy Value -- an estimate of the accuracy of the vertical coordinate measurements in the data set expressed in (ground) meters.
Domain: free real

2.4.2.2.2 *Vertacce* -- Vertical Positional Accuracy Explanation – the identification of the test that yielded the Vertical Positional Accuracy Value.
Domain: free text

2.5 *Lineage* -- Lineage -- information about the events, parameters, and source data which constructed the data set, and information about the responsible parties.

2.5.1 *Srcinfo** -- Source Information -- list of sources and a short discussion of the information contributed by each.

2.5.1.1 *Srccite* -- Source Citation -- reference for a source data set.

2.5.1.1.1 *Citeinfo*

2.5.1.1.1.1 *Origin**

2.5.1.1.1.2 *Pubdate*

2.5.1.1.1.3 *Pubtime*

2.5.1.1.1.4 *Title*

2.5.1.1.1.5 *Edition*

2.5.1.1.1.6 *Geoform*

2.5.1.1.1.7 *Serinfo/sername & serinfo/issue*

2.5.1.1.1.8 *Pubinfo/pubplace & pubinfo/publish*

2.5.1.1.1.9 Othercit

2.5.1.1.1.10 Onlink*

2.5.1.1.1.11 lworkcit

2.5.1.2 *srcscale* -- Source Scale Denominator -- the denominator of the representative fraction on a map (for example, on a 1:24,000-scale map, the Source Scale Denominator is 24000).
Domain: integer > 1
Note: This is an integer number and must not contain a comma character, decimal point nor the numerator part of the representative fraction.

2.5.1.3 *Typesrc* -- Type of Source Media -- the medium of the source data set.
Domain: "paper" "stable-base material" "microfiche" "microfilm" "audiocassette" "chart" "filmstrip" "transparency" "videocassette" "videodisc" "videotape" "physical model" "computer program" "disc" "cartridge tape" "magnetic tape" "online" "CD-ROM" "electronic bulletin board" "electronic mail system" free text

2.5.1.4 *Srctime* -- Source Time Period of Content -- time period(s) for which the source data set corresponds to the ground.

2.5.1.4.1 *Srccurr* -- Source Currentness Reference -- the basis on which the source time period of content information of the source data set is determined.
Domain: "ground condition" "publication date" free text

2.5.1.5 *Srccitea -- Source Citation Abbreviation -- short-form alias for the source citation.*
Domain: free text

2.5.1.6 Srccontr -- Source Contribution -- brief statement identifying the *information contributed by the source to the data set.*
Domain: free text

2.5.2 *Procstep** -- Process Step -- information about a single event.

2.5.2.1 *Procdesc* -- Process Description -- an explanation of the event and related parameters or tolerances.

Domain: free text

"All Flood Map Projects that will result in a digital FIRM require a digital base map that reflects reference features (i.e., roads, streets, hydrographic features, political jurisdiction boundaries) needed by users

to locate properties on FIRMs. During the Project Scoping phase, the Project Team identified the base map to be used and assign the Mapping Partner responsible for obtaining the base map for use by FEMA for FIRM production. Early coordination with all communities affected by a Flood Map Project is an important part of the Project Scoping Process described in Section 1.3 of these Guidelines. Therefore, the Section 1.4 1-68

Guidelines and Specifications for Flood Hazard Mapping Partners [April 2003] Mapping Partner responsible for preparing the Preliminary version of the FIRM or another assigned Mapping Partner shall send a letter to each affected community that: Describes the FIRM product; Requests pertinent information (pertinent information that is requested includes base map data; a current corporate limits map; elevation data [either electronic or hardcopy] and any engineering information that needs to be updated or added to the FIRM); Describes the minimum requirements for the submittal of data to be included in the new FIRM product, and Identifies the base map source that will be used if community data are not available or suitable. A sample version of this letter and other correspondence that may be generated during the Map Production phase of the project are presented in the FEMA Document Control Procedures Manual (FEMA, 2000)."

2.5.2.2 *Srcused** -- Source Used Citation Abbreviation -- the Source Citation Abbreviation of a data set used in the processing step.
Domain: Source Citation Abbr. <srccitea> from the Source info entries for the data set.

2.5.2.3 *Procdate* -- Process Date -- the date when the event was completed.
Domain: "Unknown" "Not complete" free date

2.5.2.4 *Proctime* -- Process Time -- the time when the event was completed.
Domain: free time

2.5.2.5 *Srcprod* -- Source Produced Citation Abbreviation -- the Source Citation Abbreviation of an intermediate data set that (1) is significant in the opinion of the data producer, (2) is generated in the processing step, and (3) is used in later processing steps.
Domain: Source Citation Abbr. from the Source info entries for the data set.

