MSC Product Naming Conventions

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The following is a description of the product naming conventions used by FEMA's Map Service Center. This memo includes a detailed description of the product IDs as designated by the Map Service Center (MSC) as well as example IDs. Some discussion is also offered about how each product type will be geo-indexed since the product ID used in the Map Service Center database will also be used to reference its counterpart in the geo-index. The geo-index, part of the MSC e-commerce website, will allow for products to be selected spatially i.e. through an address search or bounding rectangle.

In establishing IDs for NFIP products, the Map Service Center had to overcome some limitations. First, the previous computer system at the Map Service Center (called the IMS) restricted the length of product IDs to 10 characters. To overcome this restriction, some of the IDs of the products were modified so that they would fit into the field length. The primary impact of this restriction was that map suffixes could not be stored as part of the map panel ID. Thus historical information could not be captured when panel suffixes changed. Second, the product ID had to be unique in the database. Since many of the products delivered to the MSC use the same community ID, modifications were necessary to differentiate the products so as not to violate database integrity constraints. Third, the products as received by the Map Coordinating Contractors were not always consistently named. To allow for the products to be input into the IMS in a consistent format that would facilitate search and retrieval, naming conventions were developed to insure consistency within product types.

A new computer system is being installed at the Map Service Center. It is nicknamed "FAMIS", an acronym for Financial, Accounting, Management and Inventory System. This new system will no longer have the 10-character limitation on product IDs. The product IDs still have to be unique and consistent. The naming conventions for the public flood maps will change slightly in the new system – mainly storing the panel suffix as part of the product ID. Naming conventions for studies will not change. New, more descriptive and intuitive naming conventions have been developed for other MSC products such as FMSIS, CSB, etc.

The new system also takes a more object-oriented approach to defining products and their associations with communities. A "kit" or "bundle" of public flood maps will be created for each community. The same will occur with studies. This kit item will then contain all the component parts. For example, a public map kit for Austin, Texas will contain all the public flood maps covering the city. A study kit for Travis County will contain all the associated study volumes and floodway maps for the county. Naming conventions for kits (where appropriate) are described below as well.

PUBLIC FLOOD MAPS

FHBM – Flood Hazard Boundary Map

Subtypes:
    Flat Maps:
<u>Description:</u> These flat FHBMs are 11" x 17" and are map size code F. If there is more than one page to a community, they are stapled together and considered a multi page flat map. The index map is the first page of a multi page flat map. The index map references all other pages by panel number.

<u>ID:</u> 2-digit state FIPS + 4-digit FEMA CID + suffix if established
Example MSC ID: 280263A
Example Actual ID: 280263 A

The flat maps may or may not contain suffixes. Ideally, if a flat map is revised without a suffix, a suffix would be added to the CID so that historical information can be stored about map revisions. No spaces are permitted between the CID and the suffix.

<u>Geo-Index Implications:</u> Geo-indexing flat maps require that a single polygon be created for the coverage area of all pages to the flat map. The polygon ID will be the same as the product ID. In the future, once digital versions of the product exist, there will be separate polygons for each page.

    Z-folds:
<u>Description:</u> The Z-fold FHBMs can be a variety of map size codes from A to E. Not all Z-folds have an index but most do. Those that do not have an index may have a map locator on the panel or may be the only panel printed for a community.

<u>ID:</u> 2-digit state FIPS + 4-digit FEMA CID + 4-digit panel number + suffix
Example MSC ID: 0100170003A
Example Actual ID: 010017 0003 A

In the IMS, the panel suffix was not stored with the ID due to the space limitations. The new system enables the entire number and suffix to be stored as the ID. No spaces are permitted between the CID and the suffix.

<u>Geo-Index Implications:</u> A single polygon or region must be created for each map delineating its coverage area. The polygon or region will use the ID of the product. There may be "holes" in map coverage areas. For example, an incorporated city with its own set of flood maps will exist inside a panel covering a non-incorporated area of a county. The polygon may also consist of a region containing "islands" that delineate actual islands or noncontiguous mapped portions of an area.

