# Chapter 4 Flood Maps and Zone Determinations

Insurance agents, insurers, lenders, and other users make flood zone determinations by reviewing Flood Insurance Rate Maps (FIRMs) that are maintained by the community. Outside companies may be utilized that specialize in flood zone determinations. Many insurers provide flood zone determinations for their own agents to aid them in writing such policies.

Lenders and those that contract with lenders use a Standard Flood Hazard Determination Form, called a SFHDF, to document community status, the flood zone and the Base Flood Elevations. Generally, the borrower may also have a copy of the SFHDF. The elevation of the building's lowest floor and the BFE information is not necessary for Pre-Flood Insurance Rate Map (FIRM) buildings, unless they happen to have been elevated and it is to the advantage of the property owner to use the elevated premium rating. Elevation information is not applicable in low-to-moderate flood risk zones B, C, and X.

## Flood Hazard Boundary Map (FHBM)

The Flood Hazard Boundary Map (FHBM) is the initial flood map issued by FEMA. It identifies areas in the community that are considered at high risk of flooding, identified as Special Flood Hazard Areas (represented by darkly shaded areas on the map).

## The "100-Year Flood" That Isn't

Most of us have heard references to a "100-year flood." It refers to a flood with a 1 percent or greater chance of being equaled or exceeded during any given year. Although it is commonly called the 100-year flood, the more accurate term is 'Base Flood'. Special Flood Hazard Areas (SFHA) are subject to base floods. Many people would believe that a 100-year flood happens every 100 years, but that is not the case. In fact, Base Floods have a 26 percent chance of happening during any given 30-year period. What is the average mortgage length? Thirty years. Therefore, any individual with an average mortgage could experience what we refer to as a 100-year flood. It is not surprising that those with homes located in SFHAs are required to purchase flood insurance by their lenders. In general, a bank should not make, increase, renew, or extend any loan for property in a special hazard area unless flood insurance is in place for the term of the loan.

## Flood Insurance Rate Map (FIRM)

Regular Program communities use the more detailed Flood Insurance Rate Map, called a FIRM. The primary purpose of a FIRM is to provide information needed by agents, lending institutions, community officials, flood zone determination companies, and private citizens who need to know:

1. The specific location of a building within a SFHA;
2. The flood zone assigned to a specific building location; or
3. The Base Flood Elevation of a building.

Zones beginning with the letters A and V note SFHAs on the map. The dark shading also identifies them. Zones B, C, and X are not considered to be Special Flood Hazard Areas and indicate areas of moderate to minimal hazard subject to flooding only from severe storm activity or local drainage problems. Light shading and non-shading indicates these areas on the map. Lenders do not generally require flood insurance on buildings located in the moderate to minimal hazard zones. No one should think that property located in the moderate to minimal hazard zones never flood, however, because they could. Floods happen everywhere.

## Pre-FIRM/Post-FIRM Defined

Pre-FIRM means before the Flood Insurance Rate Map. It is defined as construction or substantial improvement on a building that started on or before December 31, 1974, or before the effective date of the initial FIRM of the community, whichever is later. Pre-FIRM structures were built when there was no Flood Insurance Rate Map to show the locations of floodplains or the BFE. As a result, there were no requirements for building structures to any specific elevation. Rates for Pre-FIRM buildings are based on the flood risk zone they are located in.

There can be exemptions based on circumstances that previously existed. This is called grandfathering.

Post-FIRM means after the Flood Insurance Rate Map. Post-FIRM is defined as construction or substantial improvement on a building that started on or after the effective date of the initial FIRM of the community or after December 31, 1974, whichever is later. These structures located in SFHAs are required to be built at or above BFE. Post-FIRM rates are based on the relationship of the lowest floor to the BFE.

To determine this relationship the owner would obtain an NFIP Elevation Certificate from a land surveyor, architect, or engineer. The Elevation Certificate provides the flood zone, BFE, and measurements that relate to the building and ground elevations. The insurance agent refers to these measurements when determining the lowest floor used for premium rating. More information can be obtained from the Special Certification section of the Flood Insurance Manual. An Elevation Certificate is required when rating a Post-FIRM structure located in a SFHA. An Elevation Certificate is not required for rating in unnumbered A zones.

If an agent is insuring a Pre-FIRM building where its lowest floor meets the minimum BFE requirement, the insured may opt to obtain the Elevation Certificate. It will verify that the lowest floor meets the requirements allowing the insured to benefit from the use of Post-FIRM ratings. Elevation Certificates are not used when rating buildings located in B, C, or X zones.

Even though the agent has the community status, the flood hazard zone, and whether the structure was built before or after FIRM, he or she will still need to know:

1. The building Occupancy Type;
2. The number of floors in the structure and whether or not one of them is a basement;
3. The amount of coverage;
4. The deductible amount;
5. Increased Cost of Compliance (ICC) Coverage, which is mandatory; and
6. The Community Rating System (CRS) Discount.