2.5.2.6 *Proccont* -- Process Contact -- the party responsible for the processing step information.

2.5.2.6.1 *Cntinfo* – Contact Information -- Identity of, and means to communicate with, person(s) and organization(s) associated with the data set.

2.5.2.6.1.1 *Cntperp* -- Contact Person Primary -- the name of the individual to which the contact type.

2.5.2.6.1.1.1 *Cntper* -- Contact Person -- the name of the individual to which the contact type applies.
Domain: free text

2.5.2.6.1.1.2 *Cntorg* -- Contact Organization -- the name of the organization to which the contact type applies.
Domain: free text

2.5.2.6.1.2 *Cntorgp* -- Contact Organization Primary -- the organization, and the member of the organization associated with the data set. Used in cases where the association of the organization to the data set is more significant than the association of the person to the data set.
Domain: Compound

2.5.2.6.1.2.1 *Cntorg* -- Contact Organization -- the name of the organization to which the contact type applies.
Domain: free text

2.5.2.6.1.2.2 Cntper -- Contact Person -- the name of the individual to which the contact type applies.
Domain: free text

2.5.2.6.1.3 *Cntpos* -- Contact Position -- the title of individual.
Domain: free text

2.5.2.6.1.4 *Cntaddr** -- Contact Address -- the address for the organization or individual.

2.5.2.6.1.4.1 *Addrtype* -- Address Type -- the information provided by the address.
Domain: "mailing" "physical" "mailing and physical", free text

2.5.2.6.1.4.2 *Address** -- Address -- an address line for the address.
Domain: free text

2.5.2.6.1.4.3 *City* -- City -- the city of the address.
Domain: free text

2.5.2.6.1.4.4 *State* -- State or Province -- the state or province of the address.
Domain: free text

2.5.2.6.1.4.5 *Postal* -- Postal Code -- the ZIP or other postal code of the address.
Domain: free text

2.5.2.6.1.4.6 *Country* -- Country -- the country of the address.

2.5.2.6.1.5 *Cntvoice** -- Contact Voice Telephone -- the telephone number by which individuals can speak to the organization or individual.
Domain: free text

2.5.2.6.1.6 *Cnttdd** -- Contact TDD/TTY Telephone -- the telephone number by which hearing impaired individuals can contact the organization or individual.
Domain: free text

2.5.2.6.1.7 *Cntfax** -- Contact Facsimile Telephone -- the telephone number of a facsimile machine of the organization or individual.
Domain: free text

2.5.2.6.1.8 *Cntemail** -- Contact Electronic Mail Address -- the address of the electronic mailbox of the organization or individual.
Domain: free text

2.5.2.6.1.9 *Hours* -- Hours of Service -- time period when individuals can speak to the organization or individual.
Domain: free text

2.5.2.6.1.10 *Cntinst* -- Contact Instructions -- supplemental instructions on how or when to contact the individual or organization.
Domain: free text

2.6 *Cloud* -- Cloud Cover -- area of a data set obstructed by clouds, expressed as a percentage of the spatial extent.
Domain: 0 <= Integer <= 100 "Unknown"

3 Spdoinfo – Spatial Data Organization Information – the mechanism used to represent spatial information in the dataset.

This section not required for FGDC-Framework-Basemap submissions.

3.1 *Indspref* -- Indirect Spatial Reference -- name of types of geographic features, addressing schemes, or other means through which locations are referenced in the data set.
Domain: free text

3.2 *Direct* -- Direct Spatial Reference Method -- the system of objects used to represent space in the data set.
Domain: "Point" "Vector" "Raster"

3.3 *Ptvcinf*[3] -- Point and Vector Object Information -- the types and numbers of vector or nongridded point spatial objects in the data set.

3.3.1 *Sdtsterm** -- SDTS Terms Description -- point and vector object information using the terminology and concepts from Spatial Data Transfer Standard (SDTS)

3.3.1.1 *Sdtstype* -- SDTS Point and Vector Object Type -- name of point and vector spatial objects used to locate zero-, one-, and two-dimensional spatial locations in the data set.
Domain: "Point" "Entity point" "Label point" "Area point" "Node, planar graph" "Node, network" "String" "Link" "Complete chain" "Area chain" "Network chain, planar graph" "Network chain, nonplanar graph" "Circular arc, three point center" "Elliptical arc" "Uniform B-spline" "Piecewise Bezier" "Ring with mixed composition" "Ring composed of strings" "Ring composed of chains" "Ring composed of arcs" "G-polygon" "GT-polygon composed of rings" "GT-polygon composed of chains" "Universe polygon composed of rings" "Universe polygon composed of chains" "Void polygon composed of rings" "Void polygon composed of chains"

3.3.1.2 *Ptvctnt* -- Point and Vector Object Count -- the total number of the point or vector object type occurring in the data set.
Domain: Integer > 0

3.3.2 *Vpfterm* -- VPF Terms Description -- point and vector object information using the terminology and concepts from Department of Defense, 1992, Vector Product Format (MILSTD- 600006)

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[3] Note: Use of the *spdoinfo.ptvctinf* and *spdoinfo.rastinfo* elements is mutually exclusive.

