Map MODERNIZATION

Federal Emergency Management Agency

FEMA's Flood Hazard Mapping Program

Guidelines and Specifications for Flood Hazard Mapping Partners

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Volume 3: Program Support

FEDERAL EMERGENCY MANAGEMENT AGENCY

www.fema.gov/mit/tsd/dl_cgs.htm

FINAL

February 2002

Volume 3

Program Support

3.1 Introduction

To aid the Federal Emergency Management Agency (FEMA) in the administration of the National Flood Insurance Program (NFIP), a variety of support functions must be performed. These functions, described in detail in this Volume of the Guidelines, are primarily performed by one of the FEMA Flood Hazard Mapping Partners—the Flood Map Production Coordination Contractors (MCCs). To allow for the greatest flexibility to FEMA for coordinating these efforts, the term "assigned Mapping Partner" is used herein. The MCC or other assigned Mapping Partner and FEMA shall refer to the guidelines and specifications in this Volume when completing such support tasks.

At the direction of the Project Officer (PO) at FEMA Headquarters (HQ) or his/her designee, the assigned Mapping Partner shall:

- Hold regular and ad hoc coordination meetings with the PO and other FEMA HQ staff.
- Attend other meetings with FEMA HQ and Regional Office (RO) staff.
- Establish and maintain a courier service to deliver mail to, and pick up mail from, FEMA HQ and transport FEMA staff to and from coordination meetings at assigned Mapping Partner's offices upon request.
- Support the Letter of Map Change (LOMC) Distribution Service.
- Maintain a management information system and provide FEMA staff with regular and ad hoc reports (in hardcopy and/or electronic formats) pertaining to work status and contract performance.
- Maintain designated portions of the FEMA Community Information System (CIS), Credited Structures Inventory System (CSIS), and Monitoring Information on Contracted Studies (MICS) system.
- Store technical and administrative support data associated with the processing of initial and revised Flood Insurance Study (FIS) reports, Flood Insurance Rate Maps (FIRMs), Flood Boundary and Floodway Maps (FBFMs), conditional and final map revision requests, conditional and final map amendment requests; revalidation letters; Letters of Determination Review; and annexation requests.
- Assist FEMA in the development and distribution of guidelines and specifications, procedure manuals, and briefing guidance documents.

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- Assist FEMA in the development and implementation of improved standards, procedures, methodologies, and report and map products.
- Prepare documentation for historical and future trends.
- Attend and participate in technical meetings with FEMA, other Mapping Partners, and NFIP constituents.
- Support the FEMA Map Assistance Center.
- Assist FEMA in maintaining and enhancing the Flood Hazard Mapping website (www.fema.gov/mit/tsd) and other Internet-based applications.
- Provide technical, programmatic, and administrative/logistical support for the FEMA Mapping Needs Assessment Process (MNAP), including maintenance and improvement of Mapping Needs Update Support System (MNUSS) and the MICS system.
- Assist FEMA by researching issues and preparing responses to Special Correspondence in six categories: (1) Congressional Responses, (2) Director Responses, (3) Mapping Responses, (4) E-Mail Responses, (5) Freedom of Information Act (FOIA) Responses, and (6) Other Responses.
- Provide technical, programmatic, and administrative support for the processing of Letter of Determination Review requests.
- Maintain the FEMA Engineering Study Data Package Facility (ESDPF).
- Maintain the FEMA fee-charge system for requests for technical and administrative support data and requests for conditional and final modifications to NFIP maps.
- Prepare and deliver final reproduction materials for FIS reports, FIRM panels, and FBFM panels, when requested by the FEMA Map Service Center (MSC), to replace missing or damaged products.
- Provide technical, programmatic, and administrative/logistical support for FEMA training initiatives.
- Provide technical, programmatic, and administrative/logistical support for FEMA hazard identification and risk assessment activities.
- Provide technical, programmatic, and administrative/logistical support for FEMA post-flood hazard verification activities, including development of recovery maps.
- Provide technical, programmatic, and administrative/logistical support to FEMA and its Partners for the Cooperating Technical Partners intiative.
- Provide technical, programmatic, and administrative/logistical support to FEMA for implementation of its Map Modernization objectives.

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- Maintain and update the Q3 Flood Data Product for FEMA.
- Provide programmatic and administrative support for tracking communities through the conversion/compliance process and preparing documentation for communities entering into the Emergency and Regular Phases of the NFIP.
- Provide other technical, programmatic, and logistical support to FEMA in its administration of the NFIP and other hazard-related programs as required.

These activities are described in the subsections that follow.

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3.2 Program Coordination and Reporting

The Project Manager for the assigned Mapping Partner shall be responsible for maintaining close communication with the FEMA PO or his/her designee, other FEMA HQ staff, and FEMA RO staff. The Project Manager shall be available for consultation and conferences at the request or concurrence of the PO or his/her designee.

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3.2.1 Regular Coordination Meetings with FEMA and FEMA Contractors

The assigned Mapping Partner shall attend coordination meetings with FEMA personnel and other FEMA contractors, as required by the FEMA Management and with the concurrence of the PO or his/her designee. These meetings will be held to unify Program direction and to discuss ongoing work. The assigned Mapping Partner shall document the proceedings of these meetings with meeting minutes. The frequency and location of the meetings will depend on the type of contract or agreement signed with FEMA. In some cases, for some Mapping Partners, teleconferences hosted by FEMA may be held in place of in-person meetings.

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3.2.2 Regular Coordination with FEMA Regional Offices

The assigned Mapping Partner shall provide technical and administrative support to FEMA ROs, as directed by the PO or his/her designee, regarding studies/restudies, special conversions, conditional and final map revisions, conditional and final map amendments, and other information. Such support shall include consultation on technical, mapping, and programmatic issues. At the request of the FEMA RO and concurrence of the PO or his/her designee, the assigned Mapping Partner shall attend meetings with other FEMA Mapping Partners and other NFIP constituents.

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3.2.3 Ad Hoc Coordination Meetings with FEMA and FEMA Customers

The assigned Mapping Partner shall attend ad hoc coordination meetings with FEMA personnel, other FEMA Mapping Partners, and other NFIP constituents with the concurrence of the PO or his/her designee. These meetings may be held to cover study-, restudy-, or case-specific issues; general mapping issues; or controversial issues in a particular community or state.

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3.2.4 Monitoring

FEMA recognizes that the production and maintenance of FIS reports, FIRMs/DFIRMs, and FBFMs involves ongoing coordination between and among the FEMA and the Mapping Partner(s) involved with a particular mapping-related activity. Community-specific anomalies, inconsistencies in the processing of reports and maps in different communities, questions regarding NFIP support activities, exceptions to procedures and specifications detailed in these Guidelines, and politically sensitive cases require direct, routine FEMA guidance. This management is accomplished through regular (sometimes, weekly) monitoring visits or communication with the assigned Mapping Partner. The assigned Mapping Partner has a responsibility to document any issue needing FEMA direction, as well as the decisions rendered in each instance.

The assigned Mapping Partner shall document any issue to be discussed during a monitoring visit or conference call. At a minimum, the Mapping Partner shall include the community name and community identification number (CID), a brief summary of the Flood Map Project or other mapping-related activity, and a summary of the issue. When a resolution of the issue is reached, the Mapping Partner shall document the date, the decision, a point of contact, any action items necessary to carry out the decision, and a due date for each action item. The summaries of the issues resolved during monitoring visits or conference calls shall be documented in Monitoring Notes reports. The Mapping Partner shall establish the content, format, and distribution for the Monitoring Notes reports with the FEMA PO, FEMA Regional Project Officer (RPO), FEMA Project Engineers, and/or FEMA Regional Engineers as appropriate.

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3.2.5 Courier Service

The assigned Mapping Partner shall establish and maintain a courier service that delivers mail to, and picks up mail from, FEMA HQ during each workday at a regularly scheduled time to be determined with the FEMA PO. The assigned Mapping Partner also shall provide courier service on an as-needed basis to pick up or deliver priority items. The assigned Mapping Partner also shall arrange transportation of FEMA staff to and from coordination meetings at the assigned Mapping Partner's offices upon request. When requested to do so by the PO or his/her designee, the assigned Mapping Partner may deliver priority items to, and pickup priority items from, other Mapping Partners.

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3.2.6 Letter of Map Change Distribution Service Support

The assigned Mapping Partner shall, at the direction of the PO or his/her designee, provide administrative and technical support for the LOMC Distribution Service. The activities for the effort shall include the following twice each month:

- Preparing copies of final determination documents and associated attachments for amending or revising Letters of Map Amendment (LOMAs), Letters of Map Revision Based on Fill (LOMR-Fs), and Letters of Map Revision (LOMRs);
- Preparing copies of final determination documents and associated attachments for requests for LOMAs, LOMR-Fs, and LOMRs that are denied by FEMA;
- Preparing copies of final determination documents and associated attachments for LOMA and LOMR-F requests where property is determined to be out-as-shown;
- Preparing copies of revalidation letters;
- Organizing determination documents and attachments by FEMA Region, State, and community, in chronological order;
- Inserting a "Notice to Subscribers" sheet immediately after a LOMR determination letter when the attachments to that LOMR are larger than 8-1/2" x 11";
- Numbering the pages; and
- Preparing an index of the LOMCs included.

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When requested by LOMC Distribution Service subscribers, the assigned Mapping Partner also shall provide copies of oversized attachments for LOMRs (i.e., full-sized Flood Profiles, FIRM panels, FBFM panels) to the subscribers free of charge.

The requirements for preparing the final LOMC publication on CD-ROM are provided in Subsection 3.10.3.

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3.2.7 Reporting

The assigned Mapping Partner shall operate a comprehensive internal financial and contractual management system sufficient to provide for effective management of all Federal funds expended as a result of a contract. At a minimum, the assigned Mapping Partner shall prepare contract status reports, time and cost estimates, computerized status reports, production reports, and other periodic reports that may be necessary to track status of work and control hours and costs.

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3.2.7.1 Computerized Financial Management System

The assigned Mapping Partner shall operate a financial management system to provide effective management and reporting of all Federal funds provided to the assigned Mapping Partner through its contract with FEMA.

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3.2.7.2 Computerized Status Reporting System

The review and preparation of the products described in Volumes 1 and 2 are a significant part of the work performed by the assigned Mapping Partner. Large numbers of studies, restudies, map revisions, and map amendments are performed each year, and the resulting report, map, and letter products must pass through numerous processing stages before they can be published. The assigned Mapping Partner must have the ability to maintain accurate records of the reports, maps, and letters being processed; those that have been completed; and the scheduled and actual dates for the completion of each processing stage for each study, restudy, map revision, and map amendment.

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The assigned Mapping Partner needs this information for daily operations and short-term and long-range planning. FEMA HQ and RO staff use this information to administer the NFIP and to report to the U.S. Congress.

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The assigned Mapping Partner shall maintain a database to track and report on all LOMCs and mapping actions. This database structure must be designed to interface with the FEMA CIS, an Oracle database system. The assigned Mapping Partner shall access the CIS through the FEMA Wide Area Network (WAN) or a dial-up account. The assigned Mapping Partner shall upload information on the work products being processed by the Mapping Partner twice weekly (more frequently if requested by the FEMA PO or his/her designee). Additionally, the assigned Mapping Partner also shall download data from the CIS on the same schedule.

The assigned Mapping Partner shall update are the Status of Studies (SOS) and LOMC modules as well as the Community Contact information in the CIS. Additional pertinent information on the SOS and LOMC modules is provided below.

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Status of Studies Module

The SOS module of the CIS contains status and processing information for FEMA-funded Flood Map Projects (i.e., studies, restudies, Special Conversions) and community-funded Physical Map Revisions (PMRs). The SOS module is comprised of three databases—the main SOS database, the SOS Flood Source Database, and the SOS Hold Status Database.

The assigned Mapping Partner shall maintain and update 85 percent of the 70+ individual fields in the SOS module; these. FEMA RO and HQ staff shall update the remaining 15 percent of the fields.

Letter of Map Change Module

The LOMC module of the CIS contains status and processing information for LOMAs, Conditional Letters of Map Amendment (CLOMAs), LOMR-Fs, Conditional Letters of Map Revision Based on Fill (CLOMR-Fs), LOMRs, Conditional Letters of Map Revision (CLOMRs) based on conditions other than fill, and Letter of Map Change Revalidation (LOMC-VALID) letters. The LOMC module is comprised of five databases—the main LOMC database, the LOMC Flood Source Database, the LOMC Property Description Database, the LOMC Map Panel Database, and the LOMC Fee Database.

The assigned Mapping Partner shall update more than 100 individual fields (with widths ranging from 1 to 60 characters) to maintain the accuracy of the LOMC module for each case. The FEMA Fee-Charge System Administrator (FCSA) shall update the remaining 10 percent of the fields.

Cost Accounting

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The assigned Mapping Partner shall track and allocate costs using job-control numbers. These numbers shall be unique to a particular product or effort being supplied by the assigned Mapping Partner. Whenever a particular cost component is incurred in the provision of a product or service, it is to be charged to the job-control number for that product or service. The assigned Mapping Partner shall ensure cost accounting is performed in compliance with the accounting structure as defined by the contract in place.

3.2.7.3 Credited Structures Inventory System

The construction of levees and similar flood-protection structures, such as dikes and floodwalls, has had a significant effect on floodprone areas throughout the United States. These structures are intended to protect lives and property and are therefore of particular importance in identifying flood hazards and reducing flood losses. For several years after the inception of the NFIP, FEMA relied heavily on Study Contractors to properly evaluate the capacity of levees and similar structures to provide protection from the 1-percent-annual-chance (100-year) flood. In recognition of the need for a uniform method of evaluating these structures, FEMA issued a Levee Policy in 1981. The Levee Policy was subsequently superseded by the publication of earlier versions of *Flood Insurance Study Guidelines and Specifications for Study Contractors* and by rule-making that resulted in the requirements documented in Section 65.10 of the NFIP regulations.

Section 65.10 identifies the types of structures that qualify as flood-protection structures and outlines the criteria on which the evaluations of these structures should be based. During the preparation and revision of FIS reports and maps, assigned Mapping Partners shall use the information provided in Section 65.10 of the NFIP regulations to determine whether structures

should be credited with providing protection from the 1-percent-annual-chance (100-year) flood. (See Appendix C of these Guidelines for additional information on the evaluation and mapping of flood-protection structures.)

In 1984, in response to the growing number of NFIP maps depicting credited flood-protection structures, FEMA created the Credited Structures Inventory. FEMA designed the Inventory to identify all structures shown as providing protection from the 1-percent-annual-chance (100-year) flood on effective and soon-to-be-effective FIRMs, including levees, dikes, floodwalls, and road and railroad embankments. The objective of the Inventory was to collect information that FEMA would need to determine priorities for future levee investigations and to monitor the operation and maintenance of these structures.

In connection with the Inventory, FEMA developed the CSIS, a computerized database and information retrieval system. The results of the Inventory were entered into the CSIS.

The initial phase of the inventory was completed and the resulting information was entered into the CSIS. The assigned Mapping Partner shall provide information required to update the CSIS, which the assigned Mapping Partner shall obtain during the review and processing of FEMA-contracted Flood Map Projects and community-initiated map revisions.

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Standard Reports

FEMA designed the CSIS to store large amounts of information about credited structures, to retrieve all or selected portions of this information, and to generate reports. When requested to do so by FEMA, the assigned Mapping Partner shall issue reports tailored to meet specific needs using the information stored in the CSIS and addendums to the CSIS.

Stored Information

In the CSIS, each credited structure within a state is assigned a unique structure number. Information is collected for each structure and stored under that structure number. Ideally, over 40 pieces of information concerning the structure (e.g., location, construction, accreditation, operation, maintenance, and size) and the protection it provides are collected and stored under the appropriate structure number.

The assigned Mapping Partner shall record credited structure information on a Levee Inventory Data Entry Form (LIDEF), which was designed to contain information for only one structure and only for that portion of the structure that falls within a single community. Spaces are provided to record information describing the effects of the structure on the flooding depicted on a maximum of six panels of the FIRM for a community. Therefore, the assigned Mapping Partner must prepare multiple LIDEFs for a single credited structure that falls within more than one community or affects the flooding on more than six FIRM panels for one community.

Update Requirements

The assigned Mapping Partner shall, as a routine part of reviewing and processing FEMA-funded Flood Map Projects and community-initiated map revisions, identify all levees and similar structures credited with providing protection from the 1-percent-annual-chance (100-year) flood, and record this information on LIDEFs for entry into the CSIS database. The assigned Mapping Partner shall submit completed LIDEFs to the FEMA-designated repository each month. Instructions for completing LIDEFs are provided below.

Data Collection and Preparation of Data Entry Form

For each credited structure identified, the assigned Mapping Partner shall review in-house files of completed LIDEFs to verify that the information listed has been provided for entry into the CSIS database. In conducting this review, the assigned Mapping Partner may find that a structure has not been previously identified, in which case no information for that structure will be contained in the CSIS database. The assigned Mapping Partner also may find that the structure has been identified and entered into the CSIS, but the information is incomplete, out of date, or otherwise inaccurate.

In either case, the assigned Mapping Partner shall complete the required LIDEFs. If the structure has not been previously identified, the assigned Mapping Partner shall assign a structure number and obtain as much information as possible. Structure numbers are assigned in ascending order from lists the assigned Mapping Partner is to maintain for each state. The LIDEF prepared for a previously unidentified structure will be the first for that structure.

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To add to or update information already in the CSIS database, the assigned Mapping Partner shall prepare a revised LIDEF. Before submitting new or revised LIDEFs, the assigned Mapping Partner shall review the LIDEFs to ensure that the information recorded on them is accurate. The assigned Mapping Partner shall also keep copies of all completed LIDEFs.

General Instructions for Completing Levee Inventory Data Entry Forms

The assigned Mapping Partner shall complete LIDEFs in the following cases:

- Credited structures are to be added to the CSIS (Addition).
- A credited structure was recorded in an earlier LIDEF, and the data should be revised (Update).
- A previously inventoried credited structure is no longer a credited structure and shall be deleted from the CSIS (Decertification).

The assigned Mapping Partner shall use the following guidelines in preparing a LIDEF:

- If any credited structures are to be added to the CSIS, complete as many of the items as possible with the information available. Item 7 (Structure Number) is not to be completed; a number will be assigned at a later date.

- If the credited structure was reported in an earlier inventory and some data must be revised, place an "X" in the box next to the word "UPDATE" in the upper right-hand corner of the form and complete Items 1 through 5, 7, 39, and 40. Other items are to be completed only if the information is new or revised.

- If a revision or upgrade is required for the "Comments" section (Item 42), include any previous comments that must be retained.

- If a structure was identified as a credited structure in an earlier inventory and, based on the updated inventory, is no longer considered a credited structure, complete Items 1 through 5, 7, 32, 33, 34, 39, 40, and 43 on the LIDEF.

- Use only capital letters to complete the LIDEF.

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- Ensure numeric entries are right-justified and alphanumeric entries are left-justified.

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- Leave boxes blank if data are not available unless otherwise specified in the coding instructions.

- Submit all forms with the same structure number together once a structure number has been assigned if the structure is located in more than one community.

- For Item 8, do not include dams and dam-related dikes designed to permanently impound water as levees. Use the term "floodwall" for a concrete or masonry wall or levee.

- For Item 22, show the verification agent as an appellant or a revision requester that provides data or information used to credit a structure, when appropriate

Item-by-Item Instructions for Completing a Levee Inventory Data Entry Form

The assigned Mapping Partner shall complete a LIDEF as follows:

- **Community Name (Item 1)**—Enter the community name.

- **Type (Item 2)**—Enter the community type using one of the following standard abbreviations:

  - BOR (Borough);
  - CTY (City);
  - CO (County);
  - PAR (Parish);
  - TWN (Town);
  - TWP (Township); or
  - VIL (Village).

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- **County (Item 3)**—Enter the county name in which the community is primarily located. If the community type is "County," enter **UNINCORPORATED AREAS**.
- **State (Item 4)**—Enter the standard two-letter abbreviation.

- **Program Status (Item 5)**—Enter **NP** for non-participating communities or **P** for participating communities.

- **Structure Location (Item 6)**—Enter **A** if all or part of the structure is within the corporate/county limits of the community. Enter **B** if the structure lies entirely outside the corporate/county limits.

- **Structure Number (Item 7)**—Enter the seven-digit structure number from the Levee Inventory Printout when updating or decertifying a previously inventoried credited structure. Enter a new structure number when adding new structures. The first two digits of the structure number shall be assigned the two-digit state code number assigned to the state in which the structure is located. The last five digits of the number shall be assigned a number identifying the structure (e.g., "0600463" identifies structure No. 463 within California). A structure located within two or more states shall be assigned separate numbers, identifying the length of the structure within each state.

- **Structure Type (Item 8)**—Enter the two-letter structure-type code. Use **R** for the first letter of the code for a riverine flooding source and **C** for a coastal flooding source. Use one of the following as the second letter of the code:

  - **A** — Levee;
  - **B** — Floodwall;
  - **C** — Combined Levee and Floodwall;
  - **D** — Ring Levee;
  - **E** — Road Embankment;
  - **F** — Railroad Embankment; or
  - **G** — Other.

  Thus, the structure-type code for a levee on a riverine flooding source would be **RA**.

- **Coordinates (Item 9)**—Enter the latitude and longitude of the approximate midpoint of the structure to the nearest 30 seconds, as determined from U.S. Geological Survey (USGS) topographic maps.

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- **Hydrologic Subregion (Item 10)**—Enter the three- or four-digit subregion code in which most of the structure is located. This code shall be taken from USGS Hydraulic Unit Maps for individual states.

- **Bank (Item 11)**—Enter **L** if the structure is located on the left overbank (facing downstream) or **R** if the structure is on the right overbank (facing downstream). Complete this item for riverine structures only.

- **Length of Structure (Item 12)**—Enter the total length of the crest of the structure, to the nearest 0.1 mile. For a levee or floodwall, identify the total length. For a road or railroad embankment, identify only the length credited with providing protection from the 1-percent-annual-chance (100-year) flood.

- **Failures (Item 13)**—Enter information on the past performance of the structure, if available. Enter **A** if a failure has occurred or **B** if no failure has occurred.

- **Official Name (Item 14)**—Enter the name if a structure or project has an accepted name. Enter **NO NAME** if there is no accepted name.