## Special Flood Hazard Area Defined

Land areas that are at high risk for flooding are called Special Flood Hazard Areas (SFHA), or floodplains. These areas are indicated on Flood Insurance Rate Maps, called FIRMs. During a 30-year mortgage, a building has a 26 percent chance of experiencing a flood in these designated areas.

## Base Flood Elevation (BFE)

We have talked about Base Flood Elevations (BFE); they are the expected water surface elevation of floodwaters during a Base Flood. These elevation measurements are typically stated in feet using the National Geodetic Vertical Datum of 1929 (NGVD). The Base Flood Elevation is shown within wavy lines. In some SFHA zones the BFE might be shown within parentheses on the flood map below its corresponding flood zone. Therefore, a listing of a zone as VE (6) would indicate that the BFE is 6 feet. That means the expected floodwater elevation would be 6 feet above mean sea level. This information is published in a Flood Insurance Study (FIS) of the community.

The Base Flood Elevation has more importance than one might imagine. It affects flood insurance rates and it affects mitigation. BFEs play an important role in any flood insurance policy. In order for a community to meet FEMA's floodplain management requirements, it must insure that substantially improved and newly constructed structures meet BFE requirements. This means a building's lowest floor must be elevated (or flood proofed if it is a commercial building) to meet the minimum BFE indicated on the map. Obviously it could exceed the BFE requirements but it could not be less than required. In the case of VE (6), the lowest floor would have to meet the requirements of 6 feet above mean sea level.

## Zone Determination

SFHAs are subdivided into flood hazard zones:

Zones A, A1-A30, and AE are subject to inundation by a Base Flood. Base Flood Elevations (BFE) are shown for Zones A1-A30 and AE. BFE's are not determined in unnumbered A Zones.

- Zones V, V1-V30, and VE are areas that can be inundated by tidal floods with velocity hazard (coastal high hazard areas). BFEs are shown for Zones V1-30 and VE.
- Zones AH are those that are subject to inundation by shallow flooding, unusually involving areas that have ponds where the average depths are between 1 and 3 feet. Base Flood Elevations are provided.
- Zones AO are areas subject to inundation by shallow flooding, usually sheet flow on sloping terrain where depths are between 1 and 3 feet. BFE's are *not* provided.
- Zones A99 are areas to be protected by a flood protection system, such as dikes, dams, or levees, that are under construction where enough progress has been made to consider them complete for insurance rating purposes.
- Zones AR are SFHAs that result from the de-certification of a previously accredited flood protection system that is determined to be in the process of being restored to provide Base Flood protection.

## FLOOD HAZARD MAPPING UPDATES

The Federal Emergency Management Agency (FEMA) partners with Tribal nations, States, and communities through the Risk Mapping, Assessment, and Planning (Risk MAP) program to identify flood hazards, assess flood risks, and provide accurate data to guide stakeholders in taking effective mitigation actions that result in safer and more resilient communities. This data is incorporated into flood maps, known as Flood Insurance Rate Maps (FIRMs), that support the National Flood Insurance Program (NFIP) and provide the basis for community floodplain management regulations and flood insurance requirements.

Flood hazards are dynamic and can change frequently because of a variety of factors, including weather patterns, erosion, and new development. FEMA, through the Risk MAP program, works with communities to collect new or updated flood hazard data and periodically updates flood maps to reflect these changes.

### What Happens When A Flood Map Changes?

When a new map is issued or an effective map is revised, your mapped flood hazard, as well as building or insurance requirements, may change. An effective map is one that has been through the public review and appeal process and has been adopted as a regulatory FIRM. Therefore, it is important for users to check FEMA's Map Service Center (MSC) or the local community map repository for current, effective information.

### What May Affect or Change a Flood Map?

FIRM updates can occur in a variety of ways, including Flood Risk Projects, Physical Map Revisions (PMRs), and Letters of Map Revision (LOMRs). Letters of Map Amendment (LOMAs) and Letters of Map Revision Based on Fill (LOMRFs) can change flood hazard designations for specific structures or properties.

### Flood Risk Project

**What is it?** Projects implemented under the Risk MAP program to engage with communities and provide flood risk information. Most commonly, these projects are initiated to create new or updated flood maps.
**What is revised?** Revises FIRM panels and FIS reports, or publishes new panels and reports for areas that were not previously mapped.
**Is there an appeal period?** Yes, there is a 90-day appeal period for affected communities.
**What is the output?** New or updated preliminary FIRM panel(s), LFD, final FIRM panel(s) and

FIS report, and LOMC Revalidation Letter.
When does it become effective?
**When does it become effective?** Six months after the Letter of Final Determination.
**Where to find it?** Digital copies can be found on the MSC. Hard copies of community FIRM panels are available at the community's map repository.
**What is uploaded to the MSC?** Map panels, FIS report, and FIRM/NFHL database.
**Where can it be found on the MSC?** On http://msc.fema.gov, after a 'Search for All Products' under a jurisdiction, the paths below will provide the corresponding items. Effective and Pending Products> FIRM Panels and FIS Reports.