3.3.2.1 *Vpflevel* -- VPF Topology Level -- the completeness of the topology carried by the data set. The levels of completeness are defined in Department of Defense, 1992, Vector Product Format (MIL-STD-600006).
Domain: $0 <= Integer <= 3$

3.3.2.2 *Vpfinfo** -- VPF Point and Vector Object Information -- information about VPF point and vector objects

3.3.2.2.1 *Vpftype* -- VPF Point and Vector Object Type -- name of point and vector spatial objects used to locate zero-, one-, and two-dimensional spatial locations in the data set.
Domain: "Node" "Edge" "Face" "Text"

3.3.2.2.2 *Vpfcnt* -- VPF Point and Vector Object Count.
Domain: $Integer > 0$

3.4 *Rastinfo* -- Raster Object Information -- the types and numbers of raster spatial objects in the data set.

3.4.1 *Rasttype* -- Raster Object Type -- raster spatial objects used to locate zero-, two-, or three-dimensional locations in the data set.
Domain: "Point" "Pixel" "Grid Cell" "Voxel"

3.4.2 *Rowcount* -- Row Count -- the maximum number of raster objects along the ordinate (y) axis. For use with rectangular raster objects.
Domain: $Integer > 0$

3.4.3 *Colcount* -- Column Count -- the maximum number of raster objects along the abscissa (x) axis. For use with rectangular raster objects.
Domain: $Integer > 0$

3.4.4 *Vrtcount* -- Vertical Count -- the maximum number of raster objects along the vertical (z) axis. For use with rectangular volumetric raster objects (voxels).
Domain: $Integer > 0$

4 *Spref* -- Spatial Reference Information – the description of the reference frame for, and the means to encode coordinates in the data set.

This section is required for all FGDC-Framework-Basemap submissions

4.1 *Horizsys* -- Horizontal Coordinate System Definition -- the reference frame or system from which linear or angular quantities are measured and assigned to the position that a point occupies.
Must specify either Geograph (4.1.1) OR Planar (4.1.2) OR Local (4.1.3),- exclusive.

4.1.1 *Geograph*[4] -- Geographic -- the quantities of latitude and longitude which define the position of a point on the Earth's surface with respect to a reference spheroid.

4.1.1.1 *Latres* -- Latitude Resolution -- the minimum difference between two adjacent latitude values expressed in Geographic Coordinate Units of measure.

Domain: real > 0.0

4.1.1.2 *Longres* -- Longitude Resolution -- the minimum difference between two adjacent longitude values expressed in Geographic Coordinate Units of measure.

Domain: real > 0.0

4.1.1.3 *Geogunit* -- Geographic Coordinate Units -- units of measure used for the latitude and longitude values.

Domain: "Decimal degrees" "Decimal minutes" "Decimal seconds" "Degrees and decimal minutes" "Degrees, minutes, and decimal seconds" "Radians" "Grads"

4.1.2 *Planar** -- Planar -- the quantities of distances, or distances and angles, which define the position of a point on a reference plane to which the surface of the Earth has been projected.

4.1.2.1 *Mapproj*[5] -- Map Projection -- the systematic representation of all or part of the surface of the Earth on a plane or developable surface.

4.1.2.1.1 Mapprojn – Map Projection Name – name of the map projection.

Domain: "Albers Conical Equal Area" "Azimuthal Equidistant" "Equidistant Conic" "Equirectangular" "General Vertical Nearsided

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[4] Note: Use of the *horizsys.geograph*, *horizsys.planar* and *horizsys.local* elements is mutually exclusive (i.e. only one of these can be used).
[5] Note: Use of the *planar.mapproj*, *planar.gridsys* and *planar.localp* elements is mutually exclusive (i.e. only one of these can be used).

Projection" "Gnomonic" "Lambert Azimuthal Equal Area" "Lambert Conformal Conic" "Mercator" "Modified Stereographic for Alaska" "Miller Cylindrical" "Oblique Mercator" "Orthographic" "Polar Stereographic" "Polyconic" "Robinson" "Sinusoidal" "Space Oblique Mercator" "Stereographic" "Transverse Mercator" "van der Grinten" free text

4.1.2.1.2 [map projection parameters for selected projection, e.g. projection center, meridian, false easting/northing, etc. See [1].]