- **Year Completed (Item 15)**—Enter the year when construction of the main structure was completed. Do not enter the year(s) that remedial or maintenance work may have been performed.

- **Rated Level of Protection (Item 16)**—Enter the exceedence frequency, in years, of the flood from which the structure was designed to provide protection. Leave the space blank if there was no design flood.

- **Flooding Source (Item 17)**—Enter the name of the main river (or water body) from which the structure provides protection.

- **Freeboard (Item 18)**—Enter the minimum freeboard, in feet, of the structure.

- **Closures (Item 19)**—Enter the type(s) of closure required to operate the structure, using one of the following codes:

  - **A** — Sandbags;
  - **B** — Flood gates;
  - **C** — Stop logs;
  - **D** — Other;
  - **E** — Combination of A, B, C, and/or D; or
  - **F** — None.

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- **Operational Plan (Item 20)**—Enter **A** if an approved operational plan exists. Leave the space blank if no operation plan exists.

- **Accreditation/Verification (Item 21)**—Enter one of the following codes:

  - Enter **A** if the structure has been verified as meeting the FEMA levee freeboard requirements or exceptions.
  - Enter **B** if the structure was credited prior to implementation of the FEMA Levee Policy. Apply this code to all road and railroad embankments unless FEMA has formally accredited the structure
  - Enter **C** if the structure was certified by another Federal agency as providing protection from the 1-percent-annual-chance (100-year) flood.
  - Enter **C** if both C and A apply.

- **Crediting/Verifying Agent (Item 22)**—Enter the crediting/verifying agency. If the agency is the Study Contractor, enter **SC** in the first two boxes. If not, leave the first two boxes blank. For the next three boxes, use two- and three-letter abbreviations for the agency (Federal, State, or local). If the firm or agency does not have a FEMA-established two- or three-letter code, enter the full name in the space provided.

- **Maintenance Plan (Item 23)**—Enter **A** if a FEMA-approved maintenance plan exists. Leave b1ank if no FEMA-approved maintenance plan exists.

- **Maintenance (Item 24)**—Enter the name of the Federal, State, or local agency with overall responsibility for maintenance of the structure. If the community is responsible for maintenance, enter the community type after the name using the two- and three-letter codes used for Item 2.

- **Date of Last Inspection (Item 25)**—Enter the year in which the structure was most recently inspected.

- **Owner (Item 26)**—Enter the name of the current owner of the structure.

- **Designer (Item 27)**—Enter the name of the firm or agency that had primary responsibility for design of the original structure.

- **Builder (Item 28)**—Enter the name of the firm or agency that had primary responsibility for construction of the original structure.

- **Design Plans (Item 29)**—Enter the name of the firm or agency that has the design plans. If such plans are available in the FEMA files, enter the name of the Mapping Partner that is maintaining those files.

- **As-Built Survey (Item 30)**—Enter the name of the firm or agency that has the as-built survey. If the survey is available in the FEMA files, enter the name of the Mapping Partner that is maintaining those files.

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- **Inspection Data (Item 31)**—Enter the name of the firm or agency that has current inspection data. This would be the firm or agency that has responsibility for the actual maintenance duties, not necessarily the Federal, State, or local agency that has overall maintenance responsibility.

- **Community Number (Item 32)**—Enter the complete six-digit CID.

- **Panel Number (Item 33)**—Enter the complete four-digit FIRM panel number and suffix for each panel on which the structure is located. The panel number and suffix is to reflect the FEMA-funded Flood Map Project or map revision being processed.

- **Effective/Revised Date (Item 34)**— Enter the effective/revised date as it appears on the FIRM panels (shown as Year, Month, Day). Leave blank if the projected effective/revised date is unknown.

- **Protected Area Type (Item 35)**—Enter the code for whether the area protected from the 1-percent-annual-chance (100-year) flood on each panel is categorized as "primarily developed" (**D**) or "primarily undeveloped" (**U**). (This determination shall be made on the basis of information such as street patterns and cultural features shown on the flood map.)

- **Protected Area Zone (Item 36)**—Enter the code for the designation of the flood insurance risk zone shown on the FIRM adjacent to the landside of the structure. If more

than one zone is shown adjacent to the landside of the structure, enter the code of the most extensive zone. Use one of the following codes:

- **A** — Approximate Zone A;
- **AH** — Zone AH;
- **AO** — Zone AO;
- **A#** — **Zone A1-A30** and Zone A99;
- **AE** — Zone AE;
- **B** — Zone B or Zone X (shaded);
- **O** — Zone C or Zone X (unshaded);
- **D** — Zone D;
- **V** — Zone V;
- **V#** —Zone V1-V30; or
- **VE** — Zone VE.

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- **Area of Protected Areas (Item 37)**—Enter the approximate area of the protected area, to the nearest 0.5 square mile, as shown on the affected FIRM panel(s).
- **Unprotected Area Zone (Item 38)**—Enter the code for the designation of the flood risk zone adjacent to the waterside of the structure. If more than one zone appears in the unprotected area, enter the code of the most extensive zone. Use the same codes as for Protected Area Zones.
- **Inventory By (Item 39)**—Enter the initials of the assigned Mapping Partner that completed the levee inventory.
- **Date of Inventory (Item 40)**—Enter the year, month, and day on which the inventory was completed or updated.
- **Study or Revision (Item 41)**— Leave blank if no FEMA-contracted Flood Map Project or community-initiated map revision is in progress. Enter one of the codes below if a FEMA-contracted Flood Map Project or community-initiated map revision is in progress.

- **A** —A FEMA-contracted Flood Map Project for which the final reproduction materials have not been sent to the FEMA MSC;
- **B** — A PMR for which the final reproduction materials have not been sent to the MSC; or
- **C** — A LOMR involving this structure has not been issued.

- **Comments (Item 42)**—Include concise comments on items that might be significant in setting priorities for the reevaluation of levees, floodwalls, or other embankments, including:
  - Additional information pertaining to Items 13, 15, 18 through 21, 23, 41, or others;
  - Structure number for this structure in an adjacent State, should the structure cross State lines;
  - Structure number for another structure operating in conjunction with the inventoried structure (in the event of a two-levee system); or
  - U.S. Army Corps of Engineers (USACE) District if the USACE is indicated for Items 22, 24, or 26 through 31.

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- **Decertification (Item 43)**—Enter **A** if the structure is included in the CSIS as a credited structure and is no longer considered a credited structure based on a more recent evaluation.

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3.2.7.4 Periodic Reports

As directed by the PO or his/her designee, the assigned Mapping Partner shall produce or provide information on the SOS and LOMC modules to provide periodic status and production reports. These reports may include:

- **Monthly Objective Status Report**—This report provides projected and actual totals for Preliminary FIS reports and FIRMs; Part 65, 67, and 70 appeal resolutions; effective FIS reports and FIRMs; and LOMAs, LOMR-Fs, and LOMRs issued.
- **Monthly Production Report**—This report provides a summary of work receipts, completions, and work to be completed.
- **Part 67 Appeals and Protest Status Report**—This status report provides the dates of receipt and acknowledgment and the status of the evaluation and resolution of each active Part 67 appeal or protest.

- **LOMA Statistics Report**—This status report provides the numbers of single-lot and multiple-lot and subdivision LOMA requests received and the numbers of lots processed (by type of resolution).

- **Contract Status Report**—This monthly report lists the work assignments and available funding under each contract task.

[February 2002]

3.2.7.5 Ad Hoc Reports

The assigned Mapping Partner shall prepare ad hoc reports for FEMA HQ and RO staff at the direction of the PO or his/her designee.

[February 2002]

3.2.8 Compendium of Flood Map Changes

In accordance with Paragraph 1360(I) of the National Flood Insurance Reform Act of 1994, a Compendium of Flood Map Changes is published twice each year to inform interested parties of changes made by FEMA to NFIP maps. Two listings are provided in the Compendium to show communities affected by map changes made by letter—i.e., LOMCs—and communities affected by physical map changes. All LOMCs issued by FEMA and all new or revised NFIP map panels published by FEMA during the prior 6-month period are included in these listings. The two 6-month periods extend from January 1 to June 30 and from July 1 to December 31 each year.

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The assigned Mapping Partner shall prepare a digital listing of LOMC and FIRM panels produced within specific FEMA Regions during the 6-month period. At the request of the FEMA coordinator for the Compendium of Flood Map Changes and with the approval of the PO, one Mapping Partner will provide technical, programmatic, and administrative support for the production and publication of the Compendium twice each year. Such support will include delivery of the Compendium in a final, print-ready form.

[February 2002]

3.2.9 Support for Monitoring Information on Contracted Studies System

Although the FEMA CIS provides some of the required information, the CIS is community-specific and does not contain all the project management or accounting tools to effectively automate the contracted study process. The MICS system is designed to complement the CIS by tracking FEMA-contracted Flood Map Projects, including projects initiated under the CTP initiative, from initiation to completion.

The MICS system is a Flood Map Project-specific system designed for use by FEMA and assigned Mapping Partners. Specifically, the MICS system is designed to:

- Include information on FEMA Mapping Partner selection and contracts and agreements for Flood Map Projects;
- Track budgets and percent completions for Flood Map Projects;
- Record details of monthly contractor contacts and regulatory visits with communities;
- Include information on Special Problem Reports; and
- Provide information about assigned Mapping Partners and contractors.

The MICS system is a user-friendly, Windows-based application. It is composed of three tiers of software that reside on two servers located at FEMA HQ. The Java-based user interface provides user-friendly screens to access and navigate the system. At the request of the FEMA PO or his/her designee, the assigned Mapping Partner shall provide technical, programmatic, and administrative/logistical support on activities relating to the MICS system including, but not limited to, the following:

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- Maintaining and administering the MICS system;
- Planning, designing, programming, installing, and testing enhancements in the functionality of the MICS system;
- Entering data into selected fields;
- Participating in coordination meetings with FEMA and other Mapping Partners;
- Preparing status reports of activities relating to the MICS system;
- Generating statistical reports and charts summarizing data collected in the MICS system;
- Developing outreach materials for targeted audiences (e.g. conference attendees);
- Developing guidance documents for MICS users; and
- Assist with orientation and training of FEMA staff and other Mapping Partners.

[February 2002]

3.2.10 Fee-Charge System Administration Support

FEMA has established fee collection procedures for the processing of conditional and final map revisions and amendments and for requests for technical and administrative support data related to the processing of studies, restudies, and map revisions. To maintain an accurate accounting of

the checks, money orders, and credit card charges that are received, FEMA has established a centralized fee-collection system, administered by the FCSA.

The procedures for tracking, reporting, and handling the fees collected for reviewing and processing conditional and final map revisions and amendments and for responding to external data requests are presented in Subsection 3.17 of these Guidelines.

[February 2002]

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3.3 Library and Archive Support

3.3.1 Technical and Administrative Support Data Storage and Retrieval

For studies, restudies, and map revisions, Mapping Partners are required to organize technical and administrative data in a Technical Support Data Notebook (TSDN) prior to submittal to FEMA and the assigned Mapping Partner for processing. The TSDN will contain all technical support data developed or used by the Mapping Partner during the study/restudy process, and will be prepared according to the format detailed in Appendix M of these Guidelines.

[February 2002]

3.3.1.1 Files

The assigned Mapping Partner shall:

- Establish and maintain files for all map, report, and letter products processed by the assigned Mapping Partner. These files shall contain all artwork, reproduction materials, correspondence, technical analyses, work maps, digital files, printouts, and other materials relating to the map, report, and letter products. In addition, for FEMA-contracted Flood Map Projects, the assigned Mapping Partner shall maintain the TSDN submitted and an inventory that lists the contents of the file for each community.

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- Establish and maintain Flood Elevation Determination Docket files for all for FEMA-contracted Flood Map Projects and community-initiated map revisions in accordance with the provisions of Sections 66.3 and 67.3 of the NFIP regulations.

- Establish and maintain individual files for the storage of microfilmed or digitally stored technical and administrative support data, scanned data on CD-ROMs, oversized materials, and non-microfilmable or scannable support data.

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3.3.1.2 Storage

The assigned Mapping Partner shall establish and maintain a storage facility that provides reasonable protection for filed materials and establish and maintain an indexing system to permit rapid retrieval of filed materials. The assigned Mapping Partner shall dispose of Program materials in accordance with written instructions provided by the PO or his/her designee.

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3.3.1.3 Distribution Requirements

The assigned Mapping Partner shall transmit copies of original materials and supply descriptive materials and Program information, such as NFIP brochures, other publications, or regulations, to a requester at the direction of the PO or his/her designee.

For each FEMA-contracted Flood Map Project or community-initiated map revision, the assigned Mapping Partner shall maintain files of all materials submitted by the Mapping Partner that performs the flood hazard analyses and all materials developed by the assigned Mapping Partner during processing. The Mapping Partner that performs the flood hazard analyses will usually submit the following (in some combination of digital and hardcopy formats):

- Draft FIS report, including figures and profiles;
- Topographic work maps;
- Computer printouts (from hydraulic models, hydrologic models, or both);
- Base map materials;
- Copies of pertinent memorandums, correspondence, and reports; and
- Hydrologic and hydraulic computations and documentation sheets.

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Materials developed by the Mapping Partner that processes FEMA-contracted Flood Map Projects usually include:

- Final copies of FIS reports and FIRMs;
- Copies of pertinent telephone conversation records;
- Copies of pertinent memorandums and correspondence;
- Corrected/revised hydrologic and hydraulic computations; and
- Corrected/revised work maps.

The Mapping Partner that performs the flood hazard analyses will prepare materials in the TSDN format. The Mapping Partner that processes the FEMA-contracted Flood Map Project and archives data shall maintain these documents and submit them to the ESDPF in the TSDN format. The requirements for the TSDN are provided in Appendix M of these Guidelines.

[February 2002]

3.3.1.4 Engineering Study Data Packages

To reduce storage requirements and to facilitate responses to requests for the administrative and technical support data developed during Flood Map Project processing, FEMA has chosen to prepare and maintain a standardized archive package of the data. The assigned Mapping

Partner's responsibilities for submitting materials to the ESDPF for permanent storage in digital form are provided below.

The assigned Mapping Partner shall categorize the data developed by other Mapping Partners as either essential or nonessential prior to submitting the data to the ESDPF. For a description and examples of essential and nonessential data, refer to Appendix M of these Guidelines. The assigned Mapping Partner shall discard nonessential data after the FIRM effective date.

When materials arrive at the ESDPF for archiving, they are logged in and reviewed. Materials categorized as essential data are indexed, scanned, and stored in digital form. Mapping materials deemed too large for scanning are permanently retained by the assigned Mapping Partner in individual files to facilitate retrieval for future reference and reproduction purposes.

After scanning and digital archiving is complete, the ESDPF staff shall provide the assigned Mapping Partner with the support data in digital form. When appropriate, the ESDPF staff shall return any supplementary hardcopy originals of essential data that could not be scanned because of the poor quality of the original material or size limitations. The assigned Mapping Partner may retain historic materials, especially work maps prepared by the Mapping Partner that performed the flood hazard analyses for the Flood Map Project, for reference purposes.

The ESDPF shall dispose of hardcopy originals of scanned material in accordance with guidance provided in FEMA Manual 5400.4, *Records Management, Records Disposition Schedules and Files Plan*. The ESDPF staff also shall duplicate and distribute the digital data to FEMA ROs and State agencies. Because of copyright restrictions, data provided by the ESDPF cannot be duplicated for distribution purposes.

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3.3.2 Internal Data Request Processing

The library/archival staff at the assigned Mapping Partner staff shall respond directly to requests from FEMA and other Mapping Partner staff for information stored and archived in the storage facility.

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3.3.3 External Data Request Processing

Data requests that are not received under the FOIA shall be processed through the FEMA fee-charge system. The assigned Mapping Partner shall respond directly to data requests and provide data (in electronic, microfilm, paper form, or some combination thereof) to the requester. Based on criteria established by FEMA, the assigned Mapping Partner will determine whether a fee is to be assessed to the requester to recover costs incurred during retrieval and reproduction of the data.

If a fee is charged, the assigned Mapping Partner shall determine the fee amount using the established rate table in effect at the time. All such fees shall be documented by the assigned

Mapping Partner and reported to the FCSA. The assigned Mapping Partner shall ensure that requesters of data submit the required user fees with requests for technical and administrative support data. The responsibilities for administration of the FEMA fee-charge system for external data requests are summarized in Subsection 3.17 of these Guidelines.

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3.3.4 Engineering Study Data Package Preparation and Delivery

For the ESDPF staff to handle archived materials efficiently, the assigned Mapping Partner shall, upon completion of a FEMA-contracted Flood Map Project, organize materials generated by their staff by labeling them accurately and discarding extraneous materials such as in-house checklists and duplicate copies of reports, correspondence, or maps. The assigned Mapping Partner shall ensure that LOMCs and project materials are stored separately such that the support data for each individual case or map action are clearly identifiable. The assigned Mapping Partner shall prepare an index of the material chosen for storage in the data package.

After the effective date of the revised FIRM reflecting the results of the FEMA-contracted Flood Map Project or map revision, the assigned Mapping Partner shall submit all pertinent data to the ESDPF for digital archiving. The assigned Mapping Partner shall ensure that the submittal is complete and includes all necessary data to duplicate the study.

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The assigned Mapping Partner shall ensure that the final input and output files of the hydrologic and hydraulic models are provided and the models agree with the information included in the FIS report and FIRM. The assigned Mapping Partner also shall provide a copy of the FIS report for use in verifying the accuracy of the submittal and for inclusion with the digitally archived materials. The assigned Mapping Partner also shall submit a copy of all LOMCs that have been incorporated into the subject FIRM along with the associated backup data.

Generally, the assigned Mapping Partner will submit pertinent data for several Flood Map Projects or map revisions at one time. The assigned Mapping Partner shall include a list of the Flood Map Projects and map revisions forwarded for archiving with the submittal to the ESDPF. The list is to identify the community CID, project or revision type, and effective date. The assigned Mapping Partner shall ensure materials are well organized and clearly labeled.

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3.4 Procedure, Guidance, and Policy Development and Implementation Assistance

3.4.1 Preparation of Guidelines and Specifications

The assigned Mapping Partner shall, at the direction of the PO or his/her designee, assist in the preparation of new or revised guidelines and specifications for:

- Performing flood hazard studies and restudies;
- Submitting conditional and final map revision and map amendment requests;
- Reviewing and processing studies, restudies, conditional and final map revision requests, and conditional and final map amendment requests;
- Preparing new or revised FIS reports, flood maps, and associated correspondence; and
- Other NFIP activities where Mapping Partners have expertise.

This assistance may include technical advice and evaluation, writing, administrative support, and maintenance of these Guidelines on the FEMA Flood Hazard Mapping website.

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3.4.2 Preparation of Procedures Manuals

The assigned Mapping Partner shall, at the direction of the PO or his/her designee, assist in the continuing development and revision of procedures manuals for the following:

- Performing flood hazard analyses and updates;
- Submitting conditional and final map revision and map amendment requests;
- Reviewing and processing Flood Map Projects, conditional and final map revision requests, and conditional and final map amendment requests;
- Preparing new or revised FIS reports, FIRMs/DFIRMs, FBFMs, and associated correspondence; and
- Other NFIP activities where Mapping Partners have expertise.

This assistance may include technical advice and evaluation, writing, and administrative support.

[February 2002]

3.4.3 Development of Improved Standards, Procedures, and Methodologies

The assigned Mapping Partner shall, at the direction of the PO or his/her designee, assist in the development of improved standards, procedures, and methodologies for performing hydrologic and hydraulic engineering analyses for FIS reports, flood maps, and associated products and correspondence, and for processing studies, restudies, conditional and final map revision requests, and conditional and final map amendment requests.

[February 2002]

3.4.4 Development of Improved Report and Map Products

The assigned Mapping Partner shall, at the direction of the PO or his/her designee, assist in the review and development of improved formats for FIS reports, flood maps, and related products.

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3.4.5 Preparation of Briefings and Other Guidance Documents

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The assigned Mapping Partner shall, at the direction of the PO or his/her designee, prepare briefings and other guidance documents and deliver the documents to FEMA RO and HQ staff, other FEMA contractors, and other Mapping Partners as directed.

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3.4.6 Preparation of Documentation for Historical and Future Trends

The assigned Mapping Partner shall, at the request of the PO or his/her designee, prepare documents that will aid in determining historical trends and in estimating future trends to provide input for the development of FEMA policy, products, and procedures.

[February 2002]

3.5 Technical Assistance

3.5.1 Meetings with FEMA and FEMA Constituents

At the request of the PO or his/her designee, the assigned Mapping Partner shall:

- Conduct onsite technical or programmatic meetings with FEMA personnel at the Mapping Partner's office;

- Attend technical or programmatic meetings with FEMA personnel, including technical conferences attended by major NFIP constituents (e.g., Association of State Floodplain Managers, American Society of Civil Engineers); and

- Participate in technical or programmatic meetings with FEMA personnel and constituents on specific issues, flood hazard studies, or conditional and final map revision and amendment requests.

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3.5.2 Review of Methodologies Submitted by Technical Experts

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Occasionally, hydrologic and hydraulic data and related mapping that are to serve as the basis for the preparation of revised FIS reports and flood maps are determined not to meet the FEMA guidelines and specifications documented in these Guidelines. To assist FEMA in determining whether such data may be used, the assigned Mapping Partner shall, at the direction of the PO or his/her designee, review the data to determine whether the methodologies on which they are based follow sound engineering practices.

If the data are the result of analyses performed with an alternative computer model, the model must meet the requirements set forth at Section 65.6 of the NFIP regulations. Furthermore, the PO or his/her designee must approve the use of such a model.

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3.6 Map Assistance Center Support

One assigned Mapping Partner shall, using Government-owned telephone equipment, provide the primary staffing for a Map Assistance Center to provide toll-free telephone service to the public nationwide. The purpose of the Map Assistance Center is to enable FEMA to be more responsive to all Mapping Partners and NFIP constituents while reducing the burden on FEMA HQ and RO staff resources.

Through the Map Assistance Center, the assigned Mapping Partner shall provide qualified map specialists that will:

- Answer general questions about NFIP maps and related regulations and procedures;
- Answer specific questions about the status of active and completed studies, restudies, conditional and final map revision requests, and conditional and final map amendment requests;
- Answer questions about technical and administrative support data available from the FEMA archives;
- Link callers with other FEMA service and fax numbers and the FEMA website;
- Provide information regarding, or copies of, FEMA products, brochures, and publications; and
- Provide statistical information to FEMA HQ and RO staff, on a monthly and/or quarterly basis, on the nature and geographic origin of questions.