## Physical Map Revision (PMR)

**What is it?** An update to the FIRM to reflect the most current flood hazard data; this results in an update to a portion of a community's map panels.
**What is revised?** Physically revises and supersedes at least an entire FIRM panel and the FIS report.
**Is there an appeal period?** Yes, there is a 90-day appeal period for affected communities.
**What is the output?** New or updated FIRM panel(s), FIS report, and LOMC Revalidation Letter.
**When does it become effective?** Six months after the Letter of Final Determination
**Where to find it?** Digital copies can be found on the MSC. Hard copies of community FIRM panels are available at the community's map repository.
**What is uploaded to the MSC?** Map panel(s), FIS report, and FIRM/NFHL database.
**Where can it be found on the MSC?** On http://msc.fema.gov, after a 'Search for All Products' under a jurisdiction, the paths below will provide the corresponding items. Effective and Pending Products>FIRM Panels and FIS Reports.

## Letter of Map Revision (LOMR)

**What is it?** An official revision to a FIRM that can reflect changes to the floodplains, Base Flood Elevations (BFEs), or regulatory floodways depicted on a community's FIRM. LOMRs most frequently reflect topographic changes and/or construction projects.
**What is revised?** Revises (normally a portion of) an existing FIRM panel (does not supersede the panel) and possibly portions of the FIS report.
**Is there an appeal period?** Yes, all LOMRs are subject to a 90-day appeal period when changes to BFEs, floodplain and/or floodway boundaries occur.
**What is the output?** A LOMR Determination Document that includes a revised area of a FIRM panel(s) and/or revised FIS report (flood profiles).
**When does it become effective?** A LOMR becomes effective 120 days after the date of the second local newspaper publication is issued, unless an appeal is submitted to FEMA.
**Where to find it?** Digital copies can be found on the MSC. Hard copies are mailed to the applicant and the community's map repository.
**What is uploaded to the MSC?** A determination document, the revised portion of the map panel(s), and updated portions of the FIS report (profiles, tables, etc.) and NFHL database.
**Where can it be found on the MSC?** On http://msc.fema.gov, after a 'Search for All Products' under a jurisdiction, the paths below will provide the corresponding items. Effective and Pending Products> LOMC> LOMR. Effective Products>FIRM Panels>click on the LOMC Button for a specific panel.

## Letter of Map Revision Based on Fill (LOMR-F)

**What is it?** A letter that provides an official determination on the flood zone for a property or structure that has been elevated by earthen fill to modify the SFHA.
**What is revised?** Flood hazard designations for properties within an SFHA on a FIRM can be changed, and an effective FIRM can be amended, but the map is not physically changed unless the area is large enough to be reflected in future updates.
**Is there an appeal period?** No.

**What is the output?** A LOMR-F Determination Document.
**When does it become effective?** On the date of the letter.
**Where to find it?** Digital copies can be found on the MSC. Hard copies are mailed to the applicant and the community's map repository.
**What is uploaded to the MSC?** A determination document.
**Where can it be found on the MSC?** On http://msc.fema.gov, after a 'Search for All Products' under a jurisdiction, the paths below will provide the corresponding items. Effective Products>LOMC>LOMA. Effective Products>FIRM Panels>click on LOMC Button for a specific panel.

## Letter of Map Amendment (LOMA)

**What is it?** A letter that provides an official determination on the relation of a property or structure to the SFHA. LOMAs are most frequently issued when a property has inadvertently been mapped within the floodplain, but is on naturally high ground.
**What is revised?** Flood hazard designations for properties within an SFHA on a FIRM can be changed, and an effective FIRM can be amended, but the map is not physically changed unless the area is large enough to be reflected in future updates.
**Is there an appeal period?** No
**What is the output?** A LOMA Determination Document.
**When does it become effective?** On the date of the letter.
**Where to find it?** Digital copies can be found on the MSC. Hard copies are mailed to the applicant and the community's map repository.
**What is uploaded to the MSC?** A determination document.
**Where can it be found on the MSC?** On http://msc.fema.gov, after a 'Search for All Products' under a jurisdiction, the paths below will provide the corresponding items. Effective Products>LOMC>LOMA. Effective Products>FIRM Panels>click on LOMC Button for a specific panel.

## Mapping Terminology

**Flood Insurance Rate Map** (FIRM) – The official flood map that shows a community's different flood hazard areas. These may include high-hazard (Special Flood Hazard Areas), moderate- to low-hazard, and undetermined areas. Different flood insurance and building requirements apply to these flood hazard areas.