4.1.2.2 *Gridsys* -- Grid Coordinate System -- a plane-rectangular coordinate system usually based on, and mathematically adjusted to, a map projection so that geographic positions can be readily transformed to and from plane coordinates.

4.1.2.2.1 *Gridsysn* -- Grid Coordinate System Name -- name of the grid coordinate system.

Domain: "Universal Transverse Mercator" "Universal Polar Stereographic" "State Plane Coordinate System 1927" "State Plane Coordinate System 1983" "ARC Coordinate System" "other grid system"

4.1.2.2.2 [grid system parameters for selected grid system, see E.g UTM or state zone]

4.1.2.3 *Localp* -- Local Planar -- any right-handed planar coordinate system of which the z-axis coincides with a plumb line through the origin that locally is aligned with the surface of the Earth.

4.1.2.3.1 Localpd – Local planar description

4.1.2.3.2 Localpgi – Georeference Information

4.1.2.4 *Planci* -- Planar Coordinate Information -- information about the coordinate system developed on the planar surface.

4.1.2.4.1 Plance – planar coordinate encoding method (Domain: "Coordinate pair" "Distance and bearing" "Row and column")

4.1.2.4.2 Coordrep[6] – coordinate representation (specify either coordrep OR distbrep NOT BOTH)

4.1.2.4.2.1 Absres – Abscissa resolution (Domain: real)

4.1.2.4.2.2 Ordres – Ordinate resolution (Domain: real)

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[6] Note: Use of the *planci.coordrep* and *planci.distbrep* elements is mutually exclusive.

4.1.2.4.3 Distbrep – distance and bearing representation

4.1.2.4.3.1 Distres – Distance resolution (Domain: real)

4.1.2.4.3.2 Bearres – Bearing resolution (Domain: real)

4.1.2.4.3.3 Bearunit – Bearing units (Domain: "Decimal degrees" "Decimal minutes" "Decimal seconds" "Degrees and decimal minutes" "Degrees, minutes, and decimal seconds" "Radians" "Grads"

4.1.2.4.3.4 Bearrefd – Bearing reference direction (Domain: "North" "South")

4.1.2.4.3.5 Bearrefm – Bearing reference meridian (Domain: "Assumed" "Grid" "Magnetic" "Astronomic" "Geodetic")

4.1.2.4.4 Plandu – planar distance units

4.1.3 *Local* -- Local -- a description of any coordinate system that is not aligned with the surface of the Earth.
4.1.3.1 *Localdes* -- Local Description -- a description of the coordinate system and its orientation to the surface of the Earth.

Domain: free text

4.1.3.2 *Localgeo* -- Local Georeference Information -- a description of the information provided to register the local system to the Earth (e.g. control points, satellite ephemeral data, inertial navigation data).

Domain: free text

4.1.4 *Geodetic* -- Geodetic Model -- parameters for the shape of the earth.

4.1.4.1 *Horizdn* -- Horizontal Datum Name -- the identification given to the reference system used for defining the coordinates of points.
Domain: "North American Datum of 1927" "North American Datum of 1983" free text

4.1.4.2 *Ellips* -- Ellipsoid Name -- identification given to established representations of the Earth's shape.
Domain: "Clarke 1866" "Geodetic Reference System 80" free text

4.1.4.3 *Semiaxis* -- Semi-major Axis -- radius of the equatorial axis of the ellipsoid.
Domain: real > 0.0

4.1.4.4 *Denflat* -- Denominator of Flattening Ratio -- the denominator of the ratio of the difference between the equatorial and polar radii of the ellipsoid when the numerator is set to 1.

Domain: Denominator of Flattening > 0.0

4.2 *Vertdef* -- Vertical Coordinate System Definition -- the reference frame or system from which vertical distances (altitudes or depths) are measured.

4.2.1 *Altsys* -- Altitude System Definition -- the reference frame or system from which altitudes (elevations) are measured. The term "altitude"' is used instead of the common term "elevation" to conform to the terminology in Federal Information Processing Standards 70-1 and 173.

4.2.1.1 *Altdatum* -- Altitude Datum Name -- the identification given to the surface taken as the surface of reference from which altitudes are measured.
Domain: "National Geodetic Vertical Datum of 1929" "North American Vertical Datum of 1988" free text

4.2.1.2 *Altres** -- Altitude Resolution -- the minimum distance possible between two adjacent altitude values, expressed in Altitude Distance Units of measure.
Domain: real > 0.0

4.2.1.3 *Altunits* -- Altitude Distance Units -- units in which altitudes are recorded.
Domain: "meters" "feet" free text

4.2.1.4 *Altenc* -- Altitude Encoding Method -- the means used to encode the altitudes.
Domain: "Explicit elevation coordinate included with horizontal coordinates" "Implicit coordinate" "Attribute values"

4.2.2 *Depthsys* -- Depth System Definition -- the reference frame or system from which depths are measured.