Indexes:
<u>Description:</u> The Z-fold FHBM Indexes come in map size codes A to E similar to Z-folds FHBMs but can also be size code I which is a folded 8 ½" x 11".

<u>ID:</u> 2-digit state FIPS + 4-digit FEMA CID + INDx (IND0.., IND1..,)
Example MSC ID: 010017IND0
Example Actual ID: 010017 0001-0011

To distinguish indexes from map panels themselves (and stay within the 10-character limit) the INDx suffix was added to the state and community ID where x is the number of the index for a particular community. Single page indexes are identified as IND0, in the case of multiple page indexes the counting begins at 1, where x is the number of the index for a particular community. It is unlikely that there would be more than 9 indexes for a community, however the new system would permit more than 9. Some of the indexes received at the Map Service Center include as part of the ID the range of panels covered by the index. This naming convention was modified to conform to the MSC standard. A field will exist in the new system that can store what is actually printed on the index panel if it is different than the convention. However, it would be preferable if all the MCCs were consistent in identification of the map indexes.

<u>Geo-Index Implications:</u> As with Z-folds, a single polygon or region is required for each index that delineates its coverage area. Indexes may contain holes and islands.

Conversion Letters:
<u>Description:</u> This letter essentially converts a FHBM to FIRM status. Rather than recreate a set of FIRMs for communities currently covered by FHBMs, a conversion letter simply applies FIRM legal status to these maps. Conversion letters are granted on a community basis and thus are tied to the community. A single letter is sent per community regardless of the number of panels ordered for that community. A conversion letter would be part of a community public map kit that identifies FHBMs as FIRMs.

<u>ID:</u> 2-digit state FIPS + 4-digit FEMA CID + 9999 + suffix (if available)
Example MSC ID: 0100509999
Example Actual ID: 010050

The Map Service Center added the suffix 9999 so that the letter would not be mistaken as a flat map. 9999 was used as a safe identifier since it is likely to never be used as a panel number.

<u>Geo-Index Implications:</u> Such letters can be tied to a polygon boundary of the FEMA community.

FIRM – Flood Insurance Rate Map

Subtypes:
    Flat Maps:
Description: These flat FIRMs are 11" x 17 " and are map size code F. If there is more than one page to a community, they are stapled together and considered a multi page flat map. The index map is the first page of a multi page flat map. The index map references all other pages by panel number.

ID: 2-digit state FIPS + 4-digit FEMA CID + suffix if available
Example MSC ID: 010107B
Example Actual ID: 010107 B

The flat maps may or may not contain suffixes. Ideally, if a flat map is revised, a suffix would be added to the CID so that historical information can be stored about map revisions. No spaces are permitted between the CID and the suffix.

Geo-Index Implications: Geo-indexing flat maps requires that a single polygon be created for the coverage area of each book. The polygon ID will be the same as the product ID. In the future, once digital versions of the product exist, there will be a separate polygon for each page.

    Z-folds:
Description: The Z-fold FIRMs come in map size codes A to E. Not all Z-folds have an index but most do. Those that do not have an index may have a map locator on the panel or may be the only panel printed for a community.

ID: 2-digit state FIPS + 4-digit FEMA CID + 4-digit panel number + suffix
Example MSC ID: 2252030115E
Example Actual ID: 225203 0115 E

In the IMS, the panel suffix was not stored with the ID due to the space limitations. The new system enables the entire number and suffix to be stored as the ID. No spaces are permitted between the CID and the suffix.

Geo-Index Implications: A single polygon or region must be created for each map delineating its coverage area. The polygon or region will use the ID of the product. There may be "holes" in map coverage areas. For example, an incorporated city with its own set of flood maps may exist inside a panel covering a non-incorporated area of a county. The polygon may also consist of a region containing "islands" that delineate actual islands or noncontiguous mapped portions of an area.