**Flood Insurance Study** (FIS) Report – A compilation and presentation of flood hazard data and analysis for specific watercourses, lakes, and coastal flood hazard areas within a community.

**National Flood Hazard Layer** (NFHL) – A digital database containing the flood hazard mapping information from FEMA's National Flood Insurance Program (NFIP).

**Letter of Final Determination** (LFD) – A letter FEMA sends to local officials stating that the process of establishing new flood elevations is complete, and a new or updated FIRM will become effective in 6 months.

**Letter of Map Change** (LOMC) – A general term used to refer to the several types of revisions and amendments to FEMA maps that can be accomplished by letter (LOMA, LOMR-F, LOMR).

**Map Service Center** (MSC) – FEMA's official public source for flood hazard information produced in support of the NFIP. http://msc.fema.gov Special Flood Hazard Area (SFHA) – The area where the NFIP's minimum floodplain management regulations must be enforced by the community as a condition of NFIP participation, and the area where the mandatory flood insurance purchase requirement applies. Revalidation Letter – A letter identifying the previously issued LOMCs that are still valid after the FIRM has been revised.

We have discussed how the NFIP compares to private-sector insurers. But that make create a misimpression: because NFIP coverage is implemented primarily *through* private insurance companies that participate in the Write Your Own (WYO) program.

So the more accurate comparison might be between private insurers operating within the WYO program and private insurers operating on their own.

The WYO Program, begun in 1983, is a cooperative arrangement between FEMA and the private insurance industry. The WYO Program operates within the context of the NFIP and is subject to its rules and regulations. WYO allows participating property and casualty insurance companies to write and service Federal flood insurance in their own names.

The companies receive an expense allowance for policies written and claims processed while the Federal Government retains responsibility for underwriting losses. Individual WYO Companies may, to the extent possible, and consistent with Program rules and regulations, match their flood business to their normal business practices for other lines of insurance. Many agents/producers have elected to move or place their flood policies with one or more of the WYO Companies they represent.

The goals of the WYO Program are to increase the policy base, improve services, and involve the insurance companies.

Through the WYO program, insurance companies sell and service flood insurance policies and adjust claims after flood losses. There were approximately 90 WYO companies operating during 2008.

The federal government acts as a guarantor of the flood insurance coverage policies issued under the WYO Arrangement. As a guarantor, the federal government is liable for paying NFIP claim losses should premiums collected be insufficient to cover these payments.

According to the feds:

To the extent possible, the [NFIP] is designed to pay operating expenses and flood insurance claims with premiums collected on flood insurance policies rather than by tax dollars.

That "to the extent possible" is a big qualification. As we've seen, the NFIP runs fairly constant operating losses - interrupted, occasionally, by catastrophic ones.

The WYO program isn't new; since the early 1980s, it's been the main tool that the NFIP uses to write flood coverage under what it calls the Stand Flood Insurance Policy (SFIP). As the court in *McCormick v. Travelers Ins. Co.* (Cal. App. 1st Dist. 2001) explained:

Initially, under what was originally designated as Part A of the NFIA, the [NFIP] was administered primarily through the National Flood Insurers Association, a pool of private insurance companies, under the supervision and financial support of the Department of Housing and Urban Development (HUD). Then, on April 1, 1979, [FEMA] was made principally responsible for the program's operation and administration and took full control of the payment or disallowance of all flood insurance claims. Under this arrangement, which was designated as Part B of the NFIA, the Director of FEMA was empowered by Congress to carry out the NFIP through the facilities of the federal government. In fulfilling this mandate, the Director of FEMA was authorized to utilize federal employees and/or private insurance companies and other insurers, insurance agents and brokers, and insurance adjustment organizations, who would operate specifically as fiscal agents of the  while assisting the Director in implementing the NFIP. In 1983, FEMA exercised this regulatory authority by creating the [WYO] program to assist it in marketing and administration of flood insurance through the "facilities of the Federal Government."

So, WYO companies issue SFIPs in their own names as insurer and arrange for the adjustment, settlement, payment and defense of all claims arising from the policies - with the federal government acting as the guarantor and reinsurer.

While flood insurance may be issued either directly by FEMA or a WYO company, FEMA establishes the terms and conditions of the policies, which are set forth in Code of Federal Regulations and which may not be "altered, varied, or waived other than by the express written consent of the Federal Insurance Administrator."

A private insurance company becomes a WYO company by entering into an agreement with FEMA known as the Financial Assistance / Subsidy Arrangement. Under the arrangement, the private insurance company agrees to issue flood policies in its own name.

Participating WYO companies are to comply with the NFIP WYO Program Financial Control Plan Requirements and Procedures (known more simply as the "Financial Control Plan"), which outlines WYO insurance companies' responsibilities for underwriting, claims adjustments, cash management and financial reporting.

