

3.0 DISTRIBUTION OF FUNDS TO THE REGIONS

This section of the MHIP describes FEMA's budget for Flood Map Modernization and plan for distribution of Flood Map Modernization funds to its Regional Offices for map production. This section also defines the process by which flood risk was assigned to areas of the Nation to guide the distribution of funds and describes how this process has been modified for the future. In each version of the MHIP, changes to the funding distribution process for each fiscal year are briefly described, as necessary.

The discussion of funding that follows refers to funding from FEMA for specific flood hazard studies and associated map production. Although studies and counties are described as funded, the money is not distributed directly to counties. The maps are developed by Cooperating Technical Partners (CTPs), FEMA contractors, and other Federal agencies using funds distributed to the 10 FEMA Regions. FEMA also expects to leverage funds, services, and other resources contributed by some of these mapping partners. These anticipated additional resources are not counted in the funding amounts described in this section and are not reflected in the estimated mapping budgets.

3.1 Flood Map Modernization Budget

Funding for Flood Map Modernization comes from three sources: Congressional appropriations, National Flood Insurance Program (NFIP) fees, and partner contributions (leveraged resources from CTPs and other State and Federal agencies). This funding supports the following efforts required to accomplish Flood Map Modernization:

- Flood map production and adoption
- Flood map revisions
- Mapping infrastructure
- Flood map use and dissemination
- Program management and planning

The majority of Flood Map Modernization funding is allocated to FEMA's Regional Offices for flood map production and adoption. The MHIP provides information on the planned budget and schedule for flood map production and adoption for areas nationwide (including territories) where there is flood risk.

Table 3-1 summarizes funding for map production, based on actual appropriations through FY06 and anticipated appropriations for planning purposes for FY07 and FY08. The current budget is used for planning mapping projects.

Table 3-1. Actual and Projected Funding

Fiscal Year	Total Funding	Map Production Funding ¹	Regional Allocation
FY04 ²	\$250,000,000	\$120,000,000	\$130,000,000
FY05 ²	\$250,000,000	\$160,000,000	\$155,000,000
FY06 ²	\$250,000,000	\$170,000,000	\$148,000,000
FY07 ³	\$250,000,000	\$175,000,000	\$157,500,000
FY08 ³	\$250,000,000	\$175,000,000	\$157,500,000
FY04-FY08	\$1,250,000,000	\$800,000,000	\$748,000,000

1 – Reflects only the map production budget

2 – Actual

3 – Proposed

Because the primary focus of the MHIP is map production, unless otherwise stated, funding and expenditures reported here cover map production and adoption. Caution should be exercised when extrapolating map production costs from this plan to program-wide costs. As shown in table 3-1, future program-wide funding estimates are approximately 1.5 times the map production funding estimates presented in this plan.

In addition to the funding estimates presented here, FEMA anticipates leveraging cost-sharing opportunities through contributions of dollars, data, and/or services from local and State mapping partners (particularly CTPs) and other Federal agencies. FEMA expects those contributions from other sources to equal at least 20 percent of the total funding allocated by FEMA to map production each year.

3.2 Approach to Distributing Funds

FEMA Headquarters distributes funds to the Regions based on a national perspective of their flood risk. Along with the funding, FEMA Headquarters articulates goals for mapping all areas with flood risk that the Regions are directed to collectively meet or exceed. Although the MHIP contains cost and schedule information for map production at the county level, FEMA Regions and their mapping partners are encouraged to combine resources where this makes sense to achieve economies of scale.

3.2.1 Distribution of FY06 Funds to the Regions

Regional funding distributions for FY06 relied on a series of data and calculations that used 10 parameters of flood risk to assign funding distribution percentages to each of the 3,146 counties in the United States. The individual county funds were then aggregated to the FEMA region level to define funding distributions to the 10 FEMA Regions. Funding amounts were determined based on the total funding available for the fiscal year and an established maximum and minimum funding amount for a given county. The FY06 regional funding distribution method involved the following steps:

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1. Tabular data were obtained from public sources and the Federal Insurance Administration (FIA) Claims Database to characterize flooding and flood risk at the county level.
2. A series of 10 “risk factors” were estimated for each county by relating the value of data at the county level to the corresponding value of the same data summed for all counties to the national level. The risk factors are presented as a relative percentage value for each county:
 - 2000 population
 - Population change 1980-2000
 - Housing units
 - NFIP policies
 - NFIP claims
 - Repetitive loss claims
 - Repetitive loss properties
 - Federally declared flood disasters
 - Predicted population growth to 2015
 - Length of stream/coasts on non-Federal lands
3. The 10 risk factors were summed for each county to obtain a raw sum of the factors and a relative percentage of risk was obtained for each county by dividing each county value by the sum of values for all counties in the Nation.
4. A risk-limiting factor was applied to limit the total national funding for FY06 to \$800 million and the amount of funding for each county receiving a map product or data to a specific amount between a minimum of \$54,000 and a maximum of \$4 million.
5. Final percentages of funding distribution by county were obtained by dividing the risk-limited funding amount for each county by the total funding allocated for the Nation.

3.2.2 Distribution of FY07–FY08 Funds to the Regions

The estimate of Regional funding distributions for FY07 and FY08 involved a refined definition and estimate of areas at flood risk calculated at the Census block group level, as opposed to the county-level risk analysis used for previous funding distributions. The identification of flood risk for each of the 211,684 Census block groups in the Nation, compared to the 3,146 U.S. counties, is expected to provide a more robust basis to improve the detail and precision for FEMA to make sound decisions on funding at the regional level. The block groups provide a higher geographic resolution than counties and Census tracts and are more manageable than working with the more than 8 million individual Census blocks identified in Census 2000. This approach is intended to

better separate low-risk areas within a county from higher-risk areas, allowing an additional focus on those high-risk areas, as described further in the Mid-Course Adjustment.

Similar risk factors used in the FY06 funding distribution were evaluated at the Census block group level with the following changes: the period of analysis for the predicted population growth factor was adjusted – through 2010 rather than through 2015 – to better align with the end of Flood Map Modernization, and improved estimates of coastal mileage were incorporated. A risk rating, or factor, was assigned to each Census block group as a percentage of the sum of the 10 spatial risk parameters.

Figure 3-1 shows the results of this effort and provides a breakdown of flood risk in selected ranges, where the areas with the greatest flood risk are associated with the top 25 percent of the data and are identified in purple. FEMA intends to incorporate this definition of National Flood Risk in an upcoming revision of FEMA’s *Guidelines and Specifications for Flood Hazard Mapping Partners* (http://www.fema.gov/plan/prevent/fhm/dl_cgs.shtm).