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Map specialists in the Map Assistance Center shall receive an inquiry; access FEMA's website, fax lines, other general phone numbers, the Management Information System maintained by the assigned Mapping Partner, and reference materials for relevant information; and provide the caller with the appropriate information. The map specialists shall provide the information in one of the following forms:

- Verbal response;
- Hard copy(ies) to be sent by U.S. mail or express mail service;
- Facsimile transmission; or
- Link to FEMA website location from which information can be obtained.

The map specialists also shall have the ability to transfer calls to the Mapping Partner that is assigned to review and process a particular FEMA-contracted Flood Map Project, community-initiated map revision, or other map change action, other NFIP specialists, or to the appropriate FEMA HQ or RO contact when necessary.

The map specialists shall maintain an interactive database to record information on each incoming call. The map specialists shall capture key information on each caller including, but not limited to, call origin, type of caller (e.g. property owner, lender, community official), and type of information requested.

Other assigned Mapping Partners shall support the primary Map Assistance Center by staffing satellite operations to address specific questions that may not be answered by the primary Map Assistance Center staff.

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3.7 Flood Hazard Mapping Website Maintenance and Enhancement Support

3.7.1 Overview

It is important to be able to disseminate information on the Flood Hazard Mapping Program in a timely manner to the general public and the various groups interested in FEMA's Flood Hazard Mapping activities (homeowners, insurers and lenders, engineers and surveyors, and floodplain managers). The World Wide Web has come to the forefront as an excellent tool to employ in this effort. Assigned Mapping Partners shall assist FEMA in developing new ideas and tools for this effort.

The assigned Mapping Partner shall, at the request of FEMA HQ or RO staff and with the concurrence of the PO or his/her designee, provide technical and programmatic assistance to support the creation and maintenance of pages on the Flood Hazard Mapping website, other FEMA websites linked to the Flood Hazard Mapping website, and other web-based applications, such as databases.

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3.7.2 Website Support

The assigned Mapping Partner shall provide support primarily for the following websites:

- The Flood Hazard Mapping website that is available to the public at www.fema.gov/mit/tsd;
- The mirror of the Flood Hazard Mapping website that is available primarily to FEMA HQ, FEMA RO, and assigned Mapping Partner staff through www.floodmaps.net/mit/tsd; and
- Password-protected portions of the FEMA floodmaps.net site (www.floodmaps.net).

The assigned Mapping Partner shall be responsible for updating and maintaining content for the user groups and/or sections of the Flood Hazard Mapping website assigned by the FEMA Webmaster. In completing website development, update, and maintenance activities, the Mapping Partner shall comply with the general requirements summarized below

- Page banner, background, format, and color must conform to current FEMA format for front pages. The available templates, cascading style sheets, and JavaScript files must be used to ensure site consistency. If the need for a new template arises, then other Mapping Partners must be consulted.

- Links to other pages within the FEMA websites must always employ relative referencing. (The Mapping Partner must never use the full URL except when referencing the FEMA Flood Map Store and the FEMA MSC website).

- Links to pages outside of the FEMA websites must use the "Good-bye" Script to let users know they are leaving the FEMA web pages. This script is implemented during the deliverable preparation phase. Links to the sites below are excluded from this requirement.

  - ESRI site, located at the following address: http://www.esri.com/hazards/)

  - MSC Online Flood Map Store, located at the following address: http://web1.msc.fema.gov/webapp/commerce/command/ExecMacro/MSC/macros/welcome.d2w/report

  - MSC website, located at the following address: http://msc.fema.gov/MSC/

  - Files associated with the DFIRM Database initiative, hosted at the following address: http://206.239.151.22/

- Text equivalent request and retrieval pages, located at the following address: www.floodmaps.net/text

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- The web page design must be compatible with Netscape and Internet Explorer, versions 4.0 and later. Formatting must be virtually identical for all browsers.

- New content must be designed with accessibility in mind, and must comply with the requirements of Section 508 of the Rehabilitation Act, "Final Standards for Electronic and Information Technology," as they apply to websites.

- All pages must be checked for adherence to FEMA accessibility requirements and other Federal accessibility requirements, as well as the appropriate version of HTML, every time a change is made.

- New web pages and updates to existing pages on the mirror site must be recorded in the Flood Hazard Mapping Website Tracking Log (http://www.floodmaps.net/fhmtracker) to notify the FEMA Webmaster and other Mapping Partners of the updated or new information.

- New web pages and updates to existing pages must be reviewed and approved by the FEMA Webmaster before they are posted to the FEMA web server.

- Only those files that are ready for final review by the FEMA Webmaster are to be posted on the mirror site. The assigned Mapping Partner shall post files under development to the "Practice" folder on www.floodmaps.net.

- File names must be eight characters or less (excluding file extension).

- File extensions must be three characters, unless otherwise approved by the FEMA Webmaster, to ensure consistent and comprehensive file backups.

- CD-ROM or e-mail deliverables submitted for upload to the FEMA server must receive a thorough quality control review and require no further editing. Only the files that are to be posted shall be included.

- All files that are developed in the "Practice" directory must be kept there until they are ready to be moved to the final location on the Flood Hazard Mapping website.

- The assigned Mapping Partner must perform a quality control review on all new and updated files to ensure that all site protocols have been met. This process facilitates a smooth file deliverable process. Presence of incomplete files may cause confusion and errors in the deliverable process.

- Only one directory (/mit/tsd/) is to be used for all HTML files and supporting documentation (i.e., documents with .pdf, .zip, .doc, .swf extensions). The majority of site graphics are to be placed in the "TSDimage" subdirectory (/mit/tsd/TSDimage). Graphics related to the CTP portion of the site are to be placed in the "CTPimage" subdirectory (/mit/tsd/CTPimage).

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- Standard two- or three-letter prefixes (uppercase) must be used to identify files by FHM website section; for example, "MM_main" is used to identify the Map Modernization main page within the Map Modernization section. The most recent listing of file prefixes may be viewed at http://www.floodmaps.net/fhmtracker/protocols/fhmproto.htm.

- Existing logos must be used for each user constituent group (homeowners, insurers and lenders, engineers and surveyors, and floodplain managers).

- Files names must **NEVER** be deleted. Even if a file changes substantially, the same file name is to be used to support users who have book-marked or linked to the page.

- Documents on the website must be made available in pdf and/or .doc file format.

- Software on the website must be made available in a zip file.

- File sizes must be included for all downloadable files. File sizes for all files over 1 MB are to be carried out to two decimal places (e.g., 1.06 MB; not 1.1 MB).

- When possible, WinZip files must be limited to sizes no greater than 1.44 MB to facilitate the download of data from the site on floppy disks. Exceptions to this rule must be approved by the FEMA Webmaster.

- All new or modified pdf files must be saved with standard security settings in Adobe Acrobat 5 so that a (standard) password must be specified to 'Change Security Options'. The appropriate download pages for these files must include a note alerting users to download the free Acrobat 5 Reader.

- All new or modified pdf files must be made accessible with the Adobe Acrobat 5 "Make Accessible" plug-in when conversion does not cause undue burden. Whenever possible, pdf files are to be created from the source file and not from scanned documents. If a pdf file cannot be made accessible, a "Request a Text Equivalent" link must be added to the calling HTML page so that a user can request and receive an accessible equivalent of the file within 10 business days. Text equivalent files must be made available via www.floodmaps.net/text/.

- All pdf files created for documents that have a Table of Contents are to include bookmarks to allow for navigation of the documents via the Table of Contents entries. These pdf files are to be saved in the "Bookmark view" (with the Table of Contents on the sidebar).

- For large graphics, a thumbnail and file size notification is to be created to help users determine if they want to launch the graphic.

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For changes to these requirements and for step-by-step instructions for implementing these requirements, the assigned Mapping Partner shall go to the following link on the FEMA floodmaps.net website: http://www.floodmaps.net/fhmtracker/protocols/default.htm.

FOR REFERENCE ONLY.

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3.7.3 Other Support Activities

The assigned Mapping Partners shall, at the request of FEMA HQ or RO staff and with the concurrence of the PO or his/her designee, provide the following assistance:

- Attend Flood Hazard Mapping website meetings as scheduled by the FEMA Webmaster for updates on website activities and special web projects;
- Assist in developing various special projects, including developing online tutorials and other materials and/or applications on different aspects of the Flood Hazard Mapping Program and its various initiatives (e.g., CTP initiative);
- Investigate new technologies for web-based solutions that may assist FEMA in the management and administration of the Flood Hazard Mapping Program; and
- Advise the FEMA Webmaster and other FEMA staff on technical, legal, and regulatory issues that may have a bearing on the FEMA Flood Hazard Mapping websites.

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3.8 Support for Mapping Needs Assessment Process

3.8.1 Background

With the enactment of Section 575 of the National Flood Insurance Reform Act of 1994, the U.S. Congress required that FEMA

> …once during each 5-year period…assess the need to revise and update all floodplain areas and flood risk zones identified, delineated, or established [by FEMA] based on an analysis of all natural hazards affecting flood risks.

To meet this requirement, FEMA formed a Task Force to develop a plan for the required mapping needs assessment. The Task Force developed and implemented the Five-Year Mapping Needs Assessment Process. Following the development and implementation of this process, the Task Force:

- Performed an initial screening of mapping needs nationwide by contacting State NFIP Coordinators and mapped participating communities for information;
- Verified the validity of the identified needs; and
- Compiled information on those needs into a computerized database, known as MNUSS.

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The Task Force documented the results of the first 5-year assessment in a 1999 report to the U.S. Congress.

During the second 5-year mapping needs assessment, mapping needs will be identified through a variety of approaches, including data collected through the NFIP Biennial Report process and followup with individual communities that submitted Biennial Reports to FEMA.

[February 2002]

3.8.2 Mapping Needs Update Support System Enhancement and Maintenance

To accommodate multiple sources of information during the information-gathering phase, the Task Force revised the existing MNUSS software to migrate it to an online, web-enabled format. At the same time, the Task Force re-evaluated the underlying logic for computing the costs associated with the identified needs and the benefits of addressing those needs in an effort to automate and improve on the existing cost-benefit analysis approach. The new, password-protected Extranet version of MNUSS was then assigned a URL of MNUSS.com, and was tested by FEMA HQ, FEMA RO, and Mapping Partner staff.

The Extranet version of MNUSS, as currently configured, allows multiple stakeholders to enter information on mapping needs from multiple locations. Thus, the information-gathering process may be dynamic and ongoing, rather than the more traditional linear process that involves sending hardcopy letters to communities and receiving hardcopy written responses. The password security on the Extranet version of MNUSS ensures that FEMA staff make final decisions regarding the validity of a particular mapping need or group of needs for a community in coordination with the State NFIP Coordinators and local officials, and the relative rankings of communities' mapping needs.

At the request of the FEMA PO or his/her designee, the assigned Mapping Partner shall, at minimum, do the following:

- Evaluate data provided by communities and other Mapping Partners;
- Perform QA/QC reviews of the submitted data;
- Enter records for new mapping needs into MNUSS as they are identified;
- Revise records for existing mapping needs as new information is received;
- Administer passwords and user rights for MNUSS;
- Analyze data collected in MNUSS;
- Generate reports summarizing data collected in MNUSS;
- Continue to plan, design, program, install, and test enhancements in the functionality of MNUSS; and
- Incorporate MNAP/MNUSS into study process to identify mapping needs and ensure that they are incorporated onto newly published FIRMs.

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3.8.3 Other Support Activities

At the request of the FEMA PO or his/her designee, the assigned Mapping Partner shall provide technical, programmatic, and administrative/logistical support on other activities related to the MNAP. This support shall include, but not be limited to, the following:

- Participating in coordination meetings with FEMA and other Mapping Partners;
- Preparing status reports and action item registers;
- Maintaining a hardcopy repository of supporting data submitted by communities, regional agencies, States, and other Mapping Partners that have identified mapping needs;

- Developing an enhanced User Guide for MNUSS and other guidance documents for Mapping Partners involved in the MNAP;
- Developing outreach materials for targeted audiences (e.g., U.S. Congress, attendees at conferences);
- Enhancing content of MNAP material on FEMA website;
- Assisting with orientation and training of FEMA RO and HQ staff and other Mapping Partners that enter needs into MNUSS; and
- Performing followup activities with communities that reported mapping needs as part of the Biennial Report process.

[February 2002]

THIS DOCUMENT IS SUPERSEDED.
FOR REFERENCE ONLY.

3.9 Special Correspondence

The assigned Mapping Partner shall, at the request of the PO or his/her designee, provide technical and programmatic assistance and prepare responses to inquiries from other Mapping Partners and NFIP constituents. This special correspondence is separated into the following categories:

- Congressional Responses;
- Director Responses;
- Mapping Responses;
- E-Mail Responses;
- FOIA Responses; and
- Other Responses.

The requirements for these response categories are summarized in Subsections 3.9.1 through 3.9.6.

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[February 2002]

3.9.1 Congressional Responses

A Congressional Response is defined as a written response to an inquiry from a U.S. Representative, U.S. Senator, or to a constituent who has contacted the President or Vice President concerning an NFIP-related topic. Such topics shall include, but are not limited to, the following:

- Impact of the NFIP on a community or on a constituent's property;
- Data required to support a flood map change; and
- Process followed or determination made in response to a completed Flood Map Project, conditional or final map revision request, or conditional or final map amendment request.

[February 2002]

3.9.1.1 Work To Be Performed

When requested by the PO or his/her designee, the assigned Mapping Partner shall investigate the specific concerns expressed in the constituent's letter and prepare a response that answers the inquiry. The response shall be designed to educate both the inquirer (e.g., U.S. Senator) and the constituent on the intent of the NFIP. The assigned Mapping Partner shall not contact or respond to the constituent directly, unless requested to do so by the PO or his/her designee. The assigned Mapping Partner shall consider all Congressional Responses as top-priority assignments, and they shall be handled as expeditiously as possible (generally within 1 week of receipt, but as assigned by the PO or his/her designee).

After investigating the specific concerns, the assigned Mapping Partner shall prepare a final letter and submit it to the PO or his/her designee or other requester at FEMA HQ. At the direction of the PO or his/her designee, Congressional Responses may be delivered to FEMA HQ in either hardcopy form via courier or electronically via diskette or e-mail message.

When appropriate, the assigned Mapping Partner shall coordinate the response with the following before delivering the response to PO, his/her designee, or other FEMA HQ staff.

- FEMA Regional Engineers;
- Other FEMA RO staff; and
- Other FEMA HQ staff .

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[February 2002]

3.9.1.2 Response Preparation Guidelines

The guidelines and suggestions that follow are to be considered by the assigned Mapping Partner when preparing a Congressional Response for signature by the Administrator of the Federal Insurance and Mitigation Administration.

- The opening paragraph is to state to the following:
  - To whom the Congressional inquiry was addressed at FEMA;
  - Date of the inquiry;
  - Name of constituent on whose behalf inquiry is being made.
  - Date of constituent's letter, if applicable; and
  - Brief summary of specific concerns raised by U.S. Representative or U.S. Senator and constituent, as appropriate.

- The second paragraph of the letter is to address the specific concerns directly and concisely.

- Subsequent paragraphs are to brief the inquirer on general topics involving the NFIP as they relate to the concerns of the constituent. In general, the assigned Mapping Partner is to assume that the inquirer and constituent have limited knowledge about the NFIP; therefore, the use of NFIP-specific terminology and acronyms is to be minimized.

- The closing the letter is to direct further questions to the FEMA Congressional and Intergovernmental Affairs Division and provide the direct line telephone number for that Division.

- Unless requested otherwise by the inquirer, the response is to be addressed to the inquirer's Washington, DC, office. However, if the inquirer requests that the response be addressed to the inquirer's home district office, a signed copy also is to be sent to the inquirer's Washington, DC, office. This distribution is to be clear in the letter.

- The appropriate FEMA RO is to be included in the cc: list at the end of the letter.

For additional information on preparing Congressional Responses, the assigned Mapping Partner shall refer to the FEMA *Congressional Correspondence Handbook* (FEMA, 1993); FEMA Manual 5200.1, *Correspondence Management*; and Procedure Memorandums issued by the FEMA Hazard Mapping Division, which are posted on the FEMA Flood Hazard Mapping website.

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FOR REFERENCE ONLY.

3.9.1.3 Case File and Correspondence Preparation Requirements

When requested to do so, the assigned Mapping Partner shall prepare the final letter for review and concurrence. The specific actions to be taken are as follows:

- Place the original incoming request and the paperwork from FEMA on the left-hand side of the case file.

- Place the outgoing response letter in a protective cover on the right-hand side of the file along with relevant backup material, envelopes for mailing (when required), and copies of documents to be transmitted with response (when required).

- Attach FEMA-designated routing and concurrence forms on top of the case file.

3.9.1.4 Deliverable Products

At the direction of the FEMA PO or his/her designee, the assigned Mapping Partner shall deliver an original hardcopy version of a draft and/or final response and/or a digital version of a draft and/or final response..

[February 2002]

3.9.2 Director Responses

The assigned Mapping Partner, at the direction of the PO or his/her designee, shall prepare informational responses to written inquiries sent directly to the FEMA Director by someone other than a U.S. Senator or U.S. Representative. These inquiries may be from Federal, State, and local agencies; State legislatures; developers; private property owners; and other FEMA constituents.

[February 2002]

3.9.2.1 Work To Be Performed

The assigned Mapping Partner shall follow the same general procedures as those followed for Congressional Responses, as documented in Subsection 3.9.1.1.

[February 2002]

3.9.2.2 Response Preparation Guidelines

The assigned Mapping Partner shall follow the same general procedures as those followed for Congressional Responses, as documented in Subsection 3.9.1.2.

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[February 2002]

3.9.2.3 Case File and Correspondence Preparation Requirements

FOR REFERENCE ONLY.

The assigned Mapping Partner shall follow the same general procedures as those followed for Congressional Responses, as documented in Subsection 3.9.1.3.

[February 2002]

3.9.2.4 Deliverable Products

The assigned Mapping Partner shall be prepared to deliver some or all of the following materials to FEMA:

- Original hard copy version of draft and/or final response as required by FEMA;
- Digital version of draft and/or final response as required by FEMA; and
- Case file that will include the draft and/or final version of the letter, FEMA routing and concurrence forms, incoming correspondence, relevant backup material, envelopes for mailing (when required), and copies of documents to be transmitted with response (when required).

[February 2002]

3.9.2.5 Completion

When requested to do so, the assigned Mapping Partner shall mail signed and dated copies of the final letter to the requester and distribute copies of the letter as directed by the FEMA PO or his/her designee. The Mapping Partner shall store the case file with other technical and administrative support data for the community that is the subject of the inquiry.

[February 2002]

3.9.3 Mapping Responses

The assigned Mapping Partner, at the direction of the PO or his/her designee, shall prepare informational responses to inquiries from communities and other FEMA Mapping Partners.

[February 2002]

3.9.3.1 Work To Be Performed

The assigned Mapping Partner shall investigate the specific concerns expressed in the incoming letter and prepare a response that answers the inquiry. These responses shall generally be provided by letter; however, under certain circumstances and at the direction of the FEMA PO or his/her designee, the Mapping Partner may handle responses by telephone conversation or facsimile transmission.

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For responses handled by telephone conversation or facsimile transmission, the assigned Mapping Partner shall provide a written summary of the telephone conversation or a copy of the facsimile transmission to the FEMA PO or his/her designee.

The responses may provide information on the source(s) of the flood hazard information depicted in effective NFIP maps for particular communities, the NFIP in general, or particular FEMA policies and procedures. Frequently, the responses forward FEMA publications or direct the individuals to the proper place or person for the answers to their concerns.

When appropriate, the assigned Mapping Partner shall coordinate the response with FEMA Lead for a Flood Map Project, other FEMA RO staff, and other FEMA HQ staff before delivering the response to the PO or his/her designee.

The required signature for Mapping Responses will vary depending on the content of the letter and the respondent. The FEMA PO or his/her designee will provide the assigned Mapping Partner with the appropriate guidance.

[February 2002]

3.9.3.2 Deliverable Products

The assigned Mapping Partner shall be prepared to deliver some or all of the following materials to FEMA:

- Original hard copy version of draft and/or final response as required by FEMA;
- Digital version of draft and/or final response as required by FEMA; and
- Case file that will include the draft and/or final version of the letter, FEMA routing and concurrence forms, all incoming correspondence, relevant backup material, and copies of documents to be transmitted with response (when required).

[February 2002]

3.9.3.3 Completion

When requested to do so, the assigned Mapping Partner shall mail signed and dated copies of the final letter to the requester and distribute copies of the letter as directed by the FEMA PO or his/her designee. The Mapping Partner shall store the case file with other technical and administrative support data for the community that is the subject of the inquiry.

[February 2002]

3.9.4 E-Mail Responses

THIS DOCUMENT IS SUPERSEDED.

The assigned Mapping Partner shall, at the direction of the PO or his/her designee, prepare informational responses to e-mail inquiries from FEMA Mapping Partners and other NFIP constituents.

FOR REFERENCE ONLY.

[February 2002]

3.9.4.1 Work To Be Performed

The assigned Mapping Partner shall follow the same general procedures as those followed for Mapping Responses, as documented in Subsection 3.9.3. Depending on the nature of the inquiry and the response, the assigned Mapping Partner may respond directly to the originator of the e-mail or provide a draft response for the FEMA PO, his/her designee, and/or other FEMA staff to use in responding to the inquiry.

If the assigned Mapping Partner responds directly to the originator, the Mapping Partner shall include the PO, his/her designee, and/or other FEMA staff as a “cc” on the e-mail.

[February 2002]

3.9.4.2 Deliverable Products

The assigned Mapping Partner shall be prepared to deliver some or all of the following materials to FEMA:

- Draft and/or final e-mail response as required by FEMA;

- Incoming e-mail message;
- Relevant backup material; and
- Electronic copies of documents to be transmitted with e-mail response (when required).