WYO companies must remit all insurance premiums collected from policyholders to be deposited into the National Flood Insurance Fund. (Premiums are kept in segregated accounts, and are considered federal funds from the moment they are collected, with interest earned belonging to the United States.)

If a WYO company depletes its premium income through the payment of claims, it may acquire additional funds to pay claims "by drawing on FEMA's letters of credit."

WYO companies receive a 3.3 percent commission on all amounts paid in satisfaction of claims under SFIPs.

SFIPs provide a dispute resolution process for aggrieved insureds, as well as a remedy for insureds and subrogation rights for insurers.

Insurance agents under contract to one or more WYO insurance companies are the main point of contact for approximately 97 percent of flood insurance policyholders. Based on information the insurance agents submit, the WYO insurance companies issue policies, collect premiums from policyholders, deduct an allowance for expenses from the premium and remit the balance to the National Flood Insurance Fund.

The remaining 3 percent of policies are written directly by the federal government through a FEMA contractor known as the Direct Servicing Agent. The Direct Servicing Agent provides an alternative, for example, when a WYO company is unable or unwilling to write a flood insurance policy.

## Adjusting WYO Policy Claims

FEMA relies heavily on WYO insurance companies to carry out NFIP financial activities such as documenting and maintaining claim files.

In turn, WYO insurance companies employ certified flood adjusters to settle NFIP claims. When flood losses occur, policyholders report them to their insurance agents, who notify the WYO insurance company. The WYO insurance company assigns a flood adjuster who is responsible for assessing damage, estimating losses and submitting required reports, work sheets and photographs to the WYO insurance company - which reviews and processes the claim, if approved, for payment.

The NFIP's claims payment policy states that the program will pay only that part of the loss that exceeds the deductible amount, subject to the applicable limit of liability (i.e., the amount of insurance coverage).

FEMA provides funds to the WYO insurance companies from the National Flood Insurance Fund for the amounts paid for approved claims and related expenses. As of December 2008, this fund was over $18 billion in debt.

About 70 FEMA Mitigation Directorate employees, assisted by approximately 105 to 110 Bureau and Statistical Agent (BSA) contractor employees, are responsible for managing and overseeing NFIP and the National Flood Insurance Fund into which premiums are deposited and from which claims and expenses are paid.

Ever few years, FEMA awards a contract for the BSA - which is responsible for:

- conducting financial and statistical reporting based upon data submissions from the WYO companies,
- developing forms and information related to NFIP and
- providing various data analyses.

Said another way, the BSA serves as the liaison between the government and insurance companies that issue federally-guaranteed WYO policies.

FEMA and the BSA are responsible for monitoring and overseeing the quality of the performance of the approximately 90 WYO insurance companies and for assuring that NFIP is administered properly. Their management responsibilities include:

- establishing and updating NFIP regulations and flood insurance rates,
- offering training to WYO company insurance agents and adjusters, and
- implementing the Financial Control Plan.

According to the NFIP Adjuster Claims Manual, the BSA maintains a database of independent adjusters who qualify to adjust flood claims. This database reflects whether the adjuster has attended FEMA-recognized flood workshops.

## Problems with WYO

Payments to WYO insurers generally represent one-third to two-thirds of the premiums collected in a given year. So, these WYO insurers play a key role in NFIP operations.

However, FEMA and the NFIP have various "internal control weaknesses" when it comes to running the WYO program. Specifically, FEMA:

- does not systematically consider actual flood insurance expense information when determining payments to WYO insurers,
- has not aligned its WYO bonus and incentive structures with NFIP goals (such as increasing penetration in low-risk flood markets and among homeowners that do not have mortgages from federally regulated lenders), and
- has not implemented many of its planned financial controls for the WYO program.

Also, contractors other than WYO insurers are responsible for performing key NFIP functions - such as collecting NFIP data and marketing the program. This may be too much outsourcing. According to the GAO:

...we have also found problems with oversight of these contractors. Specifically, FEMA did not consistently follow its procedures for monitoring contractors, did not always coordinate contract monitoring responsibilities among various agency departments on some of the contracts we reviewed, lacked contract monitoring records, and did not have a system in place that would allow various departments to share information relating to contractor deficiencies.

Further, preliminary results of the GAO's ongoing review of the NFIP's operations have revealed that FEMA "continues to lack an effective system to manage flood insurance policy and claims data," despite having invested roughly seven years and $40 million in a new information-technology system (that was eventually abandoned).

The NFIP "flies blind," even though it has the means to "see" where it's going. According to the GAO:

...FEMA does not systematically consider actual flood insurance expense information when determining the amount it pays WYO insurers for selling and servicing flood insurance policies and adjusting claims. Instead, FEMA has used proxies, such as average industry operating expenses for property insurance, to determine the rates at which it pays these insurers, even though their actual flood insurance expense information has been available since 1997.