4.2.2.1 *Depthdn* -- Depth Datum Name -- the identification given to surface of reference from which depths are measured.
Domain: see FGDC standard

4.2.2.2 *Depthres** -- Depth Resolution -- the minimum distance possible between two adjacent depth values, expressed in Depth Distance Units of measure.
Domain: real > 0.0

4.2.2.3 *Depthdu* -- Depth Distance Units -- units in which depths are recorded.
Domain: "meters" "feet" free text

4.2.2.4 *Depthem* -- Depth Encoding Method -- the means used to encode depths.
Domain: "Explicit depth coordinate included with horizontal coordinates" "Implicit coordinate" "Attribute values"

5 *Eainfo* – Entity and Attribute Information – details about information content of the data set, including entity types, their attributes and the domains from which attribute values may be assigned.
This section is required for all FGDC-Framework-Basemap submissions. This section describes the various elements of the submission package.

5.1 *Detailed** -- Detailed Description -- description of the entities, attributes, attribute values, and related characteristics encoded in the data set.

5.1.1 *Enttyp* -- Entity Type -- the definition and description of a set into which similar entity instances are classified.

5.1.1.1 *Enttypl* -- Entity Type Label -- the name of the entity type.
        Domain: free text

5.1.1.2 *Enttypd* -- Entity Type Definition -- the description of the entity type.
        Domain: free text

5.1.1.3 *Enttypds* -- Entity Type Definition Source -- the authority of the definition.
        Domain: free text

5.1.2 *Attr** -- Attribute -- a defined characteristic of an entity.

5.1.2.1 *Attrlabl* -- Attribute Label -- the name of the attribute.
        Domain: free text

5.1.2.2 *Attrdef* -- Attribute Definition -- the description of the attribute.
        Domain: free text

5.1.2.3 *Attrdefs* -- Attribute Definition Source -- the authority of the definition.
        Domain: free text

5.1.2.4 *Attrdomv** -- Attribute Domain Values -- the valid values that can be assigned for an attribute.

5.1.2.4.1 *Edom – enumerated domain (value & definition & source)*

5.1.2.4.2 *Rdom – range domain*

5.1.2.4.3 *Codesetd – codeset domain*

5.1.2.4.4 *Udom – unrepresentable domain*

5.1.2.5 *Begdatea** -- Beginning Date of Attribute Values -- earliest or only date for which the attribute values are current. In cases when a range of dates are provided, this is the earliest date for which the information is valid.
        Domain: free date

5.1.2.6 *Enddatea** -- Ending Date of Attribute Values -- latest date for which the information is current. Used in cases when a range of dates are provided. Domain: free date

5.1.2.7 *Attrvai* -- Attribute Value Accuracy Information -- an assessment of the accuracy of the assignment of attribute values.

5.1.2.7.1 *Attrva – attribute value accuracy*

5.1.2.7.2 *Attrvae – attribute value accuracy explanation*

5.1.2.8 *Attrmfrq* -- Attribute Measurement Frequency -- the frequency with which attribute values are added.
Domain: "Unknown" "As needed" "Irregular" "None planned" free text

5.2 *Overview** -- Overview Description -- summary of, and citation to detailed description of, the information content of the data set. 5.2.1 *Eaover* -- Entity and Attribute Overview -- detailed summary of the information contained in a data set.	
	Domain: "*The Basemap submission is made up of several data themes containing both spatial and attribute information. These data together represent the current basemap layers for the subject area as identified by FEMA.*"
5.2.2 *Eadetcit** -- Entity and Attribute Detail Citation -- reference to the complete description of the entity types, attributes, and attribute values for the data set.	
	Domain: "*Appendix L of FEMA's Guidelines and Specifications for FEMA Flood Hazard Mapping Partners contains a detailed description of the data themes and references to other relevant information*"

6 *distinfo* – Distribution Information – information about the distributor of and options for obtaining the dataset. *
This section is required for all FGDC-Framework-Basemap submissions.
The distributor of the data can be either FEMA or the publisher of the metadata.

6.1 *Distrib* -- Distributor -- the party from whom the data set may be obtained.

> **If FEMA is the Distributor (6.1) of the data, then the FEMA information for the elements provided below should be used. If FEMA is not the Distributor of the DFIRM data, then contact information for the Distributor must be provided in Section 6.1.**

6.1.1 -- *Contact Information* -- Identity of, and means to communicate with, person(s) and organization(s) associated with the data set.