[February 2002]

3.9.5 Freedom of Information Act Responses

3.9.5.1 Introduction

5 U.S.C. § 552, known as the "Freedom of Information Act," was enacted in 1966. The 1966 Act is the legislative basis for allowing public access to Federal Government information. It allows the release of information to the media, academia, and citizens and specifies the time in which the requests must be filled. These requests, when received, must be addressed promptly, as indicated in Section 3.9.5.2, however the requests may be rather infrequent. .

The General Law Division of the FEMA Office of General Counsel (OGC) is responsible for receiving, acknowledging, logging, and responding to FOIA requests. The major differences between standard external data requests and FOIA requests are processing time and the materials each type of request covers. Study and restudy materials are available through FEMA's external data request and fee-charge system. Therefore, the assigned Mapping Partner shall treat FOIA requests for these materials as a standard external data request, subject to the fees and other specifications already in place. The OGC must be advised whenever a FOIA request can more appropriately be processed as a standard external data request.

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[February 2002]

3.9.5.2 Processing Time

FOIA requests are highly time-sensitive because, by law, FEMA is required to respond within a given timeframe. Prior to 1996, this timeframe was 10 days. In 1996, President Clinton issued H.R. 3802, which amended 5 U.S.C. 552 and extended the legal response time to 20 days. This acknowledged the difficulty in processing FOIA requests within 10 days. It often takes the request several days to reach the assigned Mapping Partner for response.

[February 2002]

3.9.5.3 Data Gathering Requirements

Upon receipt of a FOIA request, the assigned Mapping Partner may receive special instructions from FEMA. If there is any doubt about the data that the requester needs, the assigned Mapping Partner shall contact the PO, his/her designee, and/or other FEMA staff for clarification. The assigned Mapping Partner shall **not** contact the requester directly unless directed to do so by FEMA. All questions must be relayed through FEMA.

The assigned Mapping Partner shall locate the data as soon as possible. If some or all of the data are on microfiche, the assigned Mapping Partner shall contact FEMA to determine how the data are to be handled; frequently, FEMA will direct the assigned Mapping Partner to make paper copies from the microfiche.

Different types of data may be requested under FOIA procedures. The different types of data and procedures for handling the data are summarized below.

[February 2002]

Draft, Preliminary, and Conditional Data

Draft or preliminary support data may be released to the requester; however, the assigned Mapping Partner shall clearly note on the outgoing correspondence and materials themselves that the data are draft or preliminary and subject to change.

The release of conditional information shall follow the guidelines set forth in the FEMA memorandum dated June 7, 1990. In general, the assigned Mapping Partner shall check with FEMA before releasing any data that do not support an effective FIS.

A special letter must be prepared to the originator of data supporting a request for a CLOMR to allow the originator to identify any confidential or privileged material. This letter puts the FOIA request "on-hold" for 7 working days from the date the letter is sent. The assigned Mapping Partner will also prepare a letter to the FOIA requester explaining that the data originator is being given the opportunity to object to the release of the information and that a formal time will be allowed for the requester's response before the data are released.

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Effective Information

The assigned Mapping Partner shall ensure that effective data to be released are the most recent. The Mapping Partner also shall ensure that any requested hydrologic and hydraulic models match the FIRM, FBFM, and FIS report and any mapping submitted with a revision request (if appropriate).

3.9.5.4 General Requirements

The assigned Mapping Partner shall "sanitize" all information to be released (i.e., black out names of people of nonofficial standing). If it is unclear whether data are to be included in the package (especially such things as telephone conversation records, internal processing notes, and the like), the assigned Mapping Partner shall contact the PO or his/her designee for guidance.

For most FOIA requests, FEMA will need a cost estimate to give the requester. The assigned Mapping Partner shall ensure the data can be located before providing a cost estimate.

Occasionally, a request may become highly involved and much more time than expected may be spent on its resolution. Such situations may occur when extensive coordination with FEMA is

required for the release of draft or preliminary data, or if a problem exists in finding the data. Should this occur, the assigned Mapping Partner shall consult with the PO or his/her designee to determine the time to be billed and how to charge any nonbillable time.

The assigned Mapping Partner also shall advise the PO or his/her designee if the circumstances will not permit a response within the time specified in Subsection 3.9.5.2. However, the assigned Mapping Partner shall take all appropriate action to complete the response within the time specified.

[February 2002]

3.9.5.5 Cost Computation Requirements

FOIA requests fall into different billing categories, as noted in the Definitions section of the Record of FOIA Case Processing Costs form, which must be completed as a basis for FEMA's preparation of the FOIA report to the U.S. Congress. FEMA will determine the billing category before the assigned Mapping Partner receives the FOIA request. The process used to calculate labor and reproduction costs is discussed below.

The hourly wage for each person involved is used to calculate labor costs. The assigned Mapping Partner must determine exactly how much time each person charged (and will charge) to the request.

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The Mapping Partner shall compute reproduction costs according to actual costs. The process for computing costs is outlined below.

FOR REFERENCE ONLY

1. The assigned Mapping Partner shall prepare a typed or handwritten worksheet showing the number of hours charged along with reproduction cost calculations.

2. The assigned Mapping Partner shall calculate the weighted hourly labor rate based on the salaries and time charged by the individuals working on the case.

3. The assigned Mapping Partner shall complete the Record of FOIA Case Processing Costs form based on the totals calculated on the worksheet.

4. The assigned Mapping Partner shall prepare a typed Cost Summary to be enclosed with the letter to the requester and include this Cost Summary on diskette with the cover letter.

For many FOIA requests, FEMA gives the requester 2 hours of search time and 100 pages of information at no cost. Also, FOIA requesters will not usually be charged if the total cost is less than $30.00. However, the assigned Mapping Partner shall calculate the costs following Steps 1 through 4 above for all FOIA requests.

To ensure confidentiality of staff salaries, the assigned Mapping Partner shall enclose the worksheet with this information in a sealed envelope marked "Confidential-Salary Information Enclosed." On the other copy of the worksheet, the assigned Mapping Partner shall write the weighted hourly labor rate. The sealed envelope will be part of the file the Mapping Partner submits to FEMA.

The assigned Mapping Partner must ensure that all time charged is included in these cost calculations, including the preparation and mailing of the FOIA response letter. However, if the Mapping Partner believes the requester should not be billed for all of the time charged, especially if data were misplaced or FEMA policy issues had to be resolved, the assigned Mapping Partner shall bring this concern to FEMA's attention with a short note attached to the file. The assigned Mapping Partner must ensure that all cost computations are performed correctly and that the documentation file is completed.

[February 2002]

3.9.5.6 Case File and Correspondence Preparation Requirements

The assigned Mapping Partner shall prepare the case file as follows:

- Place the incoming request (original) and paperwork from FEMA on the left-hand side of the case file.
- Place the outgoing FOIA response letter and all enclosures on the right-hand side of the file.
- Place the concurrence and cc: pages on top of the case file.

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The assigned Mapping Partner shall prepare a letter from FEMA to the requester describing the information and requesting payment, if applicable. This letter may also include special verbiage as applicable (e.g., verbiage regarding draft and preliminary data, verbiage regarding FIS processing). Usually, the assigned Mapping Partner will prepare this letter in final form and submit it to FEMA. As mentioned earlier in this subsection, the assigned Mapping Partner shall include the cost summary in the submittal to FEMA.

[February 2002]

3.9.5.7 Deliverable Products

The assigned Mapping Partner shall include the following information in the file sent to FEMA:

- Incoming correspondence and other relevant correspondence generated since the request was received;
- Draft or final letter with the Cost Summary;
- Confidential cost worksheet in a sealed envelope;

- Completed Record of FOIA Case Processing Costs form; and
- All requested materials.

After their review has been completed, FEMA staff may ask the assigned Mapping Partner to send the material and the signed and dated letter to the requester. However, FEMA staff also may choose to mail the materials and letter themselves.

[February 2002]

3.9.5.8 Completion

When requested to do so, the assigned Mapping Partner shall distribute signed and dated copies of the final letter to the requester, with copies being sent to the RO, State NFIP Coordinator, FEMA FOIA Officer, other FEMA HQ staff as directed by the FEMA FOIA Officer, the PO, or their designees. The Mapping Partner shall store the FOIA case file with other technical and administrative support data for the community that is the subject of the FOIA request. The Mapping Partner also shall send a duplicate copy of the original file to the FOIA Officer for any case where redacted materials were sent to the requester. These materials are to be available for the FOIA Officer's use should the requester appeal.

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FOR REFERENCE ONLY.

[February 2002]

3.9.6 Other Special Responses

At the direction of the PO or his/her designee, the assigned Mapping Partner shall prepare informational responses to inquiries that are not covered by the categories discussed in Subsections 3.9.1 through 3.9.5. The assigned Mapping Partner shall determine the work to be performed and the deliverable products for the responses at the time of assignment by the originating FEMA staff.

[February 2002]

3.10 Letters of Determination Review

3.10.1 Background

As mandated by the National Flood Insurance Reform Act of 1994, FEMA developed a Standard Flood Hazard Determination Form that is to be used by all regulated lenders and Federal agency lenders that make flood hazard determinations for improved property used to secure loans. When a borrower contests the determination made by the lender and the borrower and lender jointly request a Letter of Determination Review (LODR) from FEMA, they must provide the completed Standard Flood Hazard Determination Form and all technical information FEMA will need to complete its review.

If sufficient information is provided, the written response from FEMA will indicate FEMA's concurrence or disagreement with the lender's determination and whether the subject building is in the Special Flood Hazard Area (SFHA) shown on the effective NFIP map. If sufficient information is not provided, the submitted information will be returned with a written response indicating the additional information to be submitted.

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The procedures to be followed by the assigned Mapping Partner in processing requests for LODRs are detailed in Subsections 3.10.2 through 3.10.5. Additional information on the procedures and the letters and other documents to be produced by the Mapping Partner is provided in Section 8 and Appendix E of *Document Control Procedures Manual* (FEMA, 2000).

FOR REFERENCE ONLY.

[February 2002]

3.10.2 Processing Fees

FEMA assesses a review and processing fee for LODR requests. The current fee is $80 per request and applies to all requests, regardless of the determination that is issued. As with other review and processing fees, FEMA will review the LODR fees annually and amend the fees as appropriate.

[February 2002]

3.10.3 Initial Review and Processing Requirements

Within 5 days of receipt of a request, the assigned Mapping Partner shall take the initial review and processing actions summarized below.

- Open, inventory, and date-stamp the submitted information.
- Log the request into the Standard Flood Hazard Tracking and Correspondence System (TCS), which automatically assigns a case number for the request, or similar tracking database.
- Confirm that the borrower/lender notice and postmark date are not more than 45 days apart.
- Confirm that the correct fee was submitted and in a form that can be deposited directly into the National Flood Insurance Fund.
- Confirm that the effective NFIP map was used in making the determination.
- Verify whether the following required items were submitted:
  - Request to FEMA for a review of the lender's determination with the signature of the borrower and lender;
  - Copy of the lender's dated notification to the borrower that the building or manufactured home is in a SFHA;
  - Completed Standard Flood Hazard Determination form;
  - Copies of all map materials used by the lender or the lender's agent to make the flood hazard determination, including Plat of Tax Assessor's map and map showing the location of the building as related to the property; and
  - Copy of FIRM panel covering area in which building is located, annotated to show the location of the building.
- Return the package to the borrower with the appropriate return notice and update the TCS database or similar tracking database if any of the required supporting information is missing, the request is too late (i.e., submitted to FEMA more than 45 days after the date on the Standard Flood Hazard Determination form), or the fee submitted is insufficient or is nonnegotiable (and therefore cannot be deposited). The return package shall include all items submitted by the borrower, including the payment.
- Process the payment, prepare and mail a written acknowledgment of the LODR request, and initiate the case review if all required items have been submitted.

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FOR REFERENCE ONLY.

[February 2002]

3.10.4 Final Review and Processing Requirements

Once the assigned Mapping Partner has mailed the written acknowledgment of the LODR request, the Mapping Partner shall:

- Verify the location, NFIP community name, and CID. If a property is in an area that has been annexed to a community, the Mapping Partner shall ensure that the name and CID for the community that has jurisdictional authority for the property is used in the determination.
- Search the CIS databases, LOMC case files, and other community-based files for completed or in-progress LOMA, LOMR-F, and LOMR requests for the area in which the property in question is located and verify the structure location.
- Evaluate the submitted information and make a preliminary determination.
- Prepare a determination letter.
- Update the TCS database or similar tracking database.

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If the LODR request is denied and the elevation data submitted indicate the property may be removed by a LOMA or LOMR-F, the assigned Mapping Partner shall include a notification in the response letter to the borrower and lender. The response letter also shall indicate that the Mapping Partner has initiated processing of a LOMA or LOMR-F request. When the LODR is completed, the assigned Mapping Partner shall review the data in accordance with the procedures for LOMR-Fs or LOMAs documented in Volume 2 of these Guidelines.

[February 2002]

3.10.5 Deliverable Products

The assigned Mapping Partner shall perform the required procedures for preparing and distributing standard letters for LODRs as presented in Section 3 and Appendix C of *Document Control Procedures Manual* (FEMA, 2000). This includes mailing letters, with their appropriate enclosures, as specified in the U.S. Postal Service *Domestic Mail Manual*.

[February 2002]

3.11 Engineering Study Data Package Facility Support

3.11.1 Background

The purpose of FEMA's ESDP project is to prepare standardized digital records of the technical and administrative support data generated by FEMA and its Mapping Partners. The data archived for the ESDP project include the materials required to reconstruct a FEMA-contracted Flood Map Project or community-initiated map revision and copies of LOMRs and associated backup data that have been incorporated.

At a later date, FEMA may exercise the option to digitally archive materials submitted in support of LOMR, LOMR-F, and LOMA cases through the ESDP project. If this does occur, FEMA will issue appropriate guidelines and specifications for these materials.

[February 2002]

3.11.2 Archiving Operation

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Within 30 days of the effective date for a new or revised FIS report and FIRM the Mapping Partner that processed the FIS report and FIRM for FEMA shall submit all technical and administrative support data/materials related to the study, restudy, or map revision to the ESDPF. The Mapping Partner transmittals shall include all technical and administrative support data submitted by the Mapping Partner that performed the study or restudy, data submitted by revision requesters in support of map revisions, and data generated by the Mapping Partner that processed the FIS report and FIRM for FEMA. These data include, but are not limited to, correspondence, computer diskettes or hardcopy printouts of hydrologic and hydraulic data, field survey notes, and cross-section data.

The Mapping Partner shall pay particular attention to ensuring that the data submitted are complete and include all of the technical and administrative support data needed to recreate the study, restudy, or map revision for each community submitted for archiving. To help the ESDPF staff verify the completeness of the submission, the Mapping Partner shall transmit a copy of the effective FIS report along with the data to help determine the scope of the study. The ESDPF staff shall scan the FIS report text along with the other technical and administrative support data.

The Mapping Partner shall ensure that only the data associated with producing the FIRM for the given FIRM effective date are submitted. The Mapping Partner shall exclude extraneous materials such as CLOMRs, CLOMR-Fs, CLOMAs, drop letters, and denial letters, as well as duplicate copies of materials and correspondence and internal working copies. The Mapping Partner shall submit LOMRs, LOMR-Fs, and LOMAs and associated data that have been incorporated into the effective FIS report and FIRM. The Mapping Partner shall not submit source program versions of standard programs, such as HEC-2, HEC-RAS or WHAFIS.

When the data arrive, the ESDPF staff shall inventory and record the data. The inventory records what data have been submitted for archiving, the format of the material (scanned image or data file), and what has been stored in hardcopy and how to retrieve it.

As the materials are indexed and organized, ESDPF staff shall review each document for acceptability for scanning and verify that the submitted hydrologic and hydraulic models agree with the effective FIS report. The ESDPF staff shall return all diskettes and published FIS reports to the originating Mapping Partner after scanning is completed. The ESDPF staff also shall send original materials digitally archived at the ESDPF to a repository designated by FEMA after the scanning is completed.

After scanning, the ESDPF staff shall supply each originating Mapping Partner with the digital product. The ESDPF also shall send a copy of the digital product to the appropriate FEMA RO and State NFIP Coordinator.

[February 2002]

3.11.3 Data Archiving Requirements

The ESDPF staff shall prepare the data in a format accepted by the National Archives and Records Administration and shall dispose of the records in accordance with FEMA-accepted practices. The ESDPF staff shall maintain a duplicate copy of all digital files produced by the ESDP in a separate facility.

THIS DOCUMENT IS SUPERSEDED.

[February 2002]

FOR REFERENCE ONLY.

3.12 Map Service Center Support and Coordination

The MSC is the distribution center for all effective FIS reports, FIRMs, and FBFMs. The Mapping Partners that process new and revised FIS reports, FIRMs, and FBFMs for FEMA shall, with the approval of the FEMA PO or his/her designee, assist the MSC on an as-needed basis to restore, repair, or replace documents.

The MSC may request that the Mapping Partner that maintains the artwork replace or repair missing or damaged materials and produce camera-ready (composite negatives for Z-fold format and positive copies for 11″ × 17″ format) copies of FIRM and/or FBFM panels to the MSC. These composite negatives are compiled from existing mylar separates (artwork). On occasion the artwork is not be available and the negatives may have to be generated from an existing paper map. Less frequently, the MSC also may request camera-ready materials for FIS reports. The Mapping Partners will assist in maintaining a Geographic Information System (GIS)-based geo-index of all effective map panels used by the MSC.

The number of panels or reports requested and the frequency of requests will vary, because the requests are based on the volume of missing materials and the frequency of requests for map panels or reports received by MSC personnel. The general turnaround time for such requests shall be 2 to 4 weeks. With the approval of the MSC staff and the PO or his/her designee, extensions may be granted for unusually large requests.

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FOR REFERENCE ONLY.

[February 2002]

3.13 Training Support

The assigned Mapping Partner shall, at the request of the PO or his/her designee, provide logistical and technical support for new and ongoing FEMA training initiatives. This training will generally be in areas where the Mapping Partner is the subject matter expert. The level of support provided by the assigned Mapping Partner will vary depending on the training required and the location of the training.

For most support assignments, the assigned Mapping Partner shall

- Review existing training materials and recommend enhancements to improve the learning experience of the intended audience;
- Prepare new or revised training materials (e.g., PowerPoint presentations, online tutorials) targeted to specific audiences and/or specific training classes;
- Provide individuals with specific technical or programmatic knowledge to actively participate in the presentation of training materials;
- Provide logistical support for the training session; and
- Provide administrative support and support for the production of training materials.

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For most training support assignments, the assigned Mapping Partner's logistical support will be to format presentation materials for trainers and prepare notebooks or CD-ROMs for workshop attendees. However, if requested by FEMA, the assigned Mapping Partner also shall handle all logistical arrangements for training sessions, including finding a place to hold the session, sending invitations to potential attendees, arranging transportation, and finalizing food service arrangements. The exact level of effort shall be decided at the beginning of the planning process.

The support from the assigned Mapping Partner may be provided onsite at FEMA HQ; onsite at one of the ROs; onsite at the Emergency Management Institute in Emmitsburg, Maryland; onsite at the Training Center at Mt. Weather in Berryville, Virginia; or onsite at the assigned Mapping Partner's office or the office of another Mapping Partner.

[February 2002]

3.14 Post-Flood Hazard Verification/Recovery Tools

3.14.1 Introduction

It is critical to establish a coordinated effort to collect and disseminate accurate flood data and risk information to aid recovery efforts after a flood disaster occurs. Furthermore, it is important to collect and share these data as soon as possible after the event's occurrence. These data shall assist in the planning, investigation, and, ultimately, in the completion of projects to remove residential and commercial structures and other infrastructure from future flood risk.

Possible applications for these data in response, recovery, and mitigation activities include the following:

- Facilitating safe rebuilding;
- Identifying heavily damaged areas;
- Identifying locations on which to focus response and recovery efforts;
- Identifying areas for which flood insurance claims shall likely be made;
- Estimating damages for residential and commercial structures, lifelines, and other infrastructure;
- Identifying areas in which buildings may be substantially damaged and which, therefore, would be the focus of flood mitigation activities;
- Determining the likelihood of future damages in floodplains;
- Identifying inaccuracies in existing flood hazard data;
- Quantifying the benefits of taking action to mitigate or of not taking any action at all; and
- Identifying mitigation success stories.

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3.14.2 Guidance for Post-Flood Hazard Verification Activities

The following activities are associated with post-flood hazard verification:

- GIS support;
- Riverine high-water mark data collection;
- Coastal high-water mark collection;
- Wind water line investigation;
- Flood frequency determination;
- Post-disaster flood hazard data needs assessment; and
- Flood hazard update needs.

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The diagrams below present possible progressions for recovery efforts after a coastal flooding event and after a riverine flooding event.

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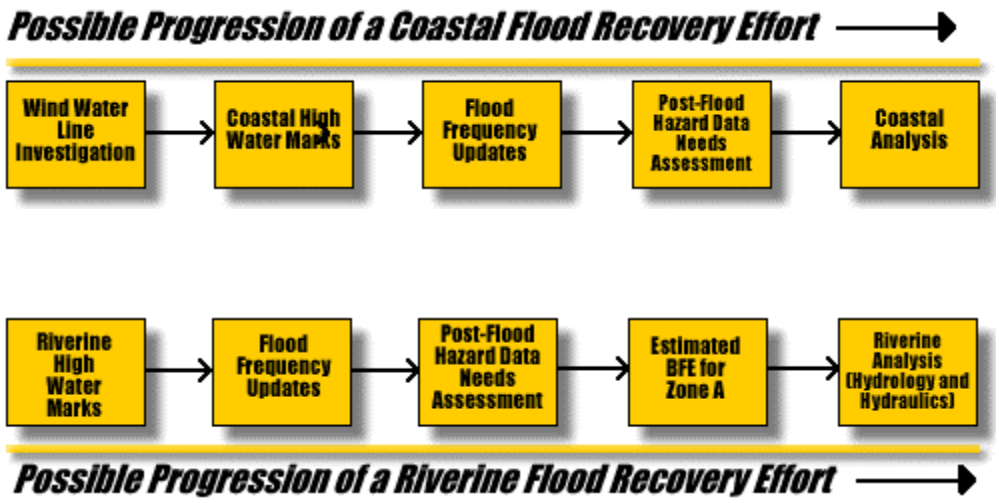
[February 2002]



3.14.3 Geographic Information System Support

GIS can be used to support emergency operations in the response, recovery, and mitigation efforts before and after a disaster. FEMA Regional Operations Center (ROC) and Disaster Field Office (DFO) staff can use GIS as a tool to help make emergency management decisions. Information relating to emergency operations is received constantly at the ROC and DFO. GIS can be used to analyze, synthesize, and display various information and thus expedite emergency management decisions.