Because FEMA does not systematically consider these data when setting its payment rates, it can't effectively measure or estimate how much insurers are spending to carry out their contractual obligations. Also, because FEMA doesn't compare the WYO insurers' actual expenses to the payments they receive each year, it can't determine whether the payments are reasonable - in terms of expenses and profit.

When GAO compared payments FEMA made to six WYO insurers to their actual expenses for calendar years 2005 through 2007, it found that the payments exceeded actual expenses by 16.5 percent of total payments made. That was $327.1 million, over three years.

By considering actual expense information, FEMA could provide greater transparency and accountability over payments to the WYO insurers and potentially save taxpayers' funds.

The Financial Control Plan provides guidance for WYO insurers to help ensure compliance with the statutory requirements for NFIP; it also contains several checks and balances to help ensure that taxpayers' funds are spent appropriately. But FEMA's record for implementing this Plan is not strong. According to the GAO and other watchdog groups:

- while FEMA performs most of the biennial audits and underwriting and claims reviews required under the Plan, it rarely or never reviews state insurance department actions or marketing, litigation and customer service issues;
- FEMA does not systematically track and coordinate the outcomes of the various audits, inspections and reviews that it performs; multiple organization units have responsibility for ensuring that WYO insurers comply with each component of the Financial Control Plan but FEMA doesn't maintain a single, comprehensive monitoring system that would allow it to ensure compliance with all components of the plan;
- because FEMA does not implement all aspects of the Financial Control Plan, it cannot ensure that WYOs are fully complying with program requirements;
- weak internal controls impair FEMA's ability to maintain effective transaction-level accountability with WYO insurers; so the NFIP has limited assurance that its financial data are accurate.

The Financial Control Plan states that:

- biannual audits WYO insurance companies are intended to reduce or eliminate the need for FEMA auditors to conduct on-site visits to oversee the companies' financial activities;
- these biennial financial statement audits are a required condition of an insurance company's participation in the WYO program; and
- the audits must be conducted by an independent Certified Public Accountant and are to include an opinion on the fairness of the financial statements, the adequacy of the internal controls and the extent of compliance with laws and regulations.

According to the GAO:

In 2007, we reported that five out of 94 (about 5 percent) WYO companies had biennial audits completed for the two-year period covering fiscal years 2005 and 2006. In response to findings that FEMA had failed to consistently enforce the biennial audit requirement, FEMA officials told us that they had exempted from this requirement companies that said that they were overwhelmed with administering flood claims after the 2005 hurricane season.

Given that operational reviews are FEMA's primary method of monitoring the WYO insurance companies for the two most significant areas of the program - underwriting and claims processing - it is important for FEMA to conduct these reviews on a regular basis.

Without the timely information regarding how WYO companies sell and adjust claims gained through operation reviews, FEMA cannot be certain that the WYO companies provide appropriate financial information to NFIP program managers.

Perhaps most troubling, from an administrative or bureaucratic perspective, the GAO study concluded that the NFIP's organizational weaknesses exist at all three levels of the NFIP's "transaction accountability and financial reporting process." Specifically:

1.at the WYO level, our internal control testing of a statistical sample determined that almost 71 percent of WYO company claims loss files did not have the necessary documents to support the claims, or reports were filed late.
2.incomplete BSA-level premium data files (lacking key information such as insureds' names and addresses) prevented an assessment of the reliability of reported NFIP premium amounts. Further, BSA-level internal control activities were ineffective in verifying the accuracy of WYO-submitted data.
3.FEMA's financial reporting process uses summary data that is overly reliant on error-prone manual data entry.

To address these shortcomings, the GAO recommended that FEMA:

•Address challenges to oversight of the WYO program, specifically the lack of transparency of and accountability for the payments FEMA makes to WYO insurers, by determining in advance the amounts built into the payment rates for estimated expenses and profit, annually analyzing the amounts of actual expenses and profit in relation to the estimated amounts used in setting payment rates, and by immediately reassessing the practice of paying WYO insurers an additional 1 percent of written premiums for operating expenses.
•Take steps to better oversee WYO insurers and ensure that they are in compliance with statutory requirements for NFIP and that taxpayers' funds are spent appropriately by consistently following the Financial Control Plan and ensuring that each component is implemented; ensuring that any revised Financial Control Plan covers oversight of all functions of participating WYO insurers, including customer service and litigation expenses; systematically tracking insurance companies' compliance with and performance under each component of the Financial Control Plan; and ensuring centralized access to all audits, reviews, and data analyses performed for each WYO insurer under the Financial Control Plan.
•Improve NFIP's transaction-level accountability and assure that financial reporting is accurate and that insurance company operations conform to program requirements by augmenting NFIP policies to require contractors to develop procedures for analyzing financial reports in relation to the transaction-level information that WYO insurers submit for statistical purposes; revising required internal control activities for contractors to provide for verifying and validating the reliability of WYO-reported financial information based on a review of a sample of the underlying transactions or events; and obtaining verification that these objectives have been met through independent audits of the WYO insurers.