Indexes:
Description: The Z-fold FIRM Indexes come in map size codes A to E similar to Z-folds FIRMs but can also be size code I which is a folded 8 ½" x 11".

ID: 2-digit state FIPS + 4-digit FEMA CID + INDx (IND0.., IND1..,)
Example MSC ID: 040019IND0
Example Actual ID: 040019 0001-4525

To distinguish indexes from map panels themselves (and stay within the 10-character limit) the INDx suffix was added to the state and community ID where x is the number of the indexes for a particular community. Single page indexes are identified as IND0, in the case of multiple page indexes the counting begins at 1, where x is the number of the index for a particular community. It is unlikely that there would be more than 9 indexes for a community, however the new system would permit more than 9. Some of the indexes received at the Map Service Center include as part of the ID the range of panels covered by the index. This naming convention was modified to conform to the MSC standard. A field will exist in the new system that can store what is actually printed on the index panel if it is different than the convention. However, it would be ideal if all the MCCs were consistent in identification of the map indexes. Indexes may contain holes and islands.

Geo-Index Implications: As with Z-folds, a single polygon or region is required for each index that delineates its coverage area. Indexes may contain holes and islands.

Street Indexes:
Description: These are legacy products. Separate street indexes are no longer produced in the DFIRM process but there is a small collection of street indexes that are still current. These indexes accompany some of the FIRM Z-fold maps, as the street indexes were not printed on the maps themselves.

ID: 2-digit state FIPS + 4-digit FEMA CID + STDx (STD0, STD1…)
Example MSC ID: 120077STD0
Example Actual ID: 120077 8888

In the past 8881 and 8882 were used for multiples of street indexes. To standardize the indexes the STD suffix was added plus a number designating the index number. Single page indexes are identified as STD0, in the case of multiple page street indexes the counting begins at 1, where x is the number of the index for a particular community.

Geo-Index Implications: Indexes come in sizes similar to Z-folds and essentially they would mirror the polygon coverage area of the FIRM they reference.

Countywide Z-fold FIRMs

Description: This format follows a regular grid based on the USGS quarter quads and covers the geographical area within the quad regardless of political boundaries. There may, however, be communities that have kept their own community maps or are non-participating communities or portions thereof that fall within the countywide mapped area.

ID: 2-digit state FIPS + 3-digit County FIPS Code + C + 4-digit panel number + suffix
Example MSC ID: 01097C0757J
Example Actual ID: 01097C 0757 J

The traditional community-based naming convention was modified with this product class. Since a map can cover more than one community, a single community ID could not be used. In its place, the county FIPs code was used along with the letter "C" to indicate the map is a countywide.

Geo-Index Implications: A single polygon or region must be created for each map delineating its coverage area. The polygon or region will use the ID of the product. There may be "holes" in map coverage areas. For example, an incorporated city with its own set of flood maps may exist inside a panel covering a non-incorporated area of a county. The polygon may also consist of a region containing "islands" that delineate actual islands or noncontiguous mapped portions of an area.

Countywide Indexes:
Description: These are the indexes to the countywide FIRMs. The indexes come in sizes similar to Z-folds and delineate the panel ID and coverage area.

ID: 2-digit state FIPS + 3-digit county FIPS Code + C + INDx (IND0,IND1…)
Example MSC ID: 41039CIND0
Example Actual ID: 41039C 0000

Countywide indexes follow the same conventions as indexes for the conventional community-based index maps. The difference is a "C" is input before the INDx suffix.

Geo-Index Implications: As with community-based indexes, a single polygon or region is required for each index that delineates its coverage area. Indexes may contain holes and islands. Typically, but not in all cases, the index polygon will follow the boundaries of the mapped county**.**

Public Map Kits

Description: The concept of "kits" or "bundles" was used to group or collect maps together for a particular community. A public map kit is simply a collection of all the public maps for a particular area. This kit can be at the community, county, state or national level. In database structure, kits are simply cross-reference files between the parent item and its associated kit component items (children).