6.1.1.1 *Cntperp* -- Contact Person Primary -- the name of the individual to which the contact type.

> **Contact Person Primary (Cntperp 6.1.1.1) is not used; Contact Organization Primary (Cntorgp 6.1.1.2) serves as primary contact.**

6.1.1.2 *Cntorgp* -- Contact Organization Primary -- the organization, and the member of the organization associated with the data set. Used in cases where the association of the organization to the data set is more significant than the association of the person to the data set.

Domain: Compound

6.1.1.2.1 *Cntorg* -- Contact Organization -- the name of the organization to which the contact type applies.

Domain: free text

6.1.1.2.2 Cntper -- Contact Person -- the name of the individual to which the contact type applies.
Domain: free text

6.1.1.3 *Cntpos* -- Contact Position -- the title of individual.
Domain: free text

6.1.1.4 *Cntaddr** -- Contact Address -- the address for the organization or individual.
6.1.1.4.1 *Addrtype* -- Address Type -- the information provided by the address.

Domain: free text
mailing address

6.1.1.4.2 *Address** -- Address -- an address line for the address.

Domain: free text
500 C Street, S.W.

6.1.1.4.3 *City* -- City -- the city of the address.	
	Domain: free text *Washington*
6.1.1.4.4 *State* -- State or Province -- the state or province of the address.	
	Domain: free text *District of Columbia*
6.1.1.4.5 Postal -- Postal Code -- the ZIP or other postal code of the address.	
	Domain: free text *20472*
6.1.1.4.6 *Country* -- Country -- the country of the address.	
	Domain: free text *USA*
6.1.1.5 *Cntvoice** -- Contact Voice Telephone -- the telephone number by which individuals can speak to the organization or individual.	
	Domain: free text *1-877-336-2627*

6.1.1.6 *Cnttdd** -- Contact TDD/TTY Telephone -- the telephone number by which
hearing-impaired individuals can contact the organization or individual.
Domain: free text

6.1.1.7 *Cntfax** -- Contact Facsimile Telephone -- the telephone number of a facsimile
machine of the organization or individual.
Domain: free text

6.1.1.8 *Cntemail** -- Contact Electronic Mail Address -- the address of the electronic mailbox of the organization or individual.	
	Domain: free text *miphelp@mapmodteam.com*

6.1.1.9 *Hours* -- Hours of Service -- time period when individuals can speak to the
organization or individual.
Domain: free text

6.1.1.10 *Cntinst* -- Contact Instructions -- supplemental instructions on how or when to contact the individual or organization.	
	Domain: free text *"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."*

6.2 *Resdesc* -- Resource Description -- the identifier by which the distributor knows the
data set.

Domain: free text

6.3 *Distliab* -- Distribution Liability -- statement of the liability assumed by the distributor.

Domain: free text "*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.*"

6.4 *Stdorder** -- Standard Order Process -- the common ways in which the data set may be obtained or received, and related instructions and fee information. **Note: the child elements, <nondig> (6.4.1) and <digform> (6.4.2) are mutually exclusive (i.e., only one can occur within a given <stdorder> element).**

6.4.1 *Nondig* -- Non-digital Form -- the description of options for obtaining the data set on non-computer- compatible media.
Domain: free text

6.4.2 *Digform** -- Digital Form -- the description of options for obtaining the data set on computer-compatible media 6.4.2.1 *Digtinfo* -- Digital Transfer Information - description of the form of the data to be distributed. 6.4.2.1.1 *Formname* -- Format Name -- the name of the data transfer format.

Domain: domain values from the table below; free text	
Value	Definition
"ARCE"	ARC/INFO Export format
"ARCG"	ARC/INFO Generate format
"ASCII"	ASCII file, formatted for text attributes, declared
"BIL"	Imagery, band interleaved by line
"BIP"	Imagery, band interleaved by pixel
"BSQ"	Imagery, band interleaved sequential
"CDF"	Common Data Format
"CFF"	Cartographic Feature File (U.S. Forest Service)
"COORD"	User-created coordinate file, declared format
"DEM"	Digital Elevation Model format (U.S. G.S.)
"DFAD"	Digital Feature Analysis Data (NIMA)
"DGN"	Microstation format (Intergraph Corporation)
"DIGEST"	Digital Geographic Information Exchange Standard
"DLG"	Digital Line Graph (U.S. Geological Survey)
"DTED"	Digital Terrain Elevation Data (MIL-D-89020)