## Financial Reporting in the WYO Program

As those last GAO suggestions imply, the NFIP's problems go beyond organizational and management weaknesses. The Program has major financial reporting problems-the kind of problems that would create scandal and controversy in the private sector...or at a higher-profile government entity.

Some of these financial reporting problems have to do with the NFIP's heavy reliance in its outside Bureau and Statistical Agent (BSA).

The NFIP financial reporting process begins at the WYO company level when the companies provide summary-level financial data and transaction-level statistical data to the BSA.

The WYO Financial Control Plan requires the WYO companies to submit a monthly financial statement reporting package to the BSA, which is to include financial, reconciliation, and certification statements, and statistical transactions.

The BSA uses the detailed transaction-level data in the reporting package for statistical purposes that include information on claims, losses and premiums (such as claim payment and coverage amounts, data on buildings and contents, and policy effective dates). The BSA uploads the summary-level financial information to its financial system which is used for financial reporting purposes.

After the BSA receives the reporting package, it performs front-end balancing - a process intended to ensure the WYO company data are consistent with the WYO companies' reconciliation statements.

This process is intended to validate that the BSA has recorded the same information that individual WYO companies have transmitted.

After BSA personnel complete the front-end balancing process they use manual processes to upload financial data into several different software systems that generate the reports and spreadsheets that various agencies use to work with the data.

Here are some examples of resulting problems:

- Each month, the BSA sends the financial statement booklets consisting of four sets of consolidated - but unaudited - financial statements to FEMA's Office of the Chief Financial Officer (OCFO). The OCFO prepares journal vouchers based on line items from the NFIP consolidated financial vouchers into the Integrated Financial Management and Information System (IFMIS), which is NFIP's official accounting system of record.
- After the journal voucher entries are loaded into IFMIS, OCFO personnel produce trial balance data and load it into the Treasury Information Executive Repository (TIER), which is a data warehouse for DHS' components' data.
- The WYO companies did not provide complete documentation to FEMA for claims paid to insureds during fiscal years 2005 to 2007. According to NFIP policies and procedures, claim loss files are to contain adequate documentation relevant to the adjustment of a claim to support claim payments.

According to the GAO:

Our detailed testing of claim losses paid during fiscal years 2005 through 2007 showed that 20 percent (36 out of 177) of the claim files reviewed were missing adjuster-prepared preliminary reports and 20 percent (36 out of 177) did not contain adjuster-prepared final reports required by the NFIP Adjuster Claims Manual.

In addition, for the claim files we reviewed, WYO companies did not file 42 percent (74 out of 177) of the preliminary and 34 percent (61 out of 177) final reports within the required 15 and 45 days, respectively, from the date of loss in accordance with NFIP policy.

...Over 50 percent of the transactions in the NFIP databases for the insurance premium policies for fiscal years 2006 and 2007 that the BSA extracted for our testing either lacked or had incomplete insured names, addresses, or policy effective dates. Consequently, we were unable to test the accuracy of reported insurance premium amounts or whether policy premium information was complete. Officials from the BSA attributed the missing or incomplete insurance premium information to their extraction process and difficulties they encountered (programming errors) when extracting the data into a separate database specifically for our use.

The fact that BSA officials could not readily produce reliable or complete data poses questions regarding their capacity to analyze data and the NFIP program officials' ability to identify appropriate managerial actions based on what is reported to them by WYO companies through their own BSA contractor.

Again, from the GAO report:

We noted that 35 of these claim files missing preliminary and final reports are for claims adjusted by one particular WYO company. According to FEMA, this WYO company has historically taken the position that they will provide the information required but will do so in accordance with the processing of all its insurance policies as allowed by the Financial Assistance / Subsidy Arrangement. In other words, it will use its own forms that contain the information in the NFIP preliminary and final reports.

While complying with the Financial Assistance / Subsidy Arrangement, based on our review of the information in the claim files as compared to the standard preliminary and final reports, we noted that the company's forms in the files do not contain certain information such as any salvage amount and the prior condition of the building and contents. In addition, the forms are not consistently signed by the adjuster and it is not clear whether the reports were prepared timely.

The NFIP's own Financial Control Plan requires WYO companies to submit a monthly financial statement reporting package to the BSA. This package is to include financial statements, reconciliation statements, certification statements and statistical transactions.

The BSA's front-end balancing - while helping to verify that the number of records and dollar amounts agree to the reconciliation documents and the timeliness of the data submitted from WYO companies - does not verify or validate the data's accuracy.