The GIS support staff from the assigned Mapping Partner shall contact the following, at a minimum, to obtain data:

- State emergency management office;
- Other State offices, such as environmental protection, transportation, and GIS offices;
- Local communities (i.e., counties, townships, boroughs, towns, cities);
- USGS;
- U.S. Department of Agriculture;
- Local colleges and universities; and
- FEMA, its contractors, and other Mapping Partners.

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The functions that the GIS support staff from the assigned Mapping Partner may have to perform include analysis and mapping support for the following:

- Repetitive loss locations;
- Damage assessments;
- High-water mark surveys;
- Various progress reports;
- Teleregistration activities;
- Hazard Mitigation Grant Program (HMGP) activities;
- Critical facilities and infrastructure;
- Demographics;
- Q3 Flood Data products; and
- Control structure locations and failures.

These analysis and mapping support function may be altered to address changes in FEMA requirements.

The assigned Mapping Partner shall inventory and catalog all digital data. This documentation must be designed to allow access to this digital data for any future data processing needs. The documentation must contain descriptions of digital data, file format type, creation dates, and source documentation.

At the conclusion of the assignment, the assigned Mapping Partner shall archive a hardcopy of all documentation and data, and a CD-ROM of the digital data. The assigned Mapping Partner also shall develop recommendations for standard products, applications, and procedures that could be developed for future events.

[February 2002]

3.14.3.1 Riverine High Water Mark Data Collection

Identification of Areas for Survey

The assigned Mapping Partner shall determine stream reach areas for high-water mark data collection through coordination with FEMA, USGS, State officials, and local community officials; review of any available remote-sensing data; and review of all existing media reports. The Mapping Partner shall obtain remote-sensing data and media reports from the Information and Planning Section staff at the FEMA DFO. In addition, the Mapping Partner shall contact USACE and other agencies to determine the existence of any similar activities by their respective offices. The Mapping Partner also shall perform an independent search on the Internet to determine if any additional remote-sensing data is available.

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The assigned Mapping Partner shall complete an initial overview and assessment of flooding within the subject area and shall identify flooding sources/stream reaches that experienced flooding for which high-water mark data are needed. In general, the Mapping Partner must collect high-water mark data for major rivers and their tributaries and in other areas where severe flooding has occurred. The Mapping Partner must place particular emphasis on areas where flood-related damage to buildings, infrastructure, or agricultural lands occurred and/or areas that experienced record or near-record flooding. The assigned Mapping Partner shall base identification of areas for high-water mark surveys on available information regarding the recent event, such as satellite imagery, aerial photography, media reports, and knowledge of local and State emergency managers and other Federal agencies.

The assigned Mapping Partner shall submit a summary report (in digital format) to FEMA to document coordination with FEMA, USGS, and State and local community officials, as well as any additional data used in determining high-water mark collection areas. The Mapping Partner shall submit annotated USGS quadrangle maps at a scale of 1:250,000 or equivalent products with the summary report.

Riverine High Water Mark Data Collection

To locate and survey high-water marks for riverine areas identified and approved by FEMA, the assigned Mapping Partner shall establish high-water mark data collection teams based on the size of the project and deploy these teams in the field. Members of the data collection teams shall identify and flag the high-water marks. The team members shall then locate the high-water marks using differential GPS units and conventional survey equipment. The teams shall then identify GPS beacons, which are to be used as the base stations. If possible, the teams shall record all measurements in real-time.

The assigned Mapping Partner shall use traditional survey techniques in the event that GPS signals are blocked by buildings, trees, or other obstructions. An engineer from the assigned Mapping Partner shall assist the surveyor in measuring the high-water marks and shall take all field notes required for the metadata documentation. High-water mark points shall be collected with a vertical accuracy of 0.5 foot.

Spacing of High-Water Data Points

The assigned Mapping Partner shall subdivide each stream or river identified for survey into reaches based on the level of development within each reach. The assigned Mapping Partner shall use Table 3-1 as a guide for classifying the reaches based on the general land use and level of development within the flooded area of the reach.

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Table 3-1. Guide for Classifying Riverine Reaches Based on Land Use and Development

Land-Use/Development Category	Description
Low	Rural, agricultural, and/or areas of no or minimal development
Medium	Areas of moderate development
High	Areas of dense development, such as large residential, urban, commercial, or industrial areas

The spacing of the high-water mark data points shall be a function of the development category for each reach. The assigned Mapping Partner shall use Table 3-2 as guidance for determining the maximum spacing between survey locations for the various development categories. The assigned Mapping Partner shall apply these spacing guidelines such that high-water mark data points are collected at locations where reliable high-water marks can be readily obtained, such as downtown areas in which buildings are flooded.

Table 3-2. Guide for Determining Maximum Spacing Between Riverine Survey Locations

Land-Use/Development Category	Guideline
Low	At upstream and downstream end of reach and no more than 10 miles apart
Medium	Upstream of the most upstream bridge or culvert within the reach and downstream of the most downstream bridge or culvert and no more than 1 mile apart
High	Upstream and downstream of each bridge or culvert within the reach and no more than 0.5 mile apart

Selection of Physical Features for High-Water Mark Survey

At each survey location, the assigned Mapping Partner shall survey at least one high-water mark data point at fixed physical features. If practicable, the assigned Mapping Partner shall survey two or more points. One point shall be on a bridge or culvert or on a building located adjacent to or near the channel that was inundated during the flood event. The second point shall be on a building that was inundated located away from the channel, in the fringe area of the flooding event.

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In the absence of bridge, culvert, or buildings for collecting a high-water mark data point, the assigned Mapping Partner may use other fixed physical features, such as trees or utility poles. If a fixed physical feature is not available to survey the high-water mark data point, the assigned Mapping Partner may use the downed vegetation line as a last resort.

High-Water Mark Type

The assigned Mapping Partner shall note the type of high-water mark for each data point. In general, the mud or residue line on buildings of bridges is considered the most reliable. In a clear-water event, the assigned Mapping Partner shall exercise great care in using the water line on buildings as the high-water mark, because of the "wicking" effect of some building construction materials. This wicking effect can cause the water to penetrate the building materials and then seep upward. This effect would tend to overstate the actual flooding event. The assigned Mapping Partner may use the debris line on the ground or suspended in vegetation as a last resort. The assigned Mapping Partner shall take digital photographs of each high-water mark data point surveyed.

Other Flooding Factors

For each location surveyed, the assigned Mapping Partner shall note and photograph other information regarding the flooding event, including the following, and include these data in the GIS metadata:

- Blockage of a bridge or culvert by debris;
- Damage to or structural failure of bridge or culvert;
- Channel scouring;
- Sediment deposition in the channel; and
- Channel bank erosion, meandering, or avulsion.

For each high-water mark data point, the assigned Mapping Partner shall provide the following GIS metadata:

- Identification number (for cross referencing purposes);
- River or stream name;
- Reach identification;
- Location (city/town/borough/village, county, state);
- Address of high-water mark structure, if applicable;
- Description of physical feature surveyed (e.g., bridge, culvert, building, utility pole, tree), including name of the structure or road for bridge or culvert and street address for buildings;
- Location relative to channel (i.e., in channel, immediately adjacent to channel, in fringe area);
- Zone designation on effective FIRM (e.g., Zone A, AE, X);
- Type of high-water mark, such as mud line, debris line, clear water line, or downed vegetation line;
- Date and time high-water mark was located;
- Date and time high-water mark was surveyed (if different from above);
- Digital photograph of high-water mark;
- Name and seal of surveyor;

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- Vertical datum;
- x, y, z coordinates (i.e., latitude, longitude, elevation); and
- Accuracy (i.e., good, fair, poor).

Reporting

The assigned Mapping Partner shall provide a summary report to FEMA that documents the high-water mark survey. At a minimum, this report shall document the dates of survey, survey methods used, benchmarks used, High-Water Mark Certificates, and interviews with local officials and/or residents regarding the event. The report shall be concise and approximately 10 pages in length with extensive appendices.

The assigned Mapping Partner shall submit the report in hard copy and digital formats. The assigned Mapping Partner shall supply copies to the FEMA PO, FEMA Hazards Study Branch Chief, USGS, USACE, and State NFIP Coordinator and shall coordinate making the report available through the FEMA Flood Hazard Mapping website (www.fema.gov/mit/tsd) for other interested parties.

The assigned Mapping Partner shall ensure the data for each high-water mark metadata file are submitted in a GIS map coverage file format that complies with Appendix L of these Guidelines. The assigned Mapping Partner shall provide the high-water mark survey points in a GIS point coverage. Final selection of file formats shall be coordinated with the FEMA PO or his/her designee.

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The assigned Mapping Partner shall cross-reference all supporting documentation to the tabular data using the identification number, and shall include the following other items:

- Digital photographs of each high-water mark;
- Digital photographs of bridge, culverts, or channel, if other flooding factors are noted; and
- USGS (Digital Raster Graphic as minimum) quadrangle maps (or comparable base map source) showing the location, designation, and elevation of all high-water marks in hard copy and as a GIS spatial data coverage.

The assigned Mapping Partner shall create GIS maps through coordination with the FEMA PO, his/her designee, and other FEMA staff and shall submit the maps in both digital and hardcopy format. The assigned Mapping Partner shall provide copies and a CD-ROM to the FEMA DFO and RO, and shall also archive a copy of the information.

3.14.3.2 Coastal High Water Mark Data Collection

Identification of Areas for Survey

The assigned Mapping Partner that collects the coastal high-water mark data shall determine coastal shoreline and embayment reach areas for high-water mark data collection through coordination with FEMA, USGS, State and local community officials; review of any available remote sensing data; and review of existing media reports. The assigned Mapping Partner shall obtain remote-sensing data and media reports through the Information and Planning Section at the FEMA DFO.

In addition, the assigned Mapping Partner shall contact USACE and other agencies to determine the existence of similar activities by their respective offices. The Mapping Partner also shall perform an independent search of the Internet to determine if any additional remote sensing data are available.

The assigned Mapping Partner shall complete an initial overview and assessment of flooding within the subject area by identifying flooding sources and reaches of shoreline that experienced flooding for which high-water mark data may be needed. In general, high-water mark data are needed for open coast shorelines (Atlantic Ocean, Gulf of Mexico, Pacific Ocean and Great Lakes) and major embayments (e.g., Chesapeake Bay, Delaware Bay, Long Island Sound). FEMA also may require the Mapping Partner to collect high-water mark data for smaller bodies of water. The Mapping Partner shall place particular emphasis on water bodies that caused flooding damage to buildings, infrastructure (including, but not limited, to evacuation routes, wastewater treatment facilities, and schools), agricultural lands, and areas that are estimated to have experienced near-record or record flooding.

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To maintain the integrity of the data, the assigned Mapping Partner may have to perform a preliminary field investigation to flag high-water marks. The Mapping Partner shall document the results of the preliminary investigation with the minimum level of metadata (detailed in the following subsection) necessary for horizontal positioning. Given the dynamic nature of the high water marks, time is of the essence in documenting these data.

The assigned Mapping Partner shall base the identification of flooding sources and their representative shoreline reaches for followup high-water mark data collection on available information regarding the recent event, such as the following:

- Wave and tide gage data from the USGS (available at www.usgs.gov) and NOAA (available at www.noaa.gov);
- Satellite imagery;
- Inundation mapping prepared by the FEMA Mapping Analysis Center;
- SLOSH simulation runs from the National Weather Service and/or National Hurricane Center;

- Aerial photography and "on-ground" reports from NOAA and/or the media;
- Media reports (Internet, newspaper, television); and
- Information provided by local and State emergency managers and other Federal Agencies (i.e., USACE Preliminary Damage Assessments for hurricane events, FEMA situation reports, FEMA Preliminary Damage Assessments, telephone logs, discussions).

As soon as possible after the flood event, the assigned Mapping Partner shall document how each area was identified for potential further study, with priority consideration given to high-water marks in coastal regions due to their perishable nature. The assigned Mapping Partner shall schedule the high-water mark data collection in those areas accordingly.

The assigned Mapping Partner shall submit a written summary report (digital format) of coordination with FEMA, USGS, and State and local community officials as well any additional data used in determining high-water mark collection areas to the FEMA Hazards Study Branch Chief in the Hazard Mapping Division. With this report, the assigned Mapping Partner also shall provide annotated USGS quadrangle maps at a scale of 1:250,000.

High-Water Mark Data Collection

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To locate and survey high-water marks for areas, the assigned Mapping Partner shall establish and deploy high-water mark data collection teams based on the size of the project. These data collection teams shall locate high-water marks using differential GPS units and conventional survey equipment. The teams shall identify GPS beacons and use these beacons as the base station. If possible, the teams shall record measurements in real-time. The teams shall use conventional survey equipment in the event that GPS signals are blocked by buildings, trees, or other obstructions. An engineer from the assigned Mapping Partner shall assist the surveyor in measuring the high-water marks and shall take all field notes required for the metadata documentation.

Spacing of High-Water Mark Data Points

The assigned Mapping Partner shall subdivide each coastal flood source identified for survey into reaches based on the level of development within each reach. In coastal floodplains, the Mapping Partner shall determine the density of high-water marks based on a range of points per square mile of coverage, with higher density of points per linear mile of coastline for barrier islands at or near the hurricane or northeaster impact zone. The geographic reach of the high-water mark data collection for a coastal flood event must be the limits of the measurable storm surge flooding.

The assigned Mapping Partner shall use the guidance in Table 3-3 to classify the reaches based on the general land-use or development category within the flooded area of the reach.

Table 3-3. Guide for Classifying Coastal Reaches Based on Land Use and Development

Land-Use/Development Category	Description
Low	Rural, agricultural, and/or areas of no or minimal development
Medium	Areas of moderate development
High	Areas of dense development, such as large residential, urban, commercial, or industrial areas

The spacing of the high-water mark data points shall be a function of the development category for each reach. The assigned Mapping Partner shall use Table 3-4 as guidance for determining the maximum spacing between survey locations for the various development categories. The assigned Mapping Partner shall apply these spacing guidelines such that high-water mark data points are collected at locations where reliable high-water marks can be readily obtained, such as downtown areas that experience flooded buildings.

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Table 3-4. Guide for Determining Maximum Spacing Between Coastal Survey Locations

Land-Use/Development Category	Guideline
Low	At upstream and downstream end of reach <u>and</u> no more than 10 miles apart
Medium	Upstream of the most upstream bridge or culvert within the reach and downstream of the most downstream bridge or culvert <u>and</u> no more than 1 mile apart
High	Upstream and downstream of each bridge or culvert within the reach <u>and</u> no more than 0.5 miles apart

Selection of Physical Features for High-Water Mark Survey

At each survey location, the assigned Mapping Partner shall survey at least one high-water mark data point at fixed physical features, such as residential or commercial buildings. When practicable, the Mapping Partner shall survey two or more points at fixed physical features.

In the absence of available structures for collecting a high-water mark data point, the assigned Mapping Partner may use other fixed physical features, such as trees or utility poles. If a fixed physical feature is not available to survey the high-water mark data point, the Mapping Partner may use the debris line on the ground within a roadway or property area as a survey point.

High-Water Mark Type

The assigned Mapping Partner shall note the type of high-water mark for each data point. In general, the mud, residue, or debris line within the interior of structures is considered the most reliable. In other areas, the exterior mud, residue or debris line on the exterior of structures can be used, with the understanding that the wave effects may be a factor in the actual measured elevation at the HWM. This effect would tend to overstate the actual flooding event. The Mapping Partner also may use the debris line on the ground or suspended in vegetation as a last resort; however, this may result in the Mapping Partner overstating the actual flooding event because of the influence of wave effects. The Mapping Partner shall take digital photographs of each data point surveyed.

Other Flooding Factors

For each location surveyed, the assigned Mapping Partner shall note and photograph other information regarding the flooding event, including the following, and include these data in the GIS metadata:

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- Waterway or inlet bridge crossing blockage by debris;
- Damage to or structural failure of waterway bridges, inlet jetties, coastal structures (seawalls and revetments), and inland bulkheads;
- Channel scouring or breaching of barrier islands;
- Sediment deposition in the channel or overland due to beach and dune washover effects; and
- Beach and dune erosion, meandering, or avulsion

For each data point, the assigned Mapping Partner shall provide the following GIS metadata:

- Identification number;
- Name of flooding source;
- Reach identification number;
- Location (city/town/borough/village, county, state);
- Address of high-water mark structure, if applicable;

- Description of high-water mark (e.g., mud line, debris line);
- Type of high-water mark (inside or outside);
- Description of the physical feature being surveyed, such as bridge, culvert, residential structure, or utility pole (for buildings, street address is included);
- Zone designation on effective FIRM (e.g., Zone V, VE, X);
- Type of high-water mark, such as mud line, debris line, clear water line, or downed vegetation;
- Orientation of high-water mark on structure (e.g., interior or exterior);
- Digital photograph of high-water mark and site condition;
- Approximate location of high-water mark relative to the shoreline in feet (include time of day for this observation);
- Date and time high-water mark was located;
- Date and time high-water mark was surveyed in (if different from above);
- Determination as to whether high-water mark is indicative of surge only, wave height, or wave runup;
- Latitude, longitude, and elevation (x,y, z) coordinates;
- Vertical datum;
- Name and seal of surveyor;
- Other notes to include brief assessment of erosion; and
- Accuracy (good, fair, poor).

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Reporting

The assigned Mapping Partner shall provide to FEMA a summary report that documents the high-water mark survey and inundation limits of the flood event. At a minimum, this report must document the following:

- Dates of survey;
- Survey methods;
- Benchmarks used;

- Location and elevation of high-water marks;
- Digital photographs of high-water marks;
- Completed High-Water Mark Certificates (documentation forms, see example at end of section);
- Interviews with local residents and officials regarding the event; and
- Pertinent information on other flooding factors.

The assigned Mapping Partner shall submit the report in hard copy and digital formats to the FEMA PO, FEMA Hazards Study Branch Chief in the Hazard Mapping Division, USGS, USACE, and State NFIP Coordinator. The Mapping Partner also shall coordinate making this report available on the FEMA Flood Hazard Mapping website (www.fema.gov/mit/tsd) for any other interested parties.

The assigned Mapping Partner shall submit the data outlined for each high-water mark metadata file in a GIS map coverage file format that complies with Appendix L of the these Guidelines. The Mapping Partner shall provide these survey points in a GIS point coverage. Final selection of file formats shall be coordinated with the FEMA PO or his/her designee.

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Using the high-water mark data, the assigned Mapping Partner shall map a projection of the flood inundation limits and elevations on USGS topographic quadrangles or another base map approved by FEMA. The Mapping Partner shall ensure supporting documentation is clearly cross-referenced to the tabular data using the identification number.

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Other items that the Mapping Partner is to submit include the following:

- Digital photographs of each high-water mark;
- Digital photographs of waterway and inlet bridges, coastal structures, and bulkhead retaining walls, if other flooding factors are noted; and
- USGS (Digital Raster Graphic as minimum) quadrangle maps (or comparable base map source) showing the location, designation, and elevation of all high-water marks in hard copy format and as a GIS spatial data coverage.

The assigned Mapping Partner shall create the GIS-based maps through coordination with the FEMA PO or his/her designee, and shall submit these maps in both digital and hardcopy format. The Mapping Partner shall provide copies on CD-ROM to the FEMA DFO and RO and shall archive a copy of the information.

[February 2002]

3.14.3.3 Wind/Water Line Investigation

The purpose of the wind/water line (WWL) investigation is to establish the geographic region of impact, distinguish between areas suffering wind and water damage from those suffering wind damage only, identify storm surge level variations, and assess the impacts on open coasts and inland bays and sounds.

Identification of Areas for Survey

The assigned Mapping Partner shall perform an initial overview and assessment of the storm-surge levels and impacts for locating a WWL and identifying physical/cultural feature changes. (This task may be performed in conjunction with a detailed coastal high-water mark data collection activity.) The Mapping Partner shall base the identification of areas for high-water mark surveys on available information regarding the recent event, such as satellite imagery, aerial photography, media reports, and information provided by local and State emergency managers and other Federal agencies.

The assigned Mapping Partner shall limit the lateral extent (perimeter) of WWL investigations to regions where the storm-surge levels caused damage to structures or property and WWLs exceed elevations of approximately 5 feet referenced to the National Geodetic Vertical Datum of 1929. (Note: The assigned Mapping Partner must modify this elevation for any work along the Great Lakes.) The Mapping Partner shall obtain WWL points along the ocean shorelines (both barrier island and mainland), in rivers, bays, estuaries, and lagoons where significant storm surge occurred.

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The assigned Mapping Partner shall submit a summary of the above findings to the FEMA PO or his/her designee . The Mapping Partner shall submit the findings in the form of a brief report, supported by USGS quadrangle maps (or comparable mapping source, such as aerial photographs) identifying the areas proposed for WWL data collection. The Mapping Partner also shall submit any supporting documentation used to complete this assessment, such as satellite imagery or aerial photography.

Data Collection for Wind/Water Line Identification

The assigned Mapping Partner shall locate and survey WWL high-water marks for areas identified and approved by the FEMA PO or his/her designee. The guidelines for spacing of WWL high-water mark survey locations, selection of physical features for collecting the WWL high-water mark data points, types of WWL high-water marks to survey, and other factors to be noted are discussed in the following subsections.

For WWL investigations of mainland shorelines along inland bays and sounds, generally landward of the barrier island, the assigned Mapping Partner shall investigate and document at least one WWL high-water mark per 5-mile reach in developed regions. The preferred WWLs for mainland shoreline areas would be those inside of structures; however; any outside debris lines (i.e., on a roadway perpendicular to the shoreline or tree mudlines) are acceptable for

delineating the inundation limits and elevation of surge levels. The elevation of surge levels outside of the open coast region helps to document the inland surge reduction.