"DWG"	AutoCAD Drawing format
"DX90"	Data Exchange '90
"DXF"	AutoCAD Drawing Exchange Format
"ERDAS"	ERDAS image files (ERDAS Corporation)
"GRASS"	Geographic Resources Analysis Support System
"HDF"	Hierarchical Data Format
"IGDS"	Interactive Graphic Design System format
"IGES"	Initial Graphics Exchange Standard
"MOSS"	Multiple Overlay Statistical System export file
"netCDF"	network Common Data Format
"NITF"	National Imagery Transfer Format
"RPF"	Raster Product Format (NIMA)
"RVC"	Raster Vector Converted format (MicroImages)
"RVF"	Raster Vector Format (MicroImages)
"SDTS"	Spatial Data Transfer Standard
"SIF"	Standard Interchange Format (DOD Project 2851)
"SLF"	Standard Linear Format (NIMA)
"TIFF"	Tagged Image File Format
"TGRLN"	Topologically Integrated Geographic Encoding and Referencing (TIGER) Line format
"VPF"	Vector Product Format (NIMA)
"GML"	**Geography Markup Language**

6.4.2.1.2 Formvern – format version

6.4.2.1.3 Formverd – format version date

6.4.2.1.4 Formspec - Format specification

6.4.2.1.5 Formcont – format information content

6.4.2.1.6 Filedesc – file decompression technique

6.4.2.1.7 Transize – transfer size

6.4.2.2 *Digtopt* -- Digital Transfer Option -- the means and media by which a data set is obtained from the distributor.

6.4.2.2.1 *Onlinopt* - [7]*Online Option -- information required to directly obtain the data set electronically.

6.4.2.2.1.1 *Computer** -- Computer Contact Information -- instructions for establishing communications with the distribution computer.

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[7] Note: Use of *digtopt.onlinopt* and *digtopt.offoptn* elements is mutually exclusive. Only one or the other may be used as a child of a given *digtopt* element.

6.4.2.2.1.1.1 *Networka - network address*

6.4.2.2.1.1.1.1 *Networkr* - Resource name*

> *Domain: **http://hazards.fema.gov** or URL where dataset may be obtained.*

6.4.2.2.1.2 *Accinstr* -- Access Instructions -- instructions on the steps required to access the data set.

6.4.2.2.1.3 *Oncomp* – Online Computer and Operating system

6.4.2.2.2 *Offoptn* -- Offline Option -- information about media-specific options for receiving the *data set.*

6.4.2.2.2.1 Offmedia – Offline Media

> Domain:

6.4.2.2.2.2 *Reccap – recording capacity*

6.4.2.2.2.3 *Recfmt* – recording format

6.4.2.2.2.4 *Compat – compatibility information*

6.4.3 *Fees* -- Fees -- the fees and terms for retrieving the data set.

> Domain: free text

6.4.4 *Ordering* -- Ordering Instructions -- general instructions and advice about, and special terms and services provided for, the data set by the distributor.
Domain: free text

6.4.5 *Turnarnd* -- Turnaround -- typical turnaround time for the filling of an order.
Domain: free text

6.5 *Custom* -- Custom Order Process -- description of custom distribution services available, and the terms and conditions for obtaining these services.
Domain: free text

6.6 *Techpreq* -- Technical Prerequisites -- description of any technical capabilities that the consumer must have to use the data set in the form(s) provided by the distributor.
Domain: free text

6.7 *Availabl* -- Available Time Period -- the time period when the data set will be available from the distributor.

Domain: timeperiod (single, multiple, range of dates)

7 *metainfo* – Metadata Reference Information – information on the currentness of the metadata information and the responsible party.

This section is required for all FGDC-compliant metadata.

7.1 *Metd* -- Metadata Date -- the date that the metadata were created or last updated.

> Domain: single_date
> **Must be in the form of YYYYMMDD**

7.2 *Metrd* -- Metadata Review Date -- the date of the latest review of the metadata entry.
> Domain: free date; Metadata Review Date later than Metadata Date

7.3 *Metfrd* -- Metadata Future Review Date -- the date by which the metadata entry should be reviewed.
> Domain: free date; Metadata Future Review Date later than Metadata Review Date

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7.4 *Metc* -- Metadata Contact -- the party responsible for the metadata information.

7.4.1 *Cntinfo* – Contact Information -- Identity of, and means to communicate with, person(s) and organization(s) associated with the data set.

7.4.1.1 *Cntperp*[8] -- Contact Person Primary -- the name of the individual to which the contact type.

> Domain: Compound

7.4.1.1.1 Cntper -- Contact Person -- the name of the individual to which the contact type applies.

> Domain: free text

7.4.1.1.2 *Cntorg* -- Contact Organization -- the name of the organization to which the contact type applies.