ID: Community, County FIPS, state or US code + P
Example MSC ID for community kits: 480624P (Austin City public map kit)
Example MSC ID for county kits: 48453P (Travis County public map kit)
Example MSC ID for state kits: 48P (Texas public map kit)
Example MSC ID for United States kit: USP (U.S. public map kit)

Geo-Index Implications: Kits for public maps will not be part of the geo-index initially. At a later time the geo-index may include polygons for kits.

FIS – FLOOD INSURANCE STUDIES

Description**:** A narrative report of the community's flood hazards that gives supporting flooding information about a community and identifies flood sources. An FIS consists of text, graphics, flood profiles and sometimes floodway maps. An FIS is in booklet form and varies in length. Some studies consist of multiple volumes. The page sizes also vary. Most are the standard 8 ½" x 11" but flood profiles and some vicinity maps are 11" x 17" in size and fold out from the booklet. Flood Boundary and Floodway maps or FBFMs are sometimes included as an exhibit to the FIS. A FIS is always sold as a kit. Unlike public map kit components, FIS components are never sold individually.

Subtypes:
Community-based study volume:
Description: These are flood studies performed on a community basis.

ID: 2-digit state FIPS + 4-digit FEMA CID + V + 00x (V000,V001…)
Example MSC ID: 060057V000
Example Actual ID: 060057

To distinguish these products from maps a "V" for volume was inserted followed by a three-digit volume number starting with 0. A single volume would = V000, multiple volumes would be V001, V002, etc.

Countywide-based study volume:
Description: These are flood studies performed on a countywide basis.

ID: 2-digit state FIPS + 3-digit FIPs + C + V + 00x (V000, V001…)
Example MSC ID: 54005CV000
Example Actual ID: The front of the study would list all of the communities and their 6-digit community number. The naming convention is a hybrid of the county-wide naming convention plus the "V" and three-digit volume number.

Supplement: (Supplement Wave Height Analysis printed on the cover)
Description: These are supplements to the original studies.

ID: 2-digit state FIPS + 4-digit FEMA CID + S + 00x (S000)
Example MSC ID: 345302S000
Example Actual ID: 345302

To distinguish these products from the study V000 an "S" for supplement was inserted followed by a three-digit supplement number starting with 0.

FBFM – Flood Boundary and Floodway Map (Floodway Map)
Description: These are the companion maps that go with the study. They contain delineation of regulatory floodway and cross sections used in the studies. They are not sold or distributed separately from the study.

Subtypes:
Flat Maps:
ID: 2-digit state FIPS + 4-digit FEMA CID + FLAT
Example MSC ID: 530198FLAT
Example Actual ID: 530198

As in many other products the suffix "FLAT" was added to distinguish this type of map from others types such as FHBMs or FIRMs.

Z-folds:
ID: 2-digit state FIPS + 4-digit FEMA CID + 4-digit panel number
Example MSC ID: 4453950001
Example Actual ID: 445395 0001

In the IMS, an alpha character was inserted after the FEMA CID for floodways to distinguish them from FIRM panels. This naming convention was developed due to the limitations in the IMS and has been changed. Since the vast majority of floodways do not have suffixes and the new system enables the entire number and suffix for the FIRMs to be stored as the ID, this will distinguish the two products from one another. No spaces are permitted between the CID and the suffix.

Indexes:
ID: 2-digit state FIPS + 4-digit FEMA CID + FNDx (FND0.., FND1..,)
Example MSC ID: 44395FND0
Example Actual ID: 445395 0001-0004

To distinguish floodway indexes from other types of indexes, the FNDx suffix was added to the state and community ID where x is the number of the index for a particular community. The counting starts at 0 and continues to 9. It is unlikely that there would ever be more than 9 indexes for a community, however the character limit is no longer an issue in the new system.