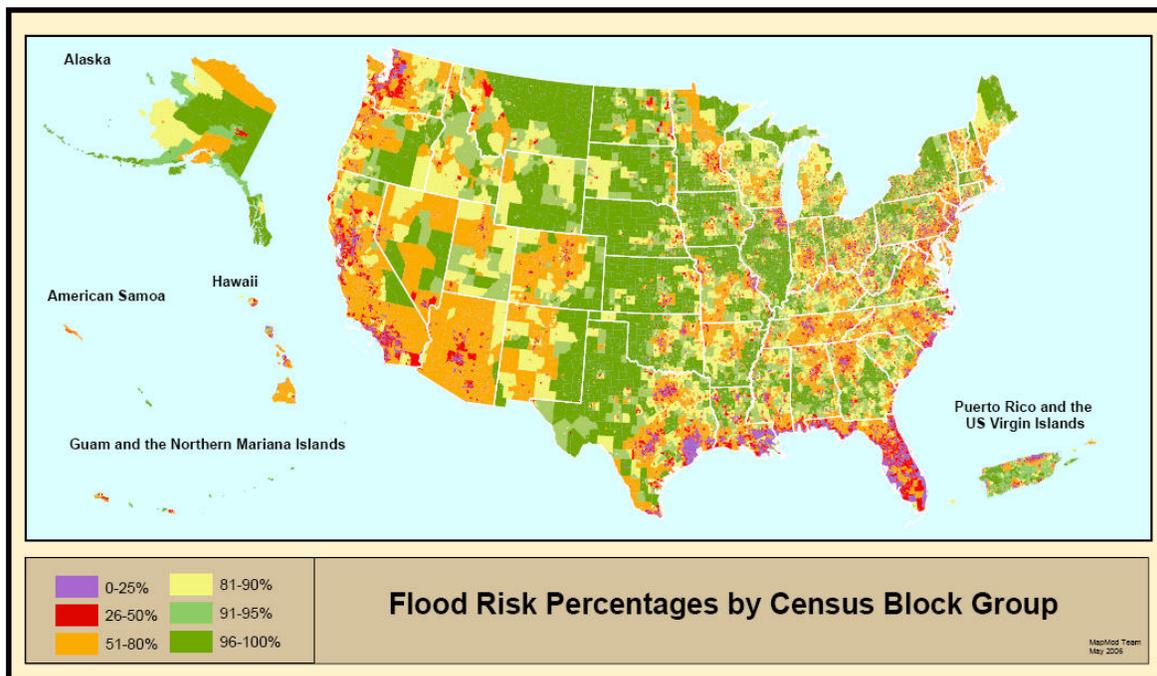


Figure 3-1. National Flood Risk Percentages by Census Block Group

The method used to develop the anticipated FY07-FY08 regional funding distribution data is summarized below:

1. Updated tabular data were obtained from public sources and the FIA Claims Database to characterize flooding and flood risk at the Census block group level.
2. A series of 10 risk factors were estimated for each county by summing the value of each factor for every Census block group within a county and dividing the resulting county

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subtotal by the corresponding total for the Nation. The factors were initially calculated at the Census block group level and then rolled up to the county level. However, declared flood disaster and projected population growth data are only available at the county level and these data were uniformly applied to the Census block groups for each county. The 10 risk factors are:

- 2000 population
 - Population change 1980-2000
 - Housing units
 - NFIP policies
 - NFIP claims
 - Repetitive loss claims
 - Repetitive loss properties
 - Federally declared flood disasters
 - Predicted population growth to 2010
 - Length of stream/coasts on non-Federal lands
3. The 10 risk factors were summed for each county to obtain a raw sum of the factors and a relative percentage of risk was obtained for each county by dividing the raw sum for each county by the sum of corresponding values for all counties in the Nation.
 4. A risk-limiting factor was applied to limit the total national funding for FY06. This meant that no single county would receive more than 0.5 percent or less than 0.0125 percent of the national funding.
 5. Final percentages of funding distribution by county were obtained by dividing the risk-limited funding percentages for each county by the total funding allocated for the Nation.
 6. Final percentages of funding distribution by FEMA Region were then obtained by summing the individual county percentages for those counties within each FEMA Region.

Funding for both FY07 and FY08 was estimated based on the difference between a projected FY03 through FY08 funding “Total Based on Risk” for each Region (these totals are based on a combined FY03-FY06 \$471 million to-date funding of Flood Map Modernization and a projected FY07-FY08 \$315 million funding multiplied by the Regional distribution percentages from this new risk methodology) and the FY03 through FY06 “To Date Funding” that each Region has received to date. This funding difference was then evenly split between the 2 fiscal years. The actual regional funding distribution for FY06 and the planned funding distribution for FY07 and FY08 using this new methodology are shown in table 3-2.

Table 3-2. Funding Distribution Amounts by Region

Region	FY06 ¹		FY07-FY08 ²		
	Percent of Risk	FY06 Funding	Percent of Risk	FY07 Funding	FY08 Funding
1	4.2%	\$6,240,000	3.6%	\$5,670,000	\$5,670,000
2	7.3%	\$11,806,000	8.3%	\$13,070,000	\$13,070,000
3	9.9%	\$14,172,000	8.5%	\$13,390,000	\$13,390,000
4	25.0%	\$36,316,119	25.1%	\$39,530,000	\$39,530,000
5	13.0%	\$16,880,022	12.1%	\$19,060,000	\$19,060,000
6	14.8%	\$25,772,340	16.1%	\$25,360,000	\$25,360,000
7	5.6%	\$10,343,077	6.9%	\$10,870,000	\$10,870,000
8	6.7%	\$7,319,783	5.2%	\$8,190,000	\$8,190,000
9	9.5%	\$14,140,000	9.4%	\$14,800,000	\$14,800,000
10	4.0%	\$5,692,000	4.8%	\$7,560,000	\$7,560,000
Total	100%	\$148,681,341	100%	\$157,500,000	\$157,500,000

1 – Actual

2 – Proposed

Appendix D presents the funding factors, risk values, and rough costs for each county (these risk values are not equivalent to the funds budgeted per county in appendix A because the costs associated with sequencing within the Regions were computed differently than funds were distributed to the Regions).