> **Domain: free text**

7.4.1.2 *Cntorgp* -- Contact Organization Primary -- the organization, and the member of the organization associated with the data set. Used in cases where the association of the organization to the data set is more significant than the association of the person to the data set.
> **Contact Organization Primary (Cntorgp 7.4.1.2) is not used; Contact Person Primary (Cntperp 7.4.1.1) serves as primary contact.**

7.4.1.3 *Cntpos* -- Contact Position -- the title of individual.

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[8] Note: Use of the *Cntinfo.Cntperp* and *Cntinfo.Cntorgp* elements is mutually exclusive. *Cntinfo.Cntperp* is specified in this context as mandatory so the *Cntinfo.Cntorgp* element must not be used here.

Domain: free text

7.4.1.4 *Cntaddr** -- Contact Address -- the address for the organization or individual. 7.4.1.4.1 *Addrtype* -- Address Type -- the information provided by the address.
Domain: free text
7.4.1.4.2 *Address** -- Address -- an address line for the address.
Domain: free text
7.4.1.4.3 *City* -- City -- the city of the address.
Domain: free text
7.4.1.4.4 *State* -- State or Province -- the state or province of the address.
Domain: free text
7.4.1.4.5 Postal -- Postal Code -- the ZIP or other postal code of the address.
Domain: free text
7.4.1.4.6 *Country* -- Country -- the country of the address.
Domain: free text
7.4.1.5 *Cntvoice** -- Contact Voice Telephone -- the telephone number by which individuals can speak to the organization or individual.
Domain: free text

7.4.1.6 *Cnttdd** -- Contact TDD/TTY Telephone -- the telephone number by which
hearing-impaired individuals can contact the organization or individual.
Domain: free text

7.4.1.7 *Cntfax** -- Contact Facsimile Telephone -- the telephone number of a facsimile
machine of the organization or individual.
Domain: free text

7.4.1.8 *Cntemail** -- Contact Electronic Mail Address -- the address of the electronic mailbox of the organization or individual.
Domain: free text

7.4.1.9 *Hours* -- Hours of Service -- time period when individuals can speak to the
organization or individual.
Domain: free text

7.4.1.10 *Cntinst* -- Contact Instructions -- supplemental instructions on how or when to
contact the individual or organization.
Domain: free text

7.5 *Metstdn* -- Metadata Standard Name -- the name of the metadata standard used to document the data set.

Domain: "FGDC Content Standard for Digital Geospatial Metadata" free text

7.6 *Metstdv* -- Metadata Standard Version -- identification of the version of the metadata standard used to document the data set.
Domain: free text

7.7 *Mettc* -- Metadata Time Convention -- form used to convey time of day information in the metadata entry. Used if time of day information is included in the metadata for a data set.
Domain: "local time" "local time with time differential factor" "universal time"

7.8 *Metac* -- Metadata Access Constraints -- restrictions and legal prerequisites for accessing the metadata. These include any access constraints applied to assure the protection of privacy or intellectual property, and any special restrictions or limitations on obtaining the metadata.
Domain: free text

7.9 *Metuc* -- Metadata Use Constraints -- restrictions and legal prerequisites for using the metadata after access is granted. These include any metadata use constraints applied to assure the protection of privacy or intellectual property, and any special restrictions or limitations on using the metadata.
Domain: free text

7.10 *Metsi* -- Metadata Security Information -- handling restrictions imposed on the metadata because of national security, privacy, or other concerns.

7.10.1 *Metscs* -- Metadata Security Classification System -- name of the classification system for the metadata.
Domain: free text

7.10.2 *Metsc* -- Metadata Security Classification -- name of the handling restrictions on the metadata.
Domain: "Top secret" "Secret" "Confidential" "Restricted" "Unclassified" "Sensitive" free text

7.10.3 *Metshd* -- Metadata Security Handling Description -- additional information about the restrictions on handling the metadata.
Domain: free text

7.11 *Metextns** **-- Metadata Extensions a reference to extended elements to the standard which may be defined by a metadata producer or a user community. Extended elements are elements outside the Standard, but needed by the metadata producer. If extended elements are created, they must follow the guidelines in Appendix D, Guidelines for**

	Creating Extended Elements to the Content Standard for DigitalGeospatial Metadata.

7.11.1 *Onlink** -- Online Linkage -- the name of an online computer resource that contains the metadata extension information for the data set. Entries should follow the Uniform Resource Locator convention of the Internet.

> **Domain:**
> **Two onlinks are required:**
> **- Link to URL on MIP (or data capture guidelines & specifications) for information on this profile***: http://hazards.fema.gov*
> **- Link to the data's EPSG code (in the form of a URL). More info about EPSG code can be found at:** *http://www.epsg.org*

7.11.2 *Metprof* -- Profile Name -- the name given to a document that describes the application of the Standard to a specific user community.

> **Domain:**
> *"FEMA NFIP Metadata Content and Format Standard"*