The assigned Mapping Partner shall obtain WWL high-water marks from locations inside structures to replicate stilling wells as well as outside structures to include wave effects. When conducting WWL high-water mark surveys, the Mapping Partner also shall perform preliminary site investigations of primary frontal dune impacts and new storm-induced washovers/inlets for open coast barrier islands. These site investigations shall include brief narrative description and photographic evidence of site. For primary frontal dune erosion areas, the Mapping Partner shall record spot elevations of dune toe (landward and seaward) and crest. For new storm-induced washover/inlets, the Mapping Partner shall record geographic location and dimensions (approximate width and length) of the area. Along shorelines of mainland bays and sounds, only WWLs are needed.

For WWL investigations of developed barrier islands of approximately 2 to 3 miles in length, the assigned Mapping Partner shall document at least four WWLs, one near each inlet along the open coast and back bay shoreline flooded areas, preferably inside marks outside of wave influence (i.e., splash zone). An inside mark would be a mud line or debris line located within a structure (with no wave influence). An outside WWL would be a mud line or debris line on the outside of a building (these marks would have added wave effects).

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The assigned Mapping Partner shall investigate and document intermediate points between inlets (at approximately 2-mile intervals) along barrier islands greater than 4 miles in length, especially where new storm-induced washovers/inlets are located. For each WWL data point, the Mapping Partner shall provide the following metadata:

- Identification number (for cross referencing purposes);
- General Location (Street address, City/Town, County, State);
- Digital Photograph;
- Latitude, longitude, and elevation coordinate;
- Type of WWL (debris line, mud line);
- WWL location (outside or inside of structure);
- Date collected; and
- Any additional notes necessary.

The assigned Mapping Partner shall provide the documentation of primary frontal dune changes and new washover/inlet in narrative and photographic format.

Reporting

The assigned Mapping Partner shall submit a summary report that documents, at a minimum, the dates of survey, survey methods used, benchmarks used (including horizontal and vertical reference datums), interviews with local officials and/or residents regarding the event, and information on dune impacts and washovers/inlets. The Mapping Partner shall submit the report in digital format.

The assigned Mapping Partner shall submit the data outlined for each WWL outlined above in a GIS map coverage file format that meets the requirements of Appendix L of these Guidelines. The Mapping Partner shall provide the WWL survey points in a GIS point coverage. The Mapping Partner shall coordinate final selection of file formats with the FEMA PO or his/her designee. The Mapping Partner shall ensure that the supporting documentation is clearly cross-referenced to the tabular data using the identification number.

The assigned Mapping Partner also shall submit digital photographs of primary frontal dune impacts and new storm-induced washovers/inlets for open-coast barrier islands if these were noted. The assigned Mapping Partner also shall submit USGS (Digital Raster Graphic as minimum) quadrangle maps (or comparable base map source) showing the location, designation, and elevation of all WWLs in hardcopy format and as a GIS spatial data coverage. The assigned Mapping Partner shall provide map products to the PO or his/her designee that may be posted on the FEMA website.

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[February 2002]

3.14.3.4 Flood Frequency Determination

The assigned Mapping Partner shall contact the USGS and National Weather Service to gather preliminary data for stream gages and rain gages in or adjacent to the impacted areas. These analyses shall be performed in conformance with Bulletin 17B (Interagency Advisory Committee on Water Data, 1982).

For those gages with peak stages that exceeded stages in the historic record, the assigned Mapping Partner shall perform a log-Pearson Type III analysis to extrapolate the frequency of the storm. These data are used to adjust the stage-discharge curves (rating curve) of the stream gage. In addition, the Mapping Partner shall research existing data, including the effective FIS reports, FIRMs, and other sources such as the USGS, USACE, State, and local communities to determine the documented 1-percent-annual-chance (100-year) flood stages at each gage site.

The assigned Mapping Partner shall develop spreadsheets to compare the new peak 1-percent-annual-chance (100-year) flood stages and/or floodflows and the flood stages and/or floodflows that are reflected in the effective FIS report and on the effective FIRM. Although these data are preliminary, the Mapping Partner must investigate areas where new peak stages exceed the

mapped stage to determine the reason for the differences in water-surface elevations. The Mapping Partner shall revisit the new stage-frequency analyses when high-water mark data and indirect measurements are available. In addition, the Mapping Partner may need to assess targeted flooding sources that did not have USGS gage data information based on future high-water mark data.

The assigned Mapping Partner shall perform stage-frequency analyses where no finite flood discharge information is available. The Mapping Partner shall perform direct and indirect discharge measurements to verify stage-frequency analyses. The Mapping Partner shall perform the discharge measurements in accordance with standards set forth in USGS Water Resources Investigation Report 94-4002 (USGS, 1994).

In the event that no direct USGS data are available for a community, the assigned Mapping Partner may establish preliminary flood frequencies on a watershed basis or based on the storm's rainfall frequency. Although these are not the most accurate methods, they do provide a characteristic of the storm. In this case, the assigned Mapping Partner shall not determine final flood frequencies shall until a new detailed flood hazard analysis is performed, if applicable.

[February 2002]

3.14.3.5 Post-Disaster Flood Hazard Data Needs Assessment

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An important function of the Technical Services Branch in the DFO is to assess the available flood hazard data and determine if the accuracy and level of detail are sufficient to support benefit/cost analysis, reconstruction guidance, insurance determinations, ESF-5, and other activities. The steps outlined below describe a process that will result in the collection and identification of flood hazard data needs for the area affected by the disaster. This activity will allow priorities to be set for the development of additional flood hazard information determined for recovery activities.

Preliminary Investigation

The assigned Mapping Partner shall obtain maps (hardcopy or digital format) that show major waterways, communities; roads and railroads; Human Services (HS) applications; and flood insurance risk zone designations from the FIRMs for all affected Counties. (Th assigned Mapping Partner may obtain these maps from ESF-5 staff at the FEMA ROC or from the Information and Planning Section staff in the DFO). As additional applications for HS assistance are received, it may be necessary to obtain updated versions of these maps.

The Mapping Partner shall review the maps to determine areas for further investigation and/or field reconnaissance. The following preliminary reviews may help to identify areas for further examination:

- Identification of areas with large concentrations of Human Services applications;

- Comparison of remotely sensed flood inundation limits to the FIRM boundaries;
- Comparison of any flagged locations of any field-collected high water marks (x,y locations), with all data collected flagged with lat/long in decimal degrees and referenced to the North American Datum of 1983; and
- Any geocoded locations for potential Hazard Mitigation Grant Program projects.

The assigned Mapping Partner may need to perform field reconnaissance to clarify issues identified through this process

The assigned Mapping Partner shall determine if the state or any other entities (local communities, state USGS, USACE districts, water management districts, regional development districts, others) are collecting data that may provide information.

Detailed Data Collection

The Mapping Partner shall review the standard Disaster Data Needs Assessment Form for reporting mapping needs to FEMA, determine if any mapping needs specific to the disaster event must be added, and finalize the form. The Mapping Partner shall distribute the completed form to FEMA planners for their "to go" kits, and brief them on the form.

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FEMA planners should provide the Disaster Data Needs Assessment Form to the communities when mapping issues are raised to document them for input into the flood hazard data needs database.

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The assigned Mapping Partner shall do the following to complete the Mapping Needs Assessment form:

- Review hydrology from FIS text to determine date and method of hydrologic analyses.
- Review hydraulics from FIS text to determine date of hydraulic analyses.
- Compare remotely sensed flood inundation limits to the FIRM boundaries.
- Compare any flagged locations of any field-collected high water marks (x,y locations).
- Identify locations for potential HMGP projects.
- Identify geocoded substantially damaged structures.
- Identify information on severely damaged critical infrastructure.
- Identify Approximate Zone A areas/unmapped areas with damages that need BFEs for reconstruction efforts.
- Review MNUSS data for affected communities.

The assigned Mapping Partner shall input data gathered into the *Disaster Data Needs Assessment* database, which is located on the FEMA website at http://www.floodmaps.net/floodrecoverydata. The Mapping Partner shall prioritize flood hazard data collection and analyses needs for possible contract Task Orders. The Mapping Partner shall shared all data collected with ESF-5/Information and Planning staff and provide it to FEMA and other Mapping Partners as needed for the MNUSS data collection effort.

The assigned Mapping Partner shall obtain maps that show major waterways, communities, roads and railroads, human services applications, and FIRMs for all affected counties. Additionally, other useful map products may be developed using the GIS support. From a review of the maps and other resources, the Mapping Partner shall identify and conduct reconnaissance of the areas that need further investigation. The assigned Mapping Partner also shall review the FIS reports for the affected communities to determine the methods used to perform the hydrologic and hydraulic analyses. The Mapping Partner shall use other resources to perform this detailed data collection, including MNUSS, high-water mark inspections, and previous flood hazard studies in the area.

From FEMA, State officials, and other sources, the assigned Mapping Partner shall obtain input on areas that are being targeted for hazard mitigation projects. The Mapping Partner also shall document locations of areas with substantially damaged structures and consider these areas in determining needs.

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[February 2002]

3.14.3.6 Flood Hazard Data Update Needs

Based on the data collected from the post-disaster flood hazard data needs assessment discussed in Subsection 3.14.2.5, the assigned Mapping Partner shall develop a priority list of flood hazard data update needs. This list is to include communities, flooding sources, reach lengths, and FIRM panels. The Mapping Partner also shall assemble data from the FIS reports, FIRMs, MNUSS, USGS, State NFIP Coordinator, local communities, and FEMA. To assist in this prioritization, the Mapping Partner shall develop a point ranking system to properly weigh all factors of flood hazard data update needs.

To determine if a new flood hazard analysis is warranted, the assigned Mapping Partner shall use the confidence limits check outlined earlier in this section. Generally, if the new 1-percent-annual-chance (100-year) storm discharge from the preliminary frequency curve produces a new 1-percent-annual-chance (100-year) flood profile that is 1.0 foot or more above that developed for the effective FIS report, then a new flood hazard analysis may be warranted.

The assigned Mapping Partner shall develop the point ranking system in coordination with the State NFIP Coordinator, local communities, and FEMA. The distribution of the points is to reflect the severity of flooding across the area. The point ranking system shall include the parameters shown in the table below.

In addition, the assigned Mapping Partner shall assign a priority category to this final ranking. The Mapping Partner shall coordinate the range of points assigned to each category with the State NFIP Coordinator, local communities, and FEMA. The priority categories are:

- **Emergency** – Immediately needed for Mitigation Recovery Activities;
- **Priority** – In support of Mitigation Recovery Activities; and
- **Routine** – Normal Restudy Needs List.

For those projects that have the same ranking, FEMA and the State NFIP Coordinator shall coordinate to decide which community has the higher ranking. The assigned Mapping Partner may list the final priorities in a spreadsheet and deliver it to FEMA, the State NFIP Coordinator, and local communities. The suggested procedures for streams and communities by priority category are outlined below. The assigned Mapping Partner shall ensure any data collected on these communities are input to the MNUSS database.

Emergency

The assigned Mapping Partner shall perform accelerated hydrologic and hydraulic analyses and present the results on a digital work map showing 1-percent-annual-chance (100-year) floodplains and regulatory floodway and the best available base map information available. These data would be used as best available data for assisting hazard mitigation recovery activities. The proposed timeframe for this action is 1 month.

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Priority

The assigned Mapping Partner shall perform accelerated hydrologic and hydraulic analyses and present the results on a digital work map showing 1-percent-annual-chance (100-year) floodplains and regulatory floodway and the best available base map information available. These data would be used as best available data for assisting hazard mitigation recovery activities. The proposed time frame for this action 3 months.

Routine

These communities shall be reprioritized, as appropriate, by the FEMA RO as part of its annual review of study/restudy requests from communities.

[February 2002]

3.14.4 Development of Recovery Tools

Collection and assessment of flood data and preparation of flood recovery maps, if needed, are activities outside of FEMA's normal flood hazard mapping operations. These activities must take place in the immediate aftermath of a disaster. When a flood occurs, valuable data become available that enable FEMA and its Mapping Partners to reassess the estimates of flood risk.

Also, rebuilding efforts begin within a short period after the disaster, and timely updated flood risk data are necessary to ensure that the rebuilding will protect properties from future flooding disasters. The new data need to be evaluated and, if necessary, incorporated into new engineering analyses. Appropriate hazard identification tools (such as flood recovery maps) must be produced quickly. In some cases, there may not be any detailed flood mapping at all, and flood recovery maps may be the only detailed guidance to assist the State and community in planning and managing rebuilding efforts.

Subsections 3.14.4.1, 3.14.4.2, and 3.14.4.3 provide guidance for preparing flood recovery tools.

[February 2002]

3.14.4.1 Estimated Base Flood Elevation for Zone A Areas

When no detailed flood data exists for specific waterways, the assigned Mapping Partner may have to perform hydraulic studies to establish base flood elevations to assist in proper floodplain management and redevelopment. At FEMA request, the Mapping Partner may be required to perform hydrologic and hydraulic analyses (the type of model shall be assigned by the FEMA PO or his/her designee in the Scope of Work) and develop the 1-percent-annual-chance (100-year) Flood Profile for specific waterways.

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Hydrologic Analysis

The assigned Mapping Partner shall develop the peak 1-percent-annual-chance (100-year) flood discharge using the appropriate USGS regression equations. The Mapping Partner shall develop drainage from USGS 30-Meter digital elevation model information, unless better topographic data are available. General guidance for performing the hydrologic modeling can be found in Volume 1 and Appendix C of these Guidelines.

Hydraulic Analysis

The assigned Mapping Partner shall develop the cross sections to be used in the hydraulic model from USGS 7.5-minute series quadrangle maps, unless better topographic or survey data are available. General guidance for performing the hydraulic modeling can be found in Volume 1 and Appendix C of these Guidelines.

Mapping

The assigned Mapping Partner shall produce work maps that present 1- percent-annual-chance (100-year) and 0.2-percent-annual-chance (500-year) floodplains and regulatory floodway using the best topographic data available on a suitable base map. The Mapping Partner shall ensure all digital mapping files are produce in accordance with the requirements documented in Appendix K of these Guidelines.

[February 2002]

3.14.4.2 Coastal Analyses

The assigned Mapping Partner shall perform all coastal analyses in accordance with the requirements documented in Volume 1 and Appendix D of these Guidelines.

[February 2002]

3.14.4.3 Riverine Analysis

The assigned Mapping Partner shall perform all riverine analyses in accordance with the requirements documented in Volume 1 and Appendix C of these Guidelines.

[February 2002]

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3.15 Hazard Identification and Mapping Activities

The assigned Mapping Partner shall assist in obtaining information regarding natural and technological hazards from Federal, State, and local government sources. This information could be used to produce maps, perform analyses, or add to web applications and could portray a broad range of natural and technological hazards.

Work assignments under this task are optional and may be exercised at any time during the term of the contract of the assigned Mapping Partner at the discretion of the FEMA Contracting Officer (CO). At that time, the Mapping Partner shall prepare a Business and Technical Proposal with a separate Time and Cost Proposal based on instructions from the FEMA CO, the Task Manager for the particular work assignment, or the PO or his/her designee.

[February 2002]

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3.16 Risk Assessment Activities

The assigned Mapping Partner shall, at the request of the PO or his/her designee, provide onsite and offsite support to FEMA's Risk Assessment mission and related functions. This support shall include acquisition of data, hardware, and software; digitizing; and database and GIS functions for daily and emergency operations. These functions will support mitigation, preparedness, response, and recovery efforts.

These functions, which primarily support the ongoing Risk Assessment mission, shall also be used in direct support to the EST/ESF-5 within FEMA. The tasks may be characterized by time-critical operations to perform the following activities:

- Acquisition of source materials (e.g., maps, reports);
- Acquisition, preparation, interpretation, and analysis of imagery;
- Digitizing of feature and related event information, characterized as geographic, property, disaster relief, flood insurance, demographic, and infrastructure data;
- Preparation of digital files for use in the FEMA-GIS software tools (e.g., ArcInfo Export file, Map Info native file, Oracle, EIS);
- Daily operation, maintenance, and upgrading of the FEMA-GIS, including within the FEMA EST/ESF-5 environment;
- Preparation of output products in digital and hardcopy formats for data exchange within FEMA; with Federal, State, and local governmental agencies; and with other Mapping Partners; and
- Development of training materials and presentation of training courses on using the FEMA-GIS.

When feasible and applicable, the digitizing and GIS support operations shall follow the requirements described elsewhere in these Guidelines.

[February 2002]

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3.17 Fee-Charge System Maintenance

3.17.1 Overview

In January 1986, FEMA instituted a fee-collection system to recover costs incurred in reviewing proposed projects and issuing CLOMAs, CLOMR-Fs, and CLOMRs. In October 1992, FEMA expanded the system to provide for the recovery of costs incurred in reviewing completed projects and issuing LOMR-Fs, LOMRs, and PMRs. Effective October 1, 1996, FEMA established a flat schedule for processing most requests for LOMR-Fs, LOMRs, PMRs, CLOMAs, CLOMR-Fs, and CLOMRs. Based on its annual review of costs, FEMA has and will continue to revise the fee schedule to ensure maximum recovery of expended funds by publishing a new schedule in the *Federal Register*.

Similarly, FEMA established a system for recovering costs incurred in responding to requests for FIS technical and administrative support data. FEMA has established seven categories into which requests for FIS technical and administrative support data are separated. (See Subsection 3.3.3 of these Guidelines for additional information on these categories.)

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As it has with requests for conditional and final modifications to NFIP maps, FEMA has and will continue to revise the fee schedule to ensure maximum recovery of expended funds by publishing a new schedule in the *Federal Register*. To maintain an accurate accounting of the checks, money orders, and credit card charges that are received, FEMA has established a centralized fee-charge system, administered by the Fee-Charge System Administrator (FCSA). The fee-charge system administration responsibilities of the Mapping Partners that process these requests and the FCSA for map change requests and external data requests are provided in Subsections 3.17.2 and 3.17.3, respectively.

[February 2002]

3.17.2 Map Change Requests

3.17.2.1 Mapping Partner Responsibilities

As indicated in Volume 2 of these Guidelines, the appropriate review and processing fee must be received by the Mapping Partner that is assigned to review and process a map change request and submitted to the FCSA before the review of any request requiring a review and processing fee begins. The review and processing fee is based on the type of map change requested. A list of current review and processing fees for map change requests is provided on the FEMA Flood Hazard Mapping website at http://www.fema.gov/mit/tsd/frm_fees.htm.

Upon receipt of the request, the assigned Mapping Partner shall review the submittal to determine whether the request is fee exempt. Once the Mapping Partner determines that the request is not fee-exempt, the Mapping Partner shall assign a case number in accordance with the

procedures discussed in Sections 2 and 3 of the FEMA *Document Control Procedures Manual* (FEMA, 2000). The Mapping Partner then shall perform a quick review of each check or money order to identify obvious errors (e.g., missing date, missing signature, discrepancies between the written and the numerical amount, and check made payable to incorrect entity).

Some checks have a 60- or 90-day *void clause* from the date of the check. If no void clause appears on the check, the check is good for 6 months from its issue date, unless otherwise indicated. If the check is past its expiration date, the assigned Mapping Partner shall not forward the check to the FCSA. Instead, the assigned Mapping Partner shall return the check to the requester and ask for a new check with a current date. FEMA cannot accept any check over 6 months old, unless stated otherwise on the check. The assigned Mapping Partner shall make copies of checks before sending them to the FCSA through interoffice mail.

The assigned Mapping Partner also shall ensure that any credit card payment form submitted directly to that Mapping Partner contains the required information, including the following

- Correct amount;
- Credit card number;
- Current expiration date;
- Signature of cardholder;
- Date of signature;
- Name of cardholder as it appears on the credit card;
- Address of cardholder (for the credit card receipt);
- Daytime telephone number; and
- Case number (established by the assigned Mapping Partner).

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FEMA accepts only VISA and MasterCard. The credit card information form appears in the MT-1 and MT-2 application/certification packages discussed in Volume 2 of these Guidelines and which may be downloaded from the FEMA Flood Hazard Mapping website.

If any of the required information is missing, the assigned Mapping Partner shall call the requester and request a corrected credit card information form. The FCSA cannot process credit card payments unless all correct information is provided. The FCSA and MCC cannot, under any circumstances, accept a credit card authorization over the telephone.

Before forwarding checks, money orders, or credit card information to the FCSA, the assigned Mapping Partner shall ensure the check, money order, or credit card information information form has been annotated with the correct case number. The Mapping Partner shall place a copy of the annotated check or money order in the case file for the map change request. For security

reasons, the assigned Mapping Partner shall block out the credit card number and expiration date on any copy of the original credit card information form before placing the copy in the case file.

The assigned Mapping Partner shall transfer fees to the FCSA daily via the regular courier run to FEMA. The assigned Mapping Partners shall place the fees in color-coded interoffice envelopes that are clearly addressed and dated. At approximately 2:00 p.m., a courier will pick up all packages or interoffice envelopes sent to the FCSA by the assigned Mapping Partner. Before forwarding the fees to the FCSA, the Mapping Partner shall ensure that the cases have been transmitted to the CIS.

To facilitate the identification of current cases, and to reduce the number of errors and refunds, the Mapping Partner shall provide the FCSA with a copy of all letters requesting or acknowledging the receipt of fees. The letters may be sent by facsimile transmission, through the interoffice mail, or delivered in person.

[February 2002]

3.17.2.2 Fee-Charge System Administrator Responsibilities

The FCSA has the responsibility for the collection, deposit, and reporting of the fees recovered under the FEMA reimbursement procedures documented in Part 72 of the NFIP regulations. To accept the fees, the FCSA shall ascertain that a valid case number exists and all necessary documentation has been received.

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Upon resolution of all problems and acceptance of the fees, the FCSA shall inform the Mapping Partner that is processing a map change request about fees received. Daily, the FCSA shall forward to the appropriate Mapping Partner, through interoffice mail, a receipt log listing all checks and money orders received through the U.S. mail. The FCSA shall forward with the receipt log along with a transmittal memorandum and a photocopy of each check or money order received. (The FCSA shall not forward copies of checks or money orders that had been transmitted by the assigned Mapping Partner, because that Mapping Partner already has a copy of each check or money order in the case file for that map change request.) The FCSA also may send a copy of the receipt log by facsimile transmission. The FCSA also shall provide the assigned Mapping Partner with a receipt log listing fees received by credit cards. However, for security reasons, the FCSA shall not provide a copy of the credit card payment form.

Twice each week, the FCSA shall deposit all fees received up to that day at a U.S. Treasury-approved bank location. The FCSA also is responsible for maintaining the fee portion of the LOMC module in the FEMA CIS.

[February 2002]

3.17.2.3 Reporting Requirements

The FCSA shall provide the following reports to FEMA and to the Mapping Partners that process map change requests:

- **Bank Deposit Information Report**, which the FCSA must provide to the FEMA Financial and Acquisition Management Division on the second business day of the month. The report shall consist of a list of all checks and money orders received and deposited and a list of all credit card payments processed during the previous month, including, if necessary, any debit voucher received regarding checks rejected by the bank. The FCSA also shall report on all refunds issued electronically. The package must contain all original 215 deposit tickets stamped by the bank and the credit card daily summary reports from the bank. (Note: The FCSA shall store a copy of every 215 deposit ticket, bank deposit ticket, list, check, money order, and credit card information form in a secure area.

- **LOMC Fee: Payment and Deposits Report**, which the FCSA must provide to the Mapping Partners that process map change requests on or about the seventh business day of the month. The FCSA shall run this report directly from the CIS. The report shall consist of a listing of all fees received and deposited the previous month.

- **LODR Payment and Deposit Report**, which the FCSA must provide to the FEMA Hazards Study Branch on or about the 15th of the month following the end of each quarter of the fiscal year. This report consists of a listing of all fees received and deposited for LODRs during the previous quarter.

[February 2002]

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3.17.2.4 Refund Procedures

When it becomes obvious that a fee has been deposited for a map change request that is actually fee exempt, the Mapping Partner shall initiate the refund procedures by sending a dated copy of the appropriate refund letter and memorandum to the FCSA. Sample copies of the refund letters and refund memorandums are provided in the FEMA *Document Control Procedures Manual* (FEMA, 2000). The Mapping Partner must coordinate beforehand with the FCSA on any refund involving a payment received by credit card.

[February 2002]

3.17.3 External Data Requests

3.17.3.1 Mapping Partner Responsibilities

Upon receipt of a request for archived data, the Mapping Partner that maintains the requested archived data shall review the request to determine whether the request is fee exempt. See Subsection 3.17.4 for a list of fee exemptions. A list of current review and processing fees for requests for technical and administrative support data is provided on the FEMA Flood Hazard Mapping website at http://www.fema.gov/mit/tsd/frm_fees.htm.

If the request is not fee exempt, a non-refundable initial fee must accompany the request. If no fee was received, the Mapping Partner shall return the request to the requester along with a letter requesting the appropriate initial fee.

The Mapping Partner shall log in all fee-exempt requests and requests accompanied by the appropriate fee and assign a unique case number to each request. The Mapping Partner shall then enter all requests received into an in-house database or MIS.

If the request is not fee exempt and the correct fee has been submitted, the assigned Mapping Partner shall forward the following to the FCSA:

- Information/Data Request Form;
- Check, money order, or original credit card information form; and
- Copy of incoming letter from the requester.

FEMA accepts only VISA and MasterCard. Before submitting the payment to the FCSA, the Mapping Partner shall review the check, money order, or credit card information form for obvious errors. If obvious errors are discovered, the FCSA shall address those errors with the requester before forwarding the check, money order, or credit card information form to the FCSA for processing.

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3.17.3.2 Fee-Charge System Administrator Responsibilities

The Mapping Partner that processes a request for technical and administrative support data shall forward the fee (i.e., check, money order, credit card payment) to the FCSA through the interoffice mail. A courier shall collect the interoffice mail envelopes daily and deliver them to the FCSA.

In the event that the fee for a new request is submitted directly to the FCSA in the form of a check or money order, the FCSA shall forward all correspondence received, including the original check or money order, to the appropriate Mapping Partner through the interoffice mail. That Mapping Partner shall then process the request as if it had been submitted directly to the correct office.

In the event that the fee for a new request is submitted directly to the FCSA in the form of a credit card payment, the FCSA shall forward all correspondence received and a copy of the credit card information form to the appropriate Mapping Partner through the interoffice mail. The FCSA shall block out the credit card number and expiration date on the copy sent to the Mapping Partner.

If the fee submitted is for an existing request, the FCSA shall match the correct case number and the fee received with the appropriate Data/Information Request Form on file before forwarding a copy to the responsible Mapping Partner.

The FCSA shall keep a copy of every check, money order, and credit card information form that has been accepted and deposited. The FCSA shall record all checks, money orders, and credit card information forms received each day on a receipt log. Daily, the FCSA shall forward copies of the Receipt Log by facsimile transmission to the designated contact person at each of the Mapping Partners. The FCSA shall enter a record of all payments and cases processed in a database.

At least once each week, the FCSA shall dispatch a courier to the bank identified by FEMA to deposit the fees collected since the previous deposit.

[February 2002]

3.17.3.3 Reporting Requirements

The FCSA and the assigned Mapping Partners that process the external data requests shall prepare the following reports:

- **End of the Month Statistics,** which the FCSA must provide by facsimile transmission to the assigned Mapping Partner by 12:00 p.m. on the last working day of the month. The Mapping Partner shall complete the form by entering the last assigned request number for each region and the number of fee-chargeable and fee-exempt requests received during the month. The Mapping Partner must returns the completed form by facsimile transmission to the FCSA by the close of business on that same day.

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- **Aging Report,** which the FCSA must provide by facsimile transmission to the assigned Mapping Partner by the close of business on the last business day of the month, categorizes requests that have not yet been completed. The Mapping Partner must make appropriate changes to the report and return it to the FCSA by facsimile transmission before the close of business on the next business day with all appropriate paperwork.

- **Bank Deposit Information Provided to FEMA Financial Management Office,** which the FCSA must prepare and deliver to FEMA Office of Financial Management on the second business day of the month. The report consists of a list of all checks and money orders received and deposited and a list of all credit card payments processed during the previous month. The report also includes, if necessary, a note on all bounced checks or refunds done electronically. With the report, the FCSA provides all original deposit tickets stamped by the bank and daily summary reports from the credit card companies.

- **Check Report**, which the FCSA must prepare and deliver to the assigned Mapping Partner by facsimile transmission by the 10th day of the month, details all deposits made during the previous month by check or money order.

- **Credit Card Report**, which the FCSA must prepare and deliver to the assigned Mapping Partner by facsimile transmission by the 10th day of the month, details all deposits made during the previous month by credit card.

- **Status Report**, which the FCSA must prepare and deliver to the assigned Mapping Partner by facsimile transmission by the 10th day of the month, provides a breakdown of data requests completed during the previous month and a breakdown of data requests that are still open.

- **Quarterly Report**, which the FCSA must prepare and deliver to the assigned Mapping Partner by facsimile transmission by the 15th day of the month following the end of a quarter, is a compilation of the statistics for the previous 3 months.

[February 2002]

3.17.3.4 Refund Procedures

When appropriate, a refund may be made to a requester. Before submitting refunds for FEMA approval, the assigned Mapping Partner must coordinate with the FCSA and ensure that the refund is well documented in the case file and the Mapping Partner's in-house database or MIS. The Mapping Partner shall prepare and forward the following to the FCSA:

- Draft refund memorandum;

- Draft refund letter;

- Copy of the check or money order received from requester; and

- Copy of the receipt log initialed and received from the FCSA.

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The FCSA shall review and approve the draft or provide the Mapping Partner with corrections if needed. The Mapping Partner shall then submit to FEMA a copy of the original refund letter, the refund memorandum, a copy of the check, and a copy of the receipt log and all pertinent correspondence.

Upon return of the refund letter from FEMA, the Mapping Partner shall date and mail the letter. The Mapping Partner shall file a copy of the refund letter and memorandum in the case file and transmit a copy of each to the FCSA via interoffice mail. The Mapping Partner and the FCSA shall update their internal databases or MISs with the date and the reason for the refund.

For credit card refunds, the Mapping Partner shall coordinate in advance with the FCSA and ensure that the refund is documented in the case file and in-house database or MIS. The Mapping Partner shall prepare a draft a refund letter and submit the letter to the FCSA for review, with a copy of the official dated credit card receipt log initialed by the FCSA and a copy of the original incoming letter from the requester. The Mapping Partner shall not prepare a refund memorandum.

The FCSA shall review, approve, and finalize the refund letter. The FCSA shall then mail the refund letter, process the refund on the date the letter is mailed, and provide a copy of the refund letter to the originating Mapping Partner.

[February 2002]

3.17.4 Fee Exemptions

FEMA has established certain categories of requests for conditional and final modifications to NFIP maps and requests for technical and administrative support data for which no fee is required. These exempt request categories are discussed in Subsections 3.17.4.1 and 3.17.4.2.

[February 2002]

3.17.4.1 Map Change Requests

Section 72.5 of the NFIP regulations describes the requirements for fee exemptions to be granted for the review and processing of requests for LOMAs, CLOMAs, CLOMR-Fs, LOMR-Fs, CLOMRs, LOMRs, and PMRs. For requests processed in Fiscal Year 2002, FEMA exempts the following:

- Requests for LOMAs;
- Requests for map changes based on mapping or study analysis errors;
- Requests for map changes based on natural changes within SFHAs;
- Requests for map changes based on the federally sponsored flood-control projects where 50 percent or more of the project's costs are federally funded;
- Requests for map changes based on detailed hydrologic and hydraulic studies conducted by Federal, State, or local agencies to replace approximate studies conducted by FEMA and shown on the effective FIRM; and
- Requests for map changes based on flood hazard information that was meant to improve on the information shown on the effective FIRM or FBFM or within the effective FIS report, provided the request does not incorporate, in whole or in part, manmade modifications within the SFHA.

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The assigned Mapping Partner and FCSA shall not waive a review and processing fee for a map change request that is not in one of the categories above unless directed to do so by FEMA RO or HQ staff.

[February 2002]

3.17.4.2 External Data Requests

In addition to the assigned Mapping Partner and FEMA staff, the following are exempt from fees for technical and administrative support data:

- Requests from private architectural-engineering firms under contract to FEMA to perform Flood Map Projects;

- Requests from communities, regional agencies, and State agencies participating in the CTP initiative;
- Requests from Federal agencies that perform Flood Map Projects for FEMA (i.e., USACE, USGS, Natural Resources Conservation Service, Tennessee Valley Authority);
- Requests from communities that supply digital community GIS data to FEMA and request the Digital Line Graph data or DFIRM files;
- Requests from communities that request data during the statutory 90-day appeal period for an initial or revised FIS for that community;
- Requests from mapped participating communities that request data at any time other than during the statutory 90-day appeal period, provided that the community requests the data for its use and not for third-party users;
- Requests from State NFIP Coordinators, provided that the data that they request are for use by the State NFIP Coordinators and not for use by third-party users; and
- Requests from State, regional, and local Mapping Partners participating in the Cooperating Technical Partners initiative.

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The assigned Mapping Partner and FCSA shall not waive a fee for an external data request that is not in one of the categories above unless directed to do so by FEMA RO or HQ staff. Fees have been waived for graduate students; university professors; individuals, firms, or nonprofit organizations that are conducting research that will be educational or otherwise beneficial to the public or FEMA; and for hardship cases (e.g., individuals who lost LOMAs (and related materials) due to flooding, individuals on fixed incomes).

[February 2002]

3.18 Cooperating Technical Partners Initiative Support

One of the key objectives of the FEMA Map Modernization Plan is to increase local involvement in, and ownership of, the flood mapping process. To meet this objective, FEMA developed and implemented the CTP initiative. As technologies have improved and applications have expanded dramatically, many State agencies, regional agencies, and communities have become increasingly sophisticated and have invested significant financial and personnel resources in flood hazard identification and mapping. FEMA envisions that the CTP initiative will evolve as technologies and the capabilities of FEMA's Partners grow.

In support of the CTP initiative, FEMA has committed to the following:

- To recognize the contributions made by FEMA's State, regional, and local community Partners by providing timely and accurate flood hazard information;
- To maximize the use of Partners' contributions as a means of leveraging limited public funds to the fullest extent possible while maintaining essential NFIP standards;
- To fully integrate contributing Partners into the flood hazard data development process, with the corresponding authorities and responsibilities;
- To provide training and technical assistance to Partners when appropriate; and
- To facilitate mentoring to increase capabilities of both existing and potential Partners.

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Additional details on the CTP initiative may be obtained from the CTP website pages located at http://www.fema.gov/mit/tsd/ctp_main.htm.

FEMA and the State agencies, regional agencies, and communities that participate in the initiative (hereinafter referred to collectively as CTPs) administer activities through close and frequent coordination and through two types of formal agreements—Partnership Agreements and Mapping Activity Statements (MASs). For mapping activities that are eligible for Federal funding, the Cooperative Agreement process also is used in the administration of the CTP initiative to allocate funds to the CTP for certain mapping activities.

The Partnership Agreement, also referred to as or Memorandum of Agreement (MOA), is a broad statement of principle, emphasizing the value of the three main components of the NFIP: insurance, floodplain management, and mapping. A template for the Partnership Agreement may be viewed or downloaded from the CTP portion of the FEMA Flood Hazard Mapping website at http://www.fema.gov/mit/tsd/dl_moa.htm.

As a CTP and FEMA identify specific mapping activities to undertake, the parties develop an MAS for those activities. Depending on the mapping activities that will be performed, an MAS

may be prepared for one of the activities listed below, other CTP-specific activities, or several activities simultaneously.

- **Refinement of Approximate Zone A Boundaries**—The CTP works with FEMA to perform analyses to refine the boundaries of the SFHAs designated Zone A. Emphasis is to be placed on automation techniques.

- **Hydrologic and Hydraulic Analyses and Floodplain Mapping**—The CTP develops digital engineering data and floodplain mapping using GIS-based or traditional hydrologic and hydraulic modeling techniques.

- **Digital FIRM Preparation**—The CTP digitizes the effective FIRM and prepares a DFIRM.

- **Redelineation of Detailed Flood Hazard Information Using Updated Topographic Data**—The CTP revises the flood hazard information shown on the effective flood map using more up-to-date topographic data. GIS technology is to be used when available.

- **Digital Topographic Data Development**—The CTP develops digital topographic data for flood hazard identification purposes.

- **Digital Base Map Data Sharing**—The CTP supplies a base map for DFIRM production. The base map must comply with FEMA minimum accuracy requirements. FEMA must be able to distribute the base map to the public in both hardcopy and electronic formats.

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- **Digital FIRM Maintenance**—The CTP assumes long-term responsibility for periodic maintenance of the DFIRM. This can include base map and/or flood hazard information.

- **Hydrologic and Hydraulic Review Agreement**—The CTP evaluates hydrologic and hydraulic studies prepared for FEMA-funded flood data updates and/or map revisions under Part 65 of the NFIP regulations. The review is to focus on compliance with the technical and regulatory requirements contained in various FEMA flood mapping guidelines and specifications; the pertinent NFIP regulations; and standard, accepted engineering practices. This activity is currently under consideration.

- **Assessment of Community Mapping Needs**—The CTP performs a detailed community-by-community investigation and assessment of mapping needs in participating NFIP communities (including unmapped communities).

- **Digital Base Map Inventory**—The CTP performs an investigation and provides an inventory of base maps meeting FEMA specifications for NFIP communities in the State.

In general, participants in the CTP initiative shall follow the portion of these Guidelines that apply to the activities that they undertake. For example, if a participating CTP agreed to perform hydrologic and hydraulic analyses for a riverine flooding source, that CTP (and any contractors selected by the CTP to participate in those analyses) would be required to meet the requirements documented in Volume 1 and Appendix C of these Guidelines. The portions of these Guidelines

that a participating CTP must meet as well as any other requirements are to be documented in the MAS.

[February 2002]

3.18.1 Support Activities

Because of the size and scope of the CTP initiative, FEMA and the participating CTPs may require support to administer the intiative both nationally and locally. When required, FEMA PO, his/her designee, or the FEMA Regional CTP Coordinator may request that certain Mapping Partners provide technical, programmatic, and logistical support for the implementation of the CTP initiative. This support shall include, but not be limited to, the following:

- Participation in coordination meetings with FEMA HQ and FEMA RO staff, CTPs, and other Mapping Partners;
- General support, including monthly time and cost reports; ad hoc reports; responses to special requests for CTP information, and development and review of tools to help administer the CTP initiative;
- Repository maintenance;
- Guidance document development;
- Outreach materials development;
- Database maintenance and enhancement;
- Website maintenance and enhancement;
- Programmatic/technical support to CTPs and ROs; and
- Training program development and implementation.

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Information on these support activities is provided in Subsections 3.18.1.1 through 3.18.1.8.

[February 2002]

3.18.1.1 Participation in Coordination Meetings

The assigned Mapping Partner shall be prepared to participate in coordination meetings with the FEMA National CTP Coordinator, other FEMA staff, and other Mapping Partners. The purpose

of these meetings will be to review ongoing activities and to plan future activities for the initiative. The Mapping Partner will prepare minutes for CTP meetings as assigned.

[February 2002]

3.18.1.2 Repository Maintenance

The assigned Mapping Partner shall establish and maintain a hard copy repository of the CTP-related documents (e.g., Partnership Agreements, MASs, success stories) that will be provided by the FEMA Regional CTP Coordinators and other RO staff.

[February 2002]

3.18.1.3 Guidance Document Development

The assigned Mapping Partner shall be prepared to participate in the development of the guidance documents that FEMA, the CTPs, and other Mapping Partners can use in accomplishing work under the CTP initiative. The support shall include writing portions of the guidance documents and reviewing the portions of the documents written by other Mapping Partners. This support may also include preparation of the final documents and administrative support for the production of the documents.

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3.18.1.4 Outreach Materials Development

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The assigned Mapping Partner shall be prepared to participate in the development of outreach materials to improve communication regarding the CTP initiative within FEMA; with CTPs; and with other Federal, State, and local Mapping Partners. Such outreach materials shall include, but are not limited to, informational flyers; PowerPoint presentations that CTPs and other Mapping Partners may use to explain the CTP intiative locally; and correspondence explaining the CTP initiative.

[February 2002]

3.18.1.5 Database Maintenance and Enhancement

The assigned Mapping Partner shall be prepared to participate in the maintenance and enhancement of the CTP Database. The CTP Database is available to the FEMA Regional CTP Coordinator, other FEMA staff, and the assigned Mapping Partner through a password-protected portion of the FEMA floodmaps.net website www.floodmaps.net/ctp/login.asp.

The purpose of the CTP Database is to

1. Provide FEMA management and staff with a tool to monitor and report on activities at the State, regional, territorial, and national levels; and

2. Provide select data to the public through the CTP portion of the FEMA Flood Hazard Mapping website (http://www.fema.gov/mit/tsd/ctp_news.htm).

Because the CTP Database is an executive-style tool, the data that will be maintained in the database are limited.

The data that the assigned Mapping Partner shall enter into and maintain in the CTP Database can be broken into two categories: (1) data on a particular partnership, and (2) data on mapping activities undertaken by a particular participating CTP. The data that the assigned Mapping Partner shall enter for each category are presented below.

Data on a Particular Partnership

The assigned Mapping Partner shall enter and maintain the data for the database fields identified in bold below for each partnership entered into by FEMA with a community, regional agency, State agency, or other entity.

- **Partner Name**—The name of the CTP as it appears in the signed Partnership Agreement is to be entered.

- **Partner Type**—The following standard categories are to be used: community, regional agency, State agency, and other.

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- **Partner Address**—The street address, community, state, and zip code of the CTP are to be entered and maintained.

- **Associated Communities**—The CIDs and names of all communities affected by the Partnership Agreement are to be entered and maintained.

- **FEMA Region**—The FEMA Region number is generated by the database from the State name in the CTP's address.

- **Partner Points of Contact**—The names, titles, CTP roles, addresses, telephone numbers, and fax numbers (if available) of the participating CTP's primary and secondary (if identified) points of contact identified in the Partnership Agreement are to be entered and maintained.

- **FEMA Points of Contact**—The FEMA Region, name, telephone number, and e-mail address of the Regional CTP Coordinator or other FEMA representative identified by the Regional CTP Coordinator is to be entered.

- **Effective Date of Partnership Agreement**—The date that appears in the signed Partnership Agreement is be entered, and a pdf version of the Partnership Agreement is to be linked to the date.

- **Date Testimonial Received**—The date that a testimonial concerning the CTP initiative is received by FEMA is to be entered, and a pdf version of the testimonial is to be linked to that date.

- **Date Other Feedback Received**—The date that other feedback concerning the CTP initiative is received by FEMA is to be entered, and a pdf version of the feedback is to be linked to that date.

- **FEMA CTP Coordinator Comments**—The Regional CTP Coordinator's comments about the partnership are to be entered. These comments may be added directly by the Coordinator or by the assigned Mapping Partner, if requested.

- **Partner Web Address**—The URL address for the CTP's website is to be added, if known.

- **Partner Training Information**—The dates, names, titles, telephone numbers, and e-mail addresses for CTP representatives that attend FEMA-provided training are to be entered and maintained.

Data on a Particular Mapping Activity

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The assigned Mapping Partner shall enter and maintain the data for the database fields identified in bold type below for each mapping activity undertaken by a particular CTP under the Partnership Agreement.

FOR REFERENCE ONLY.

- **Mapping Activity Statement Number**—The number that appears in the signed MAS is to be entered.

- **Date Mapping Activity Statement Signed**—The date that appears in the signed MAS is to be entered, and a pdf version of the MAS is to be linked to the date.

- **Type of Mapping Activities Covered by Statement**—One or more activities are to be selected and entered from the following choices, based on what is presented in the signed MAS:

  - Refinement of Approximate Zone A Boundaries;

  - Hydrologic and Hydraulic Analyses and Floodplain Mapping;

  - Digital FIRM Preparation;

  - Redelineation of Detailed Flood Hazard Information Using Updated Topographic Data;

  - Digital Topographic Data Development;

  - Digital Base Map Inventory;

- Digital Base Map Data Sharing;
- Digital FIRM Maintenance;
- Assessment of Community Mapping Needs;
- Technical Standards; and
- Other.

For the "Other" Category, specific information is to be added based on what is in the signed MAS.

- **Date Mapping Activities Initiated**—The projected and actual dates that the mapping activity or activities covered by the MAS were initiated are to be entered and maintained.

- **Date Mapping Activities Completed**— The projected and actual dates that the mapping activity(ies) covered by the MAS were completed and are to be entered.

- **Communities Affected by Mapping Activities**—The CIDs and names for all communities affected by the mapping activity are to be entered.

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- **Status of Mapping Activities**—The status of the mapping activity(ies) covered by the MAS are to be entered and maintained. The status information will be entered by, or obtained from, the Regional CTP Coordinator.

- **Partner Points of Contact**—The names, titles, CTP roles, addresses, telephone numbers, fax numbers (if available), and e-mail addresses (if available) of the CTP's primary and secondary (if identified) points of contact for the mapping activity or activities covered by the MAS are to be entered and maintained.

- **Date Testimonial Received**—The date that a testimonial concerning the mapping activity or activities covered by the MAS is received by FEMA is to be entered, and a .pdf version of the testimonial is to be linked to that date.

- **Date Other Feedback Received**—The date that feedback other than a testimonial concerning the MAS is received by FEMA is to be entered, and a pdf version of the feedback is to be linked to that date.

- **FEMA CTP Coordinator Comments**—The Regional CTP Coordinator's comments about the MAS are to be entered. These comments may be entered directly by the Coordinator or by the assigned Mapping Partner if requested.

- **Funds Contribution by Partner, State, or Other Source**—The contributions of the CTP, State, or other source (i.e., county, regional agency) to the mapping activity or activities covered by the MAS and the fiscal year in which the contributions were made

are to be entered. Funds Contributed by FEMA—The funds contributed to the mapping activity(ies) covered by the MAS and the fiscal year in which the funds were contributed, are to be entered from documentation provided by the Regional CTP Coordinator. Individual amounts and years are to be entered for each of three categories—grants, in-kind services, and other. A total amount will be calculated by the Database.

- **Leverage Factor**—This factor, which will be calculated offline, is to be entered. This factor is the total FEMA contribution divided by the combined total of the FEMA and Non-FEMA contributions.

- **Progress Reports Submitted**—The dates for each of four progress reports, required when a participating CTP and FEMA enter into a Cooperative Agreement, are to be entered in the appropriate spaces.

An assigned Mapping Partner shall develop standardized reports that may be generated automatically from the Database. Final decisions regarding the development of reports will be the responsibility of the FEMA National CTP Coordinator. An assigned Mapping Partner also shall provide program support to enhance the functionality of the CTP Database and the associated Database User Guide.

[February 2002]

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3.18.1.6 Website Enhancement, Implementation, and Maintenance

The assigned Mapping Partner shall be prepared to support the maintenance and enhancement of the CTP portion of the Flood Hazard Mapping website on the fema.gov website (http://www.fema.gov/mit/tsd/ctp_main.htm) and on the FEMA mirror website (http://www.floodmaps.net/mit/tsd/ctp_main.htm). This support consists of developing content for the website, reviewing material for the website, and upgrading the website to meet FEMA and Mapping Partner requirements as they are identified.

[February 2002]

3.18.1.7 Programmatic and Technical Support for Partners and Regional Offices

The assigned Mapping Partner shall be prepared to provide programmatic and technical support to both the CTPs themselves and to RO staff as required to assist in the completion of agreed-upon Mapping Activities. Such support may include:

- Providing copies of LOMCs, other technical and administrative support data, and data collected as part of the FEMA MNAP;

- Procuring and providing copies of FEMA documents that the CTP has difficulty locating;

- Providing training on existing hydrologic and hydraulic modeling or flood mapping techniques; flood study processing requirements; and data submittal requirements;

- Assisting CTP in obtaining approval of new hydrologic and hydraulic models; and
- Assisting Regional CTP Coordinators with development of agreements.

[February 2002]

3.18.1.8 Training Development and Implementation Support

The assigned Mapping Partner shall be prepared to participate in the development and maintenance of a training program for new CTPs. The focus of this training will be on introducing CTP administrators and key technical staff to the CTP initiative and providing them with tools that will assist them in completing mapping activities successfully. Initially, this training program will be presented at the Emergency Management Institute in Emmitsburg, Maryland. Eventually, however, the Regional CTP Coordinators may give the training at ROs or other regional sites.

The assigned Mapping Partner shall be prepared to:

- Develop PowerPoint presentations and other in-class instructional materials;
- Provide FEMA with content-specific instructors who may assist in the training sessions; and
- Provide logistical support, including working with Regional CTP Coordinators to identify potential class participants and production of Instructor Guides, Student Manuals, and CD-ROMs with other useful tools and materials.

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[February 2002]

3.18.2 Deliverable Products

The deliverable products that the assigned Mapping Partner may be asked to provide as a result of the support activities summarized in Subsection 3.18.2 will vary depending on the task assigned directly by the FEMA National CTP Coordinator or by a Regional CTP Coordinator.

[February 2002]

3.19 Support for Other Map Modernization Objectives

3.19.1 Overview

As mentioned earlier in these Guidelines, FEMA has developed a plan for modernizing the NFIP maps and improving other aspects of the products and services offered through the NFIP. This plan is documented in a FEMA report entitled *Modernizing FEMA's Flood Hazard Mapping Program, A Progress Report* (FEMA, 2001). As a result of that Plan, State and community officials, private property owners, and other Mapping Partners will be made more aware of flood hazards nationwide.

The cornerstones of the plan are to use state-of-the-art technology to cost effectively develop accurate and complete flood hazard information for the entire United States; provide that information in readily available, easy-to-use format; and alert and educate the public regarding the risk of flood hazards. As indicated in the progress report, FEMA plans to use existing digital engineering, mapping, information management, and electronic communication technologies to improve the mapping program in four primary areas:

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1. Map accuracy and completeness;
2. Map utility;
3. Map production; and
4. Public awareness and customer service.

[February 2002]

3.19.2 Current and Future Objectives

A complete list of current and future objectives as well as a list of completed objectives is provided in the Map Modernization portion of the FEMA Flood Hazard Mapping website (http://www.fema.gov/mit/tsd/mm_main.htm). To implement the current objectives of the plan, FEMA has formed numerous Work Groups, comprised of representatives from FEMA HQ, FEMA ROs, and FEMA Mapping Partners. These Work Groups, led by a FEMA staff member, have been charged with developing documentation for and implementing the various objectives. As FEMA identifies new objectives, more Objective Work Groups will be formed.

In general, the responsibilities of the members of each Objective Work Group are as follows:

- Assess selected old and new flood hazard mapping processes and products;
- Develop ideas for improving the identified processes and products;

- Coordinate with other Work Groups and with other Mapping Partners that may provide useful input; and

- Develop plan for implementation of improved processes and products.

[February 2002]

3.19.3 Support Activities

Assigned Mapping Partners shall, at the request of FEMA RO and HQ staff and at the direction of the PO or his/her designee, provide technical, programmatic, and logistical support for the implementation of Map Modernization Objectives, including:

- Attending Objective Work Group meetings on an as-needed basis to support development and implementation of improved processes and products;

- Setting up or hosting Objective Work Group meetings:

- Setting up or hosting conferences/seminars for multiple Objective Work Groups;

- Enhancing and maintaining the Map Modernization portion of the FEMA Flood Hazard Mapping website (http://www.fema.gov/mit/tsd/mm_main.htm);

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- Preparing outreach materials (e.g., flyers, brochures, web-related materials) documenting Map Modernization activities;

- Assisting in the development of regulatory changes and guidance documents to facilitate the implementation of improved processes and products; and

- Providing information for posting on the FEMA Flood Hazard Mapping website concerning Map Modernization activities.

[February 2002]

3.19.4 Deliverable Products

The deliverable products that the assigned Mapping Partners shall provide to FEMA will vary depending on the task assigned to the Mapping Partner by the FEMA PO, his/her designee, Objective Work Group leader, or the FEMA National Map Modernization Program Coordinator. Deliverable products shall include, but are not limited to, the following:

- Meeting minutes from Objective Work Group meetings;

- Status reports for the entire Map Modernization Program;

- Outreach materials regarding Map Modernization Program, including one-page flyers and website updates;

- Logistical support for State/national floodplain management and insurance conferences;
- Summary reports of Objective Work Group findings;
- Guidance documents (e.g., guidelines and specifications, procedure manuals); and
- New map and report products, PowerPoint presentations, and other logistical support for Objective Work Group meetings.

[February 2002]

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3.20 Q3 Flood Data Maintenance

To support disaster recovery operations, FEMA developed specifications for a digital product referred to as the Q3 Flood Data product. The Q3 Flood Data product is designed to serve FEMA's Response and Recovery activities as well as flood insurance policy marketing initiatives. This product is designed to allow rapid access to and distribution of digital FIRM data, and is compatible with all existing DFIRM data already available and underway. Specifications are outlined in detail in the FEMA draft document entitled *Q3 Flood Data Specifications* (FEMA, 1996).

The assigned Mapping Partner shall produce and/or update Q3 Flood Data at the request of the PO or his/her designee. The assigned Mapping Partner shall ensure all Q3 Flood Data files conform to the standards outlined in Appendix L of these Guidelines and in the FEMA draft document entitled *Q3 Flood Data Specifications* (FEMA, 1996). Highlights of these specifications are presented in Subsections 3.20.1 through 3.20.5.

[February 2002]

3.20.1 Contents

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The assigned Mapping Partner shall develop and/or update the Q3 Flood Data product by scanning and vectorizing, digitizing the existing hard copy FIRM, or converting a DFIRM to the Q3 Flood Data format to create a thematic overlay of flood risks. Q3 Flood Data files contain only certain features from the existing hardcopy FIRM, including the following:

- 1-percent-annual-chance (100-year) and 0.2-percent-annual-chance (500-year) floodplain areas, including Zone V areas, certain regulatory floodways, and zone designations;
- Coastal Barrier Resource System (CBRS) areas and Otherwise Protected Areas (OPAs);
- Political areas, including CID;
- FIRM panel areas, including panel number and suffix;
- USGS 7.5-minute-series quadrangle map areas; and
- Mappable LOMCs.

In the preparation of Q3 Flood Data files, the assigned Mapping Partner shall use sources that reflect updates effected by LOMRs, LOMAs, and LOMR-Fs. These revisions and amendments are to be included in the Q3 Flood Data product if they are mappable at the publication scale of the source graphic.

The Q3 Flood Data files shall not include the following:

- Base map data (e.g., streets);
- BFE lines and values;
- Cross sections and letter identifiers;
- Elevation Reference Marks and related elevations;
- Internal boundaries of contiguous CBRS areas and OPAs; and
- Prohibition dates associated with individual CBRS areas and OPAs.

With the exception of minor graphical mismatches, the assigned Mapping Partner shall not correct edge-matching errors, overlaps and underlaps in coverage, and similar problems during digital capture.

The hard copy FIRMs from which the data for the Q3 Flood Data product are extracted contain no horizontal control. The specifications for the horizontal control of these data are consistent with those required for mapping at a scale of 1:24,000. The assigned Mapping Partner shall typically perform the horizontal controlling of these data by fitting the vectors to a georeferenced USGS 7.5-minute-series quadrangle file.

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The Q3 Flood Data product is contained in one single countywide file, including all incorporated and unincorporated areas of a county. The feature items and attributes are defined in detail in the FEMA draft document entitled *Q3 Flood Data Specifications* (FEMA, 1996). The means for linking other associate NFIP data to these files can be derived from the attributes contained within the files. For example, the effective FIRM panel from the FEMA *Community Status Book* or the Flood Map Information System maintained by the MSC can be compared to the FIRM panel information in the Q3 Flood Data files to determine whether the Q3 Flood Data files reflect the current mapping.

[February 2002]

3.20.2 Identification of Q3 Flood Data Maintenance Needs

Before Q3 Flood Data product files are updated, the assigned Mapping Partner shall identify and prioritize areas with update needs. The Mapping Partner must compare the Q3 Flood Data product panels and the effective FIRM panels to identify which Q3 Flood Data product panels have been changed or superseded, while simultaneously identifying on which panels LOMCs fall.

The assigned Mapping Partner shall prioritize FIRM panels using criteria such as the amount of change, whether they are already in a digital format (i.e., DFIRMs), or other means. The Mapping Partner may also include additional information about FIRM panels with flood insurance policies or other pertinent data in the prioritization process.

The assigned Mapping Partner shall submit the list of potential Q3 Flood Data product updates to FEMA for review. FEMA reviews the list to determine which counties or panels should be updated. The Mapping Partner shall provide cost estimates for Q3 Flood Data product updates to FEMA when requested to support this review and decision process.

[February 2002]

3.20.3 Applications

The Q3 Flood Data product does not replace the existing hardcopy FIRM or, if one exists, the existing DFIRM product. The product has been designed to support disaster response, planning, and some Community Rating System activities; insurance marketing; and mortgage portfolio review. It does not provide BFE information; thus, it has limited application for engineering analysis, particularly for site design or rating of flood insurance policies for properties located in SFHAs.

The Q3 Flood Data product is not tied to a base map, it is not used to produce a new version of the hardcopy FIRM, and it is not subject to community review. The Q3 Flood Data product is intended to provide users with automated flood risk data suitable for determining whether features are inside or outside the SFHA shown on the FIRM/DFIRM.

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The Q3 Flood Data product can be a valuable tool to assist in screening property addresses within a GIS environment to determine the associated flood risks. However, as the geographic processing performed to develop the Q3 Flood Data product may introduce differences with the hardcopy FIRMs, product users must exercise considerable care and judgment in the application of this product.

[February 2002]

3.20.4 Horizontal Control

The hardcopy FIRMs from the Q3 Flood Data are extracted contain no horizontal control. The assigned Mapping Partner shall typically establish horizontal control of these data by fitting the vectors to a georeferenced raster or vector 7.5-minute quadrangle file. This approach to horizontal control is consistent with that required for mapping at a scale of 1:24,000.

[February 2002]

3.20.5 Tiling

The Q3 Flood Data files shall be tiled by U.S. Census Bureau county equivalent units. In some cases, the county boundaries shown on hardcopy FIRMs will not correspond to the county equivalent boundaries in the U.S. Census Bureau Topologically Integrated Geographic Encoding and Reference system files. Where this is the case, the assigned Mapping Partner shall use the FIRM county boundary as the bounding and tiling extents of the Q3 Flood Data files.

[February 2002]

3.20.6 Data Quality

FEMA will distribute the Q3 Flood Data product only after is has passed checking routines contained in FEMA's Q3 Quality Assurance Checking Software. The data are then accompanied by documentation showing that the files have been checked and passed. Using the FEMA software and manual checks, the assigned Mapping Partner shall ensure that FEMA attribute accuracy, topology, and logical consistency requirements are met.

[February 2002]

3.20.6.1 Attribute Accuracy

The assigned Mapping Partner shall use the FEMA Q3 Quality Assurance Checking Software to test the attributes of the dataset against a master set of valid attributes and attribute combinations. In addition, the assigned Mapping Partner shall test attribute accuracy by manually comparing the source hardcopy FIRM with hardcopy plots of the Q3 Flood Data and a symbolized display on an interactive computer graphic system. The assigned Mapping Partner shall individually query those attributes that cannot be verified visually.

[February 2002]

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3.20.6.2 Topology

The assigned Mapping Partner shall check the Q3 Flood Data product files to ensure certain node-area-line relationships are collected or generated to satisfy topological requirements, including the following:

- Lines begin and end at nodes.
- Lines connect to each other at nodes.
- Lines do not extend through nodes.
- Left and right areas are defined for each line segment and are consistent throughout the files.
- Lines representing the limits of the file neatlines are free of gaps.

[February 2002]

3.20.6.3 Logical Consistency

The assigned Mapping Partner shall perform tests of logical consistency using ARC/INFO software modules. The Mapping Partner also shall review check plots to ensure closure for all internal polygons.

[February 2002]

3.20.7 Formats

The assigned Mapping Partner shall prepare the Q3 Flood Data product files in one of the following formats: Digital Line Graph (DLG), ARC/INFO format, and MapInfo format. These three formats may be accessed directly by the ARC/INFO, ArcView, ArcCAD, MapInfo, and GENAMAP software packages. Some GIS software packages provide utilities to convert DLG files into their own proprietary format. Other CADD and GIS software packages may require translation of the Q3 Flood Data using a third-party utility.

[February 2002]

3.20.8 Projections

FEMA uses the Universal Transverse Mercator projection and coordinate systems for the version of the Q3 Flood Data product prepared in DLG format. The assigned Mapping Partner shall use the geographic projection and coordinate systems for the production of Q3 Flood Data products in ArcInfo and MapInfo formats.

[February 2002]

3.20.9 File Naming

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To provide for efficient file retrieval and indexing, the assigned Mapping Partner shall apply a standardized naming convention for the Q3 Flood Data product. The naming convention is DOS-compatible and allows for the unique identification of any county area of digital FIRM data. All file names are in lower-case letters. The files names shall appear as "csscc," where c is the charter "c", ss is the Federal Information and Processing Standards (FIPS) code for the State, and ccc is the FIPS code for the county.

[February 2002]

3.20.10 Metadata File

The assigned Mapping Partner shall deliver one metadata file for each county file. The Mapping Partner shall produce the metadata file in a format that is in compliance with the Federal Geographic Data Committee (FGDC) guidelines. The metadata file shall be in the form of a text file on electronic medium containing the digital files. The Mapping Partner shall follow the format described by the FGDC in *Content for Digital Geospatial Data Metadata* (FGDC, 1994).

The assigned Mapping Partner shall assign the file names for the metadata files using the same naming convention as the other files, with the exception of the letter "m" appearing at the end. Examples of metadata files are outlined in detail in the FEMA draft document entitled *Q3 Flood Data Specifications* (FEMA, 1996).

[February 2002]

3.21 Support for Conversion/Compliance Process

An assigned Mapping Partner may be asked to support FEMA in tracking communities through the conversion/compliance process and preparing documentation for communities' entry into the Emergency and Regular Phases of the NFIP. Descriptions and copies of the letters and *Federal Register* notices cited in Subsections 3.21.1 and 3.21.2 are provided in Appendix E of the FEMA *Document Control Procedures Manual* (FEMA, 2000).

[February 2002]

3.21.1 Conversion/Compliance Process

The conversion/compliance process occurs after FEMA completes the initial FIRM for a community. As discussed in Volume 1, Section 1.5 of these Guidelines, FEMA provides communities with a compliance period (usually, 6 months) to enact floodplain management measures that are compliant with Section 60.3 of the NFIP regulations before the FIRM effective date. When required, FEMA sends 90- and 30-day suspension letters to communities before the end of the compliance period, which coincides with the FIRM effective date. Communities that do not adopt ordinances consistent with the NFIP regulations by the compliance/FIRM effective date are suspended from participation in the NFIP. When these suspended communities submit compliant ordinances to FEMA, FEMA reinstates the communities as participants in the NFIP.

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As mentioned in Volume 1, Section 1.5 of these Guidelines, the Mapping Partner that processes the Preliminary and Final FIRM for FEMA must maintain a schedule and track communities for each scheduled conversion/effective date and process 90- and 30-day suspension letters as required. FEMA then selects one Mapping Partner to track the communities through the 6-month conversion/compliance process. Specifically, the assigned Mapping Partner shall:

- Develop a list, in order by FEMA Region, of all communities in the conversion/compliance process using lists forwarded from the Mapping Partners that are processing the new or revised FIRMs;
- Submit the consolidated list, which includes the land use code; date of entry into Emergency Phase or Regular Phase of the NFIP; and map effective date for each community, to FEMA for their use;
- Research the CIS for the required data (i.e., Emergency/Regular Phase entry dates, CID, past suspension and reinstatement dates, current map date) for processing the Final Rule entitled "Suspension of Community Eligibility";
- Prepare the Final Rule entitled "Suspension of Community Eligibility" for publication in the *Federal Register*;
- Review a FEMA-provided report to identify communities for which FEMA has withdrawn a suspension and reinstated them in the NFIP; and

- Prepare the Final Rule entitled "List of Eligible Communities" as required for publication in the *Federal Register*.

Additional information on the Final Rules cited above is provided in Subsection 6.1 and Appendix E of the FEMA *Document Control Procedures Manual* (FEMA, 2000).

[February 2002]

3.21.2 Correspondence for Newly Eligible Communities

As communities submit the necessary paperwork to become eligible for participation in the NFIP, appropriate correspondence must be prepared for the newly eligible communities. The tasks that the assigned Mapping Partner shall complete in support of FEMA are as follows:

- Prepare the appropriate eligibility letter and sample news release based on the status of the community in the NFIP;

- Submit the required letter and news release to FEMA for signature within 3 working days;

- Mail the letter, news release, notice regarding 30-day waiting period for insurance, and the FEMA brochure entitled *Answers to Questions About the National Flood Insurance Program* (if appropriate); and

- Distribute external and in-house file copies.

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Additional information on the documents cited above is provided in Subsection 6.2 and Appendix E of the FEMA *Document Control Procedures Manual* (FEMA, 2000).

[February 2002]

3.22 Other Program Support

The assigned Mapping Partner shall, at the request of FEMA RO and HQ staff and at the direction of the PO or his/her designee, provide technical, programmatic, and logistical support to FEMA other than what is documented in this section in its administration of the NFIP and other hazard-related programs.

[February 2002]

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3.23 References

Federal Emergency Management Agency, *Congressional Correspondence Handbook*, February 26, 1993.

Federal Emergency Management Agency, FEMA Manual 5200.1, *Correspondence Management*, undated.

Federal Emergency Management Agency, FEMA Manual 5400.4, *Records Management, Records Disposition Schedules and Files Plan*, undated.

Federal Emergency Management Agency, *Document Control Procedures Manual*, July 2000.

Federal Emergency Management Agency, *Modernizing FEMA's Flood Hazard Mapping Program: A Progress Report*, May 2001.

Federal Emergency Management Agency, *Q3 Flood Data Specifications, Draft,* March 1996.

Federal Geographic Data Committee, *Content Standards for Digital Geospatial Metadata*, June 8, 1994.

Interagency Advisory Committee on Water Data, Office of Water Data Coordination, Hydrology Subcommittee, Bulletin No. 17B, "Guidelines for Determining Flood Flow Frequency," September 1981, Revised March 1982.

U.S. Department of the Interior, Geological Survey, Water Resources Investigation Report 94-4002, *Nationwide Summary of U.S. Geological Survey Regional Regression Equations for Estimating Magnitude and Frequency of Floods for Ungaged Sites, 1993*, M.E. Jennings, W.O. Thomas, Jr., and H.C. Riggs, 1994.

U.S. Postal Service, *Domestic Mail Manual*, undated.

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