FIS Study Kits

Description: A group of Flood Insurance Study (FIS) components – study volumes, supplements, and FBFMs – will collectively make up a FIS kit. Unlike public map kits, FIS components are sold only as part of a kit and never individually. A study kit exists for whatever level the study was performed at – community or county. These kits can "roll up" into a statewide kit and a US kit.

ID: Community, County FIPS, state or US code + S
Example MSC ID for community study kits: 480624S (Austin City study kit)
Example MSC ID for county kits: 48453S (Travis County study kit)
Example MSC ID for state kits: 48S (Texas study kit)
Example MSC ID for United States kit: USS (U.S. study kit)

Geo-Index Implications: An FIS kit will have the same polygon boundaries as that of the respective community or communities contained in the study.

Naming Conventions of Other MSC Products

Q3 Digital Flood Data

ID: Q3DISK + CD#
Example MSC ID: Q3DISK1
Example Actual ID: Q3 Flood Data - Disc 1

Geo-Index Implications: The geo-index layer for Q3 data disks will have a polygon for each CD that is a conglomeration of the county polygons included in the CD. This polygon may cross state boundaries and include holes or islands.

CBRAQ3 - Coastal Barrier Resource Act Digital Flood Data

ID: Q3CBRADISK + CD#
Example MSC ID: Q3CBRADISK1
Example Actual ID: CBRA Q3 Flood Data Disc 1

Geo-Index Implications: The geo-index layer for CBRA Q3 data disks will have a polygon for each CD that is a conglomeration of the county polygons included in

the CD.   This polygon may cross-state boundaries and may include holes or islands.

FMSIS – Flood Map Status Information System
<u>ID:</u> State FIPS + -FMSIS- + SI (for Single Issue) or SUB (For subscription)
Single Issues/Single State: 01-FMSIS-SI
Single Issue/All States: US-FMSIS-SI
Yearly Issue/ Single State: 01-FMSIS-SUB
Yearly Issue/All States: US-FMSIS-SUB

<u>Geo-Index Implications:</u> The geo-index layer for FMSIS products will contain two polygon layers for each product type – single issues and subscription. Each layer will be based on the actual state polygon boundaries. In additional, there will be two nationwide polygons for the complete product sets – U.S. single issues and subscription.

CSB – Community Status Book
<u>ID:</u> State FIPS + -CSB- + SI (for Single Issue) or SUB (For subscription)
Single Issues/Single State: 01-CSB-SI
Single Issue/All States: US-CSB-SI
Yearly Issue/ Single State: 01-CSB-SUB
Yearly Issue/All States: US-CSB-SUB

<u>Geo-Index Implications:</u> The geo-index layer for CSB products will contain two polygon layers for each product type – single issues and subscription. Each layer will be based on the actual state polygon boundaries. In additional, there will be two nationwide polygons for the complete product sets – U.S. single issues and subscription.

NFIP Manual – National Flood Insurance Program Manual
<u>ID:</u>   NFIP- + component number (Full Manual)
       NFIP- + PE- + component number (Producer's Edition)
NFIP-KIT
NFIP-PE-KIT
NFIP-220
NFIP-251
NFIP-253
NFIP-254
NFIP-PE-255
NFIP-PE-257
NFIP-PE-259

<u>Geo-Index Implications:</u> This product is sold as a kit only. Two nationwide polygons will exist for each manual kit type.

LOMC Subscription

ID: LOMC- + SUB (for subscription) or V### (for back issue CD volumes) or PAPER (for back issue paper copy)

Yearly Subscription	LOMC-SUB
Back Issue – CD-ROM	LOMC-V03I7
Back Issue Paper	LOMC-PAPER

Geo-Index Implications: Nationwide polygons will exist for each issue type**.**

Community Map Action List

ID: CMAL

Geo-Index Implications: Nationwide polygons will exist for each issue type.