Although WYO companies submit statistical transaction-level data for claims losses paid and premiums written, which are the primary sources of financial activity for NFIP, the BSA does not base its financial reporting on this transaction-level data, but instead compiles the financial exhibits submitted by the WYO companies, and therefore reduces assurances that activity reported to FEMA represents actual transactions between WYO companies and policyholders.

Most troubling: the process relies too heavily on manual procedures for entering data. This over-reliance increases the likelihood of errors or incomplete/inaccurate NFIP financial information.

As FEMA's NFIP financial reporting process was designed, approximately 90 WYO insurance companies submit summary financial information in emails to the BSA for consolidation and submission to FEMA. Throughout the entire process, the BSA captures and processes key financial information such as net written premiums on the financial statements prepared by the WYO companies.

For example: In 2006, FEMA officials had to correct over 100 journal vouchers totaling an estimated $260 billion.

Also: By presenting net written premium amounts, WYO companies do not show how much of earned premiums go to pay premium refunds. This limits how much even a thorough audit can show about premiums and claims costs.

Another type of audit that is supposed to help FEMA and the NFIP exert control of the WYO program is claims re-inspection. According to the Financial Control Plan, the claims re-inspection program is designed to serve as a mechanism supporting FEMA's oversight of WYO insurance companies. The objectives of the program are to:

1. keep FEMA and the BSA informed,
2. assist in the overall claims operation, and
3. provide necessary assurances and documentation for dealing with external parties.

The BSA is supposed to conduct all re-inspections and prepare a report documenting the appropriateness of WYO companies that did not have operational reviews. However, through most of the early and mid-2000s, officials selected claims to reinspect based upon judgmental criteria including, among other items, the size and location of loss and complexity of claims. Further, FEMA only required testing for a selection of claims for flood events - with over 400 claims per a single flood event for a particular WYO company.

In other words, FEMA and the NFIP did not use a statistical sampling methodology to select files for operational reviews - instead they used non-probability sampling processes. (In non-probability sampling, investigators select a sample based on their knowledge of the population's characteristics. The major limitation of this type of sampling is that the results cannot be generalized to a larger population.)

Using this flawed methodology for selecting samples for claims re-inspections, the percentage of claims reinspected by flood event for fiscal years 2005 and 2006 was 1.8 percent for Katrina, 3.6

percent for Rita and 5.0 percent for Wilma. In other words, the NFIP de-emphasized the biggest loss events that occurred during that period.

In the early 2010s, FEMA and the NFIP have taken some steps to strengthen their internal controls. However, the GAO remains unimpressed-and has recommended the following actions:

1. Augment NFIP policies to require the BSA to develop procedures to analyze financial reports in relation to the transaction-level information that WYO companies submit for statistical purposes.
2. Revise required internal control activities for the BSA to provide for verifying and validating the reliability of WYO-reported financial information based upon a review of a sample of the underlying transactions or events, or obtain verification that these objectives have been met through independent audits of the WYO companies.
3. Determine the feasibility of integrating and streamlining numerous existing NFIP financial reporting processes to reduce the risk of errors inherent in the manual recording of accounting transactions into multiple systems.
4. Establish and implement procedures to require reviewing available information such as the results of biennial audits, operational reviews, and claim re-inspections to determine whether the targeted audits for cause managerial tool should be used.
5. Establish and implement procedures to require maintaining and considering current information from an independent source regarding state audit results to gather pertinent information such as customer service issues and inform determinations about when to conduct audits for cause.
6. Establish and implement procedures to schedule and conduct all required operational reviews within the prescribed 3-year period.
7. Establish and implement procedures to select statistically representative samples of all claims as a basis for conducting re-inspections of claims by general adjusters.

The fifth recommendation - that the NFIP consider audit results from independent sources (usually, this means state regulatory agencies) - caused some controversy among FEMA and NFIP bureaucrats. FEMA officials insisted that information from an "independent source" regarding state audit results did not apply reliably to federal programs, such as NFIP.

However, the Financial Control Plan states that it is expected that audits of WYO companies by state insurance departments will include flood insurance activity. Further, FEMA and the NFIP had previously acknowledged receiving information from a source independent of the WYO companies - specifically, they'd acknowledged receiving correspondence from state insurance departments regarding issues of customer service with the WYO companies.

So, the GAO concluded:

It is important for FEMA to establish and implement procedures to require maintaining and considering all current information available from an independent source regarding state audit results. We found that FEMA rarely received or reviewed information from state insurance department audits. Consequently, we continue to reaffirm our recommendation to obtain and consider independent information on state audits of the WYO companies, rather than continuing to rely solely on the WYO company that underwrites policies and processes claims to alert FEMA of any state issues.

The NFIP Bureau and Statistical Agent operates a network of regional offices within the continental . The regional staff may be able to assist with problems and answer questions of a general nature. However, the regional offices do not handle processing, nor do they have policy files at